

THE ARCHITECTS' JOURNAL



JUN 29 1953

DETROIT

standard contents

every issue does not necessarily contain all these contents, but they are the regular features which continually recur.

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★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ie one week, Ig to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 75, Eaton Place, S.W.1.	Sloane 3158/1601
IIBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1.	Euston 2450
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Museum 1783
I of Arb	Institute of Arbitrators. 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197/5176
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
IWA	Inland Waterways Association. 14, Great James' Street, W.C.2.	Chancery 7718
LIDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
MARS	Modern Architectural Research Group (English Branch of CIAM) Secretariat: Gontran Goulden, Building Centre, 26, Store Street, W.C.1.	Museum 5400
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. 23, Saville Row, W.1.	Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service, 8, St. James' Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalt Mine-Owners and Manufacturers Council. 94-98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 37, Onslow Gardens, S.W.7.	Kensington 8161
NCBMP	National Council of Building Material Producers, 10, Princes Street, S.W.1.	Abbey 5111
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives, Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 13, Suffolk-St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1.	Langham 4341
NPL	National Physical Laboratory. Head Office, Teddington	Molesey 1380
NSA	National Sawmilling Association. 14, New Bridge Street, E.C.4.	City 1476
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1.	Abbey 1359
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Abbey 4504
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Edinburgh 20396
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George St., S.W.1.	Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, W.8.	Western 1571
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3.	Mansion House 3921
SIA	Structural Insulation Association. 32, Queen Anne Street, W.1.	Langham 7616
SIA	Society of Industrial Artists. 7, Woburn Square, W.C.1.	Langham 1984
SNHTPC	Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen.	Holborn 2646
SPAB	Society for the Protection of Ancient Buildings. 55, Great Omond Street, W.C.1.	Temple Bar 5006
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	City 4771
TDA	Timber Development Association. 21, College Hill, E.C.4.	Victoria 8815
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	City 5051
TTF	Timber Trades Federation. 75, Cannon Street, E.C.4.	Whitehall 4341
WDC	War Damage Commission. 6, Carlton House Terrace, S.W.1.	Oxford 47988
ZDA	Zinc Development Association. Lincoln House, Turl Street, Oxford.	

No. 3041]

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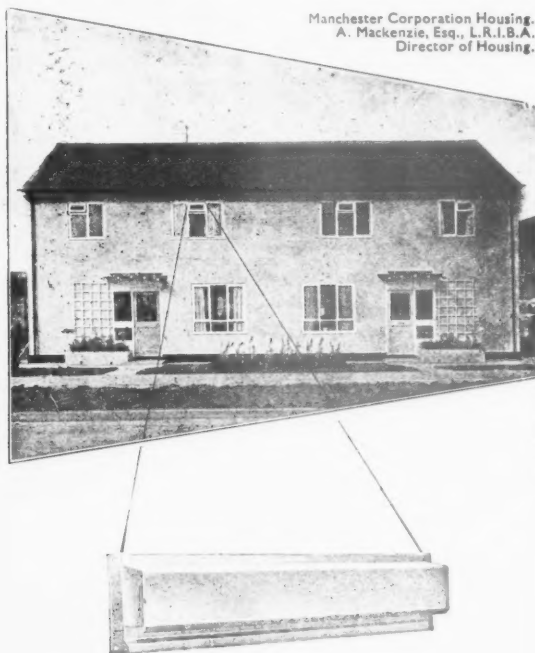
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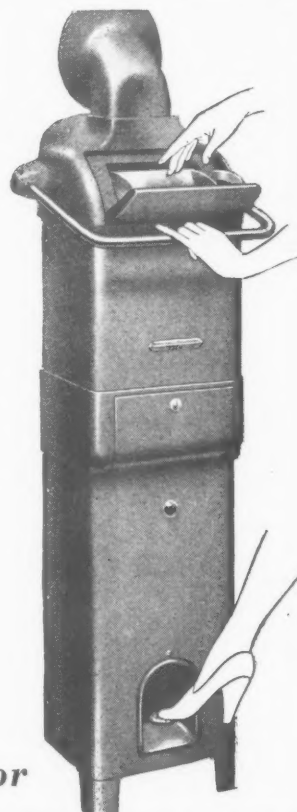
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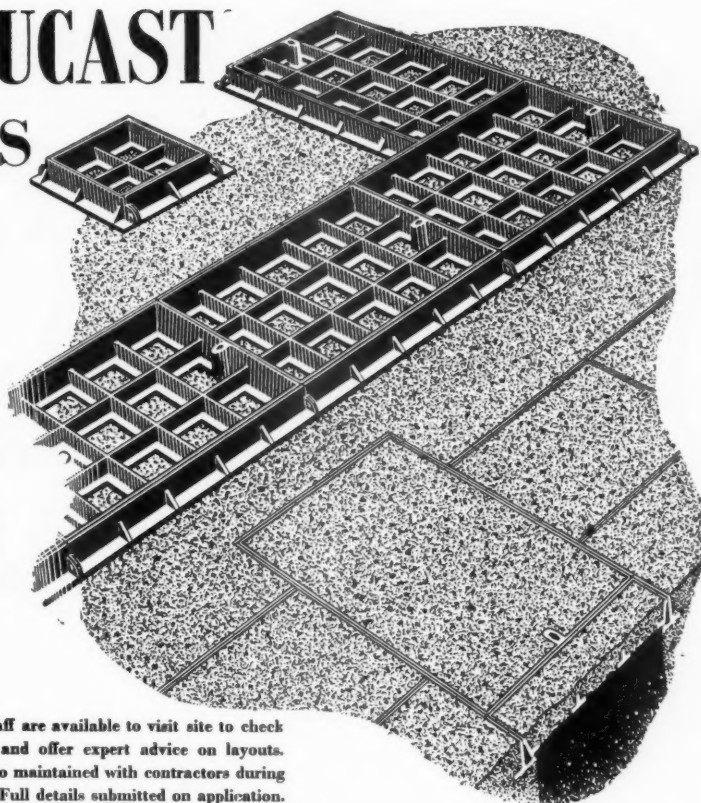


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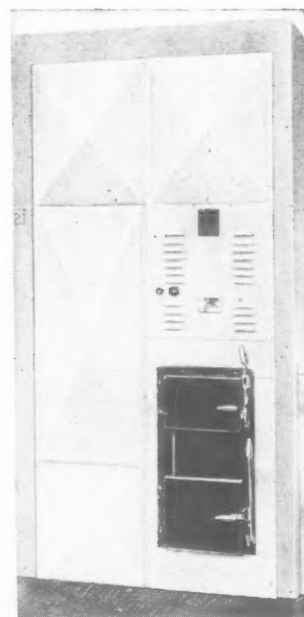
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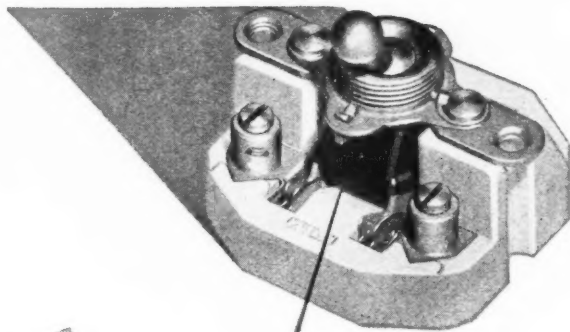
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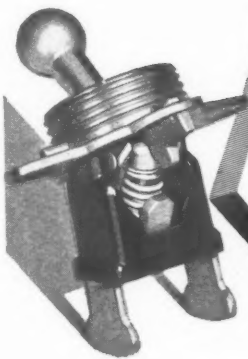
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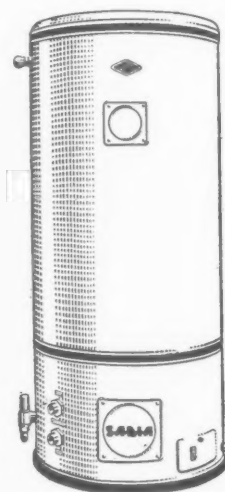
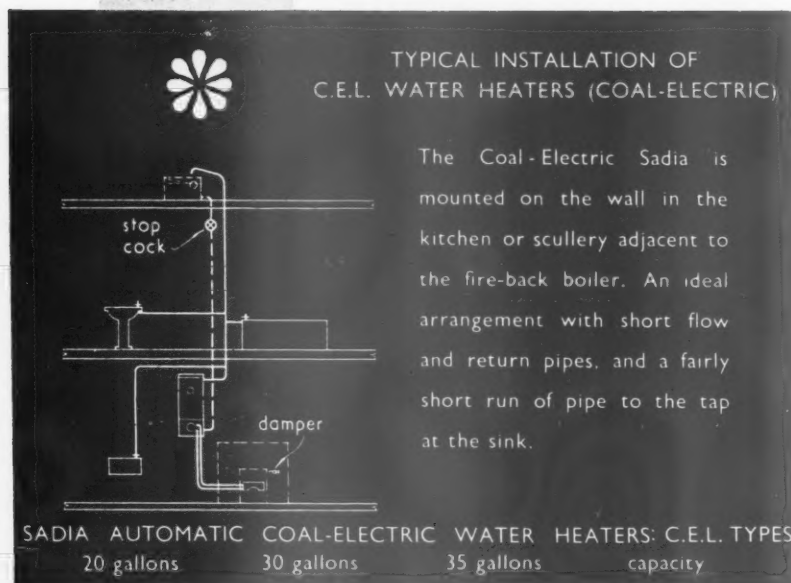
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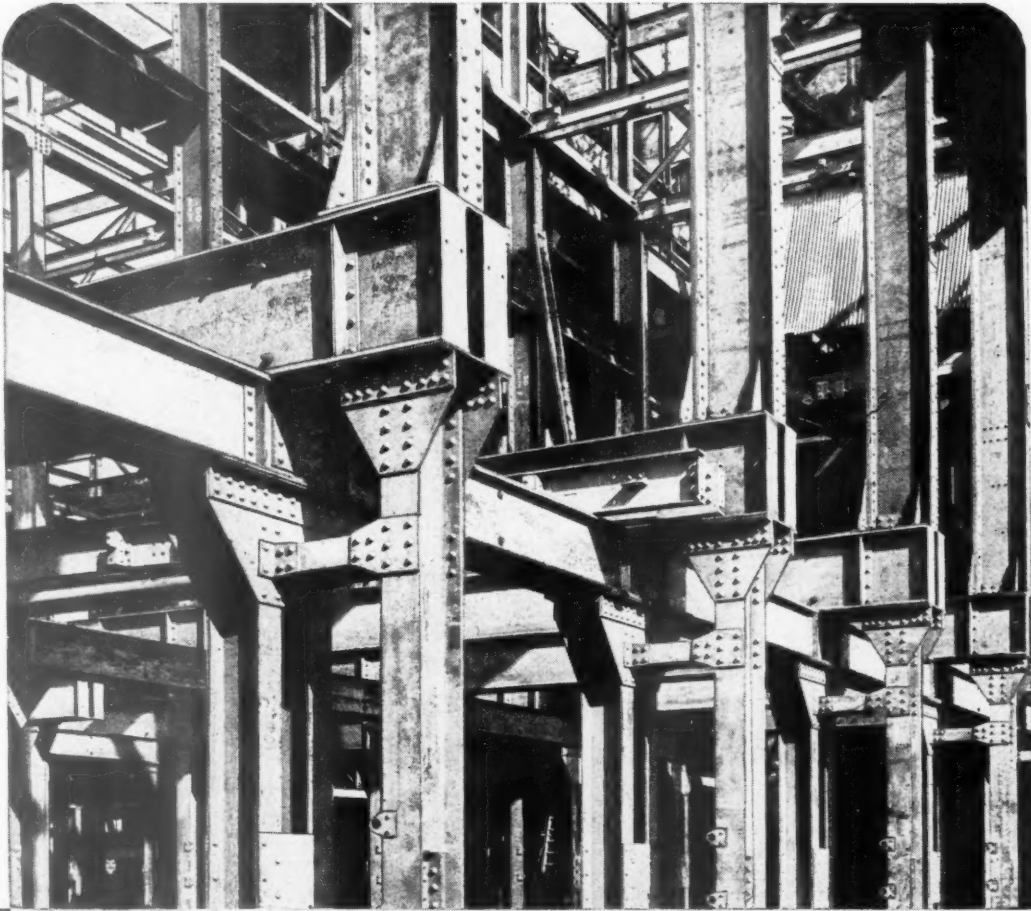
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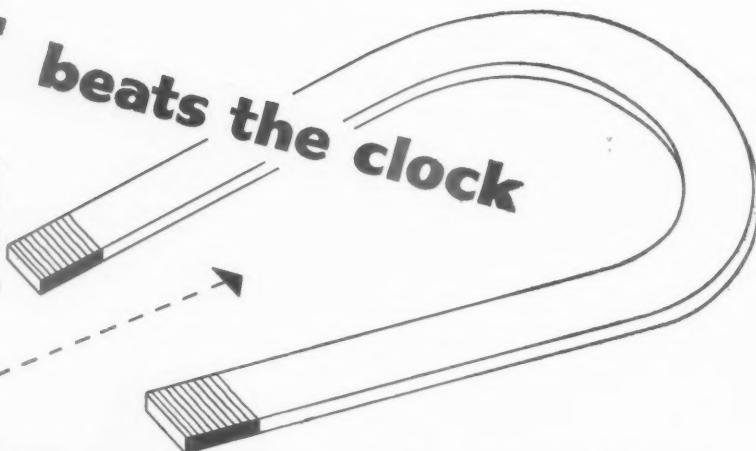
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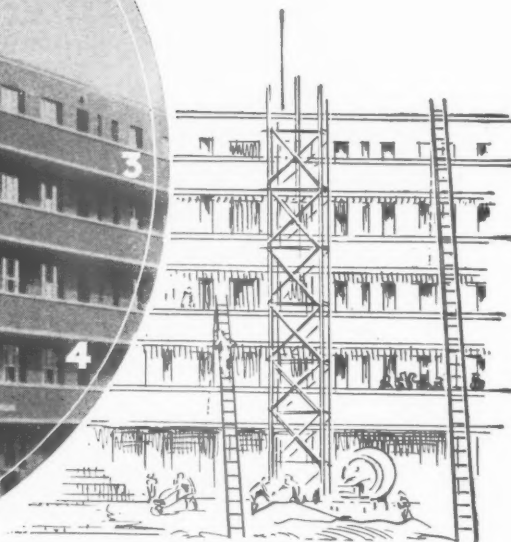
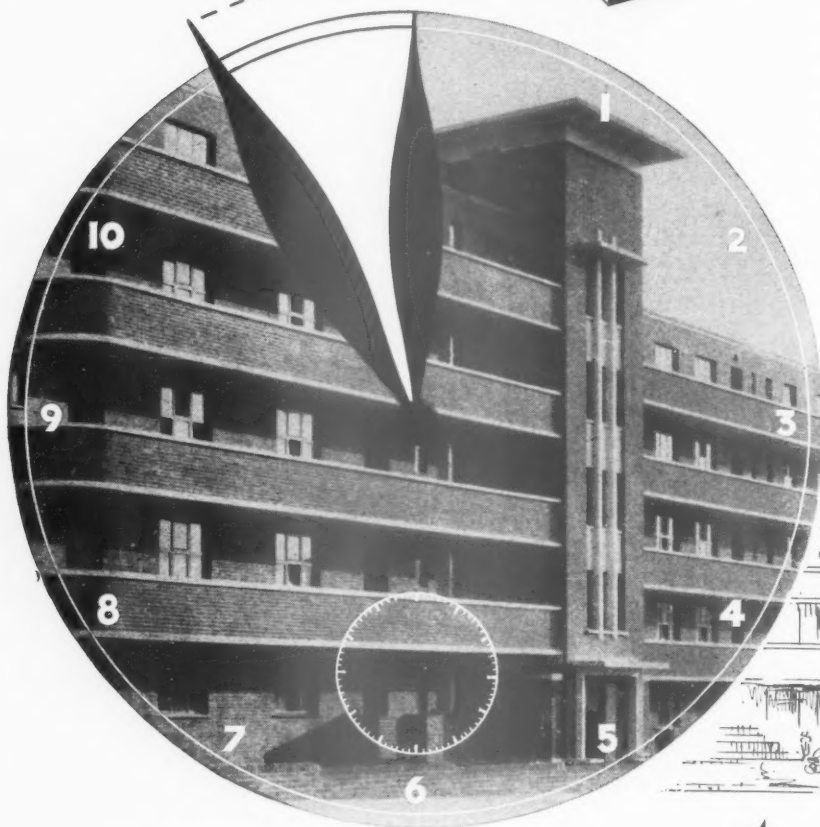
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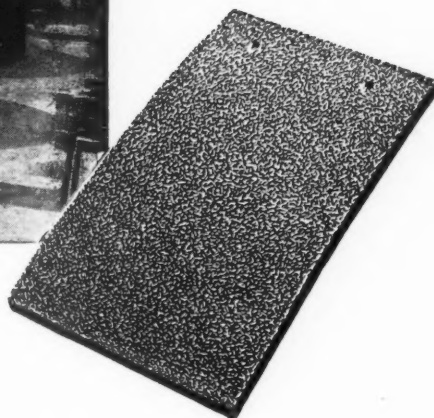
LOVE LANE, ASTON, BIRMINGHAM. Phone: Aston Cross 3291
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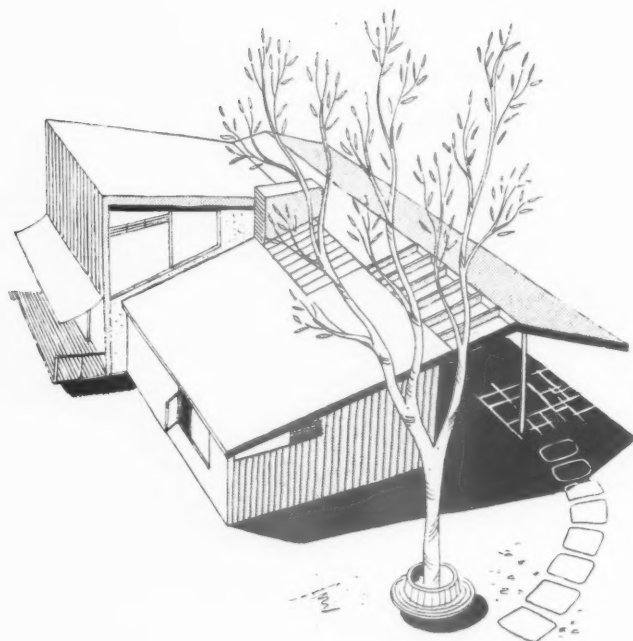
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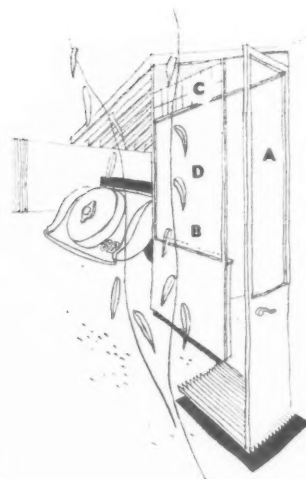
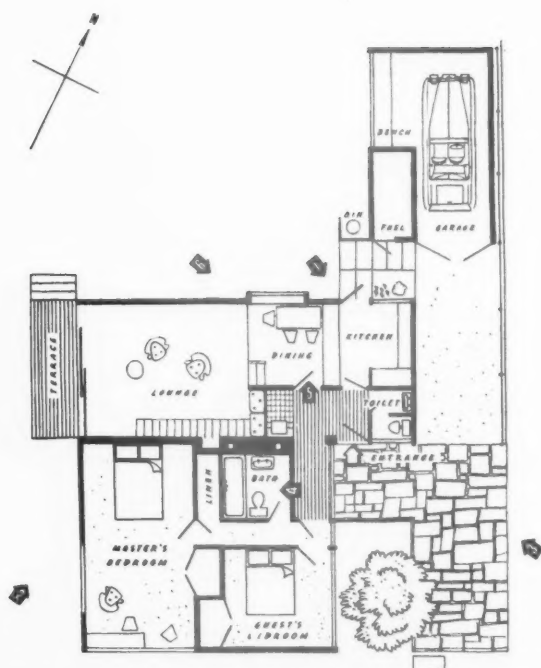
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NEW DESIGNS FOR LIVING, No. I



