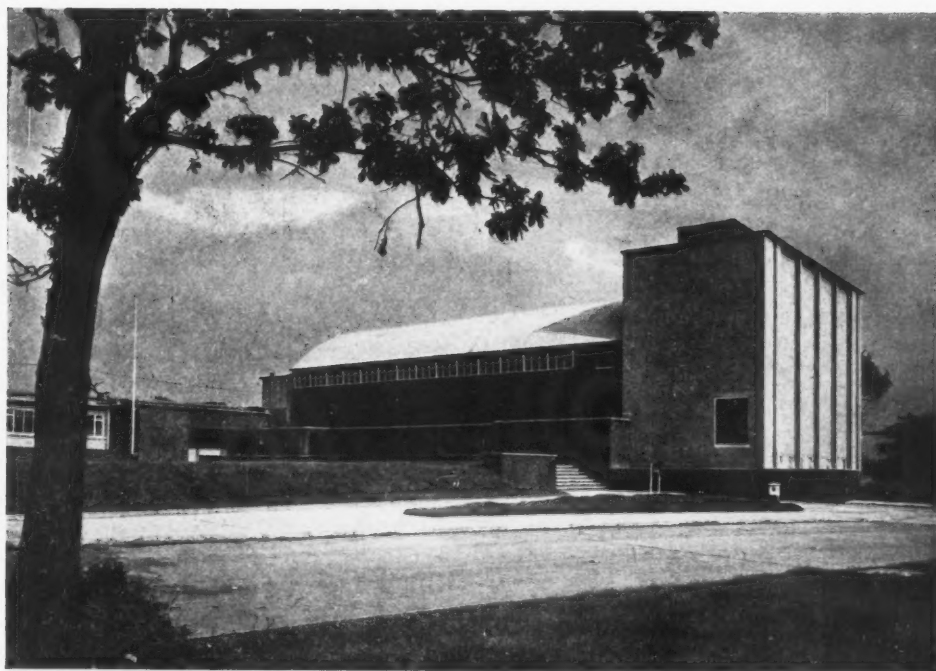


THE ARCHITECTURAL REVIEW

A Magazine of Architecture & Decoration



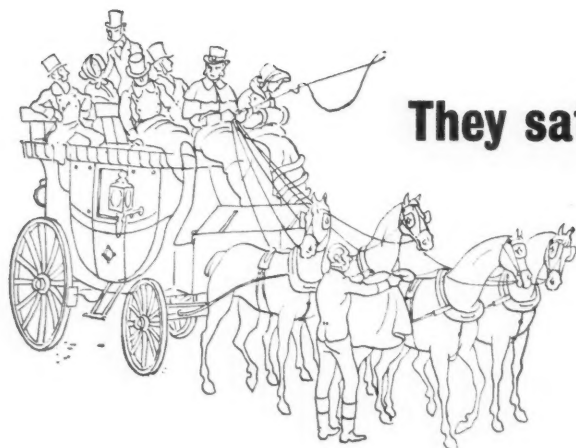
INDUSTRIAL HOSTELS

Two Shillings and Sixpence Net

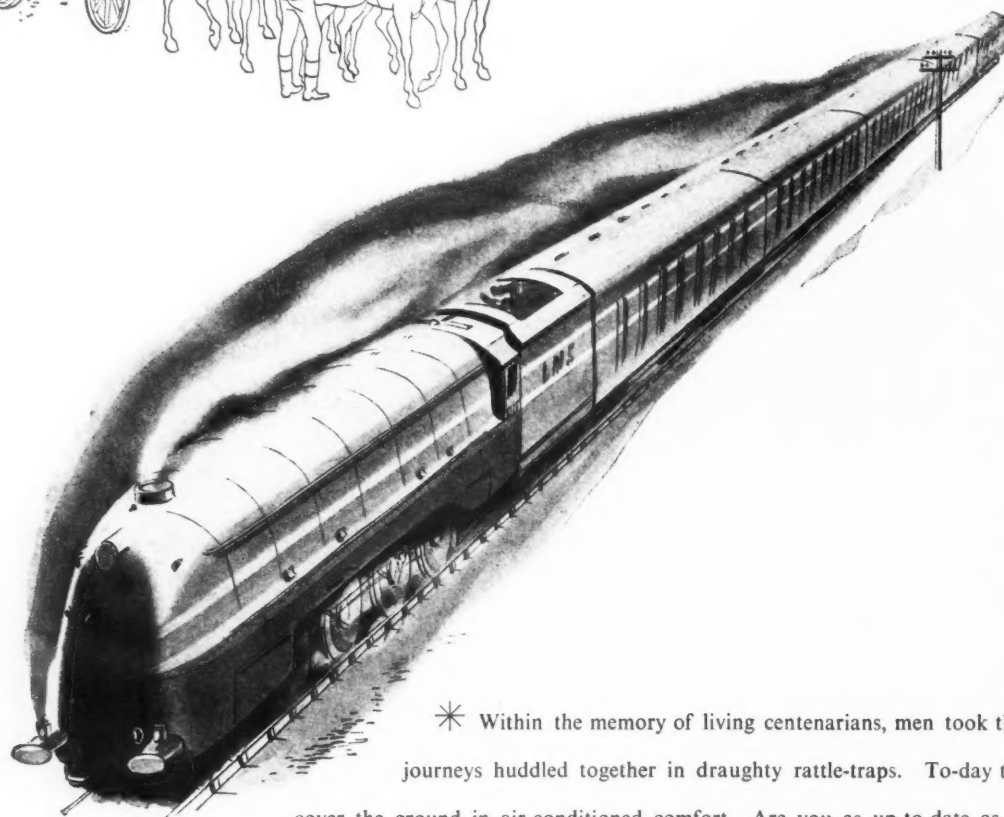
Vol. XCII

December 1942

No. 552



**They sat in a draught
for three days . . .**



* Within the memory of living centenarians, men took their journeys huddled together in draughty rattle-traps. To-day they cover the ground in air-conditioned comfort. Are you as up to date as the streamlined train? What is your outlook on plywood? Scientific research and modern facilities have transformed plywood into the Product of Great Versatility. Plywood *is* better . . . and "Emcore" is the best Plywood!



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The Architectural Review

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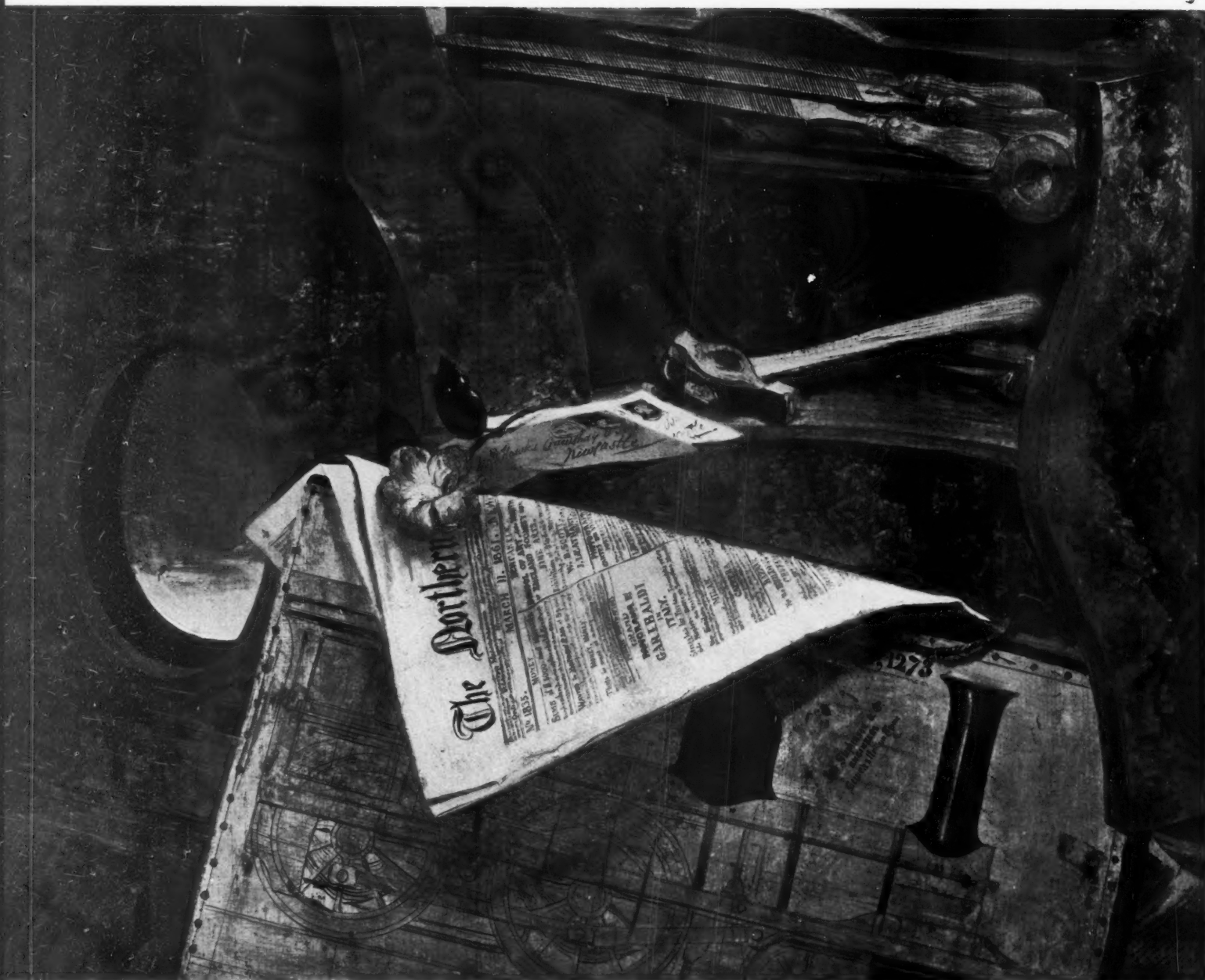
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SUBSCRIPTION RATES : United Kingdom, £1 5s. 0d. per annum, post free.
U.S.A., \$8 per annum, post free. Elsewhere abroad, £1 5s. 0d. per annum, post
free. An index is issued every six months covering the period January to June,
and July to December, and can be obtained without charge on application to
the publishers :

THE ARCHITECTURAL PRESS,
War Address:
45, The Avenue, Cheam, Surrey
Telephone: Vigilant 0087

Vol. XCII

No. 552



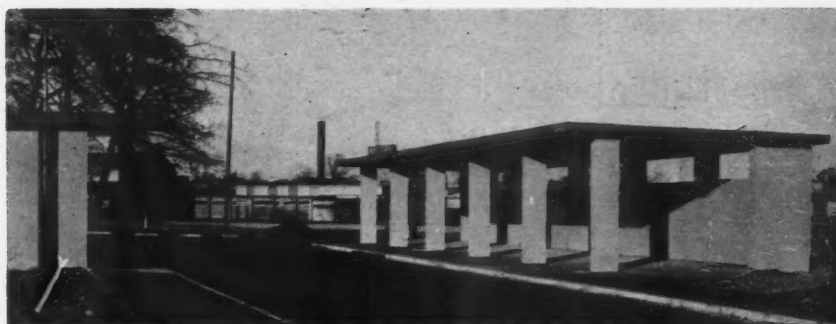
This still-life—a carpenter's tools, a corner of a newspaper, a working drawing of a locomotive, a rose and some envelopes—is the right-hand bottom corner of William Bell Scott's picture Iron and Coal, the most remarkable of his wall paintings at Sir Charles Trevelyan's seat Wallington in Northumberland. William Bell Scott was asked by Pauline Lady Trevelyan in 1856 to paint a series of scenes from Northumbrian history for the central hall of the house just then, on the advice of Lady Trevelyan's friend John Ruskin, remodelled by the Newcastle architect John Dobson. Also in the hall are wall paintings by Ruskin, Lady Trevelyan and Arthur Hughes. They are the subject of an article on pages 147-149.

On the photograph here illustrated a good many details are worth special notice: the address of Newcastle's most famous factory, Robert Stephenson & Co. on the engine drawing, the address of Messrs. Hawks, Crawshaw & Sons, a steel firm of note, on the envelopes, the date of the newspaper, March 11, 1861, which dates the picture, the advertisement of a Grand Panorama celebrating Garibaldi's victories in Italy, and that announcing an exhibition of students' work at the Newcastle School of Art, whose principal Bell Scott was. His name, coupled with that of his friend J. Leathart, the secretary to the school, appears beneath the advertisement.

Industrial Hostels

Architect: W. G. Holford

on behalf of SIR ALEXANDER GIBB & PARTNERS,
Agents & Consulting Engineers to the Ministry of Supply



DURING this war there has been a good deal of housing built to serve new or expanding industries. It falls into two main types. There is accommodation for families, which has on the whole tended to follow the lines of the normal housing estate, with a few minor alterations in the traditional house plan to include shelter from air-raids. Little extra has been provided in the way of facilities for communal life, and apart from the structural limitations due to war conditions, this sort of housing does not solve any essentially new problem, and is of a permanent type that will be suitable for family living after the war. But the other type, the hostel which accommodates single people, generally women, has had to fulfil entirely new wartime conditions, and has no pre-war precedent. Nor is it likely that after the war it will be needed in its present form.

The only slightly comparable problem in pre-war English architecture was the holiday camp. But this had to serve a shifting, mixed, and seasonal population, and was in any case generally in or near an existing holiday resort. Many wartime hostels, on the other hand, are isolated in the heart of the country, and not only have to provide a more or less permanent living environment, but also their own facilities for leisure. They are, in fact, with their segregation of one sex, and their absence of married life, in some ways rather more like boarding schools than holiday camps.

Early in 1941 the housing requirements which were at that time thought necessary for single workers in war factories were formulated into a building programme, and instructions were given to the Ministry of Supply and the Ministry of Works and Buildings for hostels to be built in various parts of the country. They were intended for either men or women as the local situation required, but it soon became clear that they would be occupied almost exclusively by women. As the Select Committee on National Expenditure has emphasized*, these hostels needed to be as attractive as possible, both in their general amenities and in the facilities that they offered. This was particularly important at the time the programme was launched, because conscription of woman power had not then been introduced, and the new accommodation had to provide an inducement rather than a deterrent for girls to leave their homes and go to work in industry. A healthy and pleasantly designed environment was essential if they were to prove a success.

The design of some of the hostels, and the

supervision of their erection, was done by the Ministries themselves; others were put in the hands of agents. The hostels illustrated in the following pages are entirely for women, and are the work of a group under W. G. Holford working with Sir Alexander Gibb and Partners, who had been appointed agents by the Ministry of Supply. This group was a complete executive and supervisory machine for all branches of the work, and on instructions from the Ministry was responsible for the layout of the sites, the design and decoration of the buildings, the civil engineering work, the site supervision, and the co-ordination of specialist consultants.

The amount and type of accommodation required had, like most wartime problems, to be decided quickly, and building had to begin before the final requirements of the schemes had been filled in, or, in some respects, even realized by the client department. So although the hostels show a gradual improvement in some buildings, an improvement that became possible when the sites were later placed in order of priority, the original simultaneous starting on a large number of sites and the need for speed of construction and a smooth sequence of operations, compelled adherence to many standard plans which could have been revised in the light of further thought and experience had they not already gone too far in erection. This applies particularly to the bedroom accommodation, which was begun before the requirements of the other buildings had been more than sketched in outline. And now that the work is completed, and the results of analysis and speculation are being put to the test of living, further improvements inevitably suggest themselves. Hostels, however, were a new problem in 1941.

These hostels serve two independent centres of war industry, and their sites vary in size from fifteen to thirty acres, and from flat and featureless agricultural land of poor quality to fine parkland with good trees and interesting differences of level. Each hostel houses a thousand or more girls, and each group of hostels is planned around its place of work rather like a ring of satellite villages. The girls are taken to and from work by 'bus, and have their mid-shift meal at the factory.

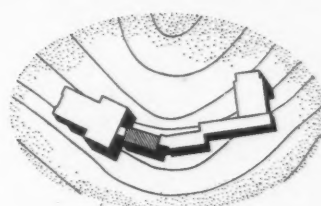
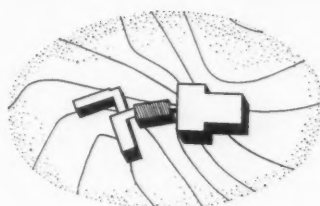
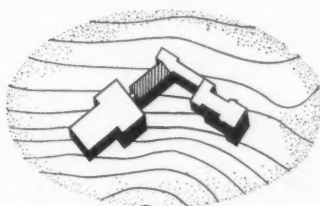
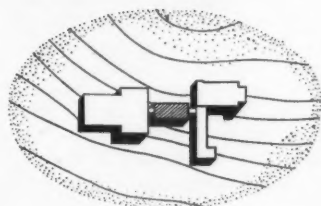
A community in which there is no normal home-life and in which one sex is segregated, needs greater provision for social welfare and entertainment than a mixed community; and isolated as some of these wartime centres of industry are, most hostels have to aim at catering for the whole of the girls' leisure time. Each hostel has its own Social Centre, a large building group that includes the administrative offices, the

canteens, an assembly hall and lounges. This is the hostel's most important building, and the largest. It is the equivalent of the town centre, with the restaurants and dance halls, the cinemas and theatres, the shops and the library all rolled into one. Around this building group spread the smaller units of the residential quarters.

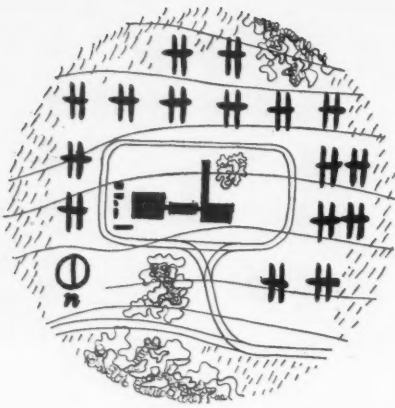
The accommodation in these Social Centres is not identical. In principle the sites are grouped so that one hostel can have, for instance, a really first-class theatre and full-scale cinema, large enough to seat not only its own residents, but also girls from other hostels within easy walking distance where there are only smaller and less fully equipped halls. This principle, besides making it economically justifiable to build and equip a few large theatres that can be used by visiting companies, such as those organized by C.E.M.A., is also intended to encourage some social relationship between separate hostels, and to help avoid the sense of imprisonment within a rigid institutional framework that might more readily arise if all the hostels were the same.

The Social Centres are composed of a number of units that can be linked together fairly flexibly, as is shown in the diagrams on this page. This has made it possible to adjust each group economically to the contours of the land and to the requirements of access on the site, and has afforded opportunities for making the most of the general grouping and massing in relation to trees and the surrounding landscape, and for getting good views and sunlight for the lounges and terraces. Consequently, although each Social Centre has a standardized type of construction and is made up largely of a series of standard plan forms, it has in its layout and atmosphere a character of its own that is appropriate to its environment.

In addition to the Social Centre and the bedroom buildings there are a number of other buildings on each site: the two boiler houses, which supply central heating and hot water throughout the hostel, distributed by overhead mains; the various stores and garages; the laundry and the chapel; the manager's bungalow and the sick-bay. But from the point of view of site planning the Social Centre and the bedrooms are the two main items. The Social Centre, being the administrative as well as the recreational hub of the hostel, is almost always placed near the entrance to the site from the public road. It is here that the 'buses collect and drop the girls on their way to and from work, and here that visitors are received and enquiries dealt with. It is approached by road from a roundabout or short loop, with space for a 'bus



* The seventh and eleventh Reports from the Select Committee on National Expenditure, Session 1941-1942. (H.M. Stationery Office.)



park, and the unloading yard for the kitchen and stores is near at hand. No traffic, except occasional service vehicles, need go beyond this point, and the rest of the site is left free.

A number of the sites had been bought before the architects took over, and it had not been possible to choose them from the point of view of planning and amenity alone. In addition to the land having to be of very low agricultural value, many other restrictions limited the choice, and nearly all the sites finally selected had some serious disadvantage. Most of them were large enough for the accommodation originally intended, although with later additions it was necessary on some of them to encroach on areas of the sites that were planned as open space. The freedom with which the sites could be laid out was limited by A.R.P. stipulations, the use of single floor hutting for the bedroom accommodation, the need to keep roads and service runs as short as possible, and the reservation of an ample open space for games. The layouts fall roughly into three types, which are characterized by the drawings at the head of the page, although interests of national security have made it necessary to reduce them to an enviable and unrecognizable simplicity. They show, in principle, three stages of a continuous effort on the part of the architects to progress from an atmosphere of rigidity towards one of informality. In the first type, which was used only on one site, the Social Centre is placed in the middle of the site and surrounded with a gridiron of bedroom buildings. It is economical of space, but not of services and roads, and tends to be institutional in effect, besides making a conspicuous pattern from the air.

The second type places the Social Centre by the access road, keeps most of the traffic away from the residential area, and disposes the bedroom buildings in a loose ring around the boundary, leaving in the middle a village green which the Social Centre can face. This is an altogether more open and pleasant arrangement than the first type, particularly when there are groups of trees and other plantings to which the scheme can be adjusted, and it is economical of roads and services. It is more suitable for flat than hilly sites, but has been used without distortion where the land has a slight and even fall away from the main road and on the sunny side of the Social Centre.

The third type, which usually takes the form of either the letter T or Y, allows hilly sites to be laid out with closer attention to the contours and a more sensitive appreciation of landscaping. It has also been applied to flatter sites of contorted and irregular shape. As before, the Social Centre is close to the access road. The full possibilities of this freer form of planning cannot be realized with the rigid H-shaped bedroom block, particularly on steeply sloping ground, where the smaller and more flexible bedroom block is most clearly an advantage. Instead of having four rigid wings, this smaller block has two, which can be rotated through a wide angle around the central spine. Although twice as many buildings are needed for the same accommodation, it is believed that the advantages more than offset this drawback.

Just as the site planning had to deal with two main categories, the bedroom blocks and the



Social Centre, so had the detailed planning and construction. The answer was partly predetermined in the case of the bedrooms, for many hostels had already had light single storey prefabricated hutting allotted to them, and the remaining part of the blocks, the central spine, was the only thing requiring solution. Here, as elsewhere in the hostels, the air-raid shelters, which had to be ample, were the all too solid core of the problem. Official surface shelter policy precluded their being sunk in the ground, and the possibility of continuous air attack made it desirable to provide sleeping space for everyone likely to be in the block at one time. The planning of shelter, lavatories, and a common room where girls could, if they wished, sit and talk or read, away from the conviviality of the Social Centre, had to be extremely compact and economical, for a small waste space multiplied many times for each block on each hostel would have constituted a very big item.

The Social Centres, on the other hand, permitted a more expansive treatment. Shelter accommodation, again, with its blast walls and general massive requirements, hampered freedom of planning and ease of circulation, as also did the need for funereal light locks at each otherwise generous entrance. But the Social Centres were large enough to carry these wartime passengers without an undue impression of overloading (particularly when, on the later sites, the total shelter accommodation was considerably reduced), and it was possible to give them something of the airiness and gaiety appropriate to a leisure building.

The probability of frequent changes in available materials and of deterioration in transport services made it desirable to keep to structural methods which needed only common materials and the building skill ordinarily available in any locality. And the short period allowed for building was another reason for avoiding unique and specialized forms of construction in which a small hold-up might easily upset the sequence of following trades. Therefore materials which were easy to obtain, and whose supply was unlikely to be much affected by unpredictable conditions—bricks, cement, hollow tiles, precast beams, and a minimum of timber and steel—were the basis of the structural systems employed.†

The bedroom blocks did not call for anything other than normal solid brick construction, except in the case of the bedroom wings on the sites where prefabricated huts were not used. But the Social Centres, which needed larger glass areas, bigger spans, considerable flexibility of planning and yet maximum standardization of method, were designed on a 10 ft. bay unit throughout, with brick piers or steel stanchions, panel walls, two standard types of window, and standard precast lintols, eaves and roof units. Where spans of 35 ft. or more were wanted, as in the canteens, kitchens and assembly halls, steel trusses and corrugated steel sheeting were used. The 10 ft. bay was found to make the best use of available stock units, such as roofing, and allowed the largest units to be manoeuvred into position by hand. In planning, it also gave a

† A more full technical description than is given in this issue was published in *The Architects' Journal*, March 5, 1942.



convenient minimum-sized room. With piers at 10 ft. centres, glazing can be almost continuous where it is needed, and where it is not needed the solids look like the panels that they are, and the unity of the exterior is not destroyed. In addition to this, the bay unit, by establishing a clearly recognizable module throughout the design, gives to these large, sprawling and complex buildings a coherence that necessarily hasty wartime design might not otherwise have achieved.

The finishes had to be simple and inexpensive, and the roughness of the structural appearance accepted. Joinery was cut to the minimum, and plaster a rare luxury restricted to very small areas. Externally most surfaces are painted in a few neutral camouflage colours, which also unify and enhance the cheap brickwork, and help the buildings to settle naturally into the landscape. Bright colours are restricted to doors and a few other small areas, and white window frames give enough sparkle when seen fairly close to relieve the drabness of camouflage. Internally, nearly all brickwork is given an even texture by a thin coat of patent rendering brushed on, stippled, and decorated with distemper.

A special standardized range of colours was prepared for the whole of the internal decoration. It is divided into four main groups, each group having as its basis two or more complementary colours from which other shades in the group are derived by the addition of black or white. Each group is closely related to one another, so that an interchange of shades can be made between them. Thus distinction can be introduced for the different rooms while maintaining continuity of colour throughout the buildings. The colours are light and cheerful, contrasts in tone and colour emphasizing focal areas and, where the plan is open, differentiating between spaces of varied functions.

Although these hostels, and many others up and down the country, have been built to fulfil a temporary wartime need, the question of their post-war use naturally arises. For their roads and services are necessarily of a permanent nature, and a large part of their structure is as capable of remaining good during post-war years as it is of lasting the duration—the materials available and the building volumes required did not permit of a more temporary solution. In addition to this, many of them are in delightful rural surroundings, are congenial in atmosphere, and with their tree planting will improve with time.

It is almost certain that with school camps and British Restaurants they will materially affect our post-war pattern. The National Council of Social Service suggests that they should form the basis of a scheme of National holiday centres† for the vastly increased number of people who, it is hoped, will have holidays with pay, and for whom, even assuming a system of staggered holidays, our recognized holiday resorts would be quite inadequate. There is no doubt that many hostels would be excellently suited for such a scheme, and it is to be hoped that the large amount of social capital already sunk in them will go to provide a permanent feature of our post-war institutions.

† Hostels for Holidays, by Sir Ronald Davison. *The Spectator*, August 14, 1942.



INDUSTRIAL HOSTELS

In association with the following architects :

R. T. Kennedy (Deputy Chief Architect), G. Stephenson, F. W. B. Charles, F. F. C. Curtis, J. Schreiner (Design).
F. R. S. Yorke and A. J. Norcliffe (Chief Site Architects).
J. Boyle, C. Brighthouse, A. J. Caney, C. Davison, C. G. Dixon, C. Dyer, M. G. Gilling, H. M. Hedges, S. B. Howard, A. F. Humphreys, A. S. Knott, W. Pecorini, T. S. Shearer, F. C. Williams and Lewis Wilson (Site Architects).

and :

A. G. Bullen	J. M. Kidall
M. L. Cobbett	R. A. Kirby
G. T. Cotton	F. H. Littler
A. Cox	P. McNeil
L. G. Creed	H. S. Pite
A. Doffman	A. E. Rice
J. Earley	F. E. Simpkins
Benedict Fleming	D. W. Spreull
J. M. Forsyth	L. B. Thearle
A. H. Gall	E. C. Thompson
A. M. Gear	G. T. Timmis
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B. Haward	L. Williams
H. Myles Wright	

Quantity Surveyors : E. C. Harris & Partners ; George Corderoy & Co.

Civil and Structural Engineers : J. R. Engineer ; A. C. Brew ; S. G. Rikof (on architect's staff).

Heating : J. Stinton Jones & Partners ; Oscar Faber.

Drainage : A. P. I. Cotterell & Son ; J. D. & D. M. Watson.

Water : Sir Alexander Gibb & Partners.

Electrical : Merz & McLellan.

Sanitary : A. M. May (on architect's staff).

Chief Architect : W. G. Holford

In deciding to devote the major part of an issue to war-time hostels, we were led by the conviction that these hostels are socially, architecturally and administratively of exceptional importance. Socially they constitute an adventure for which there existed no antecedent, except perhaps in some respects holiday camps and boarding schools. But holiday camps cater for a seasonal population, and boarding schools have much less varied needs for leisure and entertainment accommodation. For as, very soon after the hostels' programme had been formulated last year, it became clear that they would be used almost exclusively by girls, and as, at that time, there was not yet any conscription of female labour, the social life of the hostels had to be made attractive enough for thousands of girls to leave their homes and join industries in the country. Architecturally, the chief complication was the high speed at which designing and building had to proceed. Only by extreme standardization could the programme be executed. Standardization has, however, as the following photographs will show, been achieved without monotony. The method used, a method also introduced into recent housing schemes and the like, is the free grouping of standard units varied according to site conditions. As to the administrative side of the building programme, the method chosen was determined by the large scale of the operations involved. Each hostel houses about one thousand girls and there are many more than we can illustrate. So a very flexible organization was developed with one architect in charge and a large team of assistants. To the architect in charge most of the initiative was left, and he was responsible to a large extent for the application of the units to the sites, and for the solution of local constructional problems.

SOCIAL CENTRE

The hostels are approached by road through gates and past a porter's lodge. The road then forms either a loop or roundabout which passes the main entrance to the Social Centre, and from which lead the narrower service roads to the rest of the site, and a short access road to the yard behind the kitchen. The bulk of the traffic, the buses and delivery vans, need not go any farther. The Social Centre is the largest of the hostel buildings, and contains the administration offices, the canteens, the assembly hall and the other recreation rooms. The main entrance to the building leads to the administration unit and to the recreation wing. The photographs show, above, the approach road to a hostel, with the Social Centre in the background; and right, the main entrance to a Social Centre.



S O C I A L C E N T R E

Administration.

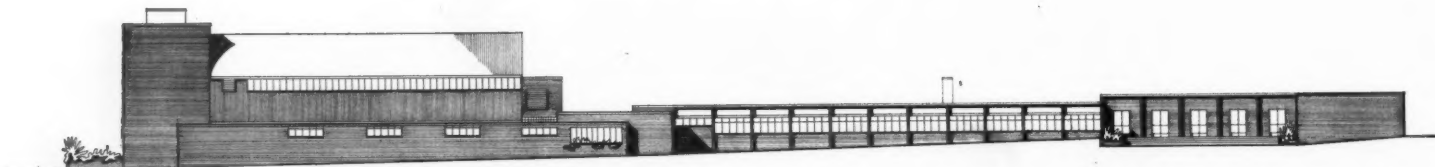
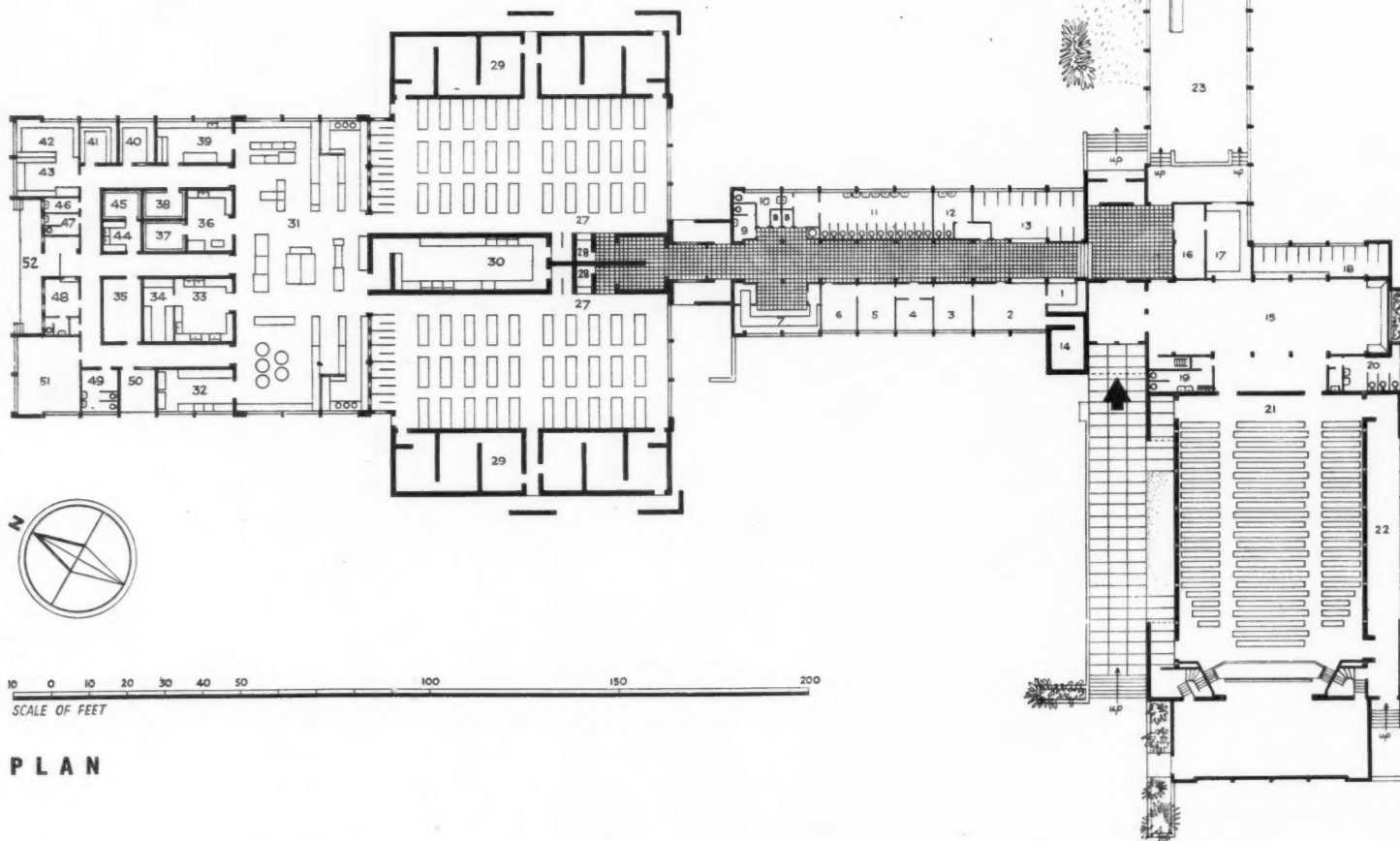
1. Porter.
2. General office.
3. Typists.
4. Accounts.
5. Manager.
6. Welfare.
7. Post office and shop.
8. Telephones.
9. Staff. Men.
10. Staff. Women.
11. Women.
12. Men.
13. Cloaks.
14. Telephone exchange.

Recreation.

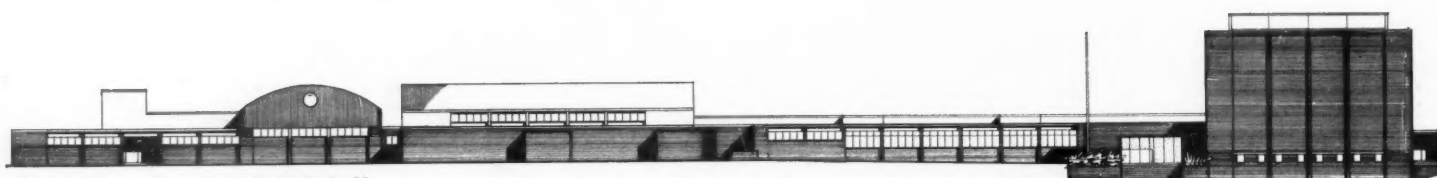
15. Foyer.
16. Bar store.
17. Bar.
18. Cloaks.
19. Men.
20. Women.
21. Assembly hall.
22. Chair store.
23. Lounge.
24. Writing room.
25. Games room.
26. Platform.

Kitchen and Canteens.

27. Canteen.
28. Cash desk.
29. Shelter.
30. Wash-up.
31. Kitchen.
32. Pot and pan wash-up.
33. Vegetable preparation.
34. Vegetable store.
35. Bulk vegetable store.
36. Meat preparation.
37. Meat refrigerator.
38. Dairy.
39. Pastry preparation.
40. Bread store.
41. Crockery store.
42. Dry goods, bulk.
43. Dry goods, issue.
44. Fish preparation.
45. Fish refrigerator.
46. Cleaner.
47. Men.
48. Manager.
49. Women.
50. Refuse yard.
51. Staff common room.
52. Unloading platform.



SOUTH ELEVATION

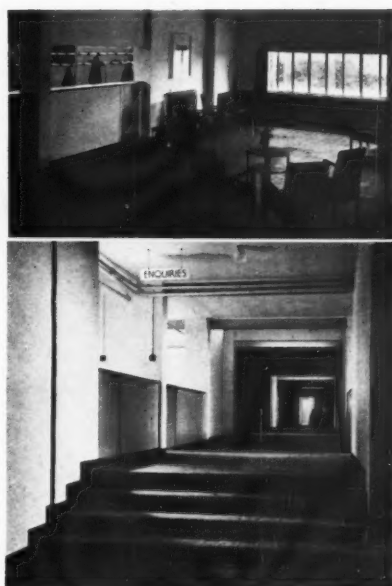


WEST ELEVATION

The Social Centre is made up of a number of units which can be linked together in various ways to suit the particular requirements of the site and to take advantage of natural features such as differing ground levels, trees and good views. The canteen and kitchen unit is standard on all sites, and is always approached through the wide central corridor of the administration unit. At the other end of this corridor is the main entrance and the recreation wing. The halls vary in size and equipment from site to site; the one shown on the facing page is the largest type. It holds 600 people and has a full stage. In all Social Centres the bar serves both the hall foyer and the lounge. The lounges and games rooms are the most flexible unit in the plan, and are not standardized, being arranged on different sites in a variety of ways. There is generally a terrace, sometimes covered, leading off the lounge or games room.

The wide spans of the kitchen, canteens and hall are roofed with curved steel trusses and corrugated steel sheets, and the other rooms have flat concrete roofs and steel beams. The building is planned throughout in 10 ft. bays.

The plan on the facing page shows a fairly rigid type of grouping; on some sites the links between the various parts are much more loose, and different angles are formed between the wings.



The administration building, above, is the centre of the activities of the hostel, and the core of the Social Centre. Residents report here on arrival, come here to interview the management, to telephone, to fetch and post letters, and to buy things at the shop. It is planned on both sides of a wide corridor which is lit at intervals by glass brick clerestory windows, and in some hostels lined with plywood built-in seats. Besides the offices and shop, it contains the A.R.P. control centre and telephone exchange, considerable cloak-room and lavatory accommodation, and often the lending library. At one end of the corridor are the canteens, and at the other end the main entrance, the foyer to the hall, and the recreation rooms.

The foyers adjoin the halls, and often have a separate entrance for the use of visitors. They contain seats, a bar, and cloakrooms, and some have been decorated with mural paintings, on plaster, by members of the architect's staff.

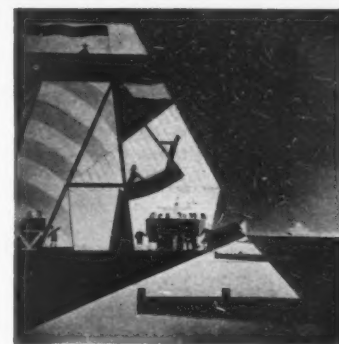


STANDARD PICTURE FRAMES



Above, left, a foyer and an administration corridor. Right, a shop and lending library which opens off an administration corridor; and another foyer, decorated with a mural painting. (The lounge can be seen at a lower level, through folding doors.)

The detail on the right is from a mural in another foyer: it is painted in bright fresh coloured distempers. Each Social Centre has also about thirty framed posters on its walls. Most of the posters are from London Transport, Shell-Mex, or the G.P.O.



SOCIAL CENTRE

The drawing, right, shows the construction of the lounges and games rooms of the Social Centre. The bays are 10 ft. wide, and the steel beams span 25 ft. The roof is of precast concrete units which span between the steel beams, and the panel walls between the structural brick piers contain one of two standard metal windows, either two or four feet deep.



The wall below the window-sill is 9 in. brickwork, and above the window a precast lintol carries a light 4½ in. brick panel which is cement rendered externally. Where light is not required the space between the piers is filled from floor to ceiling with 9 in. brickwork, either set back to give a flush surface inside the room or set forward to the outside face of the piers. Externally the piers lend a strict rhythm to these long, low buildings, punctuated by the solid panels, and internally the almost continuous glazing makes the most of the sunshine and the views.

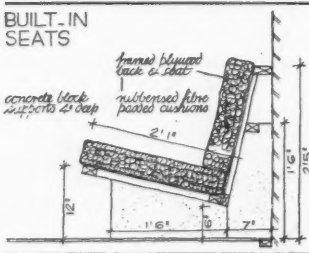
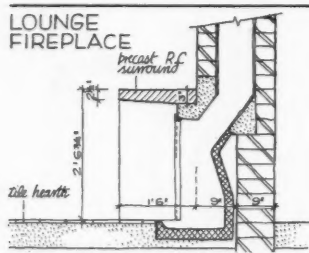
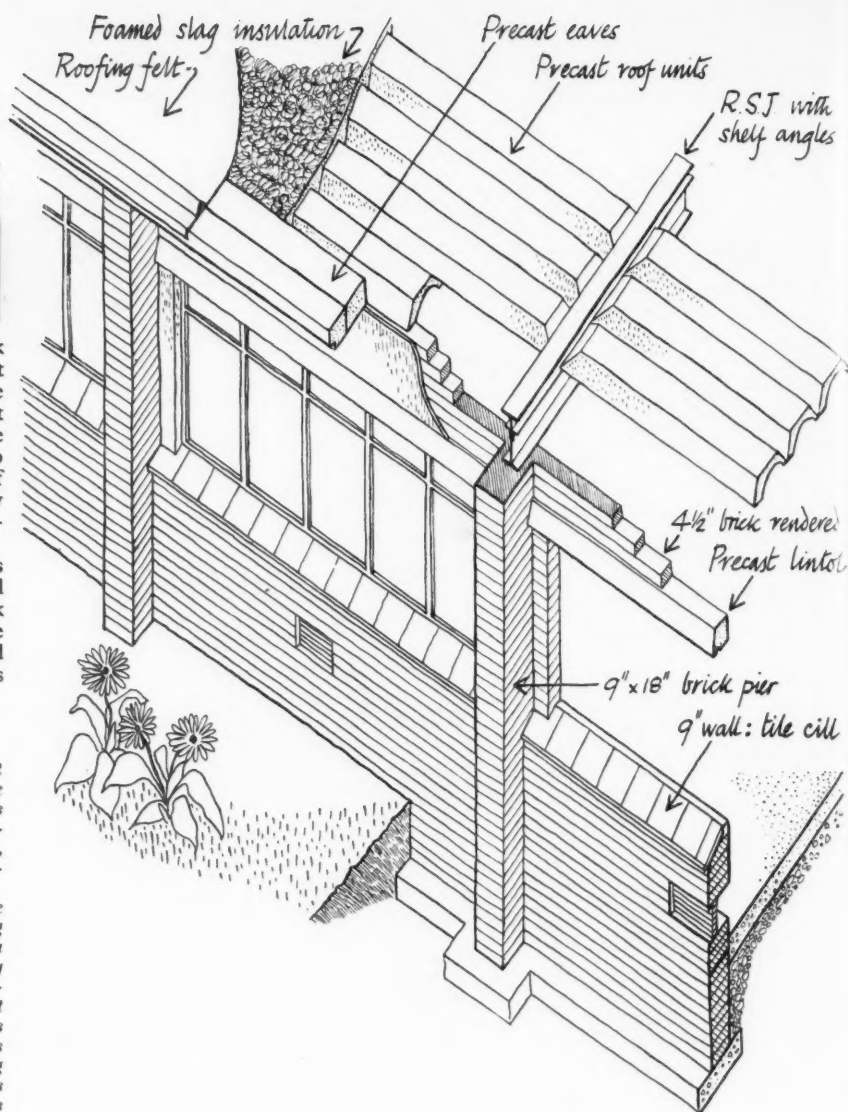
Internally the rough and deeply modelled soffit of the precast roof slabs is left exposed, and distempered. Plaster, with rare exceptions, is not used on any of the walls, but an evenness and texture is given to the brickwork by a patent rendering applied by brush and then stippled. The walls are then distempered; whites, greys, and bright contrasting colours being used to emphasize different planes and surfaces. The paintwork of the windows is white throughout.

In most cases the lounge and reading room are planned as separate but adjacent rooms, the lounge giving communication between the administration block and the other recreation rooms. In the example at the top of the opposite page, however, the lounge and reading room form one space, divided only by built-in seats and the free-standing chimney flues from the back-to-back open fireplaces. A waxed plywood screen gives a sense of seclusion from people who are passing through to the games room, without destroying the apparent volume of the lounge. The bar is at the far end of the room, at a slightly lower level. The floor is of polished pine blocks; in most other cases it is linoleum. The fireplace has a precast concrete painted surround, and the facing of header bricks is treated with oil. The hearth is quarry tile. Fireplaces are provided in all lounges and reading rooms, and there is always a built-in seat round the lounge fireplace.

The lounge on the right is separate from the reading room, which, with the writing and games rooms, is approached through a door on the left. The picture is one of the "Shell" topographical series; these and other posters by G.P.O. and London Trans-

port have been used widely throughout the hostels. The fireplace wall is pale blue, and the ceiling and other walls very pale orange. The fireplace surround is white and brown gloss paint, the carpet light brown, and the upholstery dark brown.

The photographs at the foot of the opposite page show, left, a reading room, and right, a foyer seen from a lounge at a lower level. The Ministry of Works and Planning was responsible for all furnishing, and most of it was specially designed and mass produced on a large scale for hostels and similar buildings. Considering wartime difficulties, the standard is good, although the design of the textiles is inferior to that of the furniture.







Above, another view of the lounge and reading room on the previous page, looking from the bar. The brick parapet, which is painted chocolate, divides the lounge from the lower floor level at the bar. Walls and ceiling are off-white, the beams white with brown soffits, and the curtains terracotta coloured with a white and powder-blue pattern. Right, a games room. The colours are scarlet, pale blue, and white, and the brown linoleum floor is marked out for deck games.

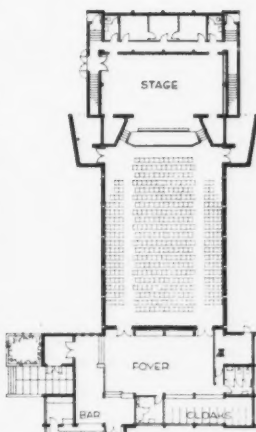


SOCIAL CENTRE



HALLS

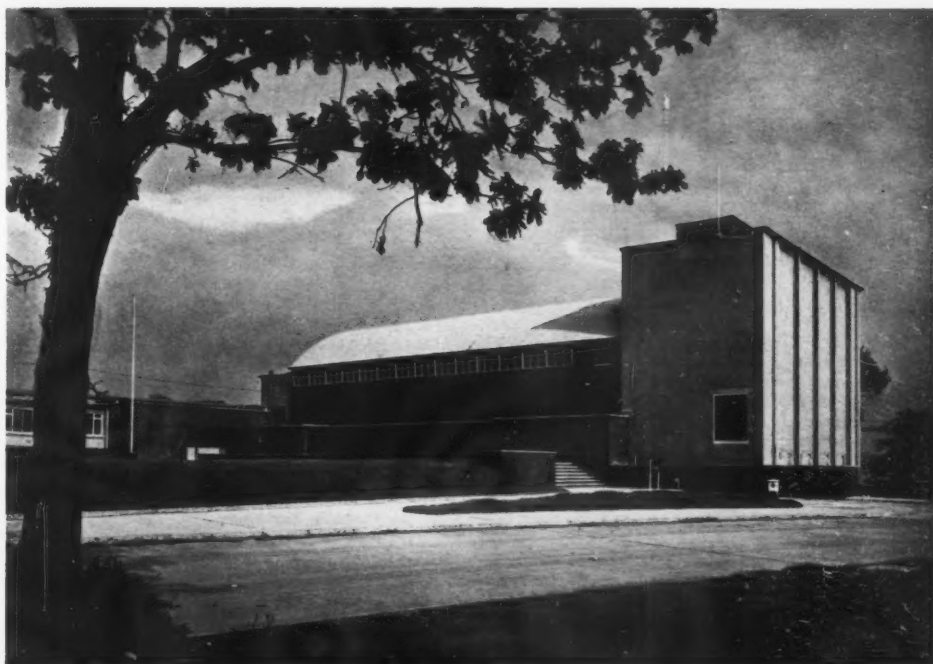
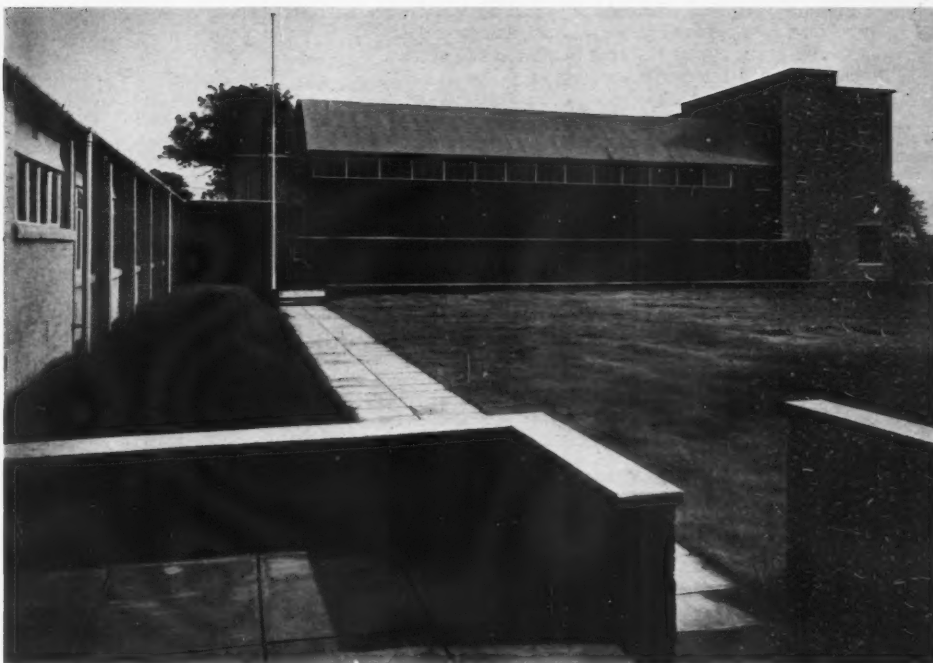
Plan of a hall with full stage and orchestra pit. It holds 350 people, and does not differ materially except in size from the larger type shown in the Social Centre on page 134. The projection room is over the foyer. The photographs are of a larger 600-person hall; the auditorium has brick blast walls with corrugated steel sheeting and fixed glazing above. The view above shows the main entrance.



The assembly halls are for concerts, dances, plays, cinema and other social functions, and vary in size and equipment. The big ones with stages suitable for full-scale theatrical performances and cinema are used by residents at nearby hostels where they have only smaller halls with a platform. All the halls have a level auditorium for dancing, and folding seats that can be stored when they are not wanted.

There are four different types of hall: those with a platform and provision for a 16 mm. cinema projector, and holding either 250 or 350 people; and those with full stages and a normal commercial sized 35 mm. projector, holding 350 and 600 people. They all have dressing rooms either behind or under the stages.

On some sites the halls have A.R.P. shelters flanking the auditorium on both sides, and are lit entirely artificially. Later halls, however, omit these shelters, and have windows; a great advantage for residents on night shift who are using them for dances, rehearsals, etc., in the daytime.



HALLS

The large halls are constructed to give the audience protection from blast. The roof trusses are carried on steel stanchions which are independent of the 8 ft. high brick blast walls, and the remaining part of the wall is filled with corrugated sheeting and fixed glazing. The sheeting is in two skins, steel on the outside and asbestos inside, and counter-balanced green canvas blackout blinds are pulled up vertically from the cavity, running in guides in the stanchion flanges. One of these can be seen in the top photograph on the right.

Warm air enters the auditorium from grilles that run the width of the back wall just above head height. The ducts are concealed in a falsework similar to the ceiling. Air is extracted from vents at high and low level in the proscenium wall. Additional local heating is given by radiators.

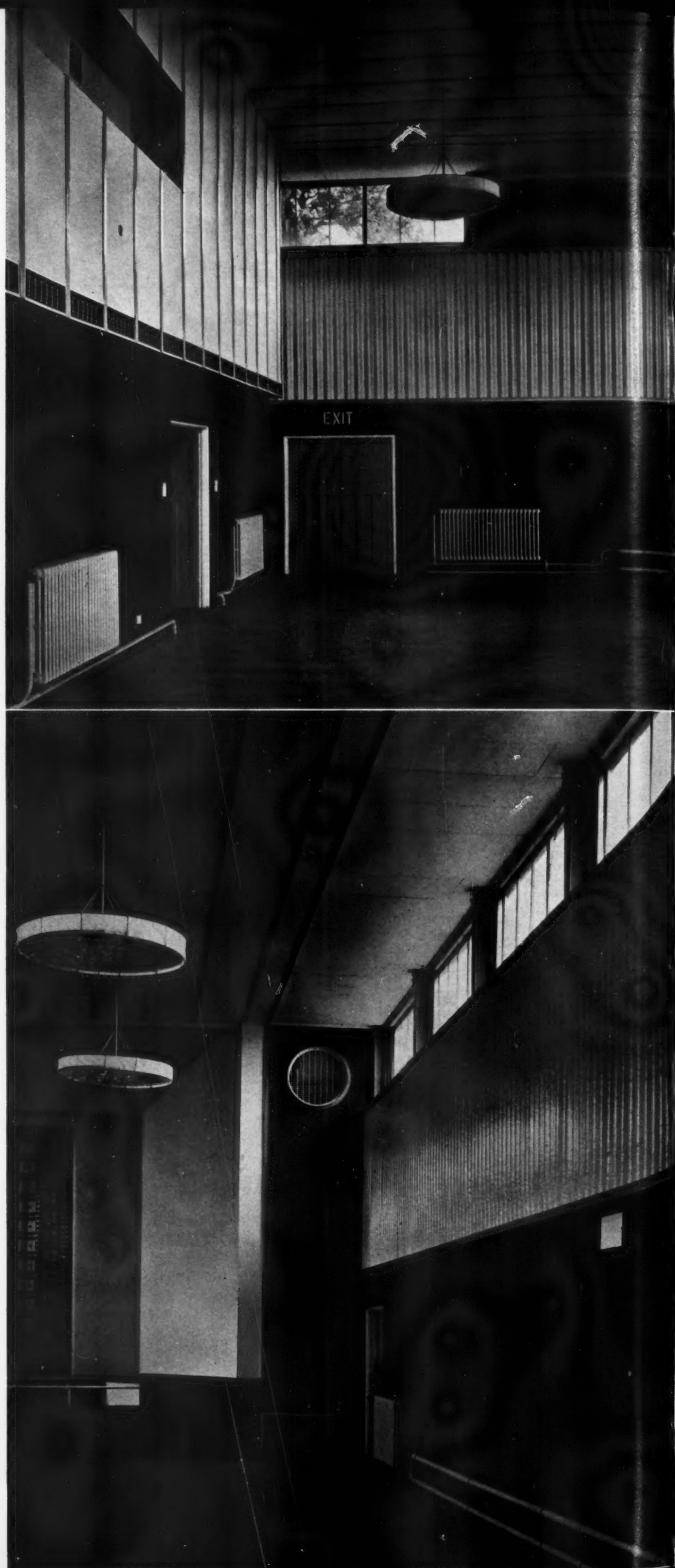
The stages are fully equipped for theatrical performances, with electrician's gallery, footlights, floods, and spots operated from above the auditorium ceiling, scenery grids, orchestra pit, and full-size cinema screen.

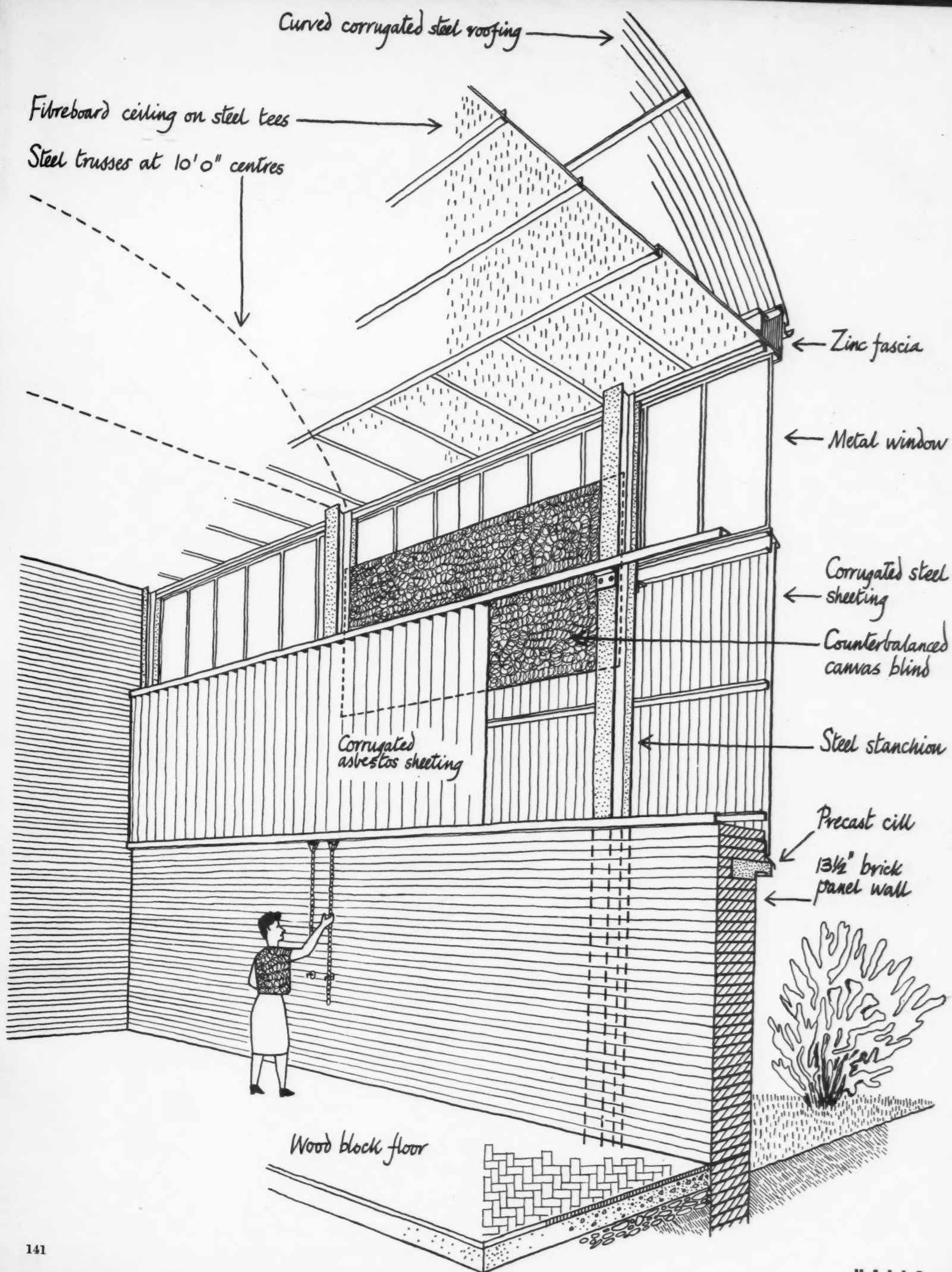


For all halls the interior decoration is similar to the lounges—a stippled rendering on the brickwork, distempered in light shades. Ceilings are distempered white, or left in the natural biscuit colour of the fibreboard, and the steel tees supporting them are painted in bright glossy colours. The two basic complementary colours used in all the halls are scarlet and blue-green, which have almost equal reaction to electric light and have long been associated with the theatre.