This house has a single storey with 850 square feet of living area. The construction is of brick and timber with cavity and fibre-glass insulation to the walls. The low-pitched roof is covered with copper sheeting on fibre board panels. A boiler supplies central heating to hall and bedroom and coil heating in the floor of the lounge below the sliding glazed panels. The lounge has an open fire as well. Plumbing, heating, linen cupboard and bathroom are grouped round the central chimney stack, with light and ventilation to bathroom and lobby through glazed panels in the roof.

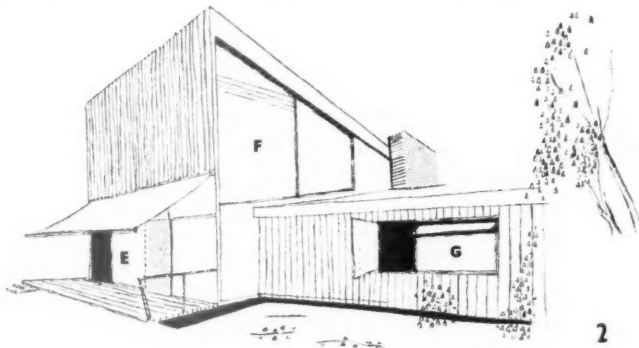
Compact planning and a general air of spaciousness have been made possible by using glass not only as a window filler but as a structural and decorative material.



- A 1" Georgian Wired Cast door panel.
- B White "VITROLITE" to inside sill and wall panel.
- C "INSULIGHT" Hollow Glass Blocks above window.
- D S.Q. 32 oz. Sheet Glass to metal window.

Designed by Leslie Gooday, A.R.I.B.A., M.S.I.A. and C. Wycliffe Noble, A.R.I.B.A., Dip. Arch.

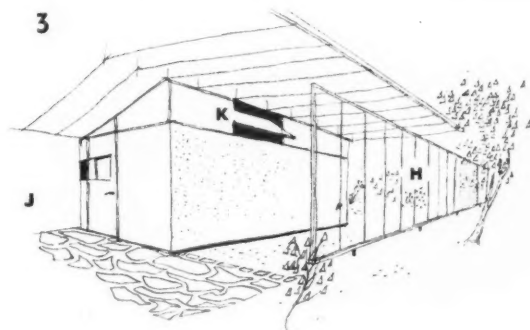
..... **GLASS IN THE SMALL HOUSE**



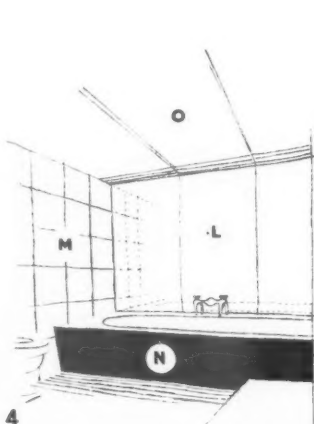
- E 1/4" "ARMOURPLATE" Glass panels in bronze sliding frame.
- F "INSULIGHT" Double-Glazing panels with remote controlled patent glass ventilator.
- G S.Q. 32 oz. Sheet Glass panels to bedroom window and night ventilator.

2

- H 1/2" Georgian Wired Cast panels to screen.
- J Toughened Rough Cast door panel.
- K Pinstripe Figured Rolled Glass to clerestory window.

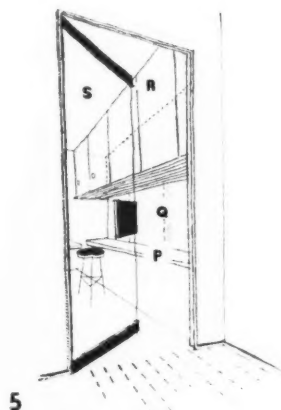


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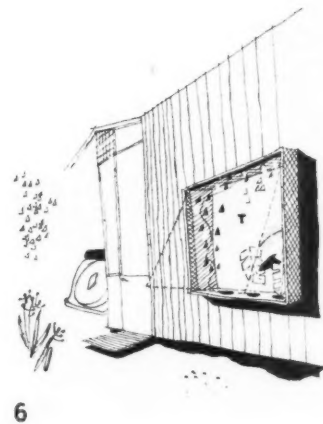
4

- L Silvered 1/2" Polished Plate, lead backed.
- M Primrose "VITROLITE" to wall in ashlar sizes.
- N Black "VITROLITE" bath panel.
- O Borealis Figured Rolled Glass lay light with glass iouvre vent.



5

- P "VITROLITE" top to breakfast bar.
- Q 1/2" Rough Cast panels between breakfast bar and kitchen.
- R 1/2" Polished Plate Glass sliding panels to cupboards above bar.
- S "ARMOURPLATE" Glass Door to dining room.



6

- T 1/2" Polished Plate Glass panel to metal top-hung windows.

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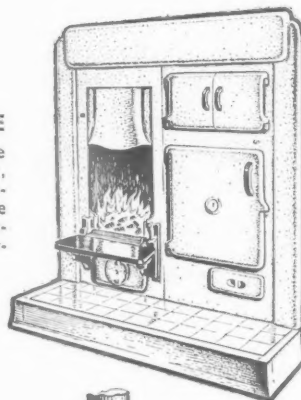


CC.1

THE ECONOMICAL FOUR

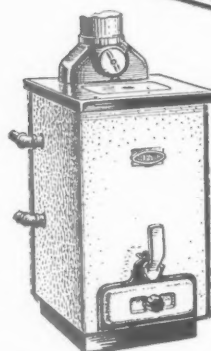
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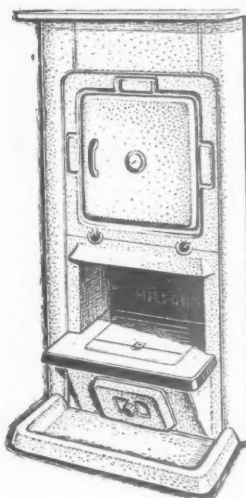
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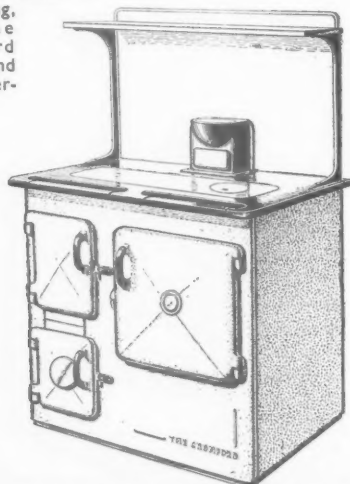
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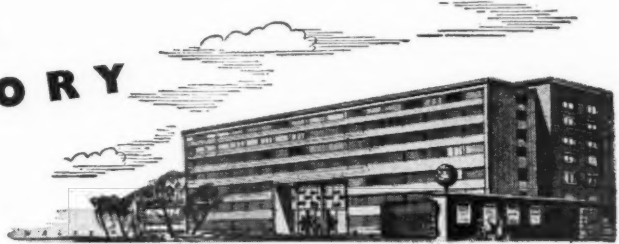
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PLIMBERITE

WOOD CHIPBOARD

IN OFFICE
AND FACTORY



cuts costs of conversions

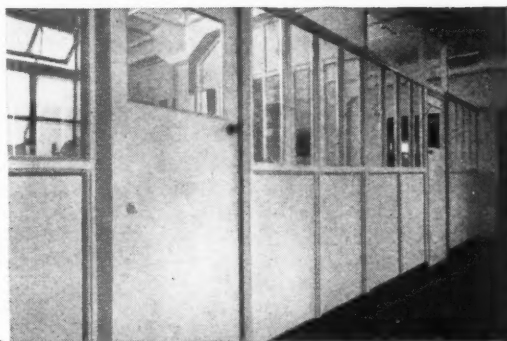
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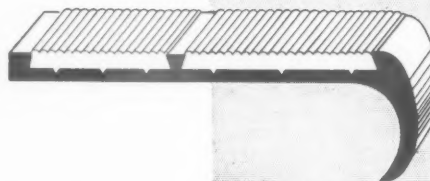
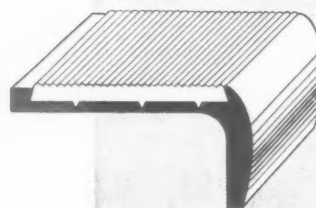
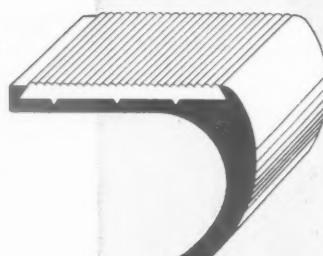
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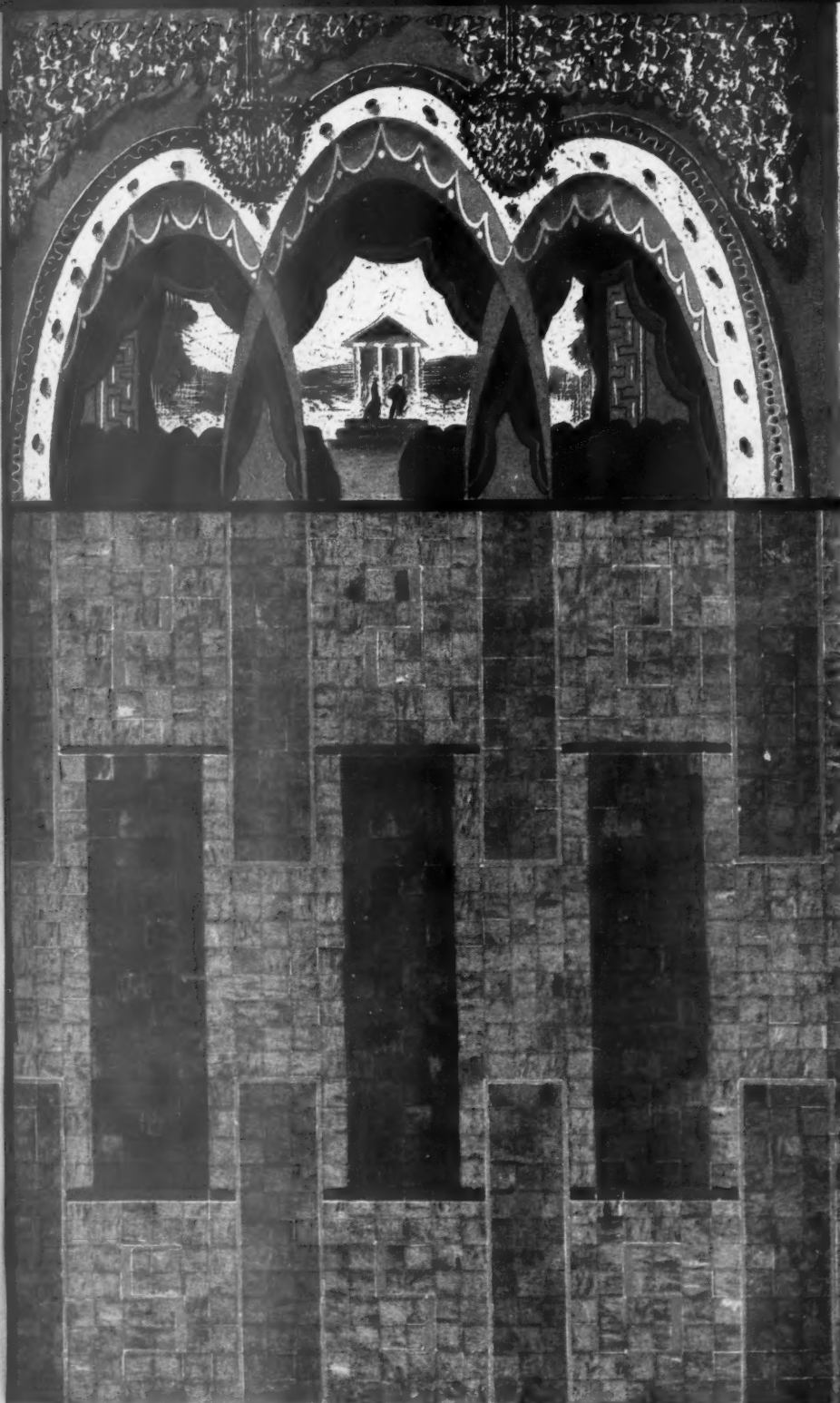
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MARLEY
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The Sensitive Needle

The line drawn between any two complementary colours on the colour circle gives in effect a needle or beam which may be regarded as being sensitive in the way that a compass needle is sensitive. In short, the needle tends to hover on its central pivot in the way that any electrical needle does and to quiver around the points adjacent to it. This analogy will make clear why it is possible on the new Marley system of colour co-ordination to choose harmonies of either parent colour with a certain amount of ease. The scarlet and blue-green needle for instance would tend to move about its central axis and the scarlet end of the needle would hover around the reds and purples. The blue-green end of the needle would tend to hover around the green and the blue. In this way the designer would quickly realise that he has a choice of colours as harmonies covered by the restless movement of the needle around its axis and he is aware of the colours on either side of the needle which would give him an enlarged choice of colour range without departing from the best principles of colour mixture. It will be seen later in this series of announcements how the entirely new range of Marley colours covers the whole colour circle in such a way that the designer can point the needle to most colours on the circle and find a range of complements which will match his architectural scheme. Thus he can choose an orange : blue-violet range or a yellow-green : crimson range and in each case he will know that he is dealing with the neutral complementary colours and is in a position to play with various colour combinations in a way that has hitherto not been possible.

This is the third of a series of announcements, six in all, describing a new system of colour co-ordination for flooring. Copies of the whole series will be available shortly.



Information



Kitchen

Gas in the design for living

The new enlarged gas and coke exhibit at the London Building Centre is now open. In it visitors will find the latest information on the use of gas and coke, mainly for domestic, but also for commercial purposes. Also shown are approved methods of gas and coke installation, together with examples of the latest equipment. A technical representative is available to answer queries and there is a comprehensive reference library. Visits from individuals or parties are welcomed (prior notice of a visit from an organised party will be appreciated).



Utility room

The lounge and reference library where visitors may consult information files, technical journals and text books. The original fireplace design provides an attractive setting for an open coke fire.



Exhibit designed by Montague Reed, M.S.I.A. Contractors: David Esdaile & Co., Ltd.



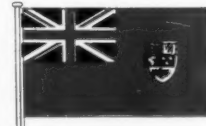
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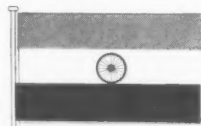
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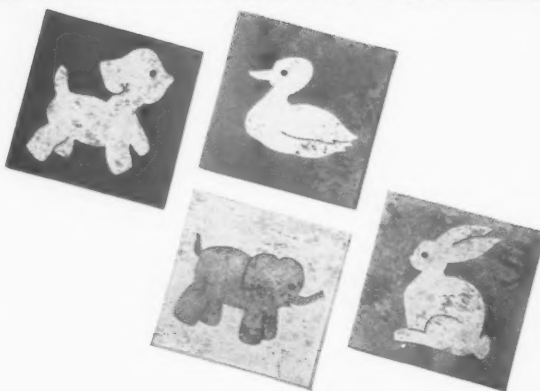
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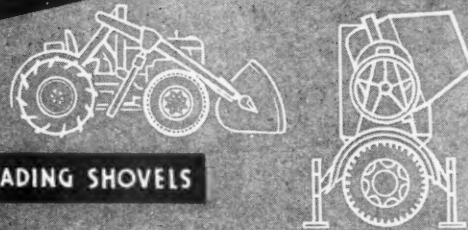
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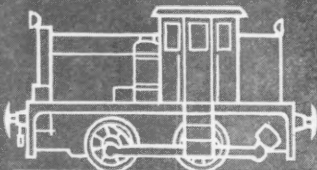
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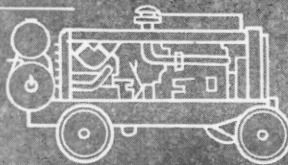


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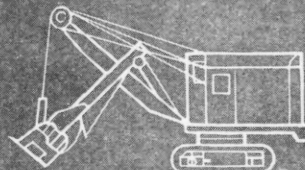
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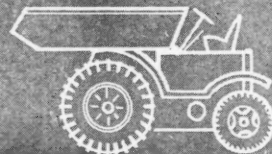
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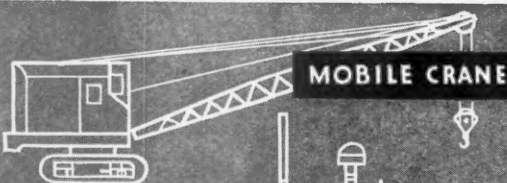
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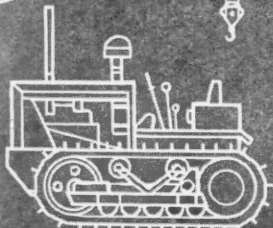
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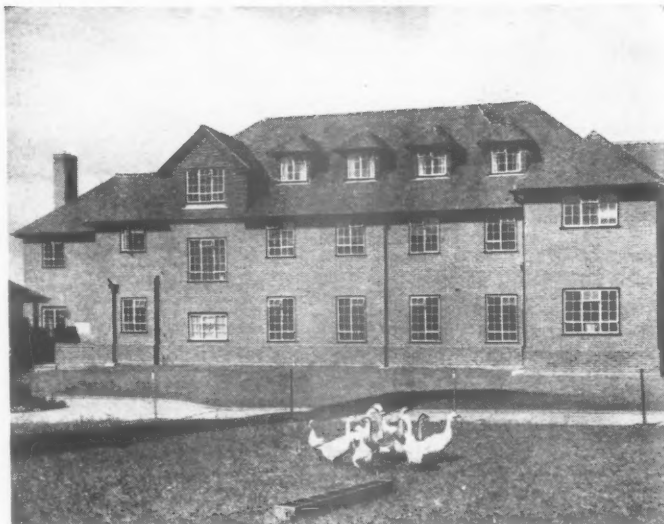
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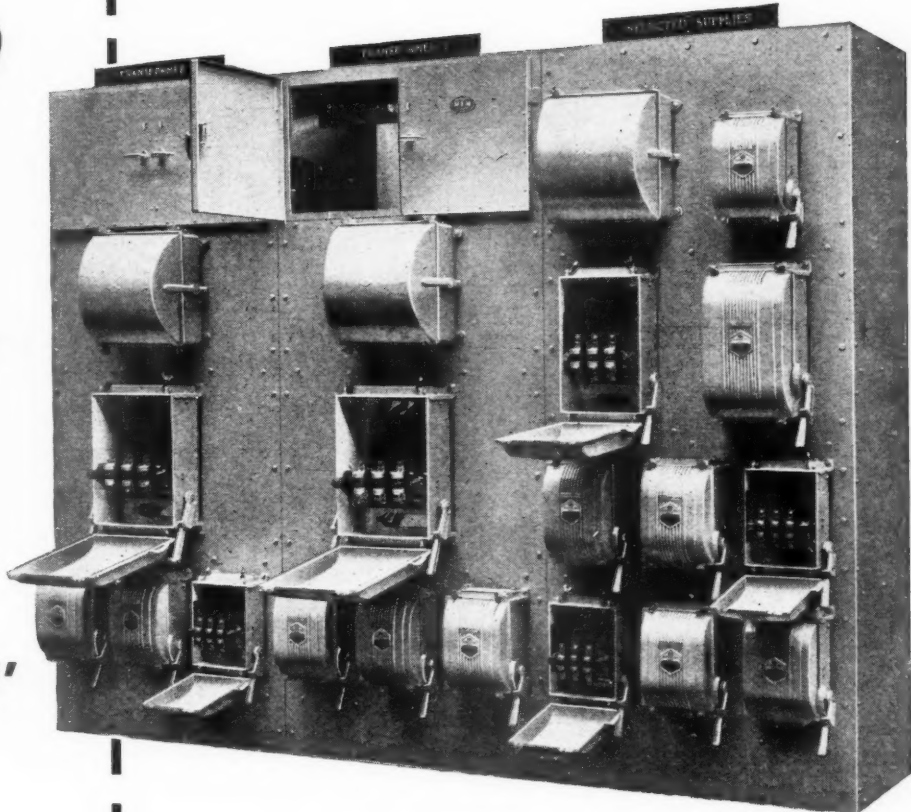
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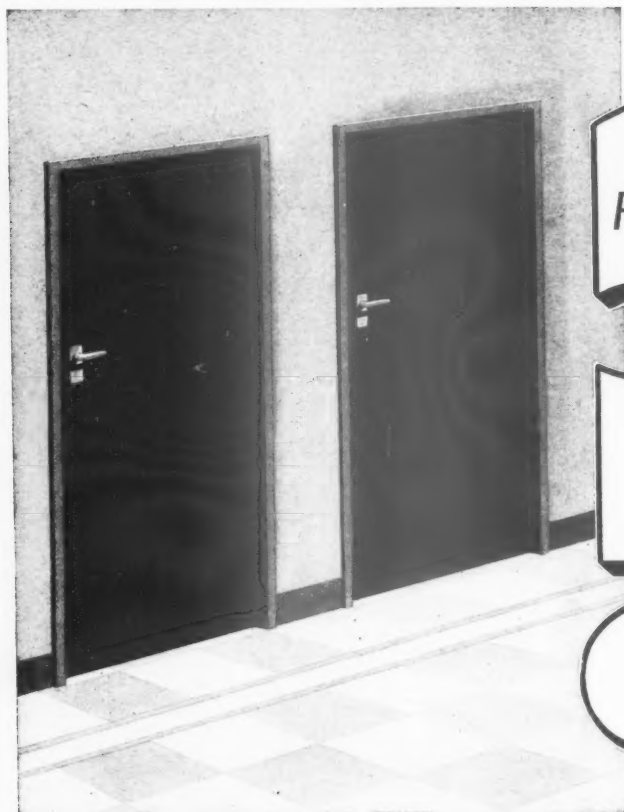
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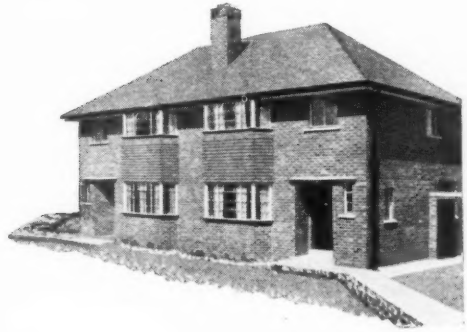
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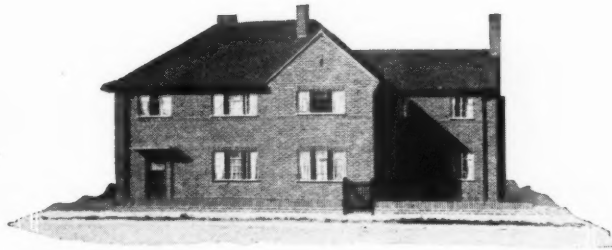
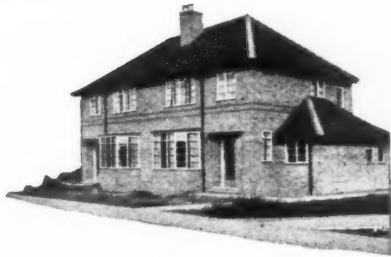
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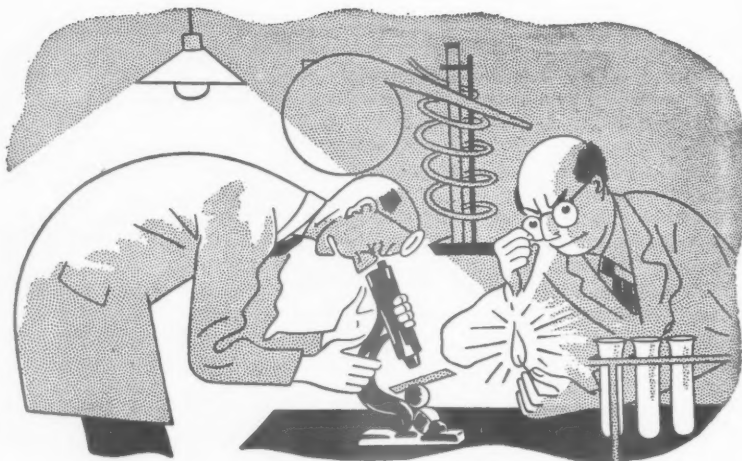
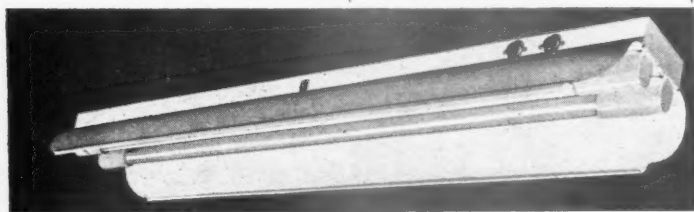
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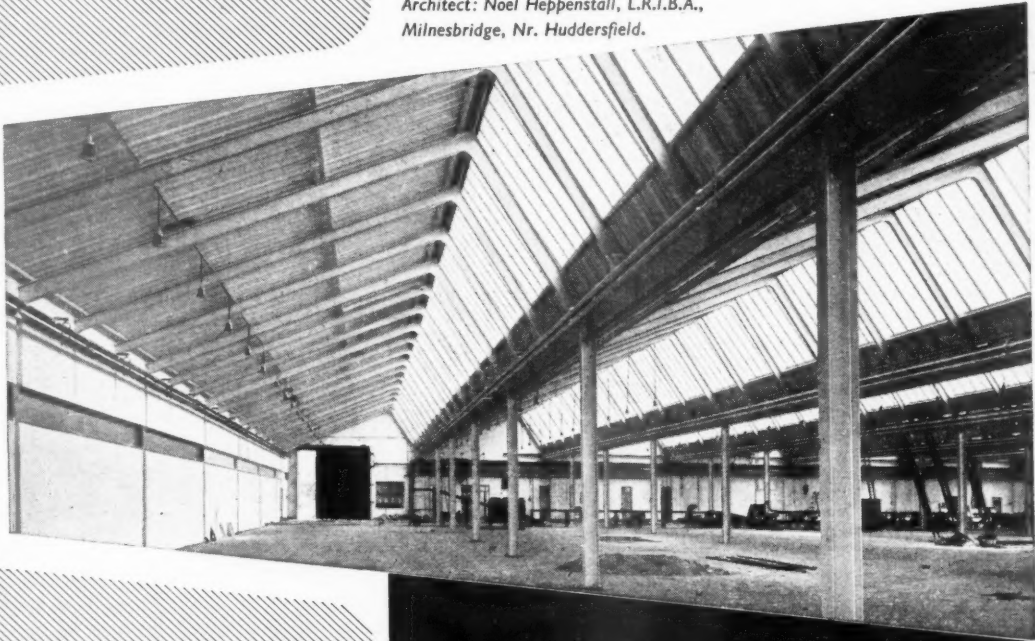
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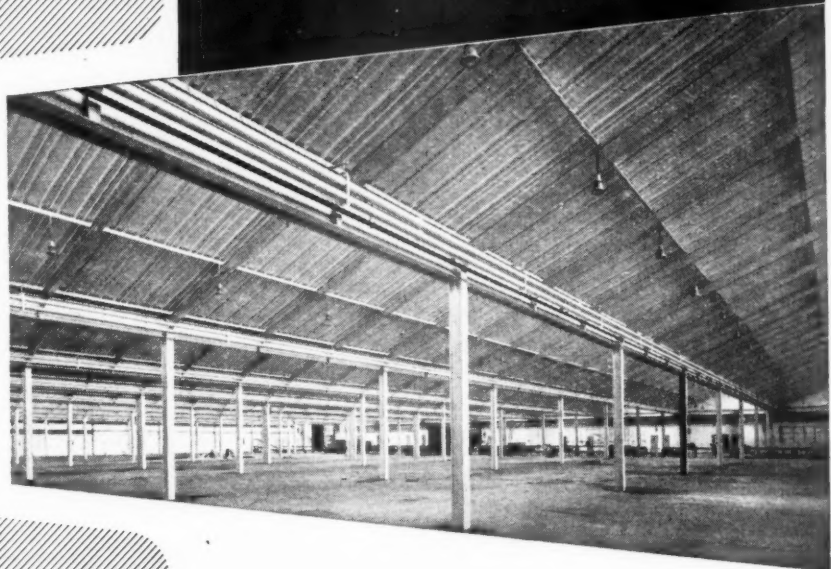