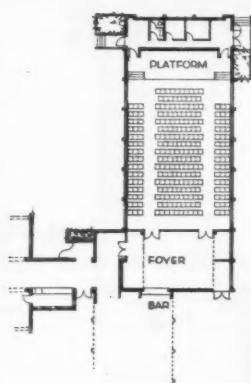
The photographs on the right show the back and proscenium walls of the largest type of hall, which holds 600 people. The materials are brickwork, asbestos, glass and fibreboard. The floor is wood block, and the fibreboard ceiling is supported on steel tees. The lighting fittings are parchment on a wire skeleton. The corrugated asbestos is painted with a white gloss paint, and the brickwork below it is chocolate. Bright colours are obtained in the stage curtains and the steel tees and angles supporting the ceiling, back wall, and asbestos sheeting. The oblique walls to the proscenium opening are plastered.

The photograph above shows a large hall from the foyer end, and its connection to the recreation wing with the long row of lounge windows and the French doors to the terrace outside the games rooms. The curved roofs to the bigger spans in the Social Centre are similar to the many Dutch barns in this agricultural district and, combined with the browns and greens of the camouflage paint, help these high buildings to sit comfortably in the landscape.





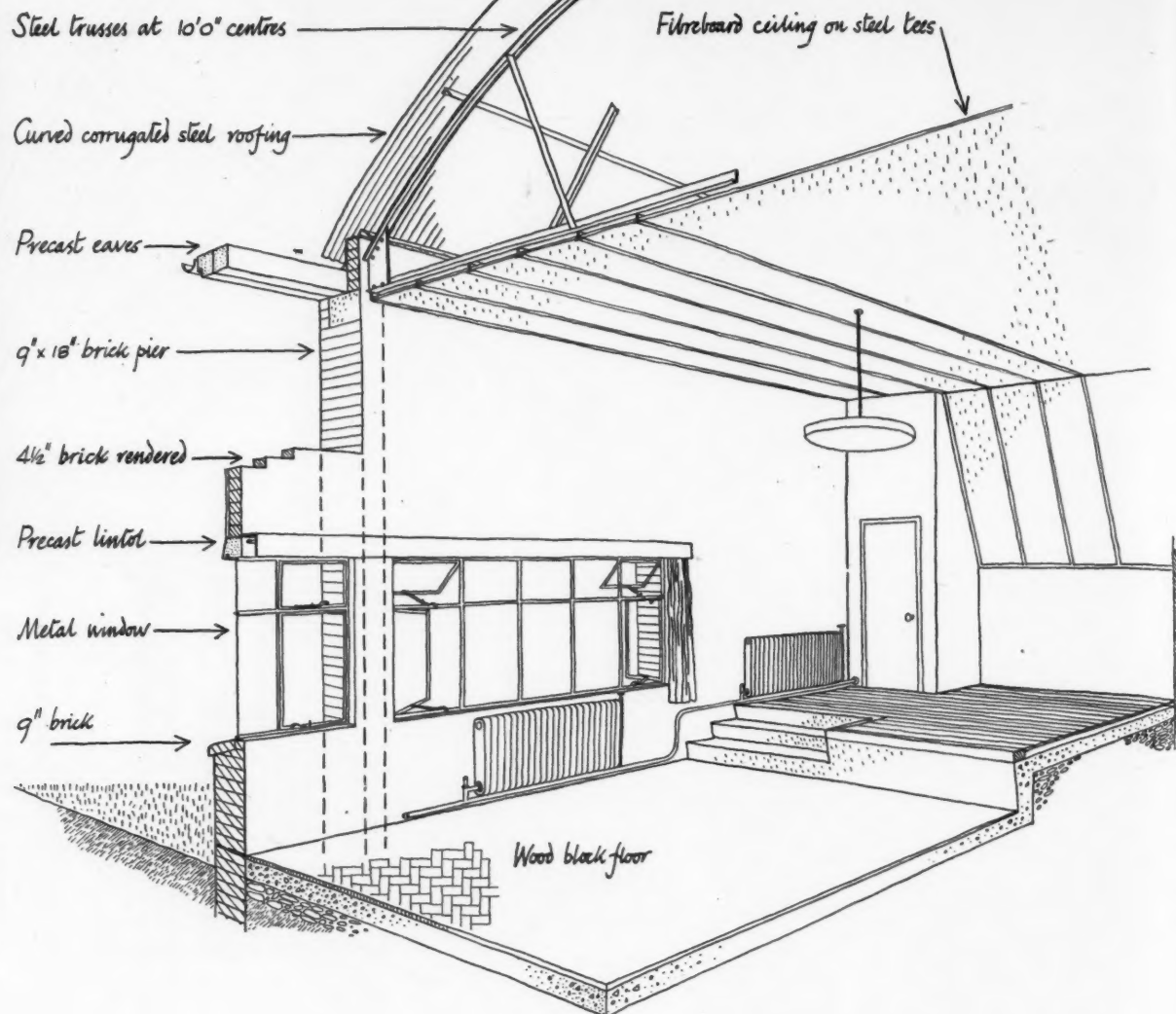
HALLS



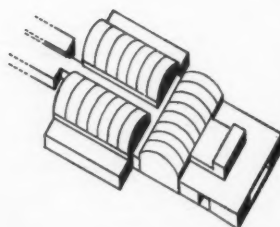
SCALE OF FEET
0 5 10 20 30 40 50 60

Plan, and photographs of the exterior and platform end of the smaller type of hall, which holds 250 people and has no stage equipment.

The smaller halls, with open platforms and 16 mm. cinema projectors, are constructed with brick piers at 10 ft. centres and a brick panel wall infilling similar to that in the lounges, with low-level windows along the whole length of both sides. The finishes and ceilings are similar to those in the bigger halls. Ventilation ducts are in the roof space, and the foul air is extracted through grilles in the ceiling. The heating is by radiators.



KITCHEN AND CANTEENS



On the facing page, top, the kitchen yard, with the unloading dock on the left and the bedding store in the background; the two canteens, showing their link with the administration building through which they are entered; and the interior of a canteen, looking towards the hatches.

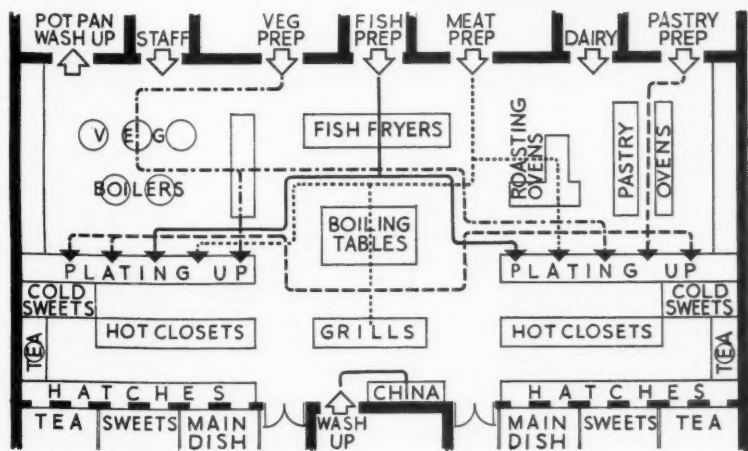
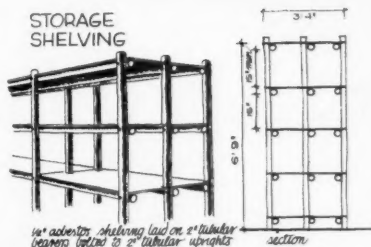
The other photographs show general views of the kitchens, the vegetable preparation room, and the food hatches. The kitchen floors are either quarry tiles or a granolithic finish with a polishing floor paint to keep the dust down.

The kitchen and canteens are the largest unit in the Social Centre, and are standard on all hostels. The building contains two parallel canteens, which are entered by residents from the administration corridor. At the other end of the canteens are the meal hatches, the kitchen, and the preparation rooms and stores which are connected to the kitchen by wide corridors. Each canteen seats 250 people, and at week-ends the kitchen has to be capable of serving up to 1,500 people at each meal. It is capable of providing a wide variety of meals, and full meals can be cooked by either steam or electricity should one or the other fail.

Large air-raid shelters flank the outside walls of the canteens, and the two canteens are separated by the crockery wash-up. The full plan is shown on page 134. Originally the wash-ups were also air-raid shelters for the kitchen staff, but with the relaxation of A.R.P. requirements lantern lights have been added.

The steel trusses of the canteens and kitchen, spanning 40 ft., are carried on brick piers. The roofs are covered with curved corrugated steel, and corrugated steel sheets are also used as a vertical facing to the gable ends. Canteens have large low-level windows at one end, and smaller continuous windows at high level along their sides, above the air-raid shelters and wash-ups. The preparation rooms and stores have a concrete slab roof, and their panel walls and piers are the same as the other low buildings in the Social Centre. The kitchen ventilation is by extract ducts over the fittings, and extract vents in the gable ends. The windows are at high level along its long sides, and at a lower level at the two ends.

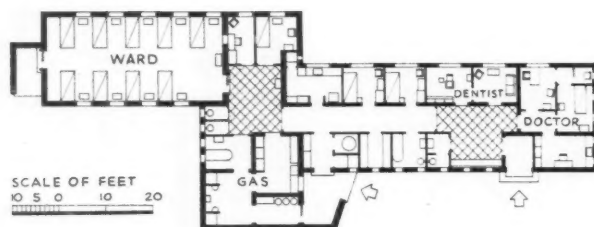
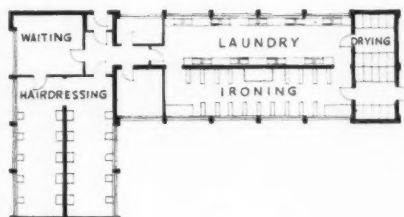
The canteen ceilings are fibreboard, distempered white, with brightly coloured steel tees and circular ventilators. The walls are in light tones, with the exception of the end wall around the meal hatch recess, which is in a darker colour. Floors are brown linoleum, and the chairs and table legs are painted. The tables have lino tops. The canteens are warmed by unit heaters, one in each corner, and there are extract vents in the ceiling.



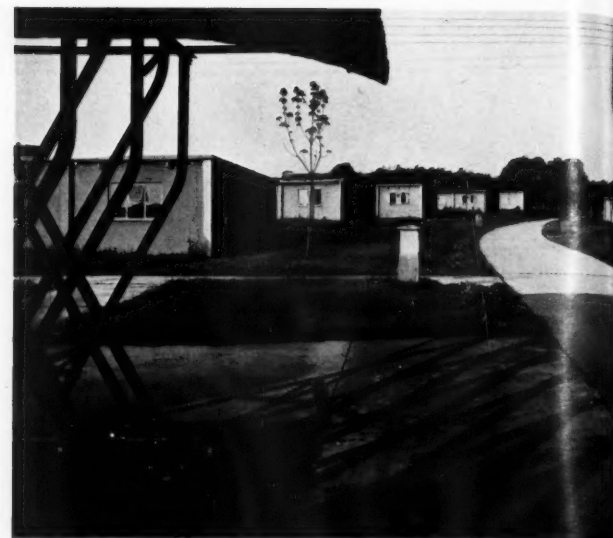
KITCHEN AND CANTEENS

SERVICE BUILDINGS

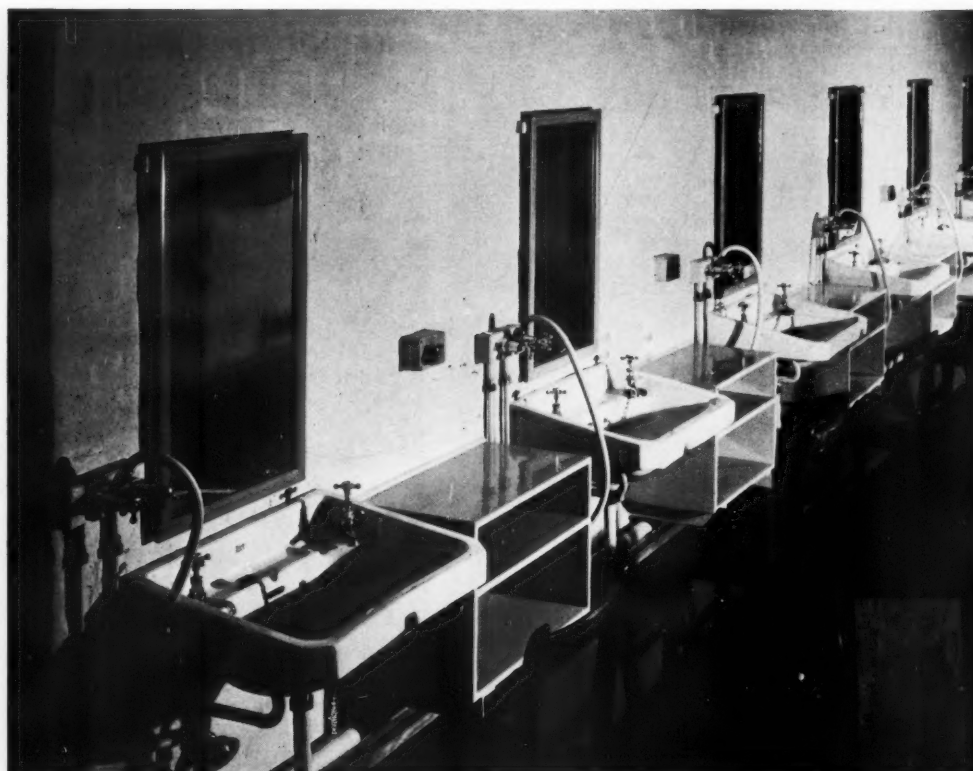
Besides the Social Centre and the bedroom blocks there are a number of other buildings on the sites. Two boiler houses supply steam and hot water throughout the hostel, distributed by mains which for the most part run along the roofs of the buildings; between buildings the mains are taken overhead, except when crossing roads. There is a hairdressing block, near the Social Centre, with a laundry where residents can wash, dry and iron smaller garments. The usual sick-bay, with an out-patients' department, has a nine-bed ward and an isolation room, but on some hostels the accommodation has been increased. There are also a small chapel, a house for the manager, and various store and garage buildings planned near the kitchen yard.



Left, the laundry, with its range of sinks discharging into a floor trough; and one of the chapels, with a fibre slab roof supported on beams made from steel scaffolding poles. Below, a detail of the hairdressing room. The plans are of the laundry and hairdressing building and the sick-bay.



Bedroom wings on H type blocks. Where the site slopes, changes of level are introduced in the passages of the central spines to allow the wings to step down the contours. The wings in this example are constructed with 9 in. brick piers and hollow tile panel walls that are rendered externally. They are painted in a pale tone, the end walls of the wings being a different colour. Bright external colours, as in other buildings, are confined to the doors. Oil burning A.R.P. lanterns mark the intersection of roads and paths throughout the sites, and covered cycle racks are placed at intervals along the roads. On some few hostels, racks have been provided to each bedroom block, placed against the entrance wall between the two porches.

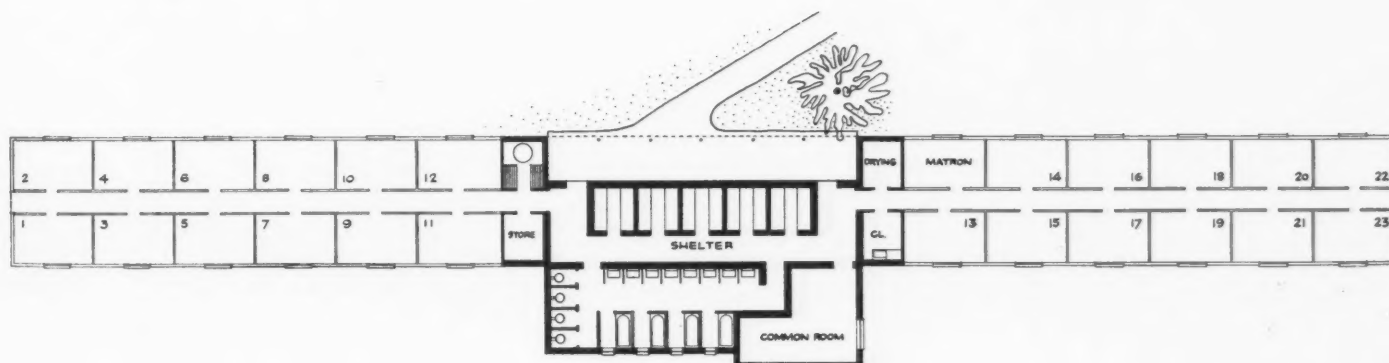
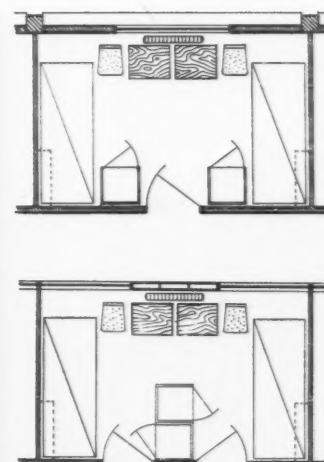
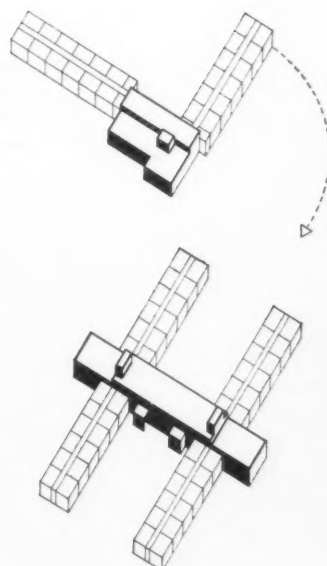
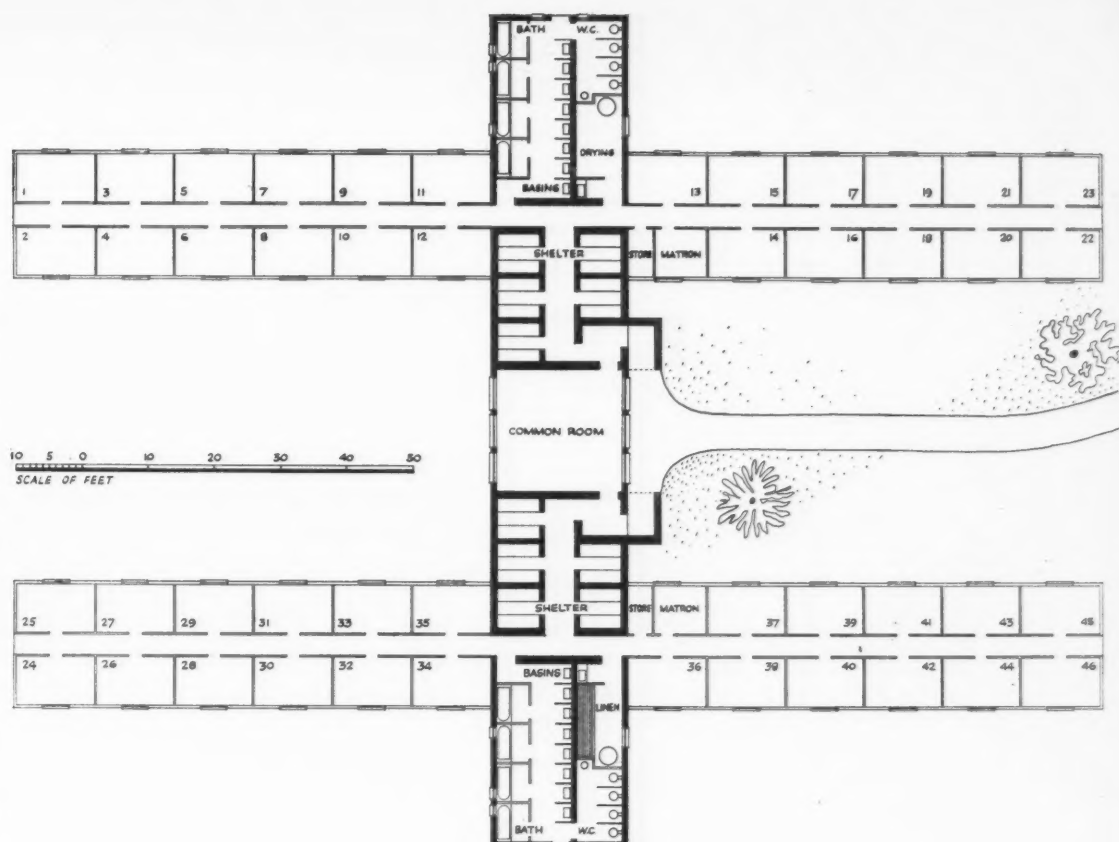


The bedroom blocks represent about two-thirds of the total built-up floor area on an average hostel. The bedrooms are in lightly constructed wings, and planned along both sides of a 3 ft. wide corridor. The common room, air-raid shelter, bathrooms and lavatories are in a central spine of more solid brick construction. The blocks are of two kinds, the H type and the L type. The former was the first to be designed, and owing to the simultaneous start of building on a large number of sites is much more extensively used than the later L type, which, with bedroom wings that can be rotated through a wide angle, has advantages for siting and variety of layout that the more rigid H plan does not possess.

The central spines of bedroom blocks are constructed of 13½ in. and 9 in. brickwork, and have *in situ* concrete roofs. In some hostels the roofs to the lavatories are patent fibre slabs on hollow tile beams. The concrete floors have a monolithic granite finish and are lino covered except in the lavatories, where a polishing floor paint is used. The W.C. partitions and the screens between the basins are asbestos sheets supported by 3 in. diameter asbestos posts. Asbestos doors and door posts have been used in the lavatories to save timber. Here and everywhere else in the hostels the wastes from ranges of basins discharge into floor troughs for ease of cleaning and to shorten metal pipe runs.

With the exception of a brick and hollow tile type, bedroom wings are standard prefabricated huts with hollow tile partitions. These had been allotted to the hostels before the architects came on the scene, and are of various kinds—timber, precast concrete, and timber and plasterboard. They all measure approximately 72 ft. by 18 ft. 6 in. internally, and have trussed roofs.

The plans and axonometric drawings on this page show the two varieties of bedroom block, the H type and the L type. The former takes ninety-two girls and two house matrons, and the latter forty-six girls and one matron. The air-raid shelters have three-tier bunks, and, with six to a compartment, can sleep two-thirds of the total number of occupants of the block. In the L type blocks the small service rooms make a flexible link between the bedroom wings and the central spine, enabling the wings to be rotated through a wide angle to suit the contours of the ground and other site conditions. Bedrooms measure about 12 ft. by 7 ft. 6 in. and are furnished with two beds, hanging cupboards, chests of drawers, chairs and bookshelves. Each has a radiator under individual control. The lower plan, with two doors, although constricting the space, gives a little more apparent privacy. The upper type is brick and hollow tile construction; the lower one is a prefabricated hut, also shown in the photograph of the bedroom corridor. Ceilings and walls are spray painted pale yellow, and the ties of the trusses are picked out in a distinctive colour. The concrete floors are lino covered.





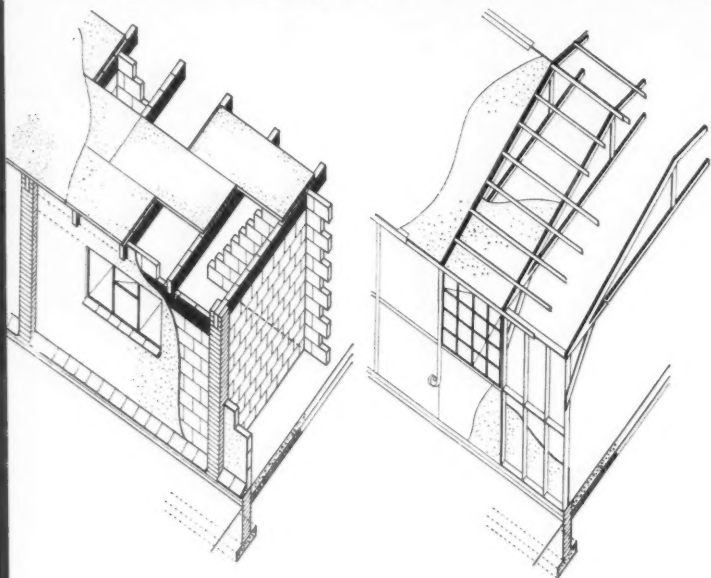
B E D R O O M B L O C K S

The entrance front of the normal H type block. The overhead steam mains which supply heating to all the blocks, and which are supported where possible on the roofs of the buildings, can be seen passing along

the central spine. The bedroom wings are in the brick and hollow tile construction shown below in the drawing on the left. These wings were built on hostels to which standard huts had not been allotted,

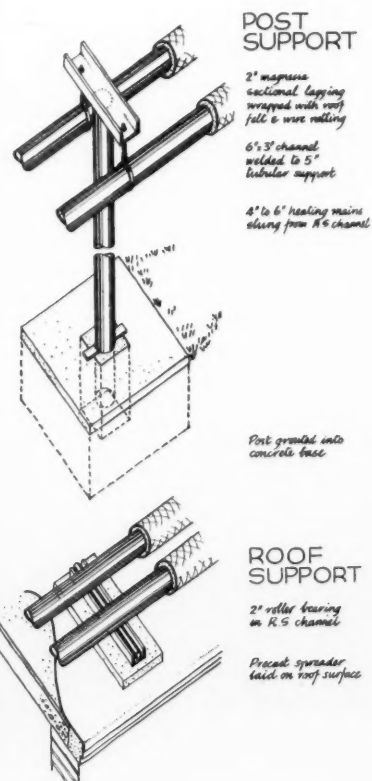
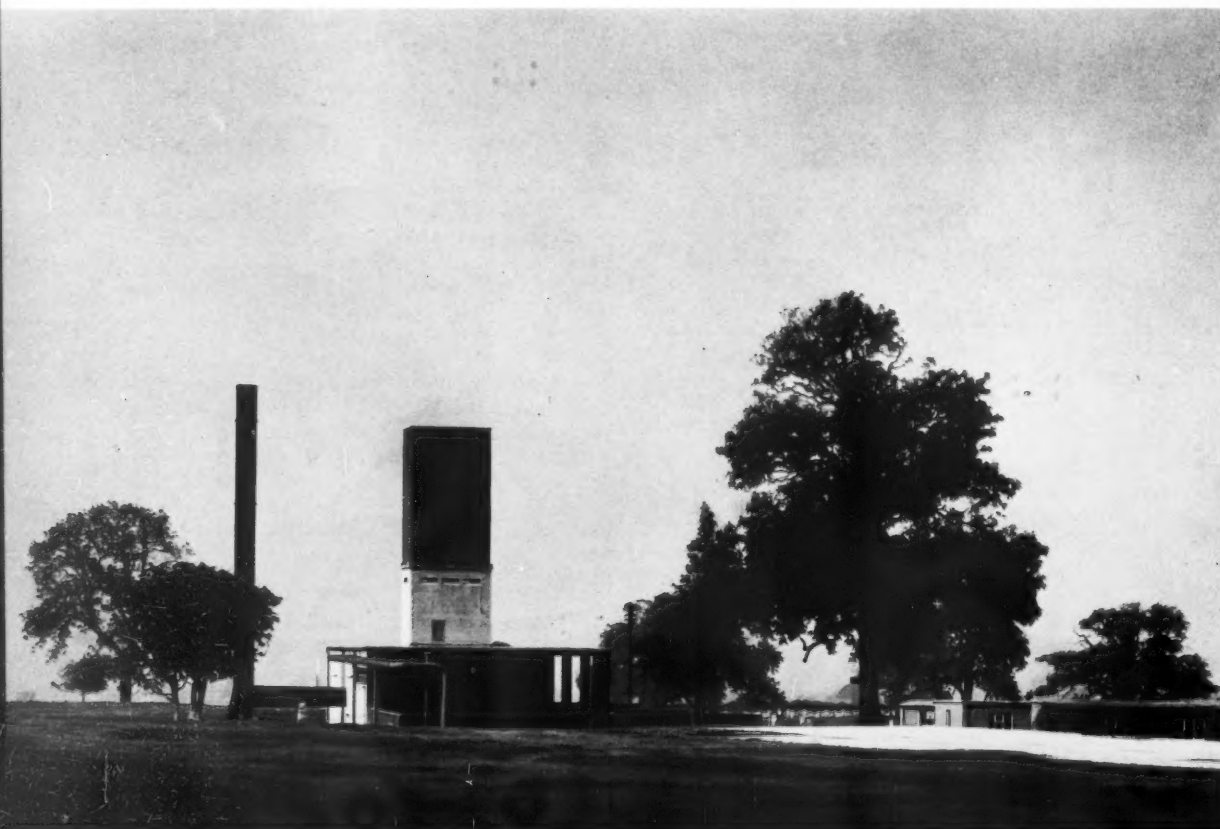
and the design was evolved to reduce bricklaying to a minimum, and to avoid the use of timber for joists or shuttering. The 9 in. brick piers take a precast beam of 4 in. hollow tiles threaded on reinforcing rods, which spans above the window, and similar beams span from this to the hollow tile corridor partition. Panel walls are hollow tile rendered externally, and the roof is patent fibre slabs secured with wires looped, during casting, round the top reinforcement of the beams. Roofs are felted, and the windows are metal.

The other drawing shows one type of prefabricated hut which has been used on other sites; the wall units are about 4 ft. wide by 8 ft. high, framed with light timber sections and clad with plasterboard and water-proof felt. A plasterboard or corrugated iron roof is supported on timber trusses at 4 ft. centres.



B O I L E R H O U S E

The boiler house, left, has a protected fire-watching post above the roof, and the steelwork supporting the water tank is clothed with corrugated steel sheets. The mains go underground to reach the bedroom blocks on the right. The two types of support for overhead mains are shown below.



William Bell Scott's portrait of Pauline Lady Trevelyan, his and Ruskin's friend, for whom the wall paintings in the Central Hall of Wallington House were painted.



Preraphaelite paintings at Wallington note on William Bell Scott and Ruskin

By Robin Ironside

IN his *Autobiographical Notes*,¹ William Bell Scott records that the interior courtyard of Wallington House,² open to the sky, "had been long found productive of only damp and cold," and how, in 1853, "Dobson the architect of so many noble works in the North of England, turned this blind space into a saloon by opening the walls into arcades and covering the whole by a coffered roof. Paved and surrounded by hot-water pipes, the whole house was made comfortable and a place provided for pictures and decoration which I was to supply." Whatever the merits of John Dobson (1787-1865)—and his work in Newcastle, particularly his partially executed design for the Central Station, has been celebrated—the Central Hall at Wallington is remarkable merely as an architectural adaptation rather than for its artistic quality. The elevation is not disagreeable, but its component features are unusually depressing. The suggestion that this hall should be constructed is said to have been made originally by Ruskin, who first visited Wallington in 1853 as the guest of Pauline Jermyn, Lady Trevelyan, "a kind of wit and not unamiable," who was already his firm "monitress-friend." Ruskin's opinion of the practical outcome of his suggestion is, as far as can be ascertained, unrecorded; there is, however, a tradition in the Trevelyan family that Ruskin himself was responsible for the design of the balustrade on the first

floor, a tradition which is supported by its somewhat Venetian Gothic character.

Something more is known of Ruskin's reactions, which were evidently unfavourable, to the large paintings supplied for the decoration of the hall by Bell Scott. In 1854, at the desire of Dr. Samuel Brown, a close friend of the Trevelyans and of Ruskin, Scott, then a master in the Government Schools of Design at Newcastle, sent to Sir Walter Trevelyan a copy of his *Poems by a Painter*, in reply to which he received a "pressing" invitation to visit Wallington. He found that Lady Trevelyan, who charmed him as she had charmed Ruskin, had not, in spite of what he considered to be her powers of discrimination, "risen above the Turner mania" and that Ruskin "held an overpowering influence over her." Scott's simple but wry nature did not incline him to sympathise with Ruskin's complex lines of thought and, as a teacher in the Government schools, he was most cynically disposed towards Ruskin's activities at the Working Men's College, where the critic was endeavouring to open the eyes of his pupils to the beauty of withered leaves and lichenous stones. It was therefore with great reluctance that Scott, when, in 1856, he was commissioned to provide the paintings for Wallington, agreed, at the request of Lady Trevelyan, to consult Ruskin about the scheme. Such consultation as took place was slight and unfruitful, Ruskin being, for the moment, "quite vowed to idleness," and probably also disapproving of his friend's choice of an artist. Whether or not he had, at the time, much knowledge of Scott's capacities, his subsequent experience of them does not appear to have been rewarding; in a letter in the *Pall Mall Gazette* of January 11, 1875,³ criticising a review of Scott's which had been published in the same paper, Ruskin refers to him as "one of a rather numerous class of artists of whose works I have never taken any public notice, and who attribute my silence to my inherent stupidity of disposition" and also as "one of the more limited and peculiarly unfortunate class of artists who suppose themselves to have great native genius. . . ." He goes so far in this

letter as to express regret that Scott was once photographed on the same plate with Rossetti and himself.

Quite apart from the tone of these remarks, in themselves sufficiently revealing, there are other grounds for supposing that Ruskin's virulence of manner was due to more than his estimate of Scott as a painter. In the same letter Scott is further stigmatised as being among those artists who "dislike being told to learn perspective, and prefer the first volume of *Modern Painters* which praises many third-rate painters, and teaches none, to the following volumes, which praise none but good painters, and sometimes admit the weakness of advising bad ones." Ruskin goes on to refer to a visit to Wallington when he saw Scott's paintings and uttered, in his good nature and weak conscience, what praise he truly could of them. It is reasonable to infer from these statements that Ruskin had sought to counsel Scott in the matter of his painting and that his advice had been rejected, doubtless as caustically as possible. In the rather unhelpful note⁴ which Ruskin sent to Scott when the latter, very loath, originally consulted him about the Wallington scheme, the only positive recommendation, a sound one, relates to ornamental features of the plan; he says he is inclined to favour "*All Nature* in the present case if but for an experiment." "The worst of Nature is," he adds, "that when she is chipped or dirty she looks so very uncomfortable, which Arabesque don't. Mind you must make her uncommonly stiff." To judge by the result, little heed was given to this injunction. Furthermore, though it was first intended, in consequence, possibly, of Ruskin's note, that the spandrels of the upper arcade were to be decorated with arabesques, Scott finally and, without any success, substituted a literary subject.

The work, as eventually completed in 1861,⁵ comprises eight large paintings, awkwardly placed beneath the arches of the lower arcade, representing scenes out of Northumbrian history from the building of the Roman Wall in the neighbourhood of Crag Lough down to

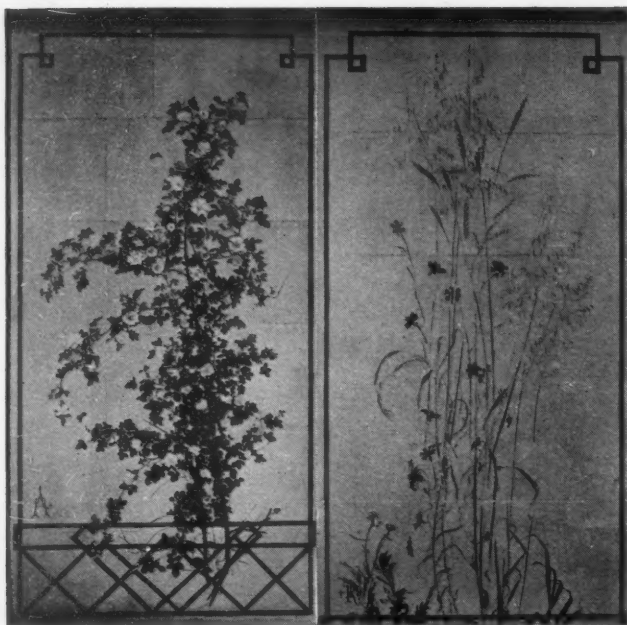
⁴ Quoted in Scott's *Autobiographical Notes*, Vol. II., p. 7.

⁵ Preliminary designs are now in the Victoria and Albert Museum.

¹ Published posthumously in 1892, Edited by W. Minto.

² For a general account of the house, which dates principally from 1688, see *Country Life*, Vol. 43.





Two of the floral panels decorating Dobson's Renaissance piers. The one on the left is by Arthur Hughes, very Victorian in pattern as well as obtrusiveness of presentation. The other, the qualities of which are barely discernible in a photograph, is by Ruskin. It is exquisitely observed and softly and delicately painted. Most of the other panels are the work of Lady Trevelyan herself.

Grace Darling, and the final subject, "Iron and Coal," showing Newcastle Quayside shortly after the building of the High Level Bridge. The spandrels of this lower arcade are decorated with portraits, wreathed by floral motifs, of eminent men connected with the Border country from Hadrian to George Stevenson; those of the upper arcade, on the first story, carry paintings depicting the Border *Ballad of Chevy Chase*. The eight large compositions were exhibited at the French Gallery, Pall Mall, in June, 1861. "But," Scott declares of this occasion, "Gambart pushed it over the season for other more promising ventures; the exhibition did little good." Reproductions of the pictures, however, found their way into popular or juvenile histories; the "Building of the Roman Wall" has, indeed, become a familiar illustration.

Scott was a painter—and poet—of limited powers. Contact with the Pre-Raphaelites, notably with Rossetti, with whom he was on intimate terms, had given his manner what agreeable flavour it possessed, though it was to Dürer and Nuremberg rather than to Florence that he gave his romantic allegiances. His less ambitious works, particularly his landscapes, are sometimes marked by that bitter-sweet conjunction of electric greens and purples which was so often the vehicle of the more tense thoughts of those artists who suffered the direct strain of Pre-Raphaelite inspiration; this, it can be safely asserted, Scott never experienced. But his art may be said to fill a niche between the work of Poole, Egg and Frith and that of the strict Pre-Raphaelites; it was a product of that wider, European movement of which English Pre-Raphaelitism, for an instant only, was the most beautiful, and also the most anguished, manifestation. The Wallington pictures can be fittingly linked with the less personal achievements of Madox Brown and with the continental school of history painting whence Brown emerged; they can equally well be compared with the historical decorations of the Villa Massimi, carried

out some forty years earlier by the German Nazarenes. Many of the scenes from Cecil B. de Mille's *The Crusades* or *The Sign of the Cross* have benefited from a similar heritage. A striving for verisimilitude, within the limits of a fallacious decency, marks Scott's paintings; the principal personages of his Border incidents are portraits of Northumbrian contemporaries of the artist, a local clergyman, for example, representing St. Cuthbert. The hall porter of the Newcastle Museum appears in two disguises; Pauline Lady Trevelyan is seen as a Saxon woman fleeing from the marauding Danes, and a Hesleyside gamekeeper and the Wallington estate agent make their bows in other subjects. The landscape backgrounds and minor accessories are distinctively Northumbrian. The general effect is one of "tableaux" rather than pictures.

While the work on the paintings was still in progress, Madox Brown sent a photograph of one of the completed subjects "King Egfrid and Cuthbert" to Rossetti who, in a letter to Scott, commented upon it with some enthusiasm declaring it to be a noble picture and supposing it to be the only one existing as yet of so definitely a "historical" class, in which the surroundings were all real studies from nature—"a great thing," he says, "to have done." The judgments of sensitive or penetrating minds on the work of their contemporaries tend almost inevitably to confuse what is of permanent value with what is of genuine value at the moment. There must be few people to-day who can read *Philip Van Artevelde* with pleasure; yet it is difficult not to believe that the admiration of Rossetti for it was the response to some real, though evidently transitory, quality. Whatever the source of his respect for the "Cuthbert," and it may have sprung merely from Scott's careful observance of the prevailing canons of history painting or from personal regard for the painter, we can now, with confidence, reject his praises. The Wallington paintings are period records of considerable interest, but they fail as works of art, conveying the impression that the painter himself, in anxiety to "create" a record of much remoter periods, neglected the pictorial possibilities, poetic or decorative, of his theme. They may have served at the time to illustrate the history of Northumberland; to-day, they are most fruitfully examined as illustrating the history of the nineteenth century, the last picture of the series, "Iron and Coal" (probably one of the earliest instances of heavy industry supplying the subject of a picture), being necessarily the most satisfactory in this respect. It is one which can also be appreciated from an æsthetic point of view—and in this it stands apart from the others—containing passages of delightfully fresh observation; the glimpse of the quayside on the left has been painted with all the care and simplicity which distinguishes the best contemporary genre of Martineau and Boyd Houghton, and with a curious potency, almost primitive in quality, which is less frequently encountered, but is, all the more, a precious characteristic of the mid-Victorian Pre-Raphaelite vision. The still-life group on the right shows real and felicitous invention; it is worth noting incidentally that the news sheet which appears here records the victory of Garibaldi at Caserta.

The piers which separate the paintings are decorated with representations of plants and flowers painted directly on the stone. These panels are not the work of Bell Scott. The majority were capably but insensitively

executed by Pauline Lady Trevelyan. One of them, however, is by Arthur Hughes (1832-1915), at his best a very winning, but always an unequal artist; were it not, indeed, for the sustained charm of his illustrations it might be said of him that, at an early moment in his career, he "hung his harp upon a tree"; at least, its tautest strings snapped when the fine fever of Pre-Raphaelitism, which infected his youth, had spent its ephemeral strength. It does not appear that his later work in oils ever recovered the emotional pitch of *April Love* (Tate Gallery) or *The Nativity* (Birmingham) both evidently executed under the influence of contacts with the youthful Millais and Rossetti. The Wallington flowerpiece displays all the tenderness, but is without, unfortunately, any of the tension of his finest work. The plant or flower study for its own sake, unrelated to any touching human situation was unfitted to the particular sentimental mode in which, too rarely, Hughes excelled. It was, on the other hand, a subject completely congenial to the spirit of Ruskin who visited Wallington in 1861 in order to paint one of the pilasters himself.

Lady Trevelyan hoped he would take the Annunciation lily as his subject. Scott's account of what followed is characteristic. "... The modesty of the professor," he states, "would not allow him to take that sacred flower. No; he would take the humblest—the nettle! Ultimately wheat, barley and other corn... were selected, and he began, surrounded by admiring ladies." The painting is tenuous in design and, as a result of a personal difference with Lady Trevelyan, Ruskin left it unfinished. But it contains something of his genius and coarsens the effect of the other work in its neighbourhood; the subject has been treated with his usual exquisite perception of the habits of nature's growth, which startles by its truthfulness, and in colours which are as soft and lucent as Scott's are, in the main, crude and discordant. It is the most, if not the single, lovely feature of the whole plan.

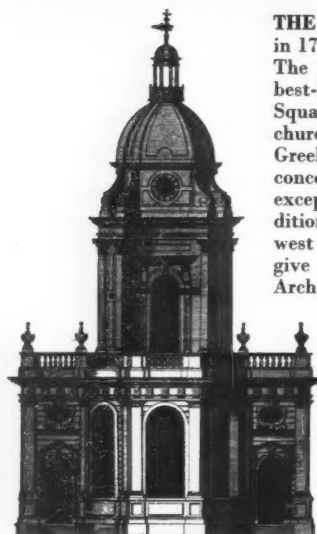
Scott's pageant of Northumbrian history was to have been summarised in sculpture by Thomas Woolner, a commission resulting in the statue, which stands at one end of the hall, representing a mother teaching her child to pray; the child stands upon a column carved with reliefs displaying, by way of contrast, the savage customs of the ancient Britons. Considerably later, four large owls, carved in wood by H. P. Jackson, a disciple of Morris, were attached to pillars of the upper arcade as screens for the electric light fittings. It must be admitted that, with the sculpture included, the total effect of the hall is not without an illogical unity arising probably from the consistent lack of relationship of its various "decorative" parts with one another. It would be expecting too much to look for strictly decorative beauty in Scott's scheme. It was conceived at a period when nothing was achieved in this direction. The nineteenth century honoured and, with limited discrimination, officially encouraged decorative painting in the grand manner, and artists appeared who worked beautifully on a large scale. But the art even of Puvion de Chavannes is first of all monumental and poetic and would be seen best in rooms specially constructed to receive it. The very nature of Scott's conception was undecorative. This failing, however, it shares, though it shares nothing else, with the *Phaon* of *Homère* and Delacroix's *Jacob and the Angel*.



The historical significance of this picture, William Bell Scott's *Iron and Coal* of 1861, lies in the fact that it is one of the earliest works of art in which industry is taken seriously and recognised as the nineteenth century's contribution to civilisation. Bell Scott's cycle of scenes from Northumbrian history consists of eight paintings: *The Building of the Roman Wall*, *King Egfrid and Cuthbert*, *The Descent of the Danes*, *The Death of Bede*, *The Spur in the Dish*, a scene in a mediæval border castle, *Bernard Gilpin*, *Grace Darling*, and *Iron and Coal*. They were very famous in the North of England when they became known, and still are—thanks to popular picture books on local history. Most of the paintings are superficial and melodramatic, but where Bell Scott could use his quick sense of observation and his patience in carrying out the minute details of things seen, his early connection with the Pre-Raphaelites in London—he wrote for *The Germ*—comes out most convincingly. The little girl in the foreground—she has brought her father's lunch and has her schoolbook in her lap—is of evident Madox Brown descent. Work, Madox Brown's own manifesto on the sacredness of labour, must have been known to Bell Scott. It was begun in 1852 and chiefly worked on in 1858. It is, however, with its contrast of the rich and the poor, the idle and the industrious, and with its portraits of Maurice and Carlyle, much more in the nature of a tract. Bell Scott has refrained from introducing anything like a moral into his story. He is content with painting what he saw and no doubt admired. Brown as compared with Scott seems a belated follower of Hogarth, whereas Scott's interpretation points forward to Menzel's *Rolling Mill* of 1875, the most renowned of nineteenth century industrial pictures. The three central figures in Bell Scott's *Iron and Coal* are portraits of workers from Stephenson's factory, the boy behind them on the left, with davy and whip, is a pit boy, the shipowners in the distance are portraits, too. In the background the Newcastle High Level Bridge can be discerned, which Stephenson designed in 1850. The Gothic lettering above the picture runs as follows: *Whatsoever thy hand findeth to do do it with thy might.*



BOMB DAMAGE TO NOTABLE BUILDINGS BIRMINGHAM



THE CATHEDRAL of St. Philip was built in 1711-19 as the church of a new parish. The architect was Thomas Archer, whose best-known work is St. John's, Smith Square, London. St. Philip's is an aisled church (unlike St. John's, which is on the Greek cross principle), but the whole conception is uncompromisingly classical, except for the tower, and this follows tradition only to the extent of being at the west end. The giant Corinthian pilasters give a hint of the kind of interior which Archer evolved for his later churches; some of the details are Baroque of an extraordinarily advanced and complicated character and suggest that Archer had studied 17th century Roman work more closely than any architect of his time. St. Philip's possesses a series of Burne-Jones windows, fortunately removed before the raids. The roof was badly damaged by fire but has been temporarily repaired.



ST. THOMAS'S CHURCH, Edgbaston, was a Commissioner's church, built in 1825-7 by Thomas Rickman with his partner and former pupil, Hutchinson. The west front, still standing, is an unusual composition, consisting of two quadrant porticoes flanking the main entrance in the base of the tower, an arrangement which ingeniously avoids the difficult relationship of tower over portico, without sacrificing the portico idea. Classical works by Rickman are rare, for he was a learned Goth, and it is, of course, to him that we owe the popular terminology of Gothic architecture — "Norman," "E.E.," "Dec.," and "Perp.": terms which, inaccurate as they may be, have been in use for 130 years and are not likely to drop out just yet.

THE MARKET HALL was designed by the Birmingham architect, Charles Edge, and opened in 1835. It was one of the many classical markets erected in the first half of the 19th century. The earliest of them was John Foster's still existing market at Liverpool (1819-20), the finest those by Fowler at Exeter and Covent Garden. The Birmingham market had three "aisles" separated by rows of cast-iron columns, survivors of which are seen in the picture on the right.





Royal Exchange



Sun Insurance



North British and Mercantile



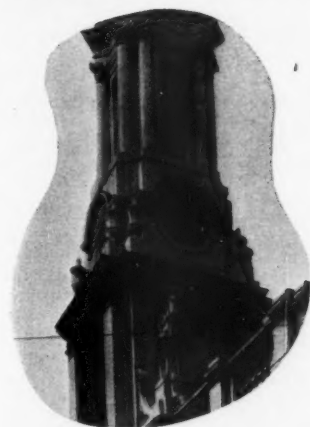
Threadneedle Street Post Office

Treasure Hunt

By Peter F. R. Donner

SPECIMEN No. 1

Royal Exchange



Famous as the front of the Royal Exchange is, few people ever look at the back of the building, and few of the millions of people who pass it know that it has a tower.

As the front is of English Palladian style, so the tower goes back to the type which Christopher Wren had evolved. The coupled columns, diagonally placed, are especially characteristic.

The front of the Royal Exchange with its grand Corinthian portico is a familiar sight. The hunter will not be rewarded by *trouvailles*, even if he takes a careful look at it. But the back is surprisingly unknown, neglected by the critics of early nineteenth century architecture, and unillustrated in Professor Richardson's *Monumental Architecture*, although it is for life and variety even more remarkable than the front. The story of the fire of 1838, the competition of 1839, the choice of William Tite to be the architect to the new building, and the objections of those who rightly preferred Robert Cockerell's design, need not be re-told. Here is Tite's building, and here its east tower. If the front is English Palladian, this tower evidently belongs to the same family. Of many possible comparisons, I have chosen Wren's St. James Garlickhithe, of 1674-87. The identity of the coupled columns, placed diagonally, and the vases to mask the transition from square to chamfered plan is evident. To any experts on European nineteenth century architecture, this English reversal to the style of Charles II and William and Mary, which marks the earliest years of Queen Victoria's reign, is remarkable enough. There is nothing like it either in France or Germany.



Sir Christopher Wren: St. James Garlickhithe, 1674-87.

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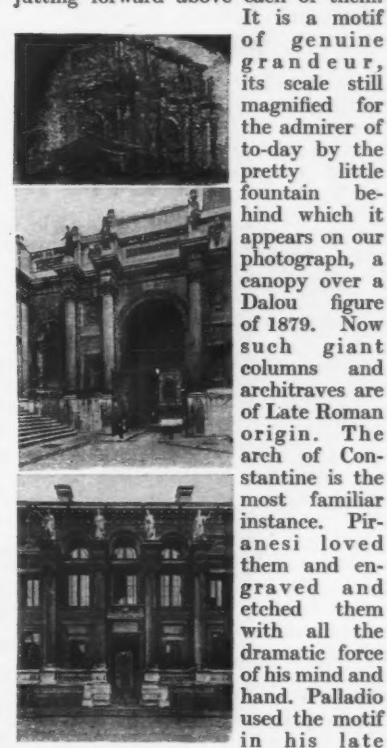
SPECIMEN No. 2

Royal Exchange



But the giant Corinthian columns with architrave jutting forward over each of them are alien to Wren and too Baroque even for Vanbrugh. Tite may have had them from Cockerell who competed with him for the Exchange or direct from Cockerell's source: Soane. As for Soane, he had been inspired by Piranesi's etchings of Late Roman buildings such as the arch of Constantine.

But Tite was far from strictly William-and-Mary. The central motif of his east front consists of four giant Corinthian columns with the architrave jutting forward above each of them.



The development of a Loggia del motif: The arch of Capitano. But Constantine, engraved by Soane in his Piranesi — Sir John splendid triumphal arch in the Bank — Cockerell's the Lothbury Taylorian Institution in Oxford.

Bank was probably more inspired by Piranesi than by Palladio. This is—if I am not

mistaken—the earliest occurrence of the motif in England. The age of Wren had still shrunk from its Baroque impact. As far as I am aware not even Vanbrugh knows it, although Grimthorpe and Seton Delaval seem to herald it. From Soane it passed on to Cockerell to whose sense of magnificence and prosperity it was highly welcome. He has it in the front of the Taylorian (1840), and also in his competition design for the Exchange. In adopting this feature, Tite proves one of the small group of architects who endeavoured to evolve a Victorian Baroque out of Roman and Renaissance features.

SPECIMEN No. 3

Royal Exchange



The rounded corner and the gentle curves of the window heads come from the French *Dix-huitième*. Their elegance blends ill with the grandeur of the Corinthian columns and pilasters.

However, Tite may have used the same motifs as Cockerell—as an artist he was not Cockerell's equal. He lacked self-certainty and consistency. This deficiency comes out clearly in the way in which he combined the Roman



Germain Boffrand: *Hôtel de . . . , Paris.*

weight of his giant columns with windows formed on the gentler, much more accommodating example of the French *Dix-huitième*. The same style suggested to him—an even less excusable admixture—the rounded corner. Such corners go beautifully with the urbanity of the Paris *hôtel*, but they paralyse the massed front attack, as it were, of the Corinthian portico.

SPECIMEN No. 4

Sun Insurance



These round-headed windows without articulation between verticals and arch are typical of 1830-1850. Nash made them popular. Cockerell here emphasizes their unclassical character by a thick Grinling Gibbons looking garland.

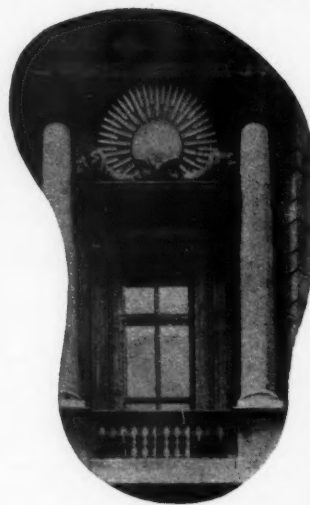


Sir Christopher Wren: *St. Martin's, Ludgate, 1677-87.*

Now here is Charles Robert Cockerell himself, in one of his minor works, the Sun Insurance of 1841. What is most interesting in this design is the freedom with which Cockerell handles the motifs of Italy and of English Palladianism. On the corner of the building he has a Tuscan order for the ground floor, and a Corinthian order for the third and fourth stories, but no order at all for the first and second, where according to all rules of classicism Ionic columns would have to be expected. In their stead he introduces a round-headed window with a Grinling Gibbons looking garland hanging down on both sides. A comparison of this window with similar features in the work of Wren and his staff is most illuminating. Wren would never have allowed a window to pass from the vertical jambs to the arched head without any articulation. It was,

SPECIMEN No. 5

Royal Exchange

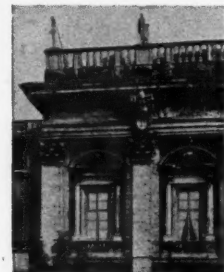


The crowning motif of Cockerell's building is a window narrowly flanked by columns—a motif invented by Michelangelo.

I think, Nash who favoured this weak transition which became so popular in England between 1830 and 1850. Cockerell must have been conscious of the effect brought about by it, or else he would not have emphasized it so much by the garlands.

The Corinthian order on the top floor flanks a window with a straight entablature on brackets. On the entablature is a symmetrical group of cornucopia to the left and right of a metal sun—the trade mark, as it were, of the insurance company. The columns and the top cornice of the building press heavily against this group and the window—a decidedly

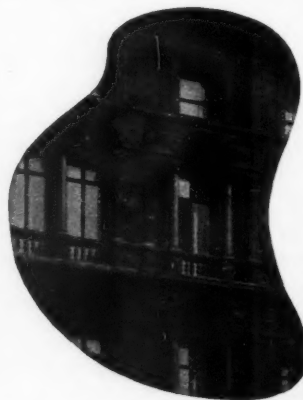
Baroque effect of forces struggling against each other. Michelangelo had been the creator of this kind of architectural expression. But Cockerell adds some spice of his own, by placing this mighty motif above the weak first floor window, Specimen 4, and the thin balcony on the second floor. The enterprising way in which the chimneys are used to crown the corner, should be specially noted.



Michelangelo: Detail from the Capitoline palaces.

SPECIMEN No. 6

North British and Mercantile



A typical example of mid-nineteenth century city architecture, designed on the lines of the North Italian sixteenth century, with the Palladio motif, and the seated figures in the spandrels, as Sansovino had used them in his famous Library. Facades at that date—as against pre-1845 and post-1900—were decorated on the all-over principle.

The North British and Mercantile Insurance Company by Thomas Piper and J. E. Goodchild, two architects of little significance, as far as I can see, appeared in *The Builder* of 1864. "The style," *The Builder* says, "is Italian, not following the exact arrangement of any particular building, but adapting the several features to the exigencies of street architecture in our northern climate, thus abandoning the advantage obtained architecturally by the solid basements of Italy, for the sake of the improved light required on the ground-story for mercantile purposes." This advantage, according to the writer of 1864, the war has recovered for the building. It is characteristic of commercial (and official) mid-nineteenth



From *The Builder*, 1864.



Sansovino's Library of St. Mark's, Venice, 1532-1554.



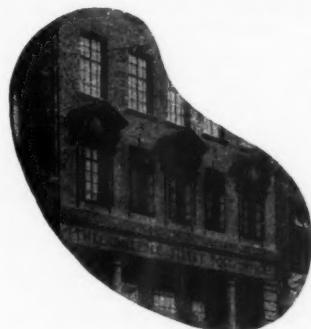
Palladio's Basilica at Vicenza, begun in 1549.

century architecture that decoration is developed as an all-over pattern. Very little is done to stress central axis or principal story. Here

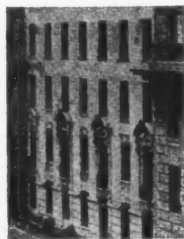
lies a difference worth remembering between designs up to, say, 1845 and designs of 1845 to 1890. The motifs in the case of the North British and Mercantile come evidently from Venice and Vicenza, that is from Sansovino and Palladio. The Palladio motifs in the centre are eloquent enough; so are the figures in the spandrels of the first floor. The windows on the sides are a curious nineteenth century development of Italian windows. The Italian arched head has become a sham front adornment over a rectangular opening. The stumpy pilasters on the top floor would also have been utterly impossible in the Cinquecento. Such looseness in the handling of classical detail came in only during the reigns of Elizabeth and James I.

SPECIMEN No. 7

Threadneedle Street Post Office



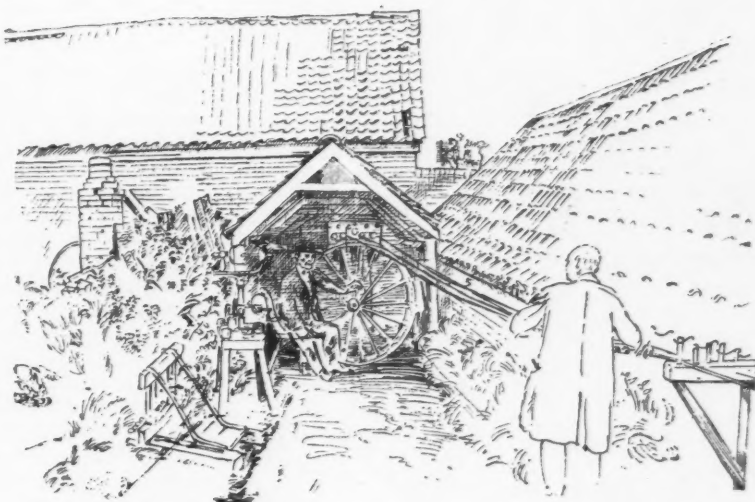
The typical Italianate city facade of 1925-1935: bare stone-faced walls with unmodelled windows, a few severely neo-classical ornamental motifs such as the maeander, and heavy decoration of high relief concentrated in a few places such as the central windows on the principal floor.