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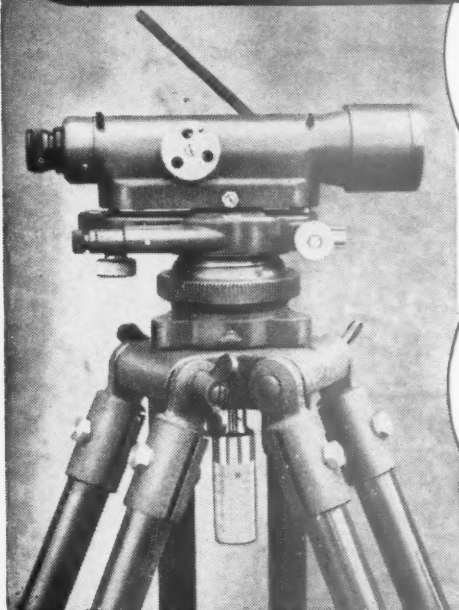


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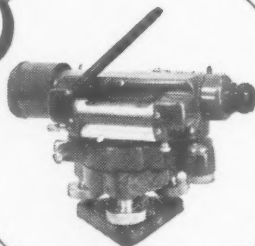
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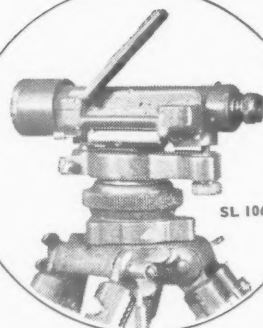
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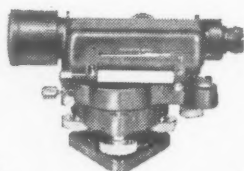
SL 105. Ball base, divided circle.



SL 103



SL 106



SL 101

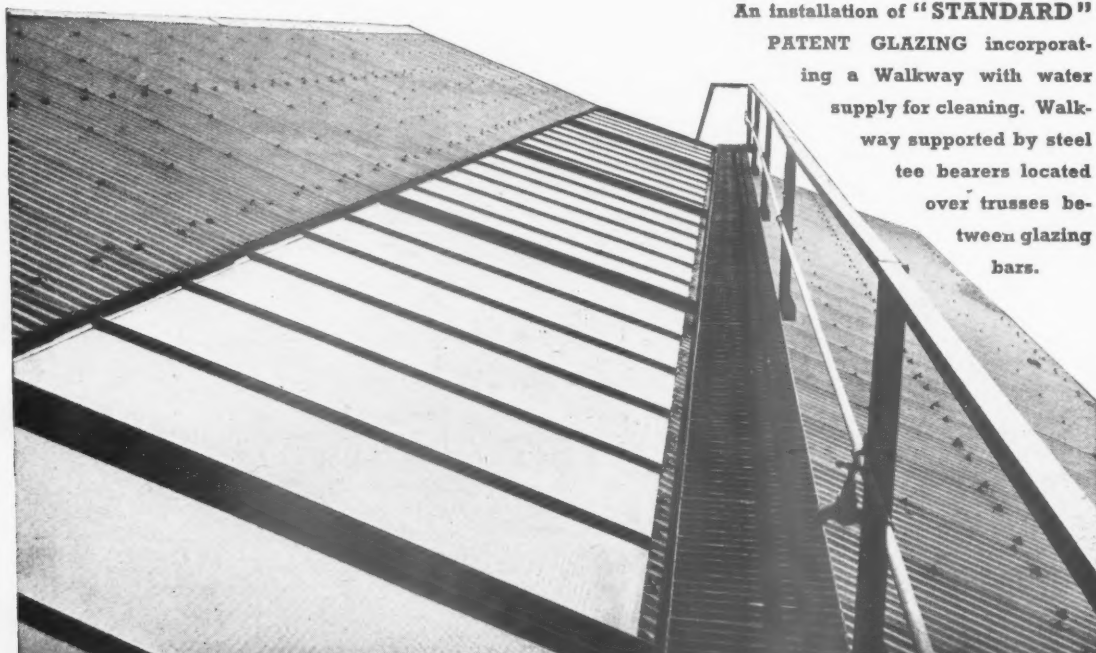
SL 106. Ball Base, without circle.
SL 103. 3-screw base, without circle.
SL 101. Prism reader for bubble; with circle.
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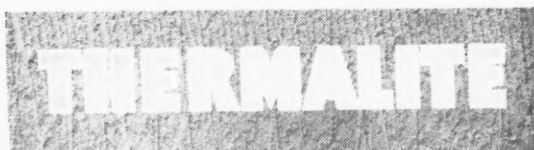
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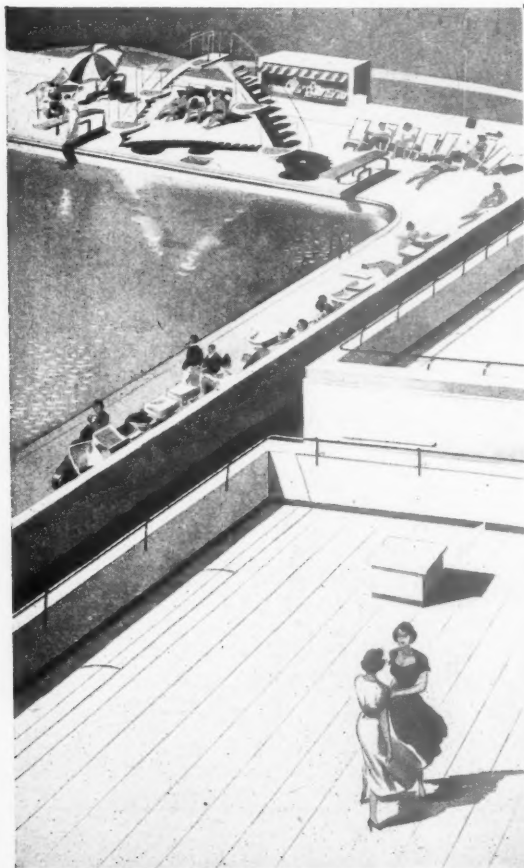
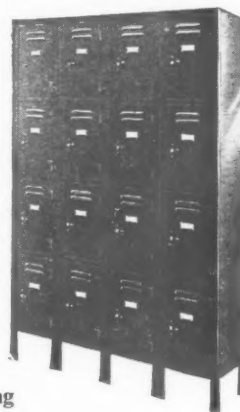
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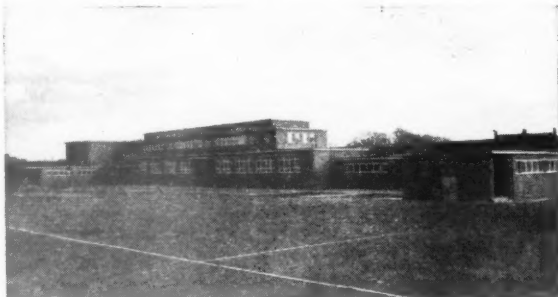
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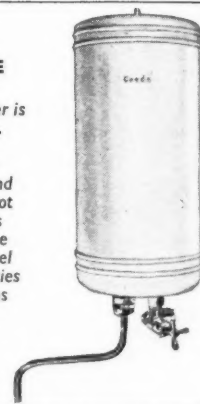
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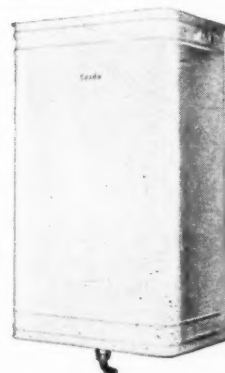
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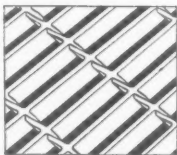
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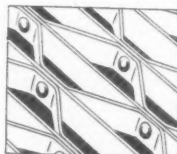


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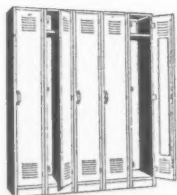
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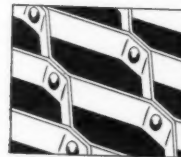
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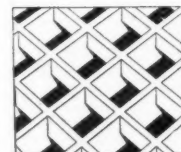
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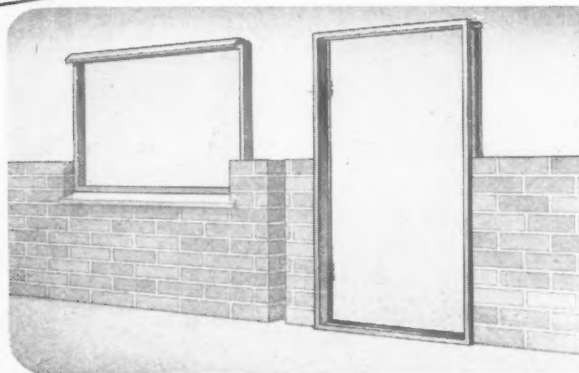
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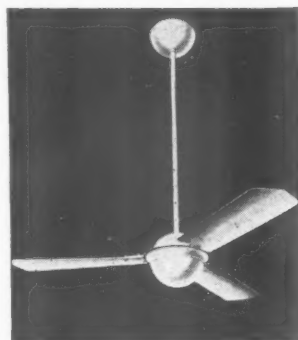
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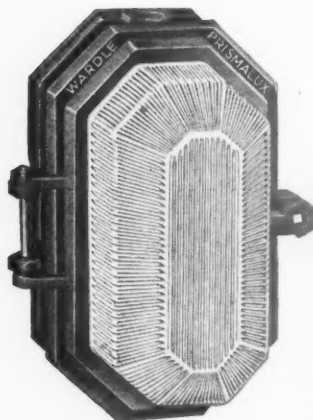
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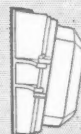
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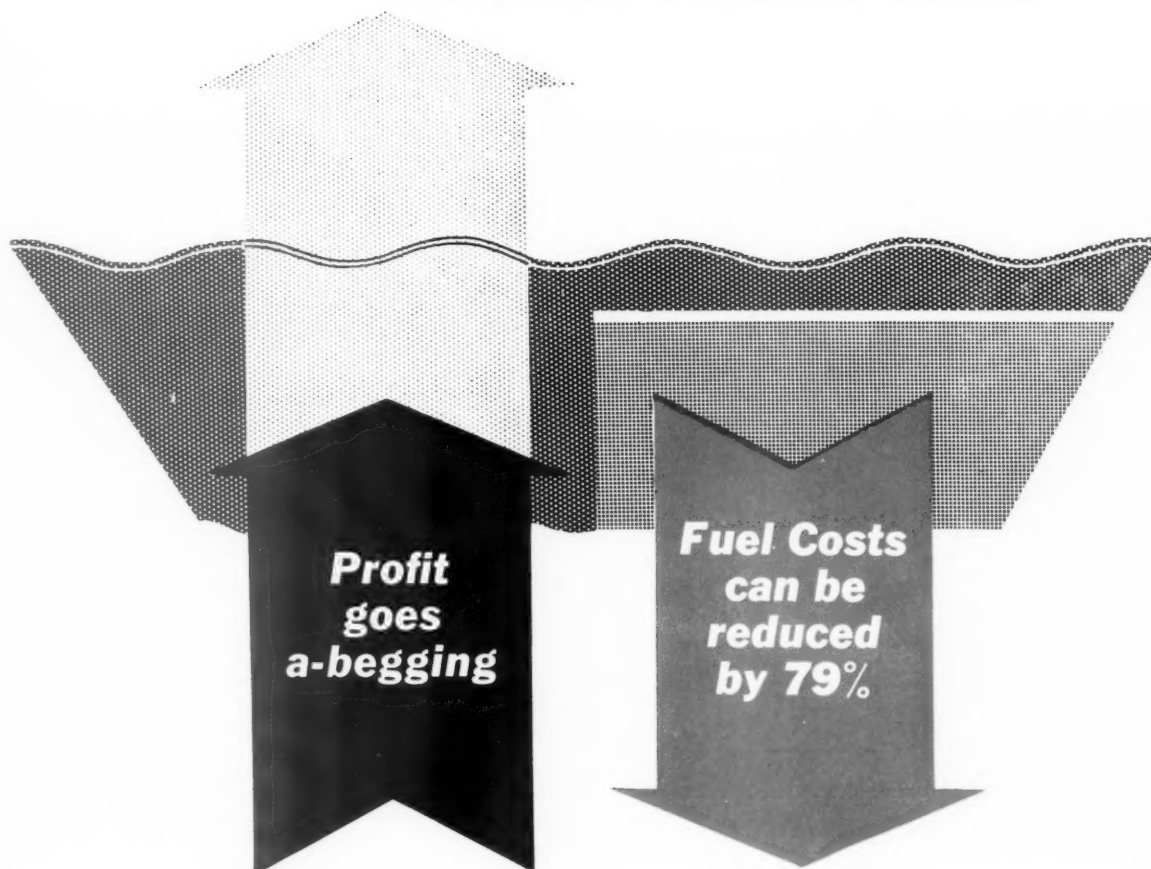
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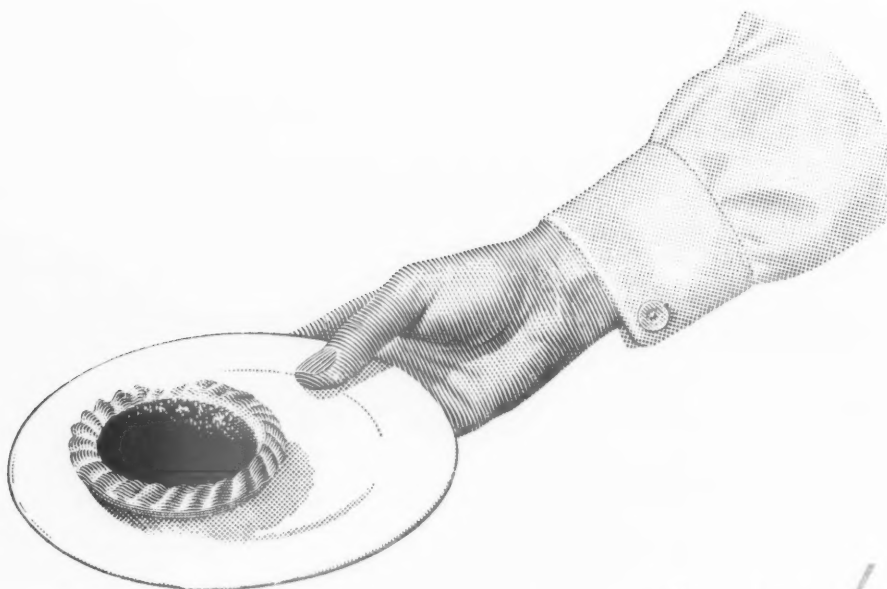
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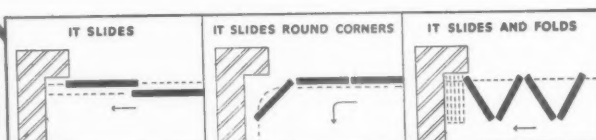
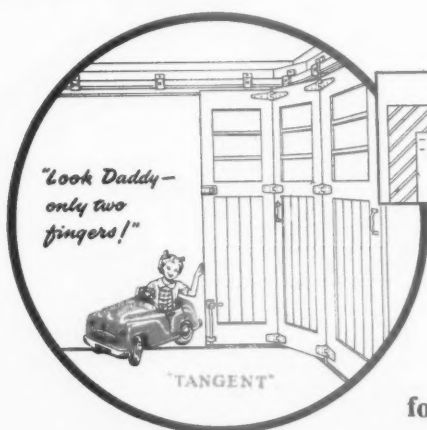
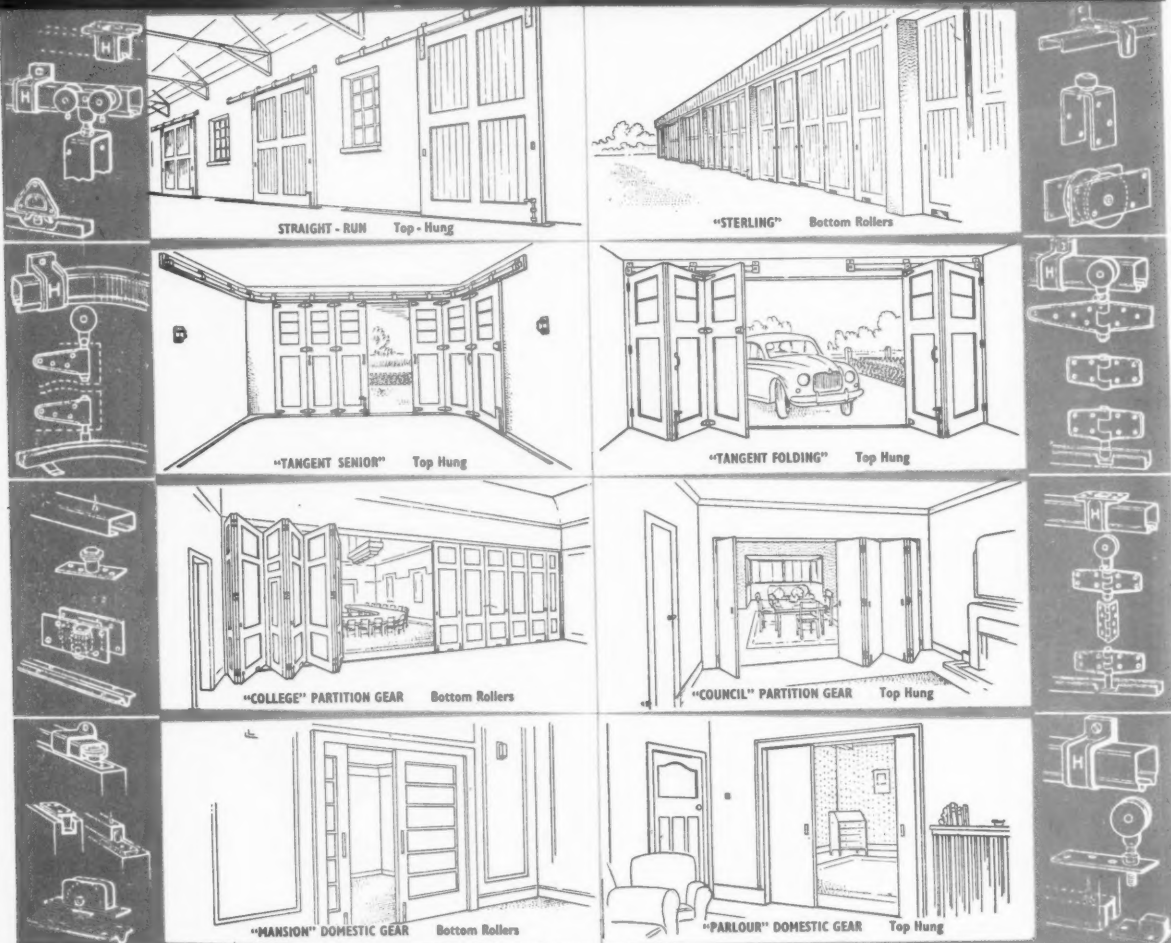
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No. 3041 June 11, 1953 VOL. 117

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CORONATION HONOURS

In the announcement of the award of a CBE to Osbert Lancaster he is described simply as a cartoonist, but he is surely known to almost as many people for his writings about, and his drawings of, architecture. Architects will certainly want to include this well-earned honour among those given to their profession; Lancaster's services to it, as numerous speakers emphasized when he read a paper to the RIBA recently, are highly valued even when he is engaged in pointing out the errors of its ways.

*

Lancaster was, until recently, a member of the editorial board of the *Architectural Review* — handsomely done by in the Honours List because

Nikolaus Pevsner, a present member of the board, gets a CBE too. ASTRAGAL, on behalf of the *Journal*, offers its congratulations to its sister paper. And of course to Pevsner himself. There is no need to describe his services to architecture, which readers must become aware of so frequently as to make them wonder how one man can achieve everything he does.

*

Besides his share in editing the *Review* (and his writings in it) he finds time to be one of our leading architectural historians, to write books, to be a Professor at Cambridge and a lecturer at London University, to edit the King Penguin books and the new Penguin History of Art, to disappear four times a year into a different English county and visit every building in it for the Penguin *Buildings of England* series and to fly off to distant parts (Johannesburg a few months ago; Texas next week) lecturing and talking to architects. His CBE is a recognition of the unique place he holds in English architectural life and the public spirit with which all his activities are carried on.

*

Other honours that architects will welcome are CBEs to Maxwell Fry, who has probably done more than anyone else to further the cause of modern architecture in this country (and whom ASTRAGAL takes special pleasure in congratulating as a former occupant of the august but anonymous chair in which he is now seated), to Geoffrey Webb, another of our leading architectural historians, and to Michael Waterhouse, one of the hardest-working presidents the RIBA has had, and a baronetcy to Alfred

Bossom who stood alone for so many years as the only architect in Parliament.

*

Finally (it should really have been first) honours have rightly been paid to those responsible for the architectural side of the Coronation preparations: a KCVO to David Eccles, indefatigable Minister of Works, and a CVO to his chief architect, Eric Bedford, who has brought a badly needed breath of fresh air into a department that had become a byword for stuffiness. It is a point to note, incidentally, that the Victorian Order is traditionally given only for personal services to the Sovereign. I wonder if an architect has ever had it before.

ASTRAGAL IN THE MALL

The huddled rows of recumbent sleepers which lined the Royal route on Coronation eve would make a tempting photograph for an Eastern-European propagandist to miscaption. ASTRAGAL, who found himself unconsciously averting his eyes from the cocooned forms so reminiscent of Henry Moore sketches, under the complete misapprehension that it was somehow indelicate to stare at people in distress, wondered how many of the eminently respectable middle-class crowd who happily waited to see the Coronation procession, would, a few months ago, have admitted to being prepared to spend a wet night in June cheek-by-jowl with unwashed strangers and flat out on the pavement of Piccadilly.

*

"It's like a presidential election," commented an American as he watched the packed masses in the Mall.