Thomas Hastings and C. H. Reilly: Devonshire House, Piccadilly, 1925.

and the other academicians and their followers, they are usually the main entrance, some central windows on the principal floor, and—as buildings rise to the height of eight or more stories—some suitable places on the top floors. Arguments against and in favour of this treatment are obvious, and need not here be repeated. So nothing remains to be said about the Threadneedle Street Post Office, except that it was designed in 1930 by the Post Office Architectural Department, and that the contrast between three heavily decorated first floor windows and the completely unmodelled and unadorned windows of the second and third floors can be found very similarly in such buildings as Devonshire House, Piccadilly, erected in 1925 to the designs of Thomas Hastings, of New York, and Professor Reilly.

COUNTRY CRAFTSMEN



The Rope Maker

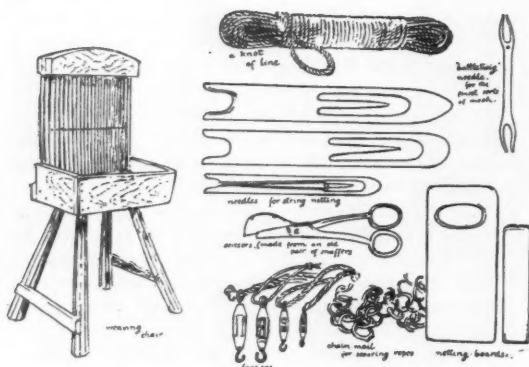
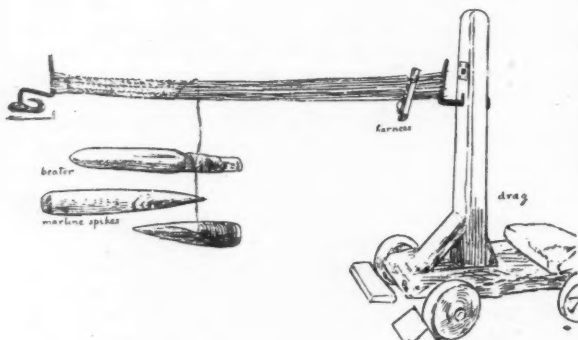
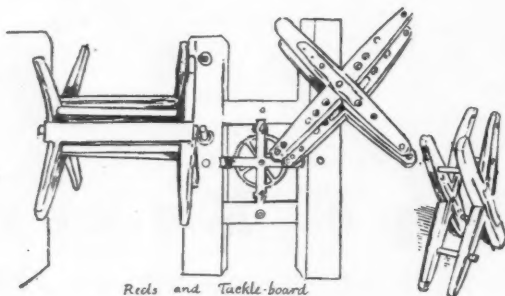
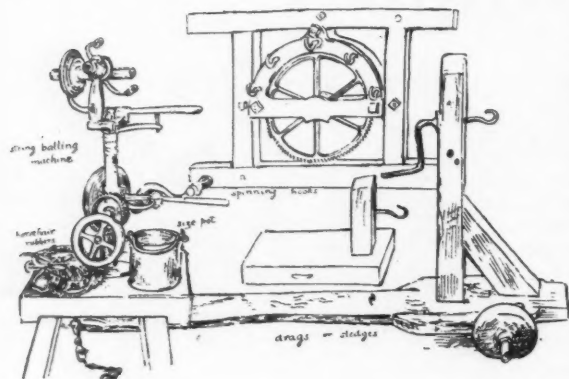
By Thomas Hennell

ROPE-MAKING by hand, especially in the southern counties, is a somewhat rare trade; remaining for the most part only as a memory perpetuated in streets and alleys which are still called "rope-walks," as at Bridport, Yarmouth, and other places, particularly seaports, in which the trade flourished up till the beginning of the present century. The Newark Road rope-walk at Ollerton, fourteen miles north-west of Newark, is the last to be used of three which were established about 1865 by the father of the present owner, Mr. A. H. Buckingham.

The Newark Road rope-walk is used for making cart-ropes, plough-lines, washing-lines, cords and twine. The other two rope-walks at Ollerton (Hopyard Lane and Wellow Road) were longer, and were used for making ships' cables, and ropes of which the length of a standard coil is one hundred and twenty fathoms. It is ninety yards long and twelve feet wide, running nearly east and west, with a wall of farm buildings along the southern side. Upon this wall numbers are painted, marking every five yards of its length. The land to the south is laid out as allotment gardens. At the eastern end is a shed which protects the winding tackle and tools from the rain. Alongside is the chimney of the tar-boiler, where the Stockholm tar was heated in a copper to a temperature above that of boiling water. This is needed for certain ropes to be drawn through it, the excess of tar being pressed out of the rope by a weighted beam.

The rope-walk is open to the sky—a neat cinder-path with grass verges in which at intervals of about twenty yards are T-shaped

THE ROPEMAKER'S TOOLS



posts of hand-height, called "bearers." In the horizontal bars of these posts are wooden pins, which keep the lines of rope or yarn separate and clear of the ground.

Formerly hemp-fibre only was used for rope-making, and a part of the work was to heckle the bundles of hemp: to comb it out and remove the tow. Then it was spun into yarn on a spinning-wheel. But now hemp is almost always bought as spun yarn, of which more varieties than were formerly available have been brought into use. The most prized is Italian hemp, then Russian and Hungarian. Other kinds are Bombay hemp, sunn, jute, ramie, sisal and Egyptian cotton—the last-named makes the best clothes-line. Of course the war has severely restricted supplies from everywhere.

Each yarn is spun from two hooks which rotate oppositely. These are mounted on a frame set up on posts in the shed. The hooks are worked by a cord which passes round a large wooden pulley-wheel, turned by a handle. This wheel is nearly four feet in diameter; a typically Irish-made wheel, having round spokes and a broad trend of thin wood. A man sits turning the handle while the spinner, having attached pieces of hemp to the hooks, walks slowly backwards, slivering or smoothing out the hemp with a woollen cloth in his right hand, while with his left he regulates the amount of yarn paid out, jerking it over the bearers as he comes to them. When the yarn is finished, the man who has been turning the wheel detaches it from the hook and winds it on a reel, the spinner walking forward and keeping the yarn taut.

The yarns are next laid or twisted into strands, the twist being now left-handed. The strand is made usually of three yarns, each of which is made fast to a hook in the tackle-board, which is spun by means of a large cogwheel. The further ends of the yarns are attached to a hook on the drag, or sledge, each yarn having been carefully "warped" or drawn to equal tension. As the hooks are turned the yarns twist together to form a strand. The drag is pulled forward to one-third the original length of the yarn: then the hook on the drag is turned in the opposite direction until this has made up for the twist taken out of the yarns in the former process.

Twine is made of two yarns only, twisted together by the tackle-board. It is dressed with paste made of flour and water, and polished with a horsehair rope, called a rubber.

The twine or strands thus made from several

yarns can be combined by twisting together to form a rope. To ensure a uniform lay, the strands are made to pass through flutes in conical wooden *toppers* or *lay tops*, which have sometimes a hole bored centrally also, so that the rope is twisted round a core. Again the strands are made fast to the tackle-hooks and to the drag, and the direction of twisting is again reversed. The tendency of the rope to untwist in one direction is thus countered by the opposite tendency in the strands and again in the yarns.

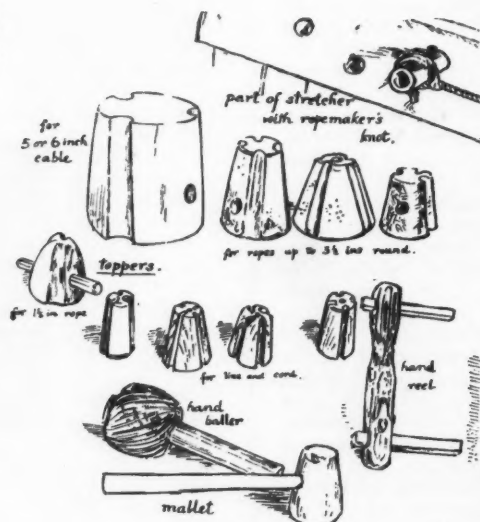
The finished rope is wound on a star-handled reel. Plough-lines and clothes-lines are formed into a "knot" (as illustrated) by being looped over two pegs in a hand-reel and then wound round the skein so formed.

Fine cord such as is used for dog-leads is made with a small hand machine, by which three strands of forty cotton yarns in each are twisted by means of a flier into a "five-sixteenths inch" cord and wound into a ball. This machine can be used simply for winding balls of string but requires some degree of skill in manipulation. Mr. Buckingham can wind a ball by hand on a polished bar of wood in four minutes, giving it a perfect form and finish—with the machine he can do it in two minutes and a half.

At the rope-shop and in the small warehouse were many kinds of fibres, yarns and ropes. In the workshops halters are woven with a rudimentary loom. This consists of a hook in the wall and a hook in the upright post of a "sledge." Between these twine is stretched in a skein, to the number of thirty strands. Each alternate strand is plucked through the skein from the sledge end, and fastened in a loop of string, the string being made fast, after each loop, between two short flat sticks. The sticks and string loops are called the harness. It is possible to pass the crossed strings from the sledge end through the harness towards the wall end, and there to tie them with a string passed down and up between the crossed strands. This induces another crossing of the strands at the sledge end, which again is passed through the harness to the further end where the weaving is continued. For passing down the crossed strands a wooden tool like a thick paper-knife is used: it is called a beater.

Another simple form of loom known as a "weaving-chair" is used for making broad webbing. It is a frame of narrow upright battens about twenty-one in number, with a very narrow interval between each; and through each batten a hole through which a thread may pass. The weaving-chair is placed between two hooks, a fast hook in front of it (and so behind the weaver), a sledge hook behind the weaving-chair. The strands are threaded alternately through and between the battens, and passed from hook to hook. As with the halter-weaving, the shed of crossed strands is passed through to the other side with a beater and made fast with the string weft.

Nets of many kinds—for shopping, for rabbit catching, and for hay or forage—are also made by Mr. Buckingham, and for these he has needles of several sizes and of two different types: the small "battletwig" (i.e. earwig) needle for tiny work, the regular netting needle for string and rope nets. These needles serve as a reel or reservoir of string; the size of mesh is determined by the hand-board which is held in the left hand and upon the margin of which the netting knot is formed. It is a difficult knot to learn, requiring three distinct motions: but when one can make it tight and evenly there is no more to learn. The same knot serves for ropes as for the finest lace-netting.



toppers and other tools



the rope walk
looking down

BOOKS

Vauxhall Gardens

VAUXHALL GARDENS. A Chapter in the Social History of England. By James Granville Southworth. Columbia Univ. Press. London: Humphrey Milford. 18s. 6d.

THE eighteenth was the most sociable of centuries. At no other period have Englishmen been more gregarious or shown greater skill in the arrangement of simple everyday diversions. It was the age of clubs, of water parties and picnics (accompanied very often by impromptu music, the winding of "fine French horns" or a concert that the picnickers themselves provided), of splendid banquets and long friendly convivial evenings, of London promenades, country sight-seeing and absorbing conversation. Characteristic of the time was the enormous popularity of the many public gardens which had sprung up on London's as yet almost unpolluted outskirts. Here every condition of Londoner—from Hanoverian princes of the blood to truculent City dandies determined to cut a dash, from matrons among their families to women of the town with their bullies and hangers-on—strolled and stared, elbowed and ogled, ate sliced chicken and ham, and drank champagne and cider and punch and tea, while fireworks exploded, singers warbled or Madame Saqui (engaged at a hundred guineas a week) skipped madly down the tight-rope, in a bewildering, sometimes embarrassing but always stimulating proximity. Of the Ranelagh Rotunda, Dr. Johnson declared that it was "the finest thing he had ever seen" and that, when he first entered it, the spectacle it afforded "gave an expansion and gay sensation" to his mind such as he had never experienced elsewhere. A noble and spacious interior it must indeed have been, to judge from the engraving of 1751. But as compared with Vauxhall, its fellow "seminary of luxury," Ranelagh, where, except on gala nights, only tea and bread and butter were served, was voted by certain visitors somewhat too dull and decorous. One could walk and listen to music and eye the *beau monde*: the wild haphazard gaiety of Vauxhall was completely absent.

To Vauxhall, then, Mr. Southworth, an American

student of the eighteenth century, has devoted his extremely informative, though not very well written monograph. But what his book lacks in literary grace it makes up in thoroughness, and the material he has to draw on is extraordinarily abundant. For nearly two centuries Vauxhall Gardens—from their Restoration beginnings to their dim Victorian ending—presented a rich and representative section of English social life. They were the playground of notabilities, the background chosen by novelists and essayists who wished to extol or to deride the manners of the day. Beneath those winking lamps, among those bowers and walks and arbours, Horace Walpole attended the famous supper-party given by Lady Caroline Petersham, who looked "gloriously jolly and handsome" and, much to the admiration of bystanders, with her own hands minced seven chickens in a china dish: Amelia and Evelina were exposed to the boisterous advances of tipsy strangers: Boswell and Johnson strolled: Goldsmith recorded the adventures of Beau Tibbs, Mrs. Tibbs, the Man in Black and the Chinese Philosopher: and Lady Brute and Bellinda met Constant and Heartfree. . . . By the opening decades of the nineteenth century, Vauxhall, under the ceremonious management of that Micawberesque Master of Ceremonies, C. H. Simpson, Esq., late of the Royal Navy, to the delights of a place of entertainment in full working order added the dignity of an historic institution. The Tibbs family—or their successors—were still to be observed supping in the boxes or hurrying off, afraid to miss the waterworks:

The boxes show a weary set,
Who like to get serenely wet
Within, and not without;
There Goldsmith's widow you may see
Rocking a fat and frantic knee
At all the passing rout.
Yes! there she is—there,—to the life
And Mr. Tibbs, and Tibbs's wife,
And the good man in black.
Belles, run, for oh! the bell is ringing
But Mrs. Tibbs is calmly singing,
And sings till all come back!

Even the disadvantages of the place were hallowed by tradition. The remarkable smallness of the chickens and the diaphanous thinness of slices of ham, cut by diabolically expert carvers, provided

the kind of joke most gratifying to the English sense of fun.

Pepys had taken Mrs. Pierce and Mrs. Knepp to Vauxhall (then Fox-Hall) in 1668, and been distressed by the bawdy talk of young Harry Killigrew and other Restoration courtiers just back from France: the final dissolution of the gardens did not occur till 1859. Architecturally, the effect they produced must have been gaudy, various and amusing; and Mr. Southworth describes the succession of triumphal arches, obelisks, transparencies, panoramas and colonnades built in styles that included the Gothic, the Chinese and the Moorish, with a considerable admixture of Palladian bravado, to please a public whose taste for the romantic and picturesque had begun to develop as early as the vogue of William Kent. . . . The social life of the gardens had its vulgar and obstreperous side—bands of young men who pounced upon protesting virgins, smashed lamps by the hundred and hurled wine glasses at the heads of harmless passers-by: but as a place of popular entertainment they might compare, even from that point of view, not unfavourably with the modern Jacobethan road-house. If the metropolis is ever to be replanned on a truly heroic scale, our post-war planners will do well to remember the chain of pleasant, spacious, inexpensive pleasure-gardens that once encircled London.

PETER QUENNELL

Decorative Art 1942

THE STUDIO YEARBOOK. Edited by C. G. Holme. Published by Studio Ltd., 66, Chandos Street, W.C.2. Cloth bound, 12s. 6d. Paper bound, 9s. 6d.

THIS book deals with domestic decorative art. It covers the planning of the house from architecture, pure and simple, to interior decoration: furniture, textiles, glass and china. This is as it should be; any modern definition of decoration will have to be all-inclusive to the degree that it conceives its field of action to be unlimited.

But first and foremost it has to be realistic. The Studio yearbooks are intended, not so much for the information of the professional designer

as for the plain man, to instruct and guide him, to supplement and strengthen his own ideas. If this is their aim, then they must provide suggestions for their clientele within their reach, from the social as well as the economic point of view. This book does not seem to take either of these factors into consideration.

In the collection of material the editor has attempted to break through the isolation enforced on us and has succeeded in bringing together examples not only from this country but also from Scandinavia, from South Eastern Europe and, most important of all, from the United States. Incidentally it would have been interesting had a comparison been made between the decorative art of this country, as affected by three years of war, and of America, which at the time when this book was planned was comparatively free from the restrictions imposed on a nation at war. The fact that a visitor from the moon could look through this volume and still assume that it was produced in a world at peace, strikes me as odd. Surely if, as its title suggests, it is to be a representative volume of current decoration, some mention ought to have been made of the new experiments in the decoration of workers' hostels, of emergency flats and feeding centres, of the new utility furniture, and experiments in prefabrication.

In its foreword the editor says that the *Studio* stands for Modern Design and that "the old days have finally gone and there is no limit to the possibilities immediately ahead. . . ." Its illustrations, to my mind, belie that very statement. Most of the photographs might have come from the scenario of any glamorous Hollywood film. The appeal of Hollywood was, and still is, mainly directed at "Suburbia"; it exploits the false and insincere "window-gazing" mentality. This is not an instinct to which we should appeal, if we are to form a realistic and good post-war taste.

The book is divided into several sections of which by far the best deals with individual houses. Plans and photographs of the exterior and interior of a very pleasing house by Francis Ellsworth Lloyd are shown, another, to my mind the best piece of work in the book, by Richard J. Neutra, which is lovely in its true simplicity and beauty of form. A small and very attractive house is shown by William Keyser. All these come from America.

Some good furniture, notably folding dining-room tables, comes from Bowman's and the Rowley Galleries. There are sections dealing with "The Combined Living Room-Dining Room" in all its aspects, hall, staircase, bedrooms, bathrooms and the kitchen. Too little space has been allotted to the latter and its equipment. The section on bars and cellars is particularly repulsive. Designers seem to have been inspired to produce an atmosphere faintly reminiscent of crypts and catacombs.

Of the smaller decorative objects depicted, such as curtain and furnishing materials, china and silver, few have much to recommend them.

The general get-up of the volume is pleasant and clear. There are three articles: one on the possibilities of design after the war by A. C. Bossom, another on the importance of the floor in interior decoration by C. G. Holme and a third on new materials such as plastics by J. Gloag. They are all somewhat platitudinous, but I suppose not much more can be expected, considering the space that was at their authors' disposal.

CHRISTINE BERGSON

Planning for Traffic

TOWN PLANNING AND ROAD TRAFFIC. 118 Pages. By H. Alker Tripp, C.B.E. With a foreword by Professor Patrick Abercrombie, M.A., F.R.I.B.A. Edward Arnold & Co. 10s.

ROADS and road layout cannot with complete success be projected and designed by people who think mainly in terms of physical survey, construction, architecture, finance or even town planning; it is necessary

also to think, and to think accurately, in terms of traffic control."

Occasionally a profession is enriched by the revolutionary contribution of a man who impinges obliquely upon its field. It might not be too much to say that Paxton, with his immortal conservatories and greenhouses, accomplished no more for honest contemporary building than Mr. H. Alker Tripp will effect for honest contemporary town planning in this country.

Efficient circulation is the prerequisite of a healthy organism and Mr. Tripp, with a wealth of practical illustration based upon many years of experience in charge of traffic at Scotland Yard, sets before us principles which, if the Town Planner will keep them in mind, "will not only solve the traffic problem, but increase the amenities of the town and country in which we live and move."

During the ten years preceding the war, nearly seventy thousand persons were killed on the roads, and over two million injured. This stark fact has given rise to no less forcible maxims from Mr. Tripp for those who "plan towns and by reason of their bad layout will continue to kill its inhabitants quite unnecessarily."

A few of these maxims are worth mention and merit reflection. "Nothing ought to be effected by restriction which can be effected by construction." Speed limits, although reducing the lethal effect of human error, do not solve the traffic problem. Nowadays, when road traffic has railway speeds—railway planning principles must be applied and there must be complete segregation of the traffic streams. But what is of utmost importance is that the types of road should be reduced to a minimum—and here the author insists upon three types only and no more, the arterial, the sub-arterial and the local. The first two of these must be completely unobstructed. On the other hand the "local" roads will be designed for vehicular loiterers and so planned as to discourage through traffic of any kind. These are the only sorts of roads upon which buildings are to have access. The main disposition of the parts of the city where people live, work and shop are to form what Mr. Tripp calls "precincts"—or insulated neighbourhoods secluded from the main artery each with its distinctive name. As in the new scheme for Coventry—shopping or corridor streets must cease and shops must form their own secluded precincts insulated against danger and noise. Where this is not possible, as in busy centres of large towns, the separation of levels of pedestrian and vehicular traffic should be taken as a basic factor in planning.

Adequate provision must also be made for the parking of cars as vehicles increase in numbers. "Aesthetically, as well as from the practical point of view," says Mr. Tripp, "the standing vehicle is a great incubus. More and more of the open spaces in the world's great cities are spoiled by the 'cluttering' effect of masses of parked cars. Vehicles out of use ought to be out of sight."

A mortal shaft is aimed at those who would revive antiquity or who design on the drawing board symmetrical cities to be "seen from the clouds." "It is usual and very right to revere the architecture and design of the great ages of the past. In the matter of road layout, however, classical layouts are nothing but a snare. The designs required for the necessities of modern transport are of a totally different character."

Another blow at defunct Renaissance planning is dealt when the author declares that so far as the main city arteries are concerned grand façades must go—and with them frontage access—which he insists should be replaced by well-designed "backages" railed away from the traffic and overlooking parkways which flow beside the highway in an uninterrupted stream.

The author's experience yields invaluable suggestions for the practical remodelling of existing street layouts and traffic routes, and in this way he has a really important contribution to give to the town planner, who in his turn can assist Mr. Tripp, when it comes to the question of detailed layout of the precincts within the main traffic framework. It is a pity that this collaboration was not sought in the preparation of the illustrated examples, which many readers will

consider do not do justice to the main thesis of this timely and important book which should be a constant work of reference to all engaged on preparing schemes.

MAX LOCK

SHORTER NOTICES

BRITAIN REBUILT. By Eric S. De Mare. 72 pages. Sidgwick & Jackson, Ltd. 2s. 6d.

THIS is an earnest attempt to present the case for the social credit system and to relate it to the use of modern building techniques. After persuading his readers of the futility of rebuilding our bombed cities under finance-capitalism, the author stresses the need for the credit system to be controlled in the interests of the whole community. All that is desirable in post-war architecture, economics and political theory is here pieced together and accompanied by illustrations which suffer from the same scantiness as much of the substance of the book.

It is obvious that the author sees his ideals as a whole, but his message tends to be spoilt by the slightly aggressive shepherding of his readers into a position in which they are supposed to swallow all the doctrines propounded.

The book culminates in suggestions for the rational planning of town, country and communications—for the formation of an all-embracing National Building Department and for a draft plan for the rebuilding of Britain. The reader is all along shown vividly enough the more obvious anomalies of things as they are, and he is told passionately how they might be transformed in a leisure state in a Power Age. The theory and practice of Social Credit is shown to him as the final flowering of economic reform—but he is given no indication as to what may be the first practical step to the achievement of this goal. However, this may be the subject of a more finished and disciplined contribution from Mr. de Mare in a few years time.

ARCHITECTURE IN CAMBRIDGE. By Theodore Fyfe. Cambridge University Press. 8s. 6d.

Why should a book like this be written or published? It is a baffling question. Some thirty pages of a very general introduction to the styles of English architecture, and some fifty drawings of Cambridge buildings and building details with comments, sketchy drawings of a technique reminiscent of illustrations in the architectural magazines of, say, 1875. Neither an architectural textbook, nor a guidebook to Cambridge. For a textbook, Cambridge and its surroundings leave too many gaps, for a guidebook such drawings as those of King's College Chapel or the front of St. Catherine's College are too uninformative. Whether it was a good idea to use drawings at all instead of photographs remains doubtful, whatever purpose the volume may be meant to serve. Unless architectural sketches are of such exquisite aesthetic quality as to make them independent works of art, they can no longer have a place in publications on antiquarian subjects. Photographs are bound to be superior to them in documentary value, because less coloured by a personality other than the original architect's.

So Mr. Fyfe's volume appears a curious survival of the Victorian architect's sketch-book, that type of publication once so popular with fellow architects and laymen. There is a distinct Victorian flavour in Mr. Fyfe's approach to styles too. To him the Fellows' Building of King's and the Senate House are still "Full Renaissance," and Sir Giles Scott's Clare College buildings a just acceptable piece of modern functionalism.

Whom does he address then? The citizen of Cambridge, it seems, who has never read books on architecture and wants to learn by looking at the examples in his home town, or the undergraduate coming from a school in which nothing has been made known of differences between Anglo-Saxon and . . . and eager to combine sight-seeing with elementary tuition. There are plenty of them, hundreds every year. So Mr. Fyfe's book may after all have quite a good *raison d'être*.

ANTHOLOGY

The agreeable effect of a baronial castle

Having not yet seen the castle, I took my leave of the ladies, after promising to drink tea with them. I passed through a dark, gloomy gateway of some length and depth, and was certainly much struck with the splendid scene within the walls. The body of the inner castle is surrounded by elegant semi-circular towers, which produce a very agreeable effect, being adorned with pinnacles, figures and battlements. I proceeded through massy towers into the third court, which occupied an extensive area, in the centre of which I observed a lion in bronze. Several small brass guns were planted close to the castle. I then entered the inner court in the very centre of this great citadel; but, being told by a very well-behaved and genteelly dressed person, to appearance one of the upper servants, that I could not possibly obtain a view of the interior till in the course of an hour, I was under the necessity of departing. This stupendous building may certainly be considered as a magnificent model of a baronial castle, and great taste and judgment have undoubtedly been displayed in restoring and adorning the edifice in the true Gothic style. Such of the warriors distributed round the battlements as were defaced have been repaired, and new ones put in the room of those that were destroyed. But in order to supply a correct idea of Alnwick Castle, in the splendid periods of its warlike grandeur, it would perhaps be necessary to have recourse to a still greater number of extraneous objects. For instance, when I reflected on the daring stratagem of Hammond, and fancied I beheld that soldier in some one of the warriors on the battlements, the eye certainly experienced a very offensive transition by observing a number of overgrown powdered fellows loitering in various parts, and apparently suffering no inconvenience but what may reasonably be expected to arise from enormous loads of laced coats and waistcoats, plush breeches and tremendous cocked hats.

The elevated situation of Alnwick Castle is truly grand when viewed from the river. I thought the banks of the Alne bore no very imperfect resemblance to those of the Thames about Richmond; they are at all events very beautiful, and must be delicious when in possession of their vernal graces and the various charms of propitious seasons. I could have wished to have seen Alnwick Abbey, and to have made an excursion into Hulne Park; but I was obliged to postpone the enjoyment of those scenes till some other opportunity. On my return to the ladies, I rendered a faithful account of what I had seen; and the time passed so very swiftly, that before I was aware of it, the arrival of the mail was announced, and I felt myself under the necessity of bidding adieu to a very interesting and amiable group of ladies.

J. A. ANDERSEN (*A Dane's Excursions in Britain*, 1809)

MARGINALIA

Utility Furniture

The exhibition at the Building Centre of the Board of Trade's new utility furniture, the only furniture to be manufactured after November 1, 1942, is the result of work done by a special committee which the Board of Trade appointed last July. Its membership was promising. There were two representatives of the largest mass-producers of furniture in the country, a representative of large-scale distribution, several housing experts, Miss Denby, John Gloag, Gordon Russell and others. They went to the National Register of Industrial Art Designers for designers to carry out what they had agreed amongst themselves would be the right types, sizes and designs and the right construction. The whole preparation from first meeting to completed sample suites took no more than three months. Some of the most inspired and most experienced free-lance designers could not co-operate because they are serving in the Forces. Materials were scarce. Hardboard, veneered both sides, had to take the place of plywood. It made large flush surfaces inadvisable. The panel-and-frame technique of Gimson, the Arts and Crafts, early Heal, and early Gordon Russell had to be adopted throughout. So the furniture exhibited is sadly educational in character. The designs surely could have been a little less minimum. However, the problems

brought up by this exhibition are so complex and so closely linked with general questions bearing on future housing policy, that we shall deal with them in more detail next month.

Follies Never Die

We learn from Mr. Geoffrey Dunn that Knockholt Folly, near Orpington in Kent, is being pulled down. The house was not of any considerable architectural value, either before it had been remodelled in 1891 to 1892, or in the state in which it has come down to us. But it possessed the great attraction of the romantic folly, and the late-Victorian romantic folly at that; that is a building venture embarked on by a man in whom phantasy was already firmly wedded to inventive technique. No Hindoo-Gothic pavilion for Mr. James Vavasour, but bare walls, 4 ft. 6 in. thick, with undecorated windows cut in, some rectangular, some pointed, and with all the flues carried through these walls into the tower which acts as a gigantic smoke stack. Heating must have interested old Mr. Vavasour particularly, for he also installed two kitchens, one with an open, and one with a shut range, whether to satisfy his own experimental leanings or to enable his wife to gratify cooks of both schools of thought, is not recorded with sufficient authenticity. The house was covered with a glass roof to collect rain-water, and pipes

connected this extensive reservoir with brick and concrete ponds in all Mr. Vavasour's fields. Of this level water supply, he is said to have been especially proud. In the history of the folly, Knockholt will hold a place of honour as a brave piece of eccentricity in the face of the rising tide of utilitarianism. That it stands for eccentricity tinged by considerations of utility makes it all the more interesting. If this was possible for a successful City merchant in the

nineties, we need not be afraid that follies will die out in an age of functional and social building.

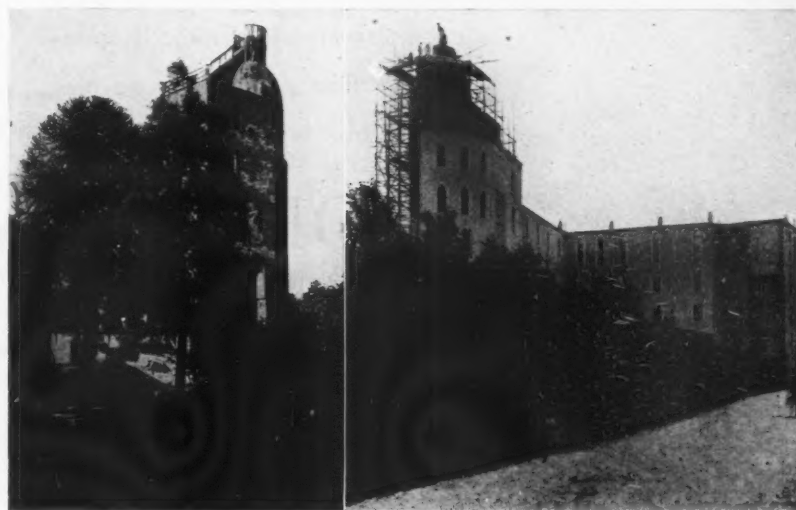
The R.A. Plan for London

The City of London has protested against the Royal Academy plans for London, not however on the ground that they do not like the particular alterations suggested, but very much, it seems, out of a distrust of any major changes. One could imagine that the Mayor's and Aldermen's objections to Wren's plan in 1666 may have sounded very similar to those of 1942. The most dangerous consequence of the Academy's plans will probably be that attacks against them will be taken as attacks against sweeping innovations within London in general. It looks as though, if critics are not very careful, they may suddenly find themselves enlisted in the wrong army. But is there anything like the right army yet?

Twenty-five Years of U.S.S.R.

It was hard to forget the recent past at the opening of the Soviet Exhibition at the Wallace Collection. There was the President of the Royal Academy, and there was the good old Wallace Collection, the home, first of one of the craziest and grandest of Victorian aristocrats, and then of some of the most exquisite furniture and paintings ever done for a sophisticated and unscrupulously anti-social class of connoisseurs. What a lark to see scarlet flags and hammers and sickles where Boucher's and Fragonard's pictures and Oeben's and Riesener's cabinet-work used to frolic. Now it is all large photographs of peace and war efforts in the U.S.S.R. Theatre and book production are illustrated by originals. One room contains war posters exclusively. Many of them seem surprisingly naïve to those who expect the attitude of the Russian film producer.

The best section is the central one consisting of a series of graphical and statistical screens, exquisitely drawn and coloured by Ernő Goldfinger, who has been responsible for the arrangement of the whole exhibition. By sharp line, delicate colour and well-selected photographic documentation, these screens have been transformed into enjoyable patterns quite independent of their meaning, and



Knockholt Folly, built in 1892, which is now being pulled down.

TRADE NOTES

Change of Address

The London offices of The British Reinforced Concrete Engineering Co. Ltd., having been taken over by a Government Department, the Company have now removed to 8, Little College Street, Westminster, S.W.1.

"Gypklith" and "Gyproc"

Two technical booklets were published some while back by Gyproc Products Ltd., and contained much technical data bearing on the type of light frame construction and interior finish so much in use to-day. The first deals with "Gypklith," a light-weight building material of compressed petrified wood fibre bound with cement. Manufactured in slab form (dimensions 6 ft. by 2 ft., in thicknesses varying from 1 in. to 3 in.), "Gypklith" is highly resistant to fire and has good heat and sound insulating qualities. The many varying applications of these building slabs are well described and illustrated and include use as self-supporting (non load-bearing) partition walls, as permanent shuttering to concrete roofs and walls, and as an insulating wall lining applied on timber battens. Specifications are also given for the application of external rendering and plaster over the slabs.

The second booklet in a similarly comprehensive manner describes the

[continued on page 1



The Fuel Exhibition at Dorland Hall, the first major exhibition staged by the Ministry of Information.

by these very means succeed in the difficult task of keeping up the visitor's interest.

The exhibition will, after its close at the Wallace Collection, tour the country.

Coal-Mining in Regent Street

There is something refreshingly low-brow in the section nearest to the entrance at the Ministry of Fuel's Dorland Hall exhibition. Visitors of all kinds seem to enjoy suddenly

finding themselves in the low and winding galleries of a coal-mine, complete with pony and figures of miners. The Ministry of Information in this first major exhibition for which its Exhibitions Department has been responsible, has done brilliantly to sugar the pill of admonition with a piece of pure showmanship. To make an entrance vestibule of the coal-mine instead of, as by routine exhibition technique it should have been, a side-show, was a stroke of

genius. At the same time those who want something more contemporary in display need not be afraid of disappointment either. The back-hall and first-floor rooms are done crisply and dramatically so that the message conveyed by pictures, photo-screens, loud-speakers, posters and all the other paraphernalia of modern exhibition technique hammer on your brains and senses all the time. Top marks for a Government Department.

LOVINGLY the sculptor fingers the stone, takes up the old familiar tools and feels the chisel bite into the unbroken surface. While his hands work with steady rhythm, his imagination hurries on to form the image of the completed task in his mind. Hopton-Wood, the finest of the British marbles, provides his urge and inspiration.



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Norwich Cathedral

THE building of Norwich cathedral was begun in 1096 by Herbert de Losinga, upon whom this task was imposed by the Pope as a penance for an act of simony—the corrupt purchase of ecclesiastical preferment. It is said that he received a bishopric in return for a payment of £1,900 into the treasury of William Rufus. The fifteenth-century spire, built upon a Norman tower, is outrivalled in height only by Salisbury—that perfect example of Early English style—but yields nothing, even to this, in grace. Any achievement so completely satisfying and enduring is an encouragement to all human endeavour, and it is a source of pleasure to us that in the protection and restoration of many ancient buildings a valuable contribution has been made by the use of 'PUDLO' Brand cement waterproofer.

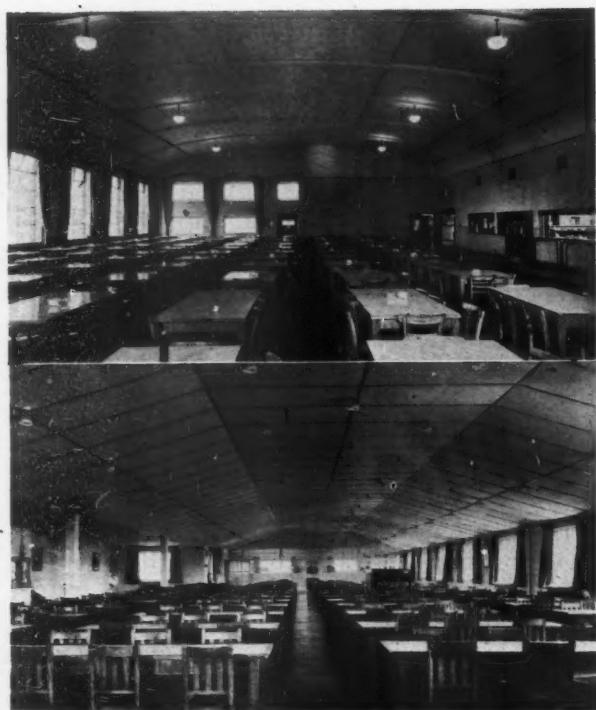
'PUDLO'
BRAND
CEMENT WATERPROOFER

It is tantalising, but inevitable, that so many of the interesting jobs in which 'PUDLO' Brand waterproofer is now being used must remain "unheralded and unsung" until after the war. In place of the illustrations that cannot be used, we are pleased to publish a series of drawings of East Anglian monuments; these drawings, in pen and wash, are the work of Leonard Squirrell, A.R.W.S., R.E., who, by the verdict of his fellow artists, is placed in the ranks of the foremost British landscape draughtsmen.

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Two factory canteens. In the top illustration "Gyproc" has been utilized for both wall and ceiling lining; the lower example shows a "Gypstele" suspended ceiling.

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properties and some of the many applications of "Gyproc" wall and ceiling board. It contains a lot of precise information for the building contractor on the handling, jointing and fixing of the board and, important in these days when the use of wood is restricted, gives full technical details regarding the "Gypstele"

system of unit construction for walls and ceilings. There are many interesting illustrations of completed work, indicating the wide adaptability of this system of light frame construction. Further information about these materials can be obtained on application to Gyproc Products Ltd., "Westfield," Upper Singlewell Road, Gravesend, Kent.

Hostels

A list of the architects associated in the design and planning of the hostels illustrated in this issue is given on page 133. The clerks of works, principal contractors, manufacturers and specialist firms engaged in the construction, equipment and decoration of the buildings were as follows:—

CLERKS OF WORKS: H. A. Ablett, A. Brown, F. G. Clarke, M. England, G. P. Furnell, H. Garnett, G. Herickx, A. F. Jackson, W. H. Lees, C. Linnatt, T. McCormick, W. K. Miller, H. J. Ormerod, J. P. Parker, W. Sinnott, J. D. Swales.

General Contractors

BOVIS LTD.; JOHN MOWLEM & Co.; SIR LINDSAY PARKINSON & Co., AND HOLLOWAY BROTHERS (LONDON) LTD.

Structural steelwork and steel scaffolding John Booth & Sons (Bolton) Ltd. and The Burton Constructional Engineering Co. Ltd. (structural steelwork); Redpath Brown & Co. Ltd. (structural steelwork); Scaffolding (Great Britain) Ltd. (tubular steel scaffolding).

Suppliers of bricks

The Potteries Brick Company,

Hanley, J. & A. Jackson Ltd., T. T. Smith, The Ravenhead Brick Co., Bispham Hall Brick Co. Ltd., Arrell Brick Co. Ltd.

Hollow blocks London Brick Co. Ltd.

Roofing and pre-cast concrete roofing units

The Ruberoid Company Ltd. (Ruberoid and Ruco Ruberoid roofing); Turners Asbestos Co. Ltd. (roofing tiles); D. Anderson & Sons (roofing); The

(continued on page lii)

AVERY'S

81, Great Portland Street, W.1
(LANGHAM 2433)



The late Mr. JOSEPH AVERY,
b. Tintagel, Cornwall, 1798.

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Foolproof.

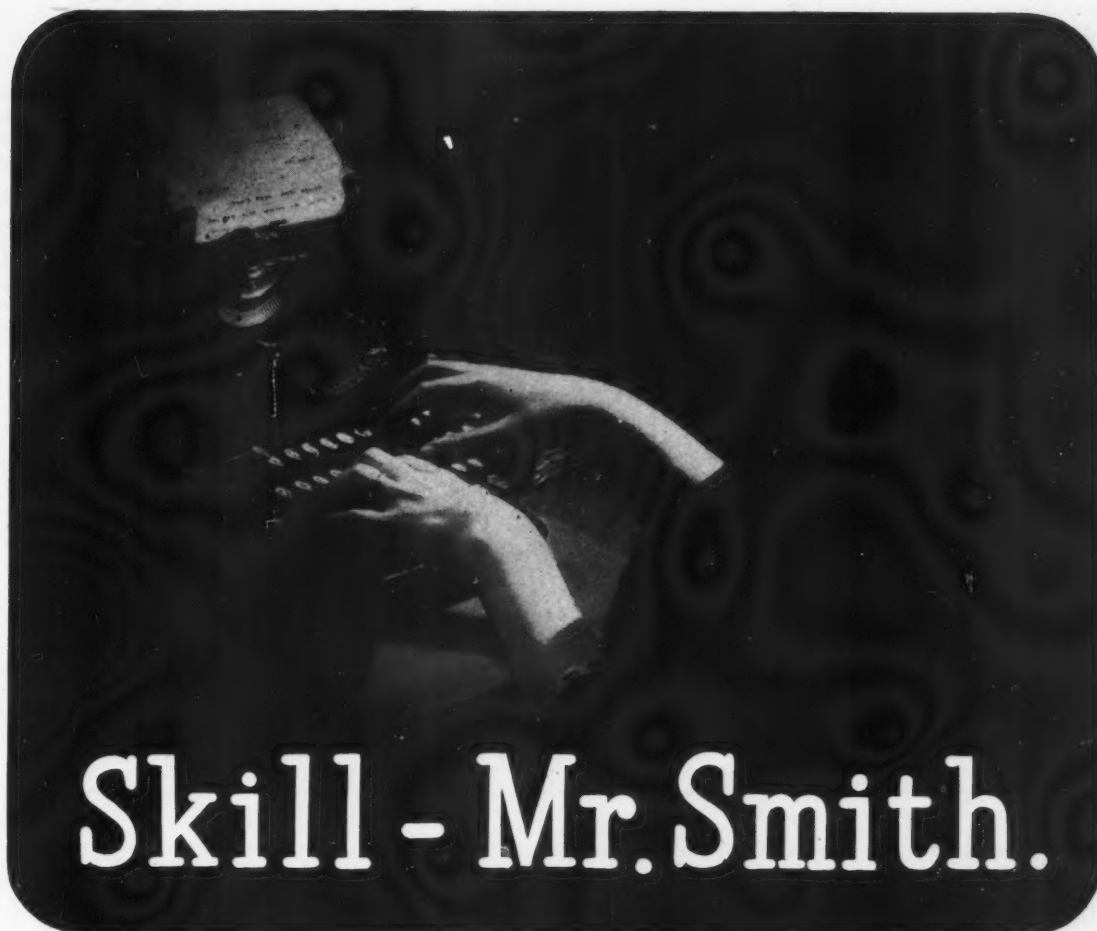
Excellent Ventilation.

Sturdy.

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Skill - Mr. Smith.

Can you type Mr. Smith? In the same way that you employ someone with the necessary skill to do your typing for you, so you should call in someone with the requisite skill to plan your lighting for you. Benjamin are qualified above all others to deal with any kind of lighting. Benjamin knowledge, experience and research are available through an organisation with an engineer stationed in your district, ready to help you.



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MARGINALIA

continued from page 1]

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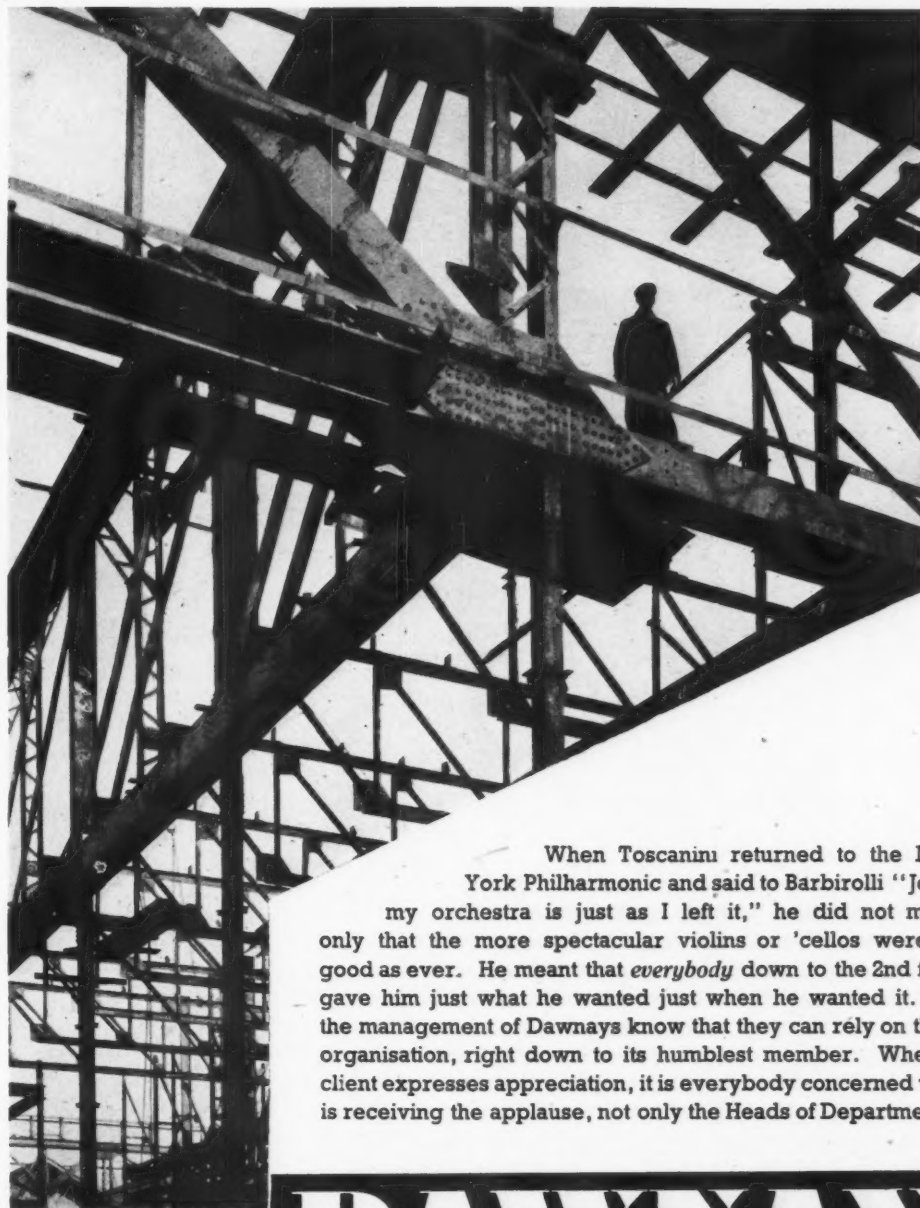
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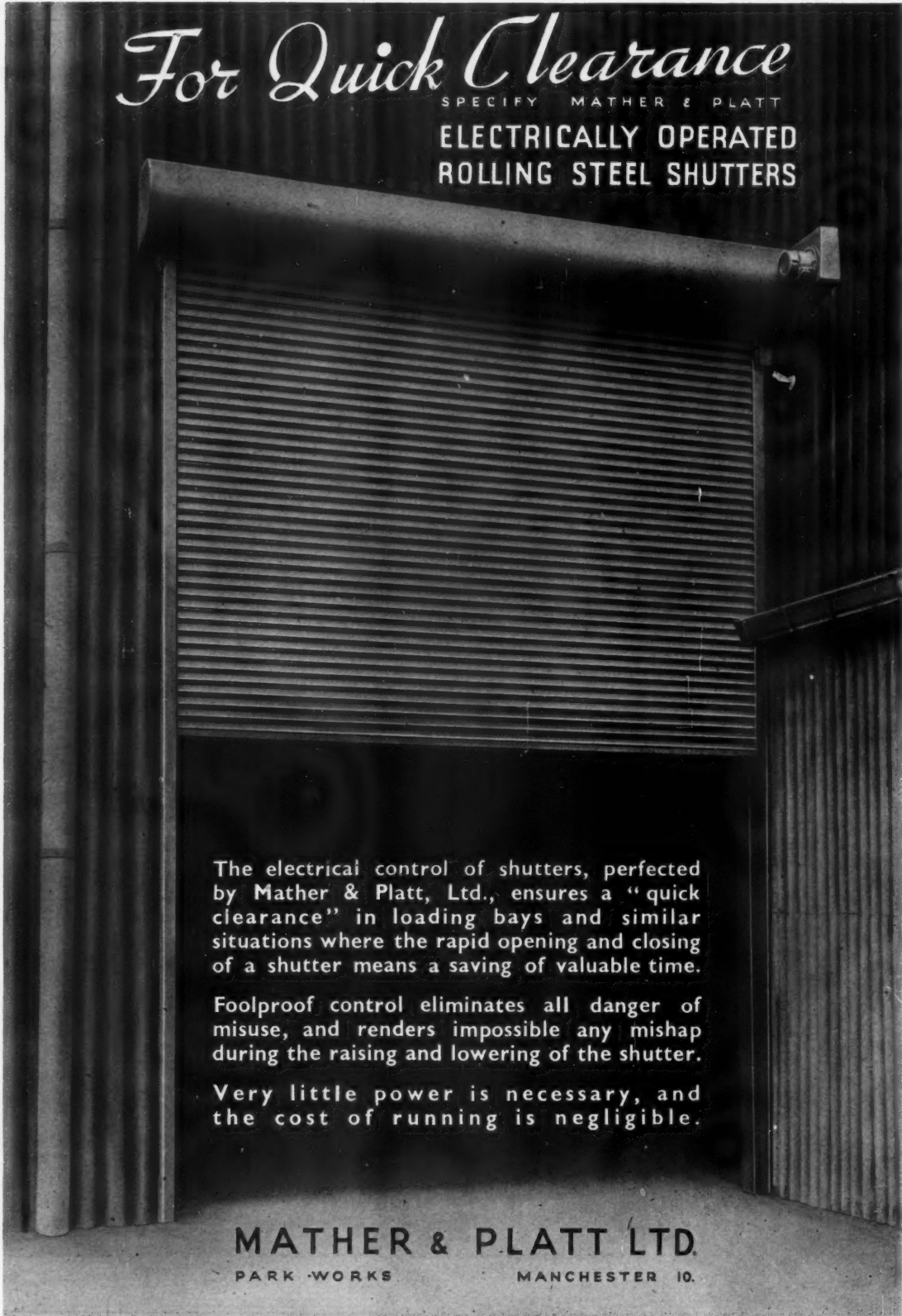
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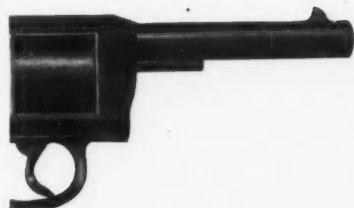
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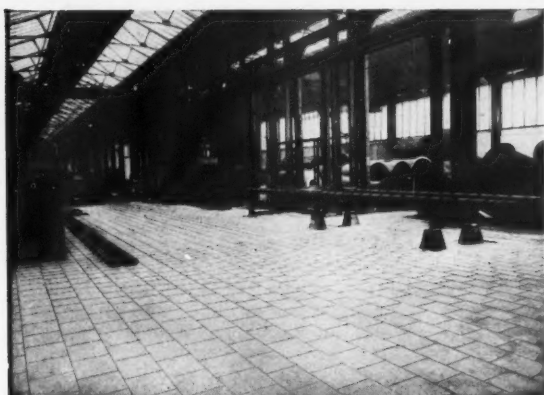
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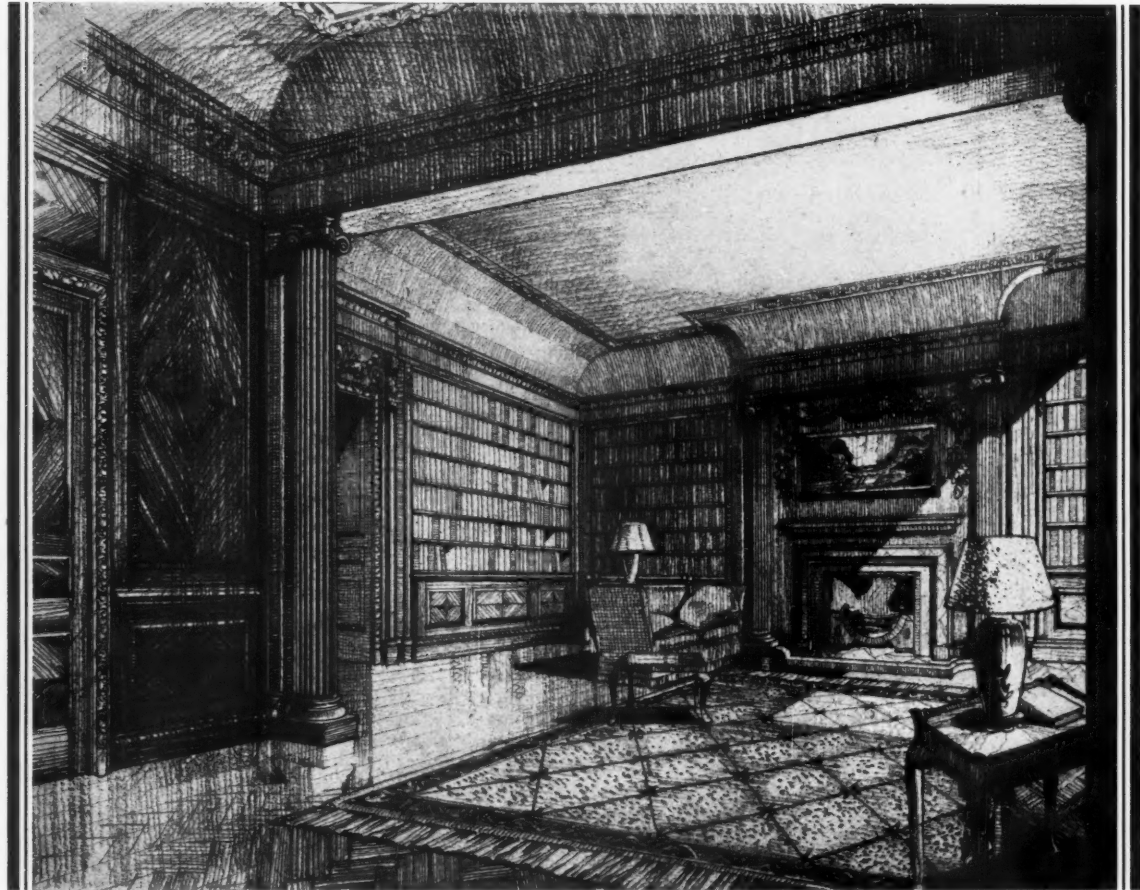
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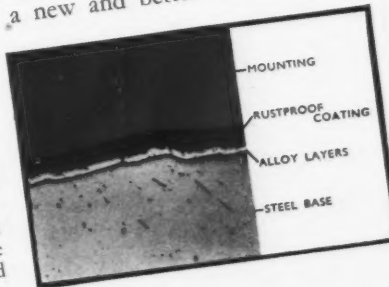
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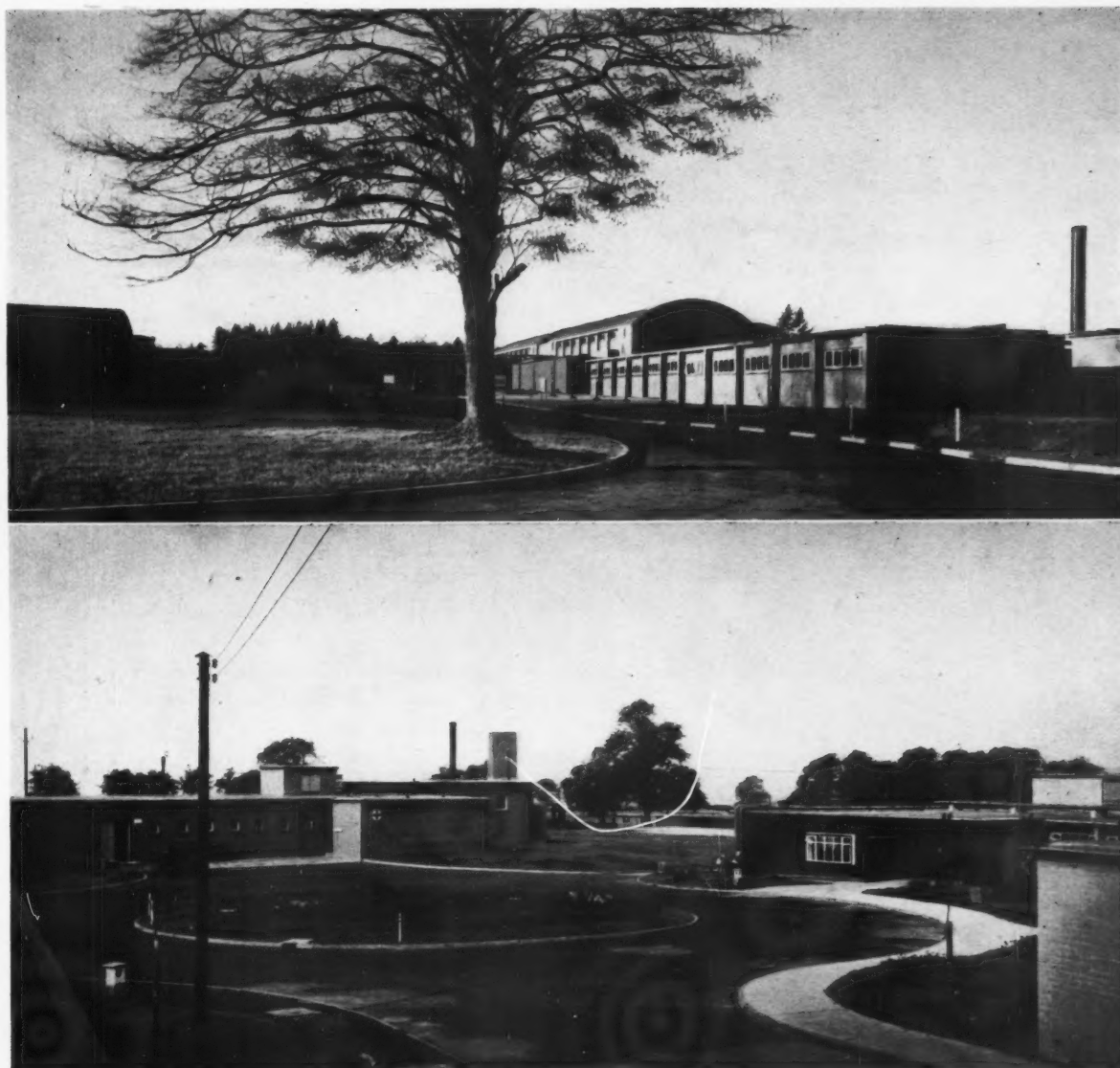
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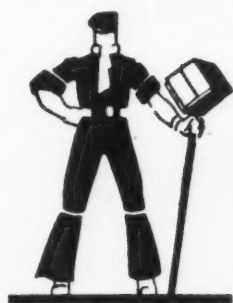
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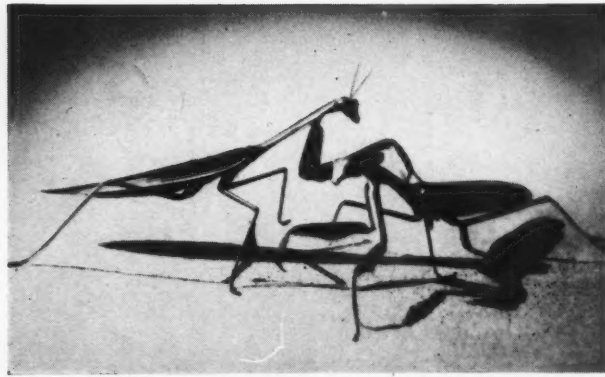


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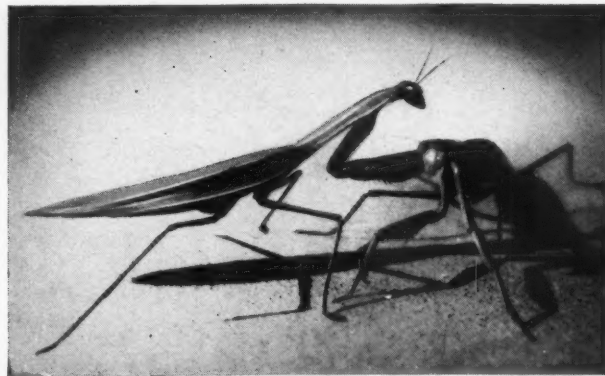
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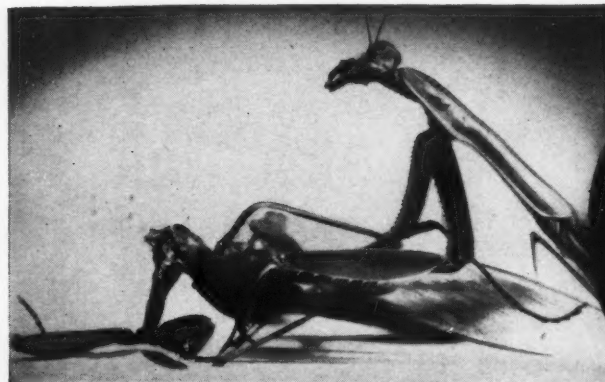
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The female Mantis circling round her husband for an opening of attack.