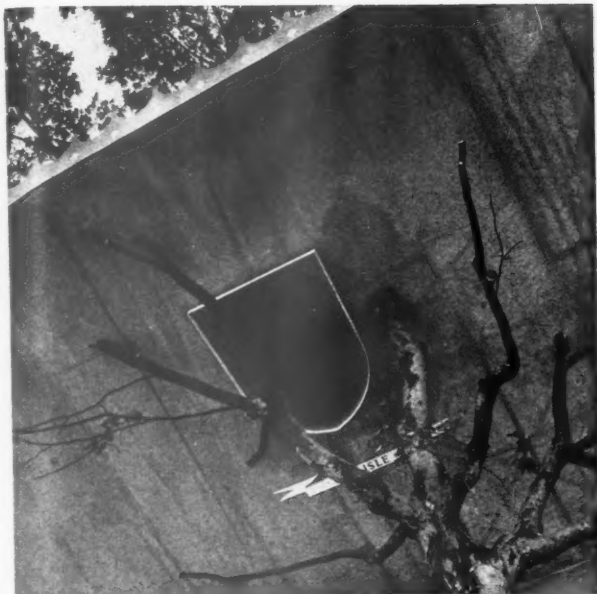
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Left, kindness to trees. Right, unkindness to sculpture. ASTRAGAL's comments on these pictures appear below.

"Which is another reason," replied a cold, damp and very English voice, "for having a Monarchy. One doesn't have to go through this every five years." And yet, ASTRAGAL is prepared to bet that not even the coldest, most wet and long-suffering person, who actually saw the procession, felt a moment of regret. For no word and no picture, televised or filmed, can compare with having seen, and heard, for oneself.

"Daily Mail" cried the tender-hearted newspaper boy, "don't bother to read it, keep yourself warm." Which at round about two o'clock on a cold morning is very sound advice. When at a loss to describe the strange greatness of that dull and chilly day, such trivialities come to the mind of ASTRAGAL-in-the-Mall. As also the earnest Dutch woman journalist sketching furiously on rain-pulped paper both procession and crowds, including hirsute Peter Ustinov, who obligingly autographed it: "Nero at the Coronation." And then, the sudden storm, which turned a half mile line of red-coated guardsmen, with a flurry of capes, into a grey-blue streak scarcely discernible through the rain. The vast fur-rug of bearskins which carpeted half the Mall when the procession came momentarily to a halt. And lastly, the fervour which united a stand, consisting largely, it seemed, of foreigners, into joining in cheers which will ring in one's ears for ever.

ENOUGH TO MAKE THE SAP RISE

The attitude of our elders and betters toward our dumb friends has always been a matter of concern to the Eng-

lish, and ASTRAGAL, who is just as concerned as the next man (and who could be more concerned than the next man?), observed the above two



Sir Hugh Casson may have had a 75% fatality rate for his Westminster decoration proposals but the influence of the South Bank Exhibition, for which he was director of architecture, is apparent in all the best of the designs to be seen in London's streets. He was snapped on Coronation day by one of ASTRAGAL's satellites. With him is his eldest daughter, Carola.



Temporary Townscape

A few weeks ago it seemed quite in order to grumble about the disappearance of Parliament Square and Westminster Abbey's precincts behind board and scaffolding. What, it was asked, would foreign visitors make of this part of London? Now that we have seen the stands completed and in use it does not seem too much to hope that visitors are impressed by them. And there is no doubt that people who pass through this part of Westminster every day are going to miss the temporary townscape very much when it is dismantled. Eric Bedford, the

Chief Architect to MOW (now awarded the CVO), provided us with something more than a sprawling stadium. His viewing stands have a mediæval quality which was appropriate to the occasion. We shall be sorry to see them go—these and the other successful Coronation dressings for London. But we shall feel confident—as we could not have felt confident after the last Coronation—that imaginative use of colour and of 3-dimensional effects will be the rule rather than the exception on future occasions of National celebration.

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POINTS FROM THIS ISSUE

Coronation Honours : eight architects mentioned ..	pages 723 and 728
London's Street Decorations described and illustrated	pages 729-735
RIBA Conference : five papers summarized ..	pages 737-740

The Editors

FATE WORSE THAN DEATH

IT cannot be denied that the five architects reading papers at the British Architects' Conference during today and tomorrow, at Canterbury and Folkestone, have done their part in ensuring that there is something controversial for the architect members to discuss. Excerpts from these papers are published elsewhere in the JOURNAL, and, even in this shortened form, each paper, with the possible exception of Richard Sheppard's, provides a subject on which the profession will be hotly divided. S. A. W. Johnson-Marshall, after describing the advances architects have made towards achieving the "right balance between quality and economy" in school building, and the four systems of labour-saving construction (two of steel, one of aluminium, and one of precast concrete) which the MOE are developing in collaboration with local education authorities and manufacturers, concludes by suggesting that the code of professional conduct which forbids an architect being a partner, or director, of an industrial firm is at fault. The effect of this, he contends, is that design becomes subsidiary to, instead of inseparable from, industrial policy.

F. R. S. Yorke, in the final paper, also proposes a change in the code of professional conduct by advocating the architectural company to replace the partnership, his reasons being that the company structure, being less dependent on individual personalities, and with the chance of being in a stronger financial position, is more likely to achieve continuity than the partnership which is so strongly affected by death, or retirement, of its members. F. R. S. Yorke also supports S. A. W. Johnson-Marshall as regards the status of the architect in industry. He points out that while the civil engineer is allowed to be a director of a building or civil engineering company, the architect is allowed only to be "employed in a salaried capacity much lower down on the scale where he has no say in policy."

During the last century, the status of the architect grew, under the inflationary influence of the phrase "art for art's sake," until he reached a position whereby, in the creation of a "work of art," he was responsible to nothing, save his creative soul, for what he designed. Such a position, immune from the philistines, has its advantage. It enables the architect to ignore criticism, even when the client starts to show his

examples of MOW's care and attention in the stands at Parliament Square. The trees that grow there and in Broad Sanctuary were treated with the utmost respect; neat holes were made in canopies and gaps were made in crestings, so that they might continue to grow undisturbed.

But what of our mighty dead? London's statues are among the oldest as well as the dumbest of our dumb friends, and the courtesy which was extended to trees could surely have been afforded to the small party of famous statesmen who tangled with the stands—better to be decently boxed in with one's memories of Coronations past than be left, deprived of view, with one's enbonpoint exposed to the north wind and the ridicule of lesser breeds without the law.

THE ABBEY

Although he is no television fan, ASTRAGAL—who did a brief sprint from the Mall and back in between processions—was overwhelmingly surprised by the quality which TV gave to the ceremony. No cinema screen has quite the magic of the cathode tube. Here was something like a new art form . . . the slight distortions, the curving and elongating of figures on the margins, the high officers of State and Church grouping and re-forming in astonishing positions—at one moment symmetrical, next asymmetrical—and the figures, thrones and dais appearing not in three-dimensional perspective but in the more ancient two-dimensional iconography—reduced in size, according to distance, but on the same plane. Here, almost incredibly, was a Byzantine ceremony portrayed in terms recalling the Ravenna Mosaics.

Rising early two days later to see the Abbey before it was opened to the public, ASTRAGAL caught the Dean and his minions with their dust covers down and their Hoovers purring getting things in order. Without the glitter of the jewelled assembly the Abbey scene is a little dull. The colour of the carpets and the fabrics is intentionally muted to show off the elaborate assembly. Even so, there is something very moving about the Abbey thus transformed, and one is lost in admiration at the efficiency with which it has been done.

ASTRAGAL

growing doubt of the value of the precept by giving his work to other designers.

If one of the principles of modern architecture is that the architect must substantiate every factor in his design, then the sooner the architect leaves his ivory tower of pure artistry the better. There is but one reason for doubting the wisdom of this move. Is the *average* architect, not the proven and accomplished architects speaking at the Conference, but the ordinary, run-of-the-mill architect—whose work is often seen in the JOURNAL's special articles on the blitzed towns—sufficiently well equipped, mentally, to leave his inviolable ivory artistic tower to hold his own, on equal terms, with business man, engineer and production manager? Or will he become, like so many other designers in industry, the man who, to order, slicks-up an article for saleability?

At the moment, the RIBA, under the guise of a code of professional conduct, effectively protects the *average* architect from any such danger.



HONOURS LIST

Architects Included

The Coronation Honours list included the following:—

A. E. Maxwell Fry, C.B.E., Nikolaus Pevsner, C.B.E., Osbert Lancaster, C.B.E., Michael Waterhouse, C.B.E., Geoffrey Webb, C.B.E., David Eccles, Minister of Works, K.C.V.O., Alfred Charles Bossom, baronet, Eric Bedford, chief architect to MOW, C.V.O., C. E. Mee, assistant chief architect, MOW, W. S. Bryant, senior architect, MOW, R. W. S. Biggs, architectural assistant, War Office, B.E.M.

RIBA

Twenty-fifth Conference

The RIBA's 25th British Architects' Conference opened last night with an informal reception at Leas Cliff Hall, Folkestone. The 500 members of the conference—at Folkestone and Canterbury—are the guests of the South Eastern Society of Architects, which is celebrating its silver jubilee.

Photographs taken at the conference events will appear in the JOURNAL on June 18 and 25.

MOW

Westminster Abbey on View

Westminster Abbey and the Annexe are open to visitors on weekdays until July 4, between 9.30 a.m. and 5.30 p.m., Monday to Friday; 9.30 a.m. to 9 p.m. on Saturdays. Visitors will enter through the Annexe, pass up the centre nave and the "theatre" and out of the East Cloister Doors. The charge for admission is 2s. 6d. except on Fridays when it is 5s.

HERTS

Modular Society to Visit School

C. H. Aslin, C.B.E., County Architect, Hertfordshire, has invited fellow members of the Modular Society to visit Summerswood School, Furzehill Road, Borehamwood, designed on a 40-in. grid, on June 18, at 8 p.m. Members of the architectural staff will attend to give short talks on the advantages and disadvantages of the 40-in. grid, the design of 4-way junctions, tolerances and lessons learnt.

MOHLG

Housing Progress

The number of permanent houses completed in Great Britain during April was 23,262, as compared with 28,729 in March and 17,401 in April, 1952. In the first four months of this year 92,693 permanent houses were completed, as compared with 71,010 in the same period of 1952.

The rate of increase over 1952 has been well maintained and the prospect of reaching the Conservative Party's target of 300,000 completed houses this year appears good.

The total of permanent houses and flats completed under the post-war programme is 1,348,964.

RICS

New President

George Arnold Coombe was recently elected president of the RICS in succession to J. Cassels Pinkerton. Mr. Coombe is chief surveyor to the Prudential Assurance Co., Ltd.

TPI

First Gold Medal Awarded

Sir George Pepler is to be presented with the first TPI Gold Medal, for outstanding achievement in the field of town and country planning. The presentation will take place at a meeting specially convened for the purpose at 6.30 p.m. on June 25 at the Livingstone Hall, Broadway, S.W.1.

COID

Design Lecture Available

Bound copies of the series of five lectures on industrial design given last winter in Glasgow can now be obtained from the COID Scottish Committee, 95, Bothwell Street, Glasgow, C.2. The titles are: "The Importance of Design Today," by Sir Gerald Barry; "The Problems of the Designer," by John Barnes; "The Retailer's Responsibility in Design," by George Breeze; "The Industrialist's Views on Design Policy," by W. S. Worboys; "Design Policy and the Public," by Gordon Russell. The price is 1s. 3d. each including postage.

DIARY

British Architects' Conference. At Canterbury and Folkestone. JUNE 10-13

Housing Architecture. Peter Shephard. In the Conference Hall, LCC County Hall, S.E.1. (Sponsor: HC.) 2.30 p.m. JUNE 11

Taking Stock: Slums, Improvements and New Building. Housing Centre Annual Conference at the LCC County Hall, S.E.1. UNTIL JUNE 12

Royal Occasions. Exhibition at the Tea Centre, 22, Regent Street, S.W.1. Weekdays, 10.30 a.m. to 6.30 p.m.; Saturdays, until 1 p.m. UNTIL JUNE 13

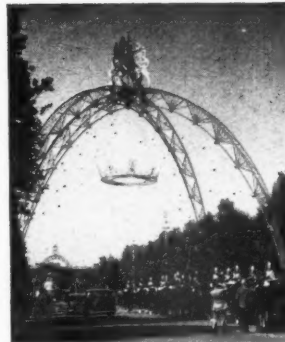
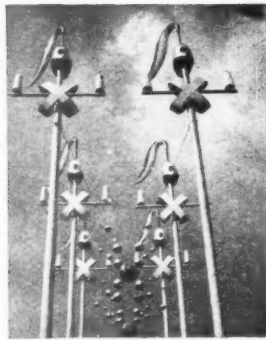
Ten Selected "News Chronicle" Coronation House Designs. At the BC, 26, Store Street, W.C.1. Weekdays, 9.30 a.m. to 5 p.m.; Saturdays, until 1 p.m. JUNE 15-30

Petworth House. Professor A. F. Blunt. At the Courtauld Institute of Art, 20, Portman Square, W.1. 5.30 p.m. JUNE 16

British Plastics Exhibition. At Olympia. Weekdays, 10 a.m. to 6 p.m. UNTIL JUNE 18

The Christian Theme in Contemporary Arts. Exhibition at Park Lane House, 45, Park Lane, W.1. (Sponsor: International Faculty of Arts.) 10 a.m. to 10 p.m. Sundays 2 p.m. to 10 p.m. UNTIL JUNE 18

House and Garden Summer Colours. At the House and Gardens Decoration Centre, 16, Grafton Street, W.1. Weekdays, 10 a.m. to 5 p.m.; Saturdays, until 12.30 p.m. UNTIL MID-JULY