Having found the opening, she closes in to kill.



She devours her spouse—with the exception of his wings.

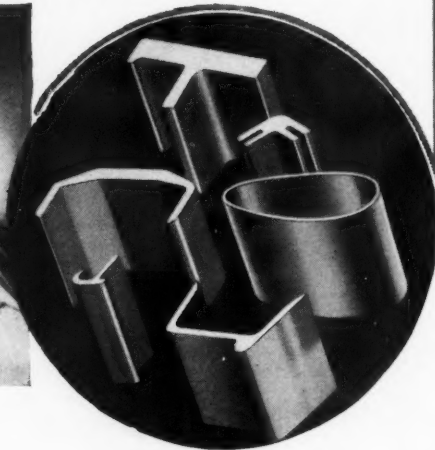
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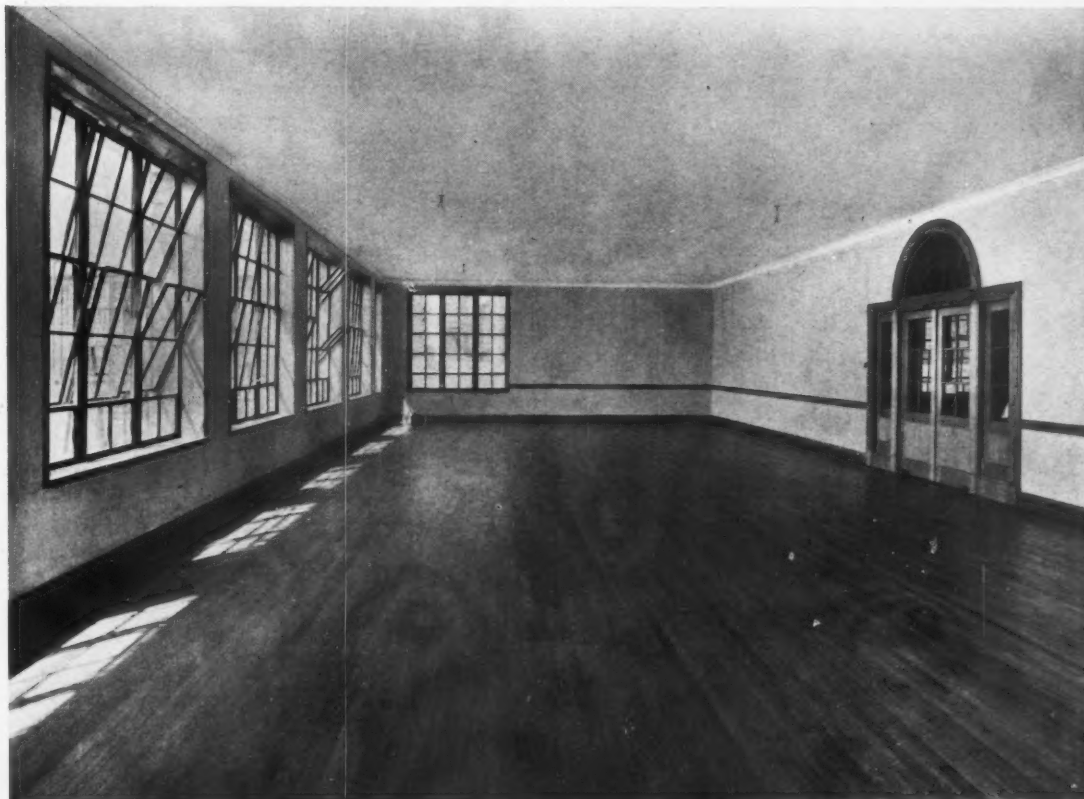
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If you are among those industrialists who are increasing the daylight lighting of their factories at the present time, "Reform" Glazing should be of interest.

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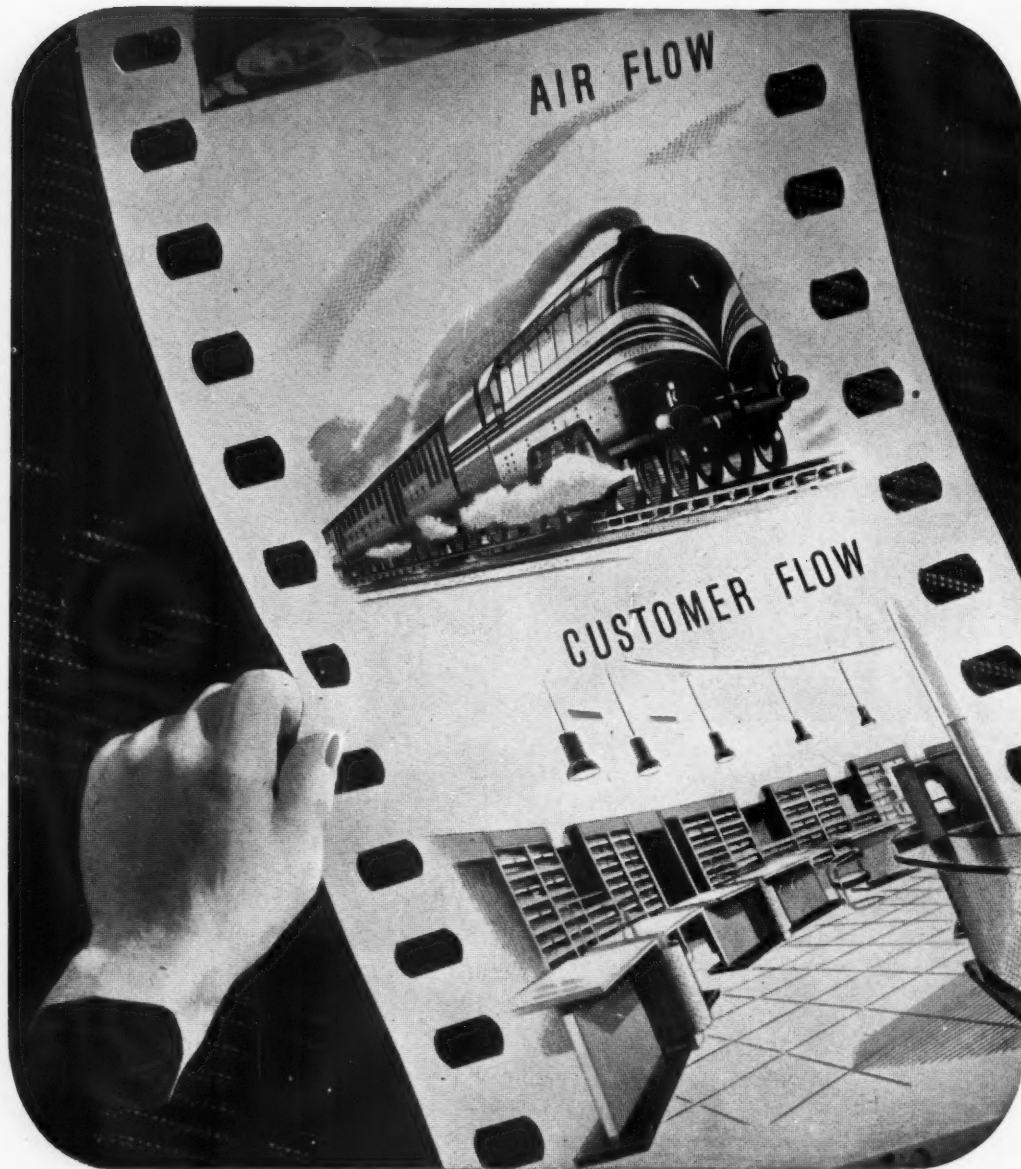
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solves this problem



*The nation's need
to save **STEEL***

This is one of a series of advertisements designed to show how Asbestos-cement can help to solve an almost infinitely varied range of problems. At present, war-time needs have a monopoly of its service, but when peace comes the manufacturers look forward to extending further its usefulness.

**TURNERS
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The sketch shows
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CONSTRUCTION
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We made it for SHIPS

"PLYDEK" was made originally for ships' decks, to cover the edges of overlapping plates and protruding rivet heads, to give a smooth, hard-wearing surface and make everything ship-shape. It was made to hold fast against the storm and stress of the toss and



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PLYDEK

Now it's ready for FLOORS

"PLYDEK" is now serving on many ships and will serve on many more.

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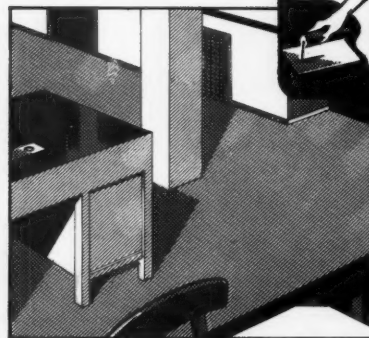


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A Standard after the War

"PLYDEK" is one of the industrial victories of the war. When peace comes "PLYDEK" will be a standard flooring. Secure in its position on its merits alone. It is waterproof, jointless, resilient and quiet to the tread, non-slip and easily polished. It is coloured red, brown, green, grey, stone and black. It is supplied to the Office of Works and Buildings and has been tested by the Building Research Station.

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Telephone: Newcastle 28792.

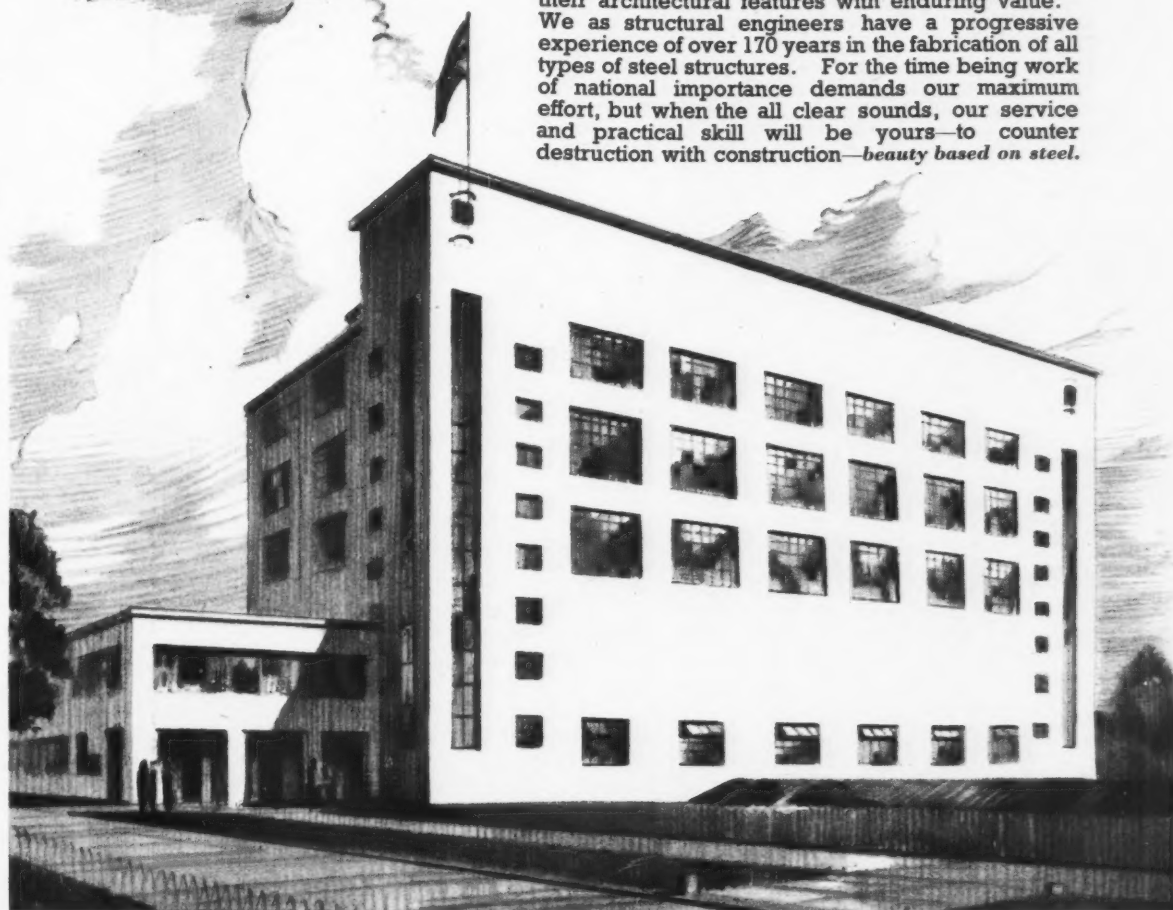
Telegrams: "Bowran" Newcastle-on-Tyne

Send for copy of Report by The Building Research Station Department of Scientific and Industrial Research

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BASED ON STEEL

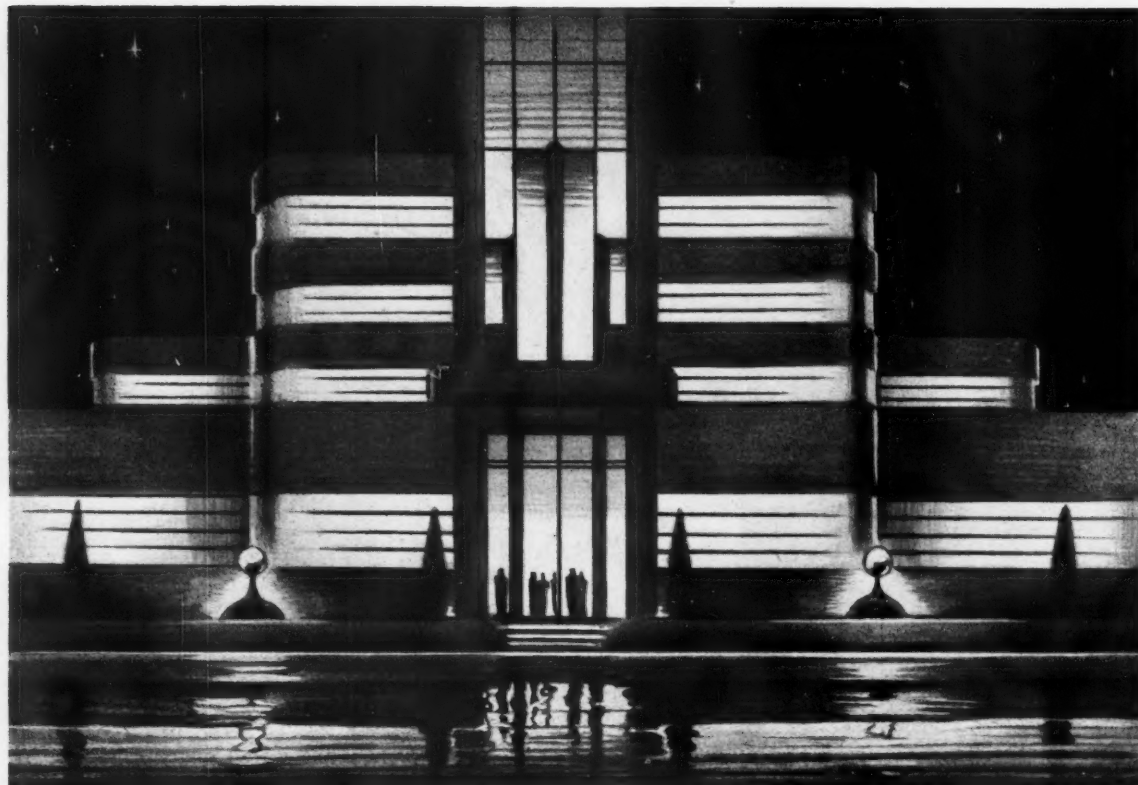
—is without doubt the foundation of fine modern architecture. Buildings so constructed possess permanence and solidity—which in turn endow their architectural features with enduring value. We as structural engineers have a progressive experience of over 170 years in the fabrication of all types of steel structures. For the time being work of national importance demands our maximum effort, but when the all clear sounds, our service and practical skill will be yours—to counter destruction with construction—*beauty based on steel.*



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Architectural imagination will have full scope when post-war building emerges as the dominant demand of industrial, public and domestic life. It is then that the BEACON system of standardised Metal Windows will give you the widest possible scope in designing the structures of the future. Although war priority work is absorbing the whole of our output at the moment you will be well advised to have at hand the fullest possible information about these Windows in readiness for the great demand which will swiftly and inevitably follow the cessation of hostilities.

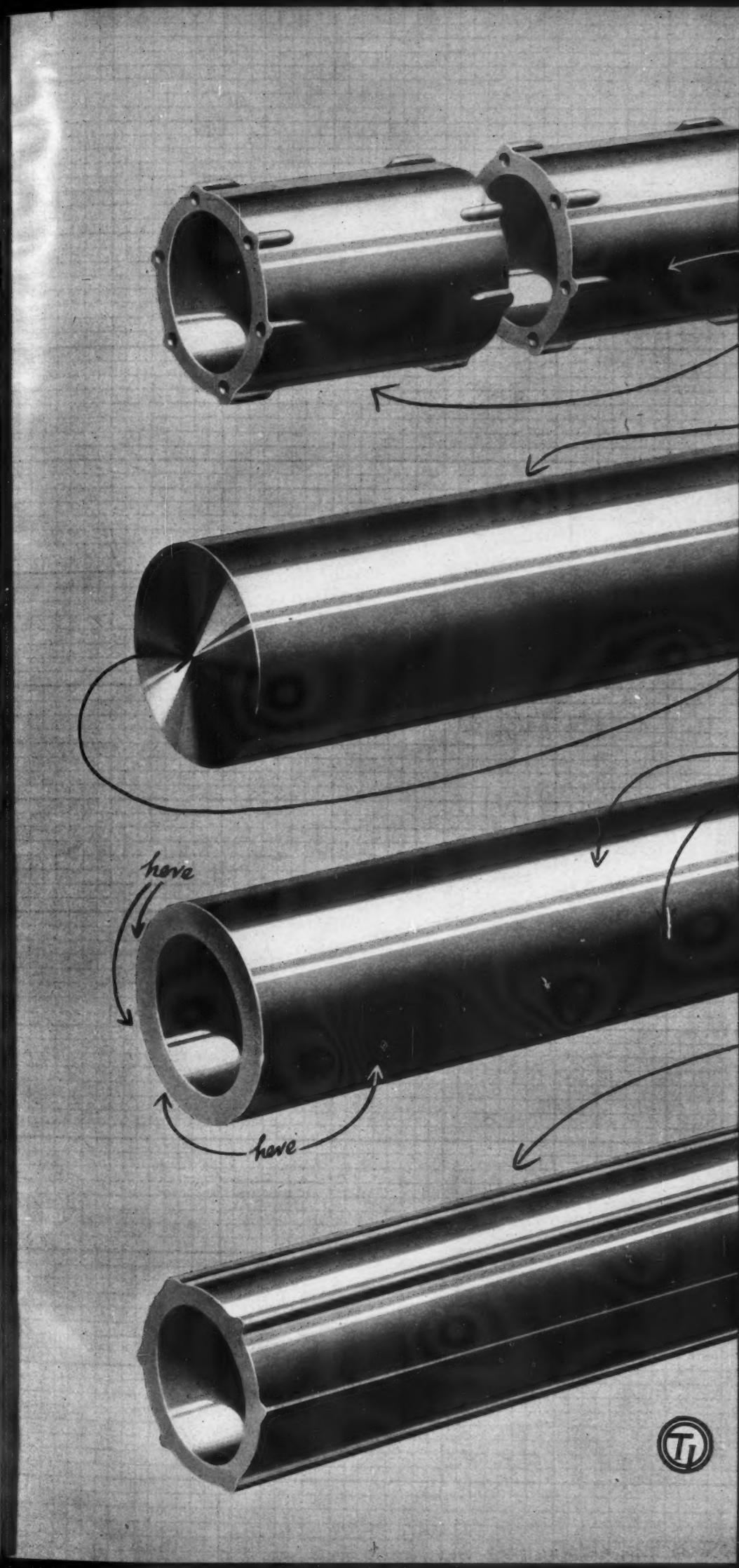


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If you wanted
a lot of steel
parts like these

would you start
with this

and bore a hole
through here

and then take
off the metal

here or would
you ask the

★
S.T.A.C. just to
give you this

to cut up?

A steel tube can be just
a round piece of metal with
a hole in it. Or, it can
be so forged, manipulated,
upset and 'worked up' that
it changes into a motor
axle, an oxygen cylinder, a
lighting standard, a
hypodermic needle or a
thousand and one other
things to help industry save
time, money and trouble.

Tube Investments Ltd.,

★ STEEL TUBES ADVISORY CENTRE,
BIRMINGHAM





THE Steel Scaffolding Company has since the outbreak of war devoted its entire production to the National Effort, displaying its adaptability in many hitherto unthought-of developments.

After the war, the new Building Programme! A new and fairer Britain will rise, story by story, amidst the strong slender standards, ledgers and putlogs of Big Ben Steel Scaffolding — the modern scaffolding, simple, safe and strong with the strength of steel.



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THE PLANNING OF A NEW BRITAIN is, in some respects, an unenviable task.

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With Form and Siting, so with Materials. The range is wide, and the scope practically unlimited.

Whilst recognising the merits of newer materials, the manufacturer of *Good Bricks* has justifiable confidence in his ability to contribute to the strength and lasting beauty of our new buildings.

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Under the most exacting conditions—

Good Bricks always look Good!

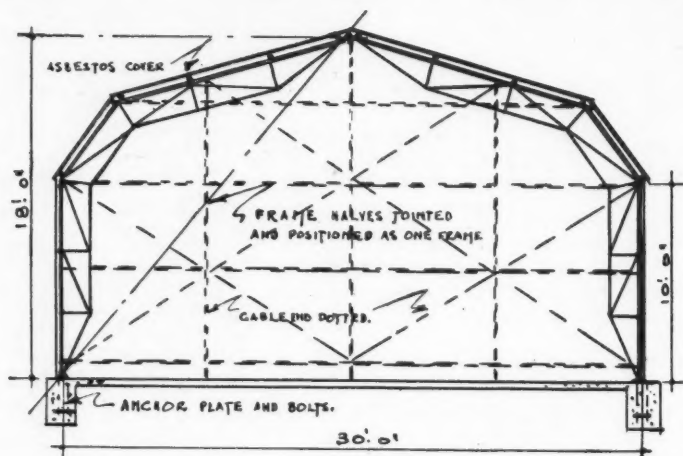


Published in the interests of Good Brickwork by the makers of

ACCRINGTON "NORI" BRICKS

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PATENT WELDED TUBULAR CONSTRUCTION



WELDED Tubular Construction is a recent development of considerable interest. Welded tubular steel roof trusses have been designed and tested and standard trusses, ranging from 15 ft. up to 120 ft. spans, are now being fabricated and employed. Sectional wall frames, door frames, standard sections for domestic or hip roof assembly and a wide range of standard prefabricated tubular sections for such a variety of structures as bridges, pylons, gantrys and water towers have been made, submitted to all necessary tests, and are now being used by architects, engineers and building contractors in many parts of the country.

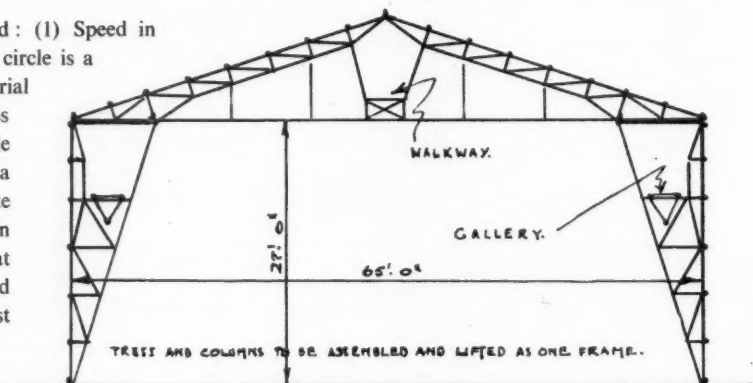
The following advantages may be claimed: (1) Speed in erection; (2) Economy in steel—the hollow circle is a most economical section using the least material for the greatest resistance to stress; (3) Lightness of structure with great strength. It is notable that the joints, usually the weakest part in a structure, are the strongest parts; (4) Complete factory prefabrication or site welding—an alternative choice of importance and great convenience; (5) The circular section and welded joints are most simply protected against corrosion.

A series of informative Data Sheets are available describing the principles of welded tubular construction and detailing some of the forms of construction being utilised by architects and engineers.

An eminent Consulting Engineer, referring to this system of construction, recently wrote as follows:—

"All points of interest referring to post-war work are applicable to wartime contracts; in addition, the saving of weight has an increased importance in wartime. For post-war reconstruction, the following points seem to be of the most importance:

- (1) For housing, etc., it is possible to have a very light, cheap structure, which can entirely disappear in very thin walls. It gives a set shape and provides for the use of lighter materials for walls.
- (2) For flats, the light structure is also possible, particularly for columns, and it can be suitably combined with concrete.
- (3) For factory buildings and bridges, a construction of almost any shape is possible, and a structure with all the advantages of reinforced concrete design, but as light as a steel construction, is quite feasible. Buildings of tubular construction provide a much greater degree of rigidity than ordinary steel."



The sections reproduced are typical examples of tubular frame construction. The first has been designed as a store building; the second, with gallery along either side and central walkway suspended from the roof, is a form of light, economical construction designed for a Film Production Centre.

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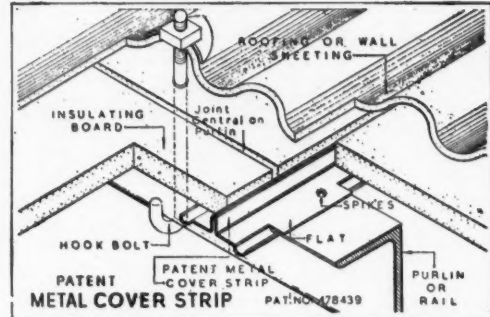
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In particular, we hope to maintain at the highest level the technical service we render to Architects, Engineers and Contractors.

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- Solving new fixing problems when they arise, developing new fixing methods where necessary.
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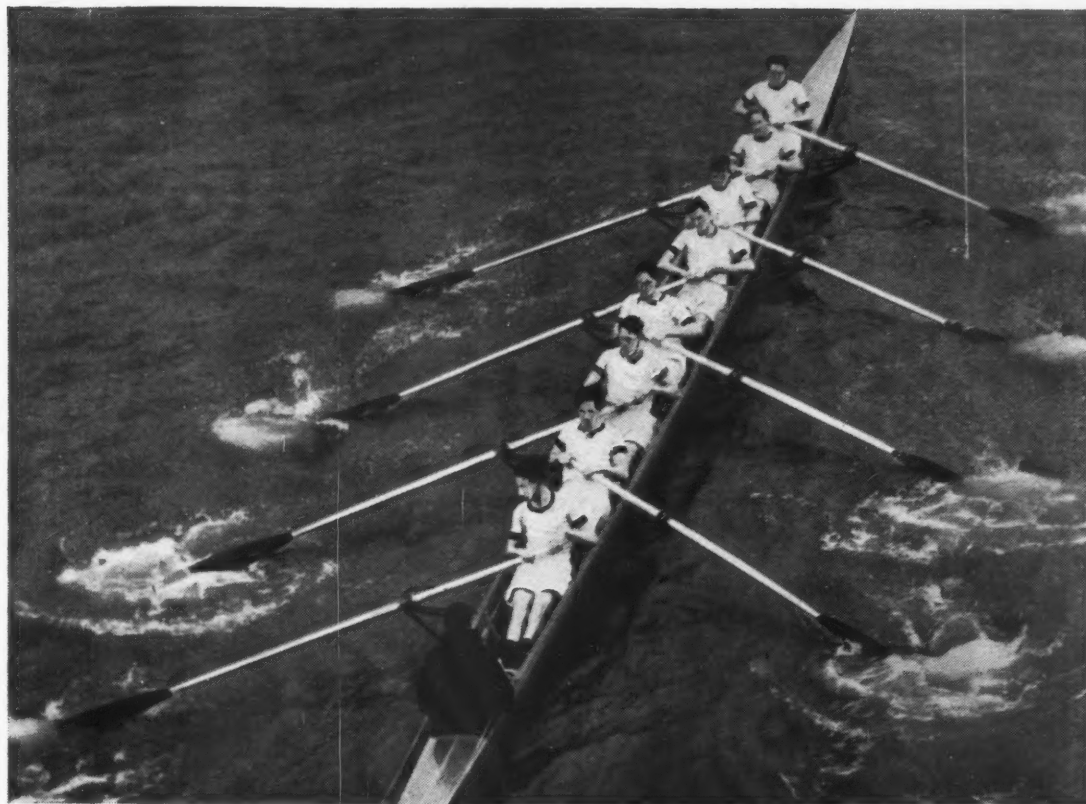


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In—out—in—out; there goes a stylish crew—look at the perfect finish.