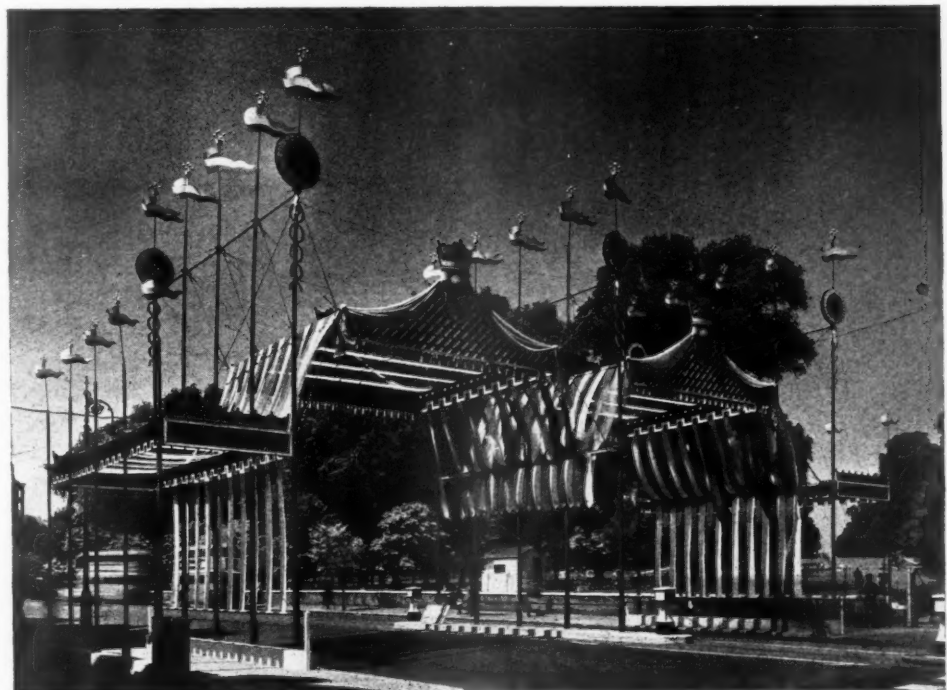


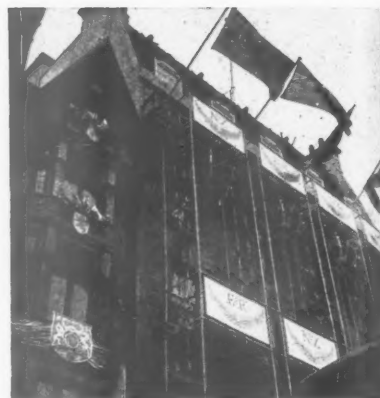
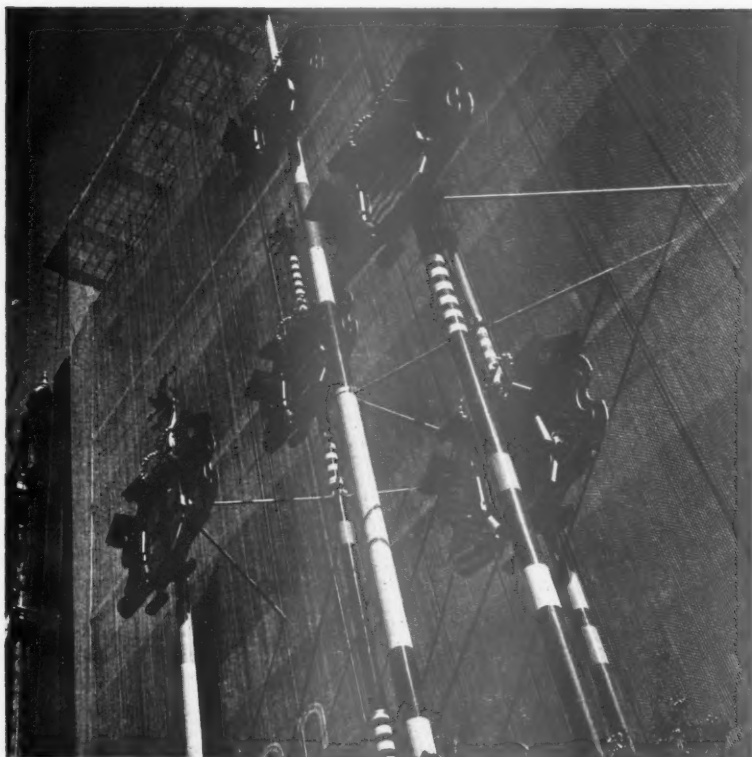
A SURVEY OF LONDON'S STREET DECORATIONS

In our generation we have seen the death of an old tradition in Royal ceremonial design, and the first manifestations of a new one. The old consisted of such gothic symbols and ceremonies of pre-Cromwellian monarchy as the Restoration could salvage, re-expressed in terms of the Restoration's own design idiom, the Baroque—the living remnants of a dead tradition summed up in the new and lively one. But as the Baroque lost vitality the old gothic symbols have been left like isolated rocks in a receding tide, unconnected by a common ceremonial style. Yet it is they—St. Edward's chair, the ritual of the Holy Oil, the Abbey itself—which have lent true lustre to Coronations, while the temporary festive structures, still Baroque in style, have, since 1900, lent only an air of ridiculous pomposity. But now we have an alternative festive idiom, that of the South Bank 1951, and the best of what has been done to decorate this year's high ritual has shown that this new idiom can assume the venerable symbols of the gothic, and what is still living of the Baroque, to form what could become a New Ceremonial Style, whose basic law is clear—Honour your ancient symbols, be resolutely contemporary in style, and the rest shall be added unto you.

James Gardner's free-standing triumphal entrance to the Royal Borough of Kensington—traditional ceremonial elements in the ever-contemporary tented manner.

The following designers are responsible for some of the decorative features illustrated on pages 729-735:—
Beverly Pick, Regent Street; Trehearne and Norman, Preston and Partners, Bond Street; S. A. G. Cook (Borough Architect), Holborn; Sergei Kadleigh and Patrick Borsbrugh, Oxford Street; James Gardner, Kensington; Sir Giles Gilbert Scott, Fleet Street; Borough Engineer's Department, St. Pancras; Miss N. Knoll, outside decorations for Simpsons, Piccadilly; Brian Peake, O. & A. Modes, Ltd.; Miss Doris Lindner (in association with Frederick Mancini), Selfridge's equestrian statue.
Those responsible for the heraldic feature in Whitehall (page 734) were Sir Hugh Casson, architect; Robin and Christopher Ironside, heraldic design; J. Starkie Gardner, Ltd., craftsmen; Rendel Palmer and Tritton, consulting engineers Westminster City Engineer, site preparation and contracts.

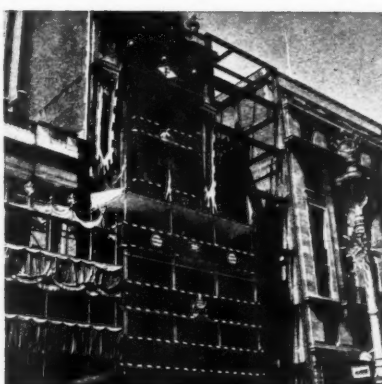
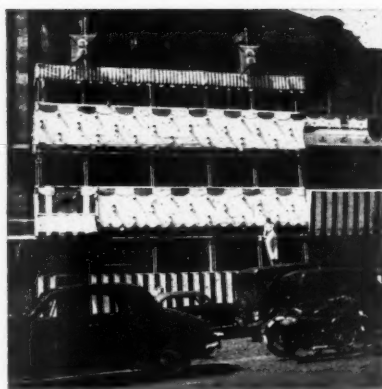
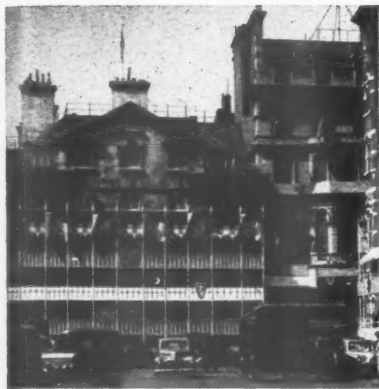




Shop Fronts

A perfect model of the new ceremonial manner is the front of Simpsons in Piccadilly (above left) where the gothic heritage—the heraldry—framed in Baroque cartouches is literally supported and backed up by the contemporary festive idiom; poles painted in primary-coloured stripes according to precepts of Swiss abstract theory, arranged in deep space and backed by an ephemeral screen of string. A screen of some sort is the best answer to many London facades, though New Zealand Chambers' chastely framed out screen (above right) in pastel shades and gilt, covers a facade of which they need not really be ashamed. C & A Modes, with better reason, have drawn a rather heraldic chequerboard veil over their frontage (below left) and topped it with very successful crown-mobiles. On the other side of Oxford Street, Selfridges offer a stupefying scheme (below right) which, for all its cheerful ignorance of symbolical niceties, succeeds on its own terms beyond all cavil.

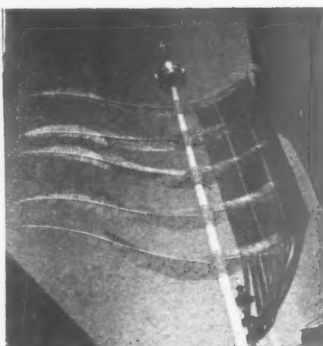
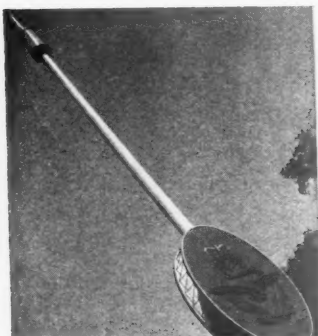




Heraldic Revival

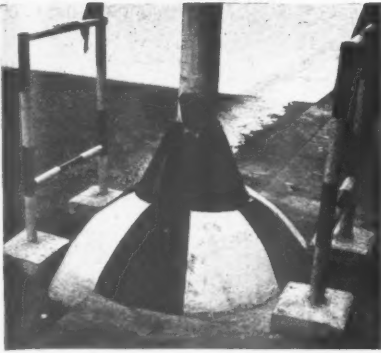
One of the most intriguing features of the Coronation has been the emergence of Heraldry as a valid language for decoration. It offers the designer a pre-established repertoire of shapes and a perfect excuse for dazzling juxtapositions of primary colours; it is ceremonially and patriotically acceptable; it is traditional and it combines with the slenderness of steel tubing to realise the airy elegance of an architecture which has hitherto existed only in the dream-world of Gothic miniatures. In St. James, (four photographs, left) under Misha Black, it is gayest when most resolutely heraldic, and occasionally rises to surprising heights of appropriateness when combined with mediaevalizing Victorian buildings. Harry of England, or even Macbeth, could have held forth in St. James' without appearing out of place. MOW's use of a similar idiom in the more solemn precincts of Westminster (below) was, very properly less airy-fairy but could still have used much more heraldry than it did. The large areas of yellow and blue canvas needed more diversification, if only to distract one's eye from the inevitable rain-stains. Nevertheless, the sky-blue undersides of the canopies the banks of exotic flowers and the sight of Parliament Square and the Sanctuary built up two or three storeys high and nearly out to the kerbs, completely transforming the urban personality of Westminster, will not easily be forgotten.





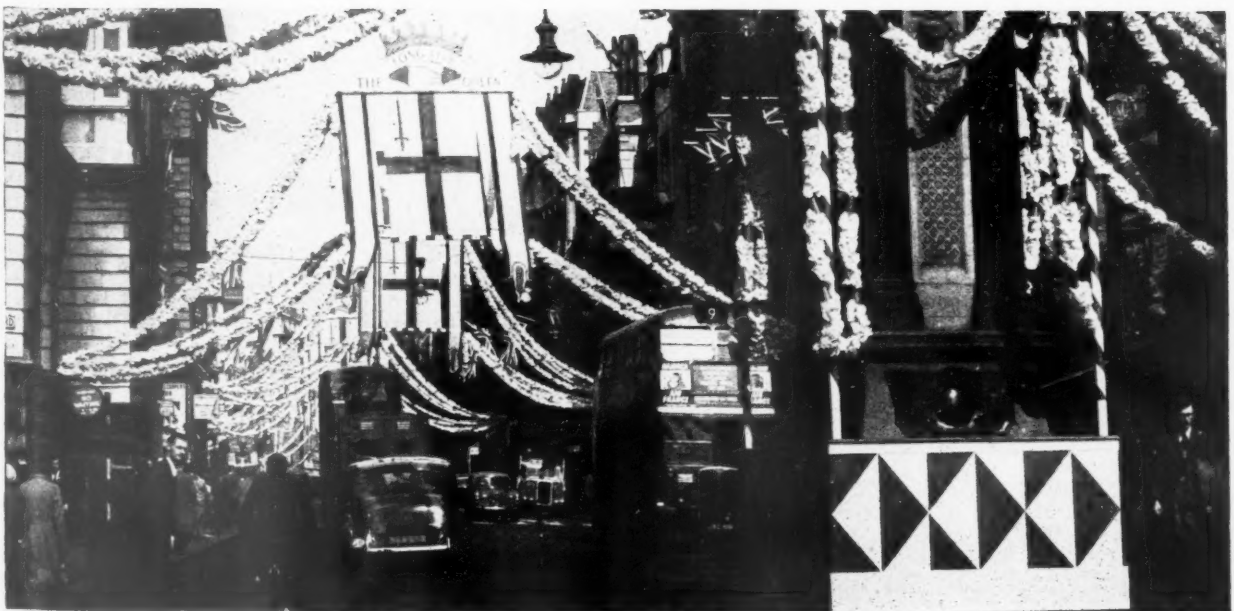
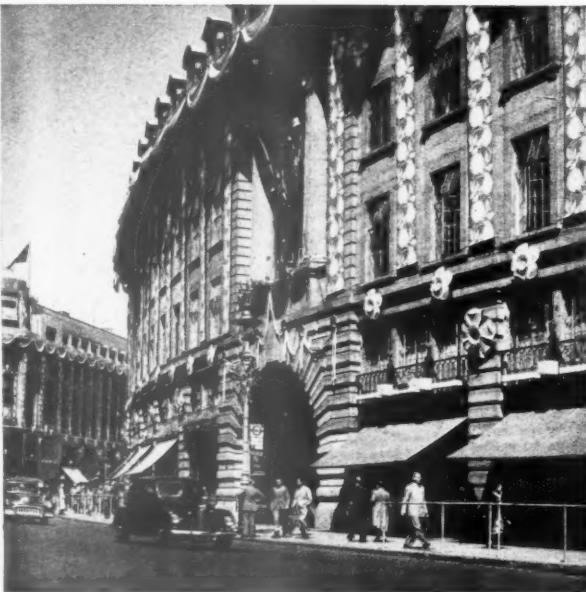
Street Perspectives