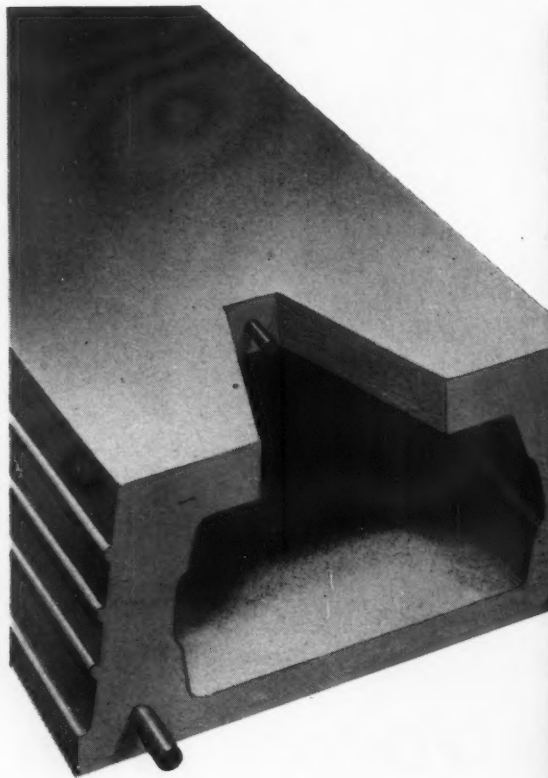
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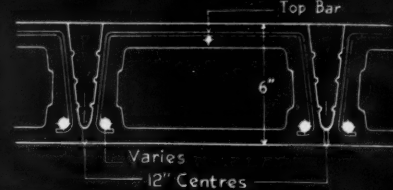
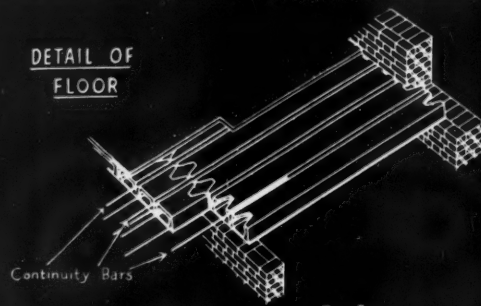


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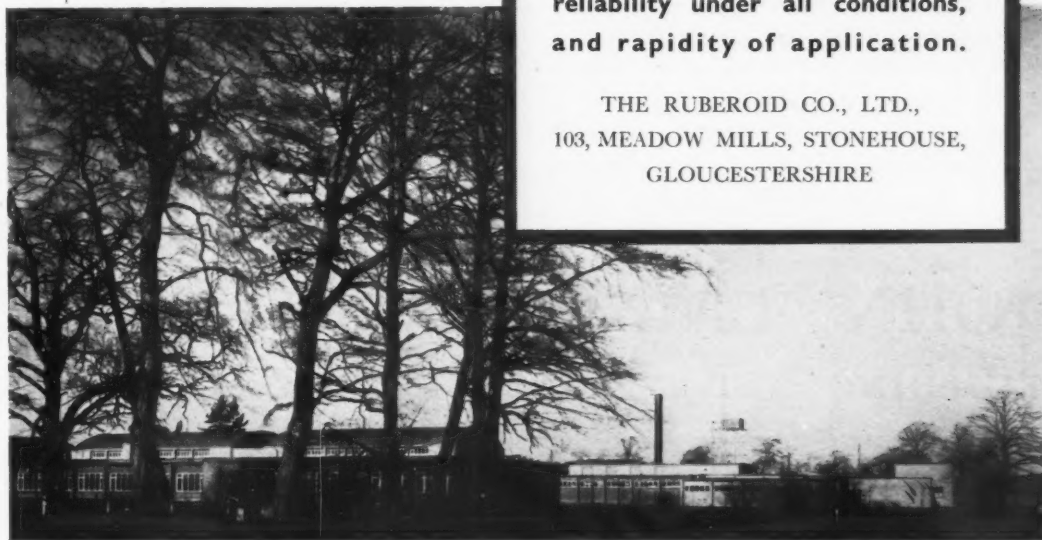
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Ruberoid Roofings, Ruco Ruberoid Roof, Ruberoid Slates, Astos and Pluvex Dampcourses, Zylex Bituminous Slaters' Felt, Zylex Reinforced Slaters' Felt—all have contributed to the enviable name this company bears for products of dependability.

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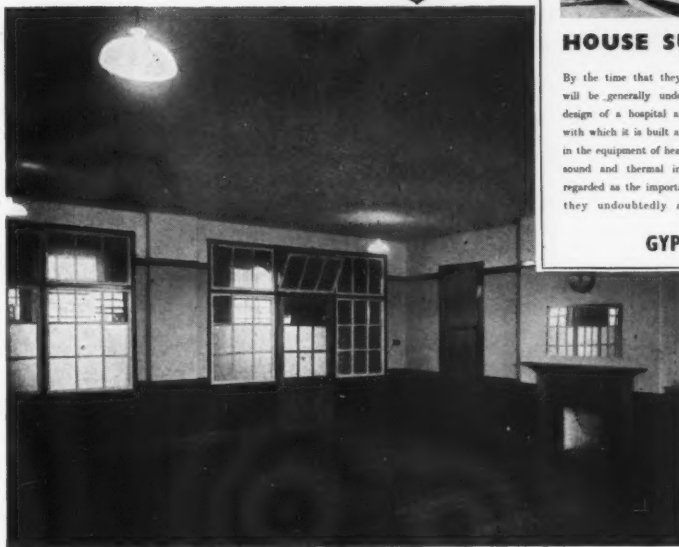
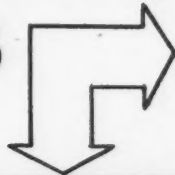
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HOUSE SURGEON AND MATRON OF 1975

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GYPROC PRODUCTS LIMITED

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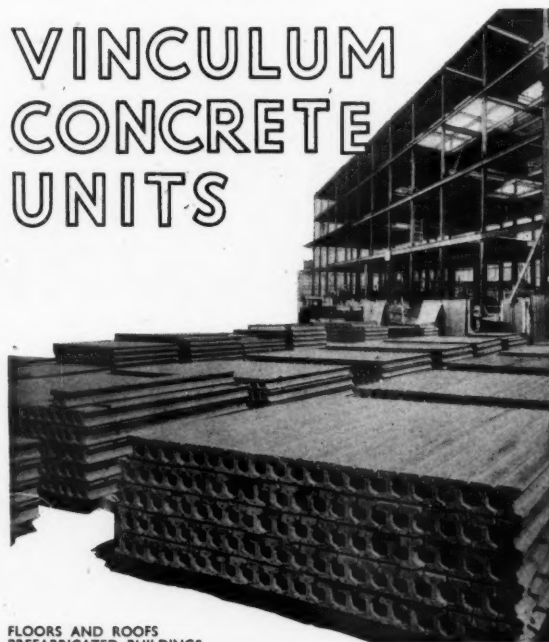
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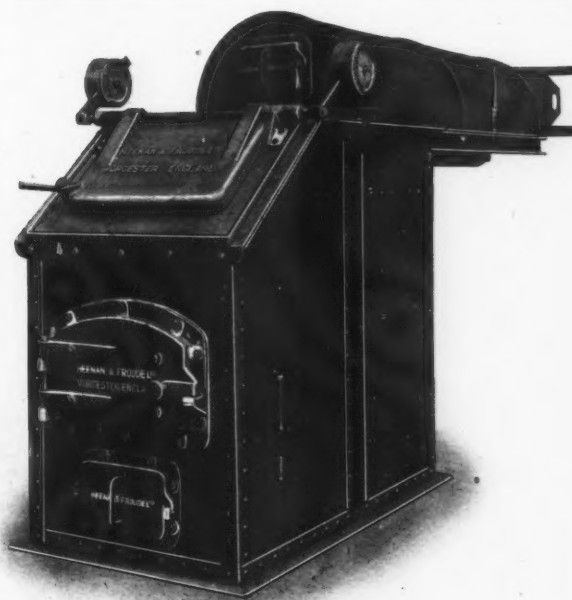
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**AS SUPPLIED TO A LARGE
NUMBER OF HOSTELS
FOR THE DISPOSAL OF
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HEENAN & FROUDE LIMITED

ENGINEERS

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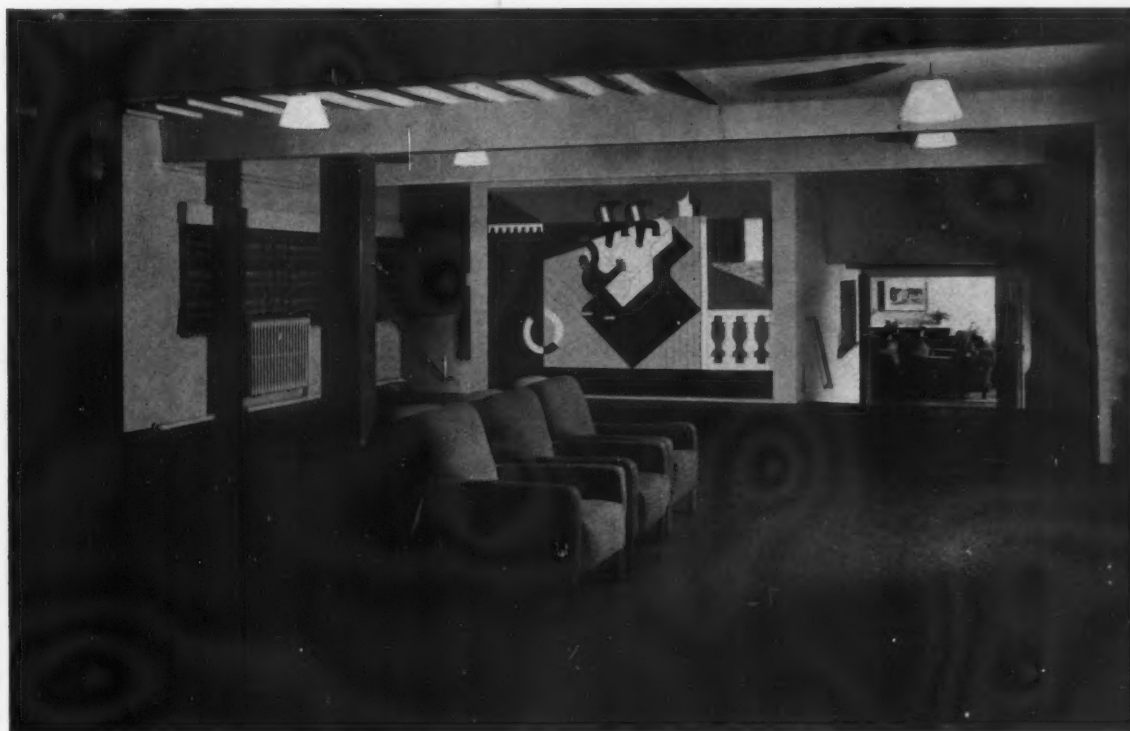
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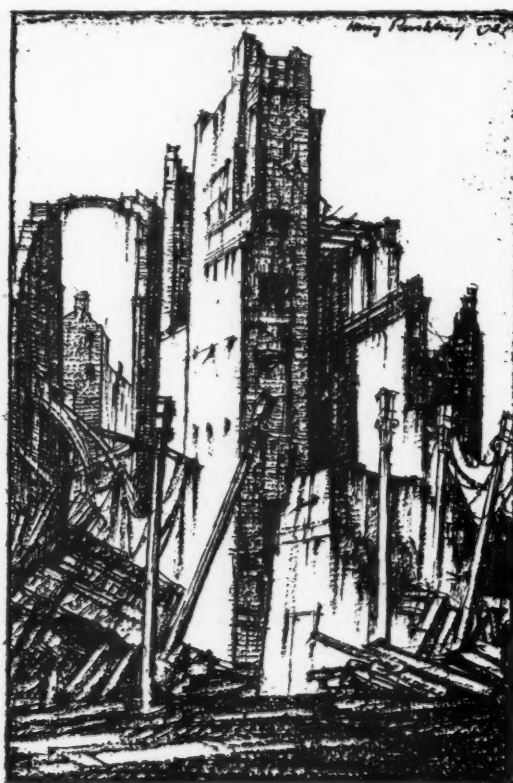
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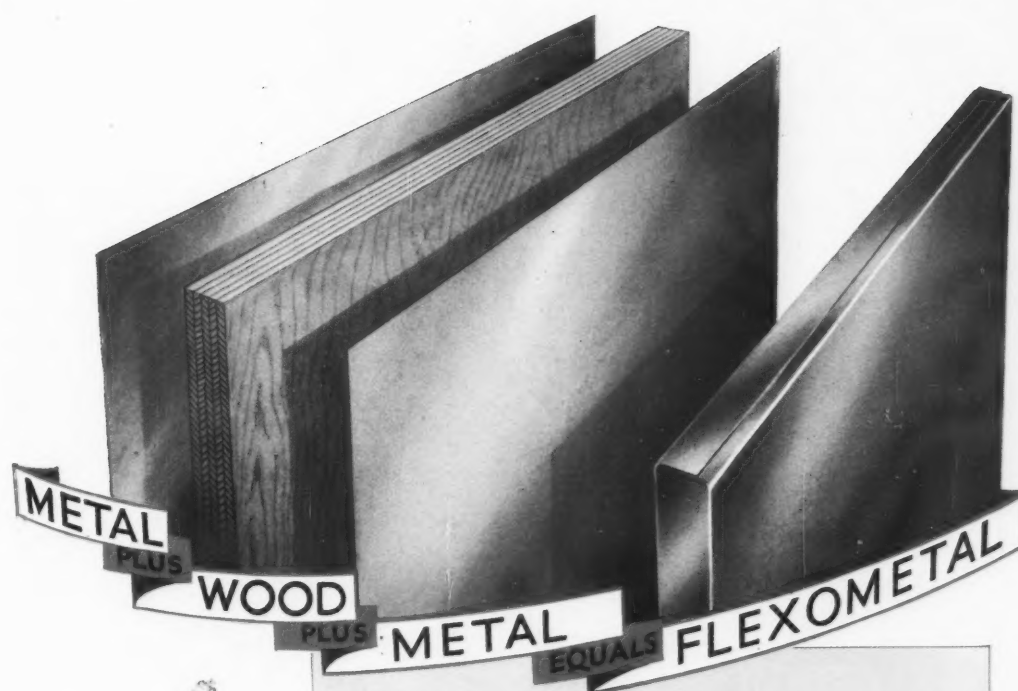
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USES—No. 5 Cathedral Glass

The apparatus used to demonstrate the properties of these Glasses consists of a white opal tube lamp $4\frac{1}{4}$ " behind Clear Glass, and a $\frac{1}{2}$ " wood strip, painted black on a white background. Each type of glass in turn is placed in front of this, so that its properties may be illustrated.



USES

Cathedral Glasses are used for internal partitions, windows of rooms where partial privacy is desired, and also in factory glazing where direct vision is not essential.

★

SPECIFICATION

The groups of glasses described here possess a varying and progressive degree of light diffusion and privacy, and the photographs demonstrating these properties indicate the most suitable type for any specific purpose.

Non-formal Textures :

The surface, textured on one side, just gives sufficient obscurity to prevent clear vision through the glass.

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DOUBLE ROLLED
CATHEDRAL

PLAIN CATHEDRAL

WATERWITE
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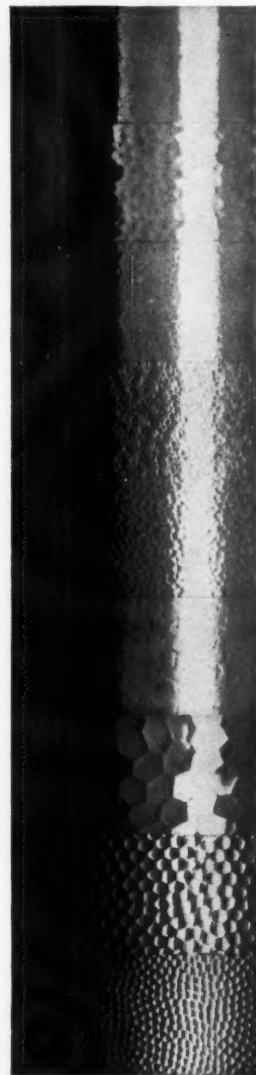
Semi-formal Patterns :

A slight, semi-formal pattern on one surface gives a brightness to the appearance of the glass and partly obscures vision

No. 1
HAMMERED
CATHEDRAL

No. 2
" "

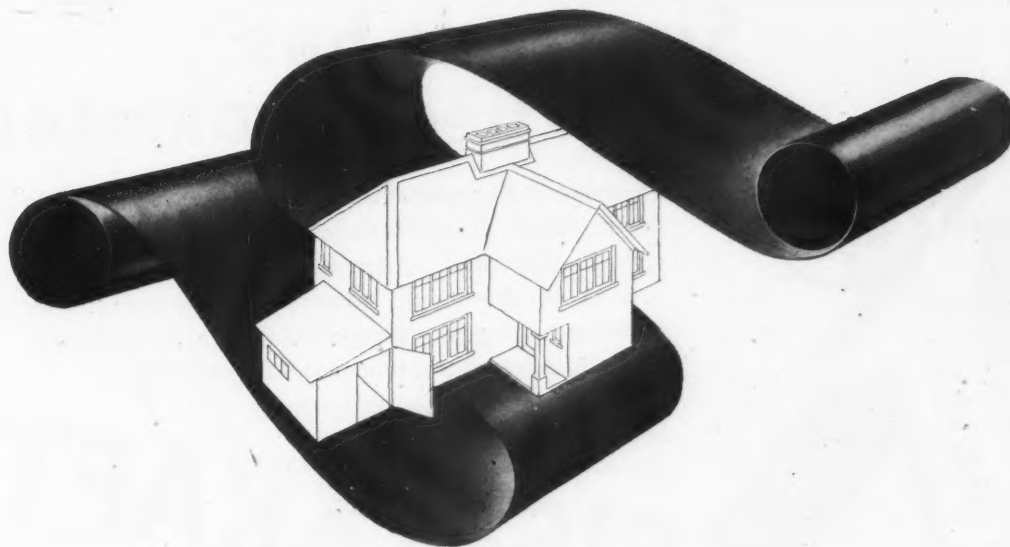
No. 3
" "



The patterns shown are approximately $\frac{1}{4}$ actual size.

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

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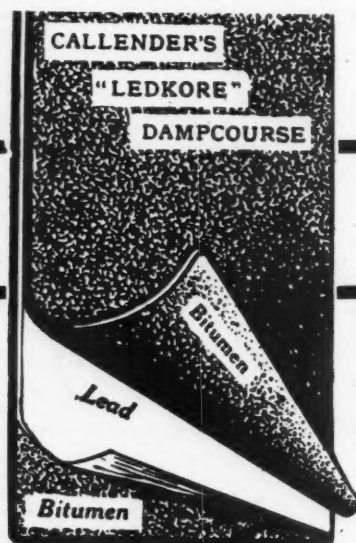
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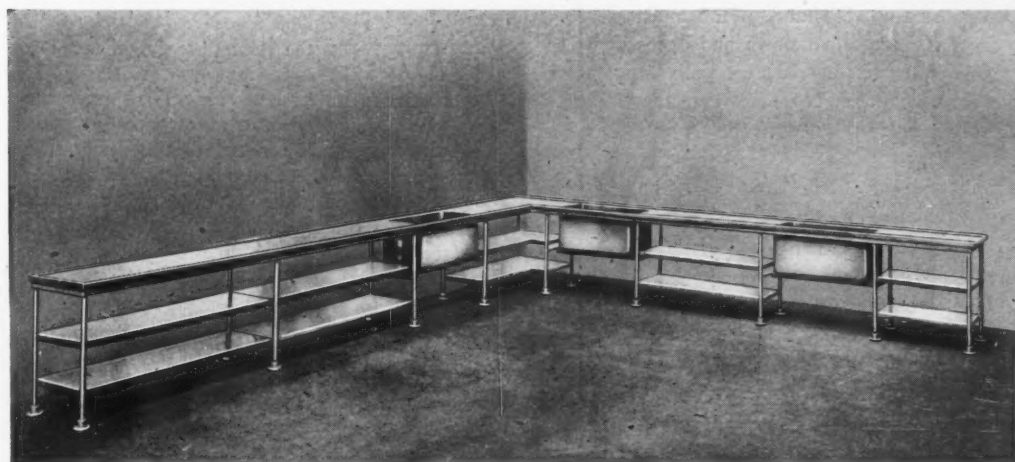
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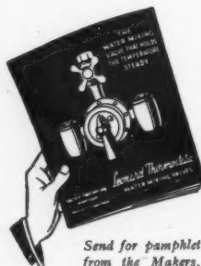
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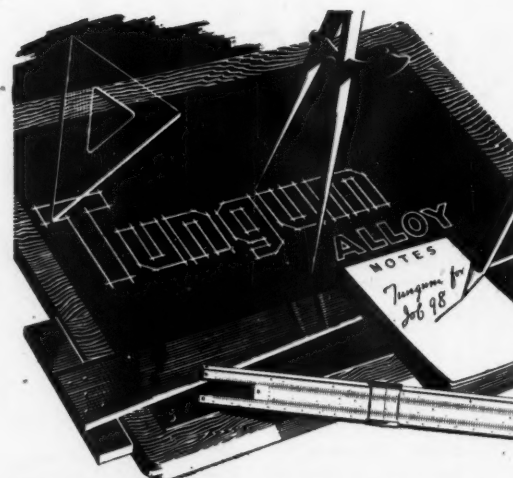
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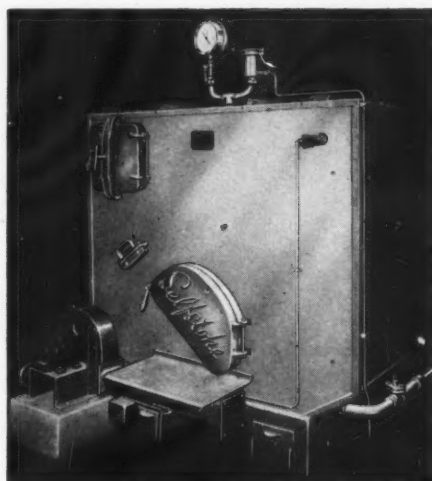
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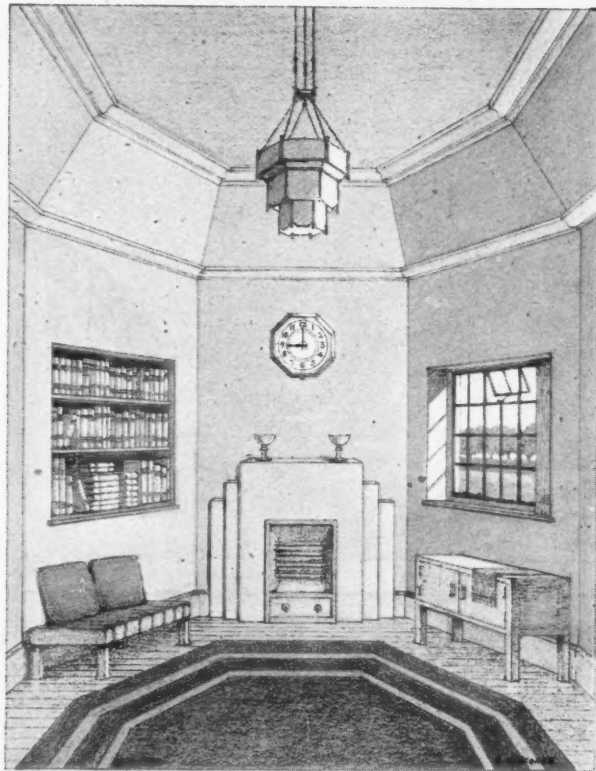
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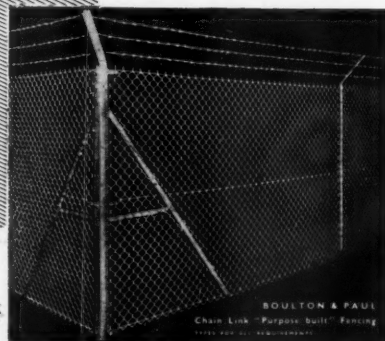
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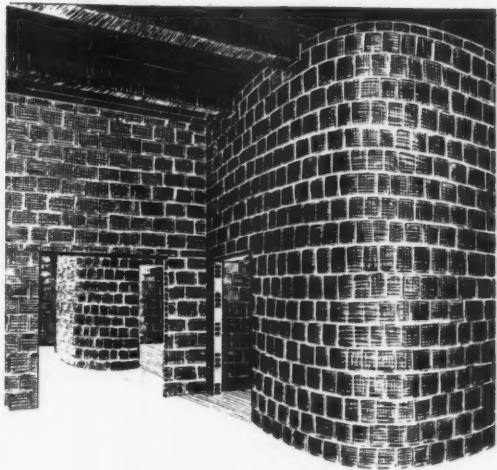
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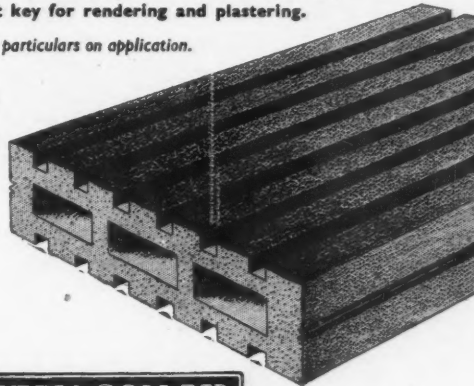


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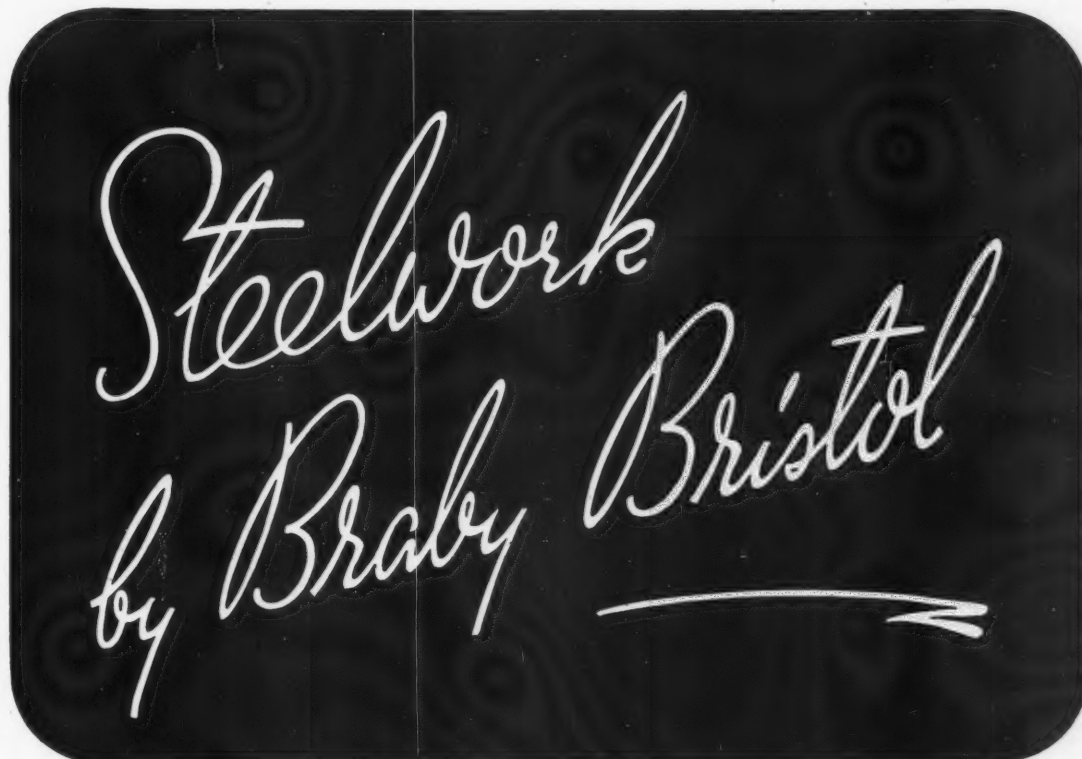
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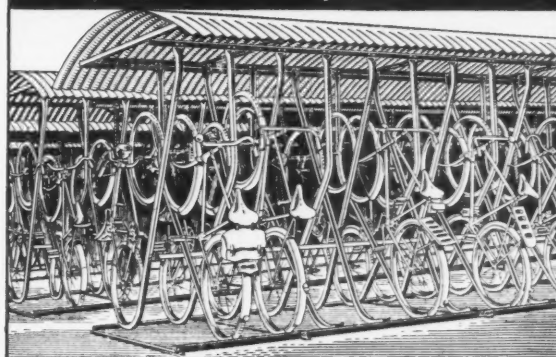
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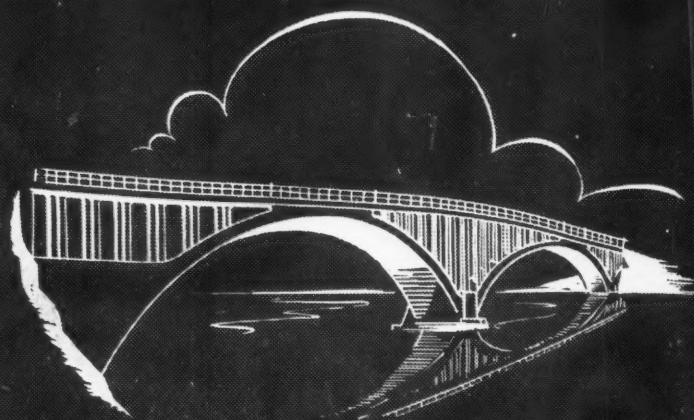
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