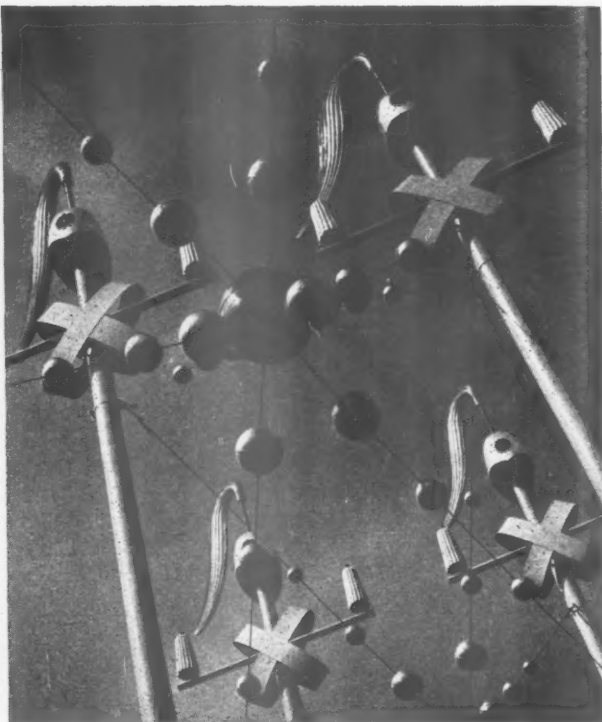
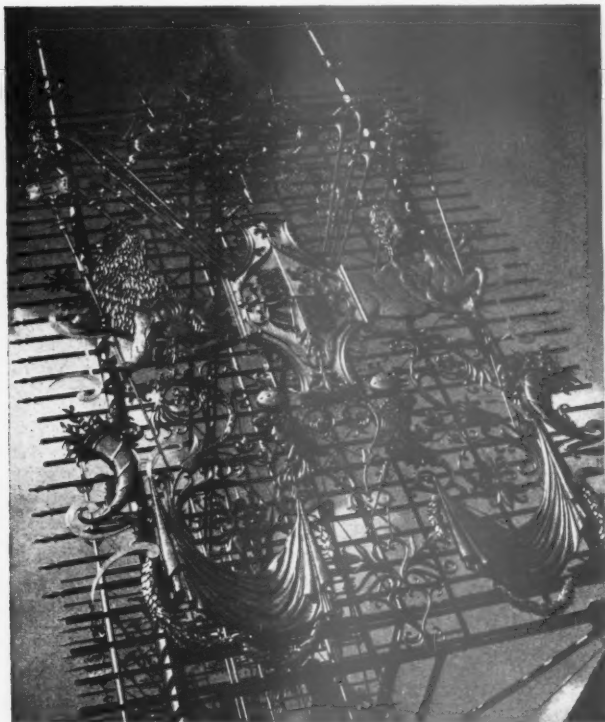
Streets have beginnings, ends and middles; as although this may appear to be a truism, it is a point which has been frequently missed. St. Pancras (left) has provided little weighting for beginnings and ends, and the middles are apt to be relentless repetitions, unadjusted to varying building heights or widths of carriageway, of the same lumpish imitation banners, quite ingeniously offered up in the form of a box which clamps round the lamp-post, but lacking any gaiety and utterly unaware of 1951. Bond Street (below left) provides a good deal of weight at its main entrances and exits, but that at the north end looks like nothing so much as a bunch of coral-crust lobster-pots, while that at the southern end is an interesting example, by omission, of the need to honour one's symbols. The trumpets of fame are one of the Baroque's most useful emblems, but silver trumpets are a less generous compliment than gold, while sceptre balanced over crown is equally unfortunate—these symbols have meanings and are not abstract shapes to juggle with at will. Regent Street (opposite page, left), though its individual elements are nicely detailed, and the symbol—the Tudor Rose—a highly acceptable one, is altogether too flat in treatment to compete with the overwhelming pomposity of the architecture, and lacks accent at the ends. Holborn, however, with a well-conceived highly three-dimensional accent at the Circus (opposite page, right) spoils its effect completely with sloppy and imprecise detailing. But this scheme, and Regent Street, are both greatly improved when artificially lit at night. Curiously enough, it is the thoroughly old-fashioned decoration in Fleet Street (opposite page, bottom) which succeeds best on grounds of three-dimensionality and processional effect, the white festoons striking a very opulent note among the architectural squalor, while the City's long tradition of considering itself every bit as good as the Crown fully excuses the visual preponderance given to its own armorial bearings.



Vertical Features

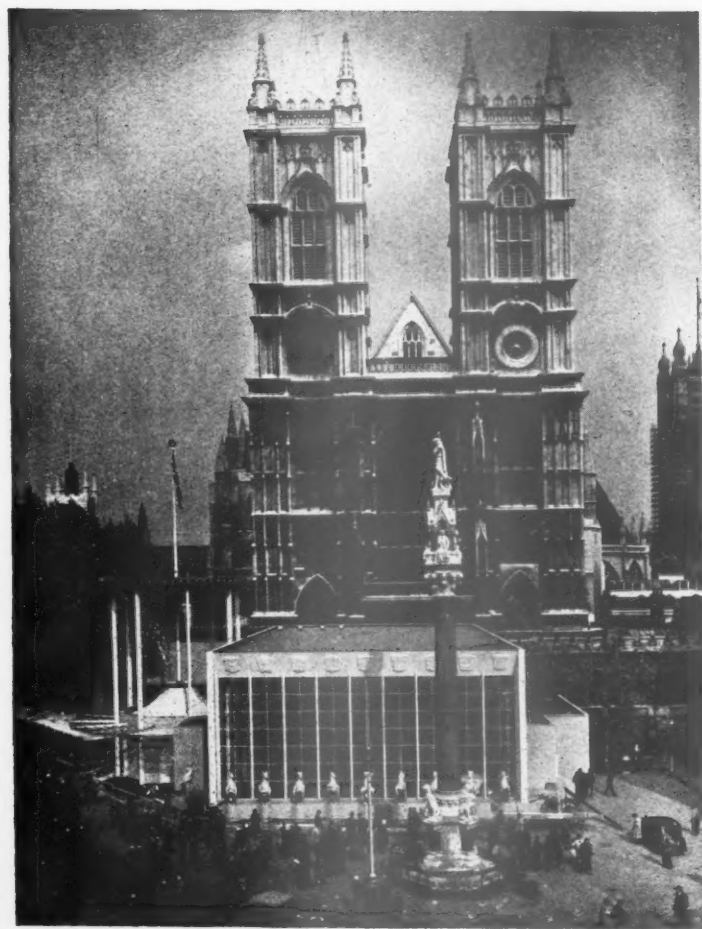
Much of London's decorations had, of necessity, to be on poles. MOW lined the East Carriage Road in Hyde Park with elegant pikes bearing oval medallions with the badges of Commonwealth fighting services, and though the whole curving rank cannot be seen as one sweep because of the trees, any individual pole (extreme left) is a strong enough composition to stand by itself, and the medallions are among the best heraldic sculpture to be seen anywhere along the route. The palm-crowned standards (next from left) in Pall Mall (the leaves are all metal foil of course) were one of the few displays of consciously good taste which did not appear feeble; this, no doubt, because they have visibly learned the lesson of Battersea—that Regency is the last period when the older Ceremonial tradition was still alive. By contrast, the expanded metal bus-ticklers in Oxford Street (third from left) are visually weak (though bad detailing had something to do with this) and symbolically unreadable. They are better when they twist up their fronds into a stiffer arabesque (fourth from left) but in any form were too transparent to make their gilding tell against the sky. Perhaps the best feature of these poles was the sensible but decorative detailing (left on this page) which served to warn traffic against crashing into their bases.

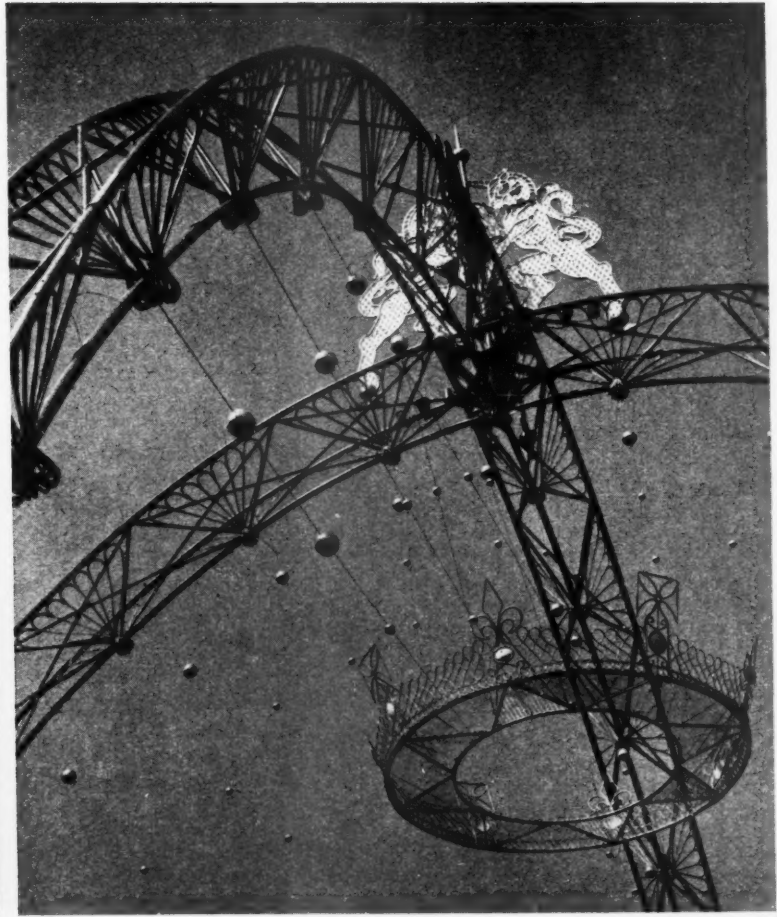
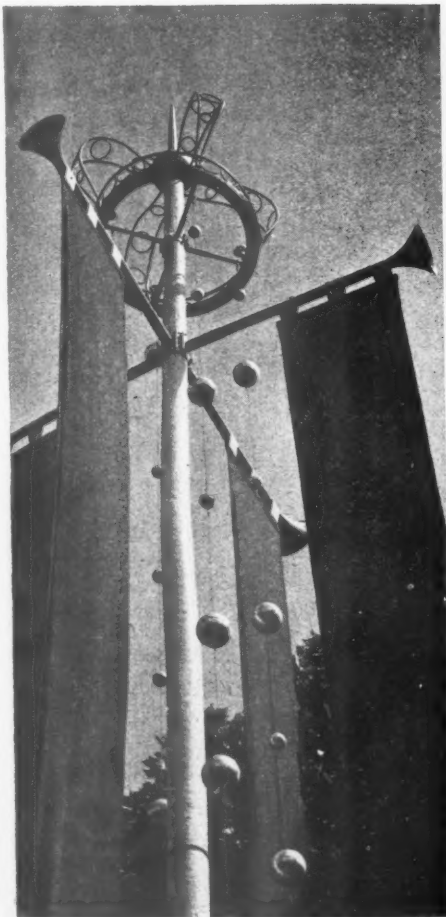
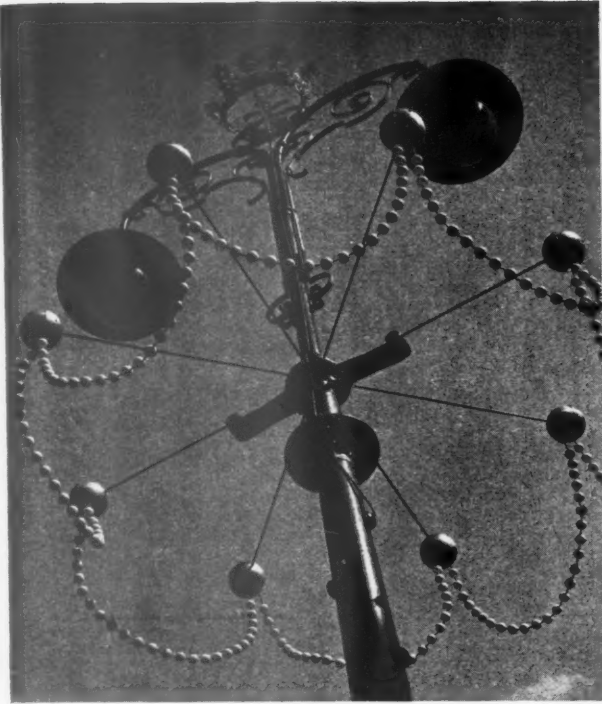




New Ceremonial

It is in the processional heart of London that one finds the clearest promises of a new ceremonial style, and if one offers them sharper critical comment it is just because the promise is clearest. Sir Hugh Casson's "permanent guardsmen" (above right) are, perhaps, a little too stiff, but they make an excellent sky-pattern, which is their primary purpose, and they achieve the nearly-impossible in decorating one of London's least decoratable streets. Similarly, the space-frame (above left) with which he opens the processional vista of Whitehall, with its swaggering baroque heraldry carried on an uncompromisingly South-Bank structure, though possibly open to carping in details, is an excellent alternative to the suspended feature (which was not permitted) or view-obstructing triumphal arch, and is the sort of structure which will solve the very complicated problems of twentieth-century ceremonial. Further fanciful ingenuity in coping with these problems of adjacent traffic and lighting requirements is shown in the elegant bracelets of the lamp-posts in the Haymarket (opposite page, top left), but Eros (opposite page, top right) is not quite up to the same standard. Although one knows that this was intended for a baldachin, the ordinary citizen, looking up at it, might be forgiven for thinking it a cage, and therefore symbolically unfortunate. Eric Bedford's baldachin over the entrance to the Abbey annexe, was far more convincing (bottom left) because of its solid canopy. But Eric Bedford's great contribution to the new ceremonial manner is, of course, the arches over the Mall (opposite page, bottom right). These soaring blue lattices with their gold trim and glittering silver balls, repeated on the banner poles (opposite page, bottom left) floating like stars in a regal planetarium are architecture's most memorable contribution to the Coronation, and provide a basic contemporary formula on which endless variations may be devised, without destroying their instant symbolic legibility as Coronation arches. On seeing such structures we shall know a Royal occasion is in view, as surely as we do on seeing the Royal Standard, and their improper use by unlawful persons will, one hopes, be regarded as an equal act of *lèse majesté*.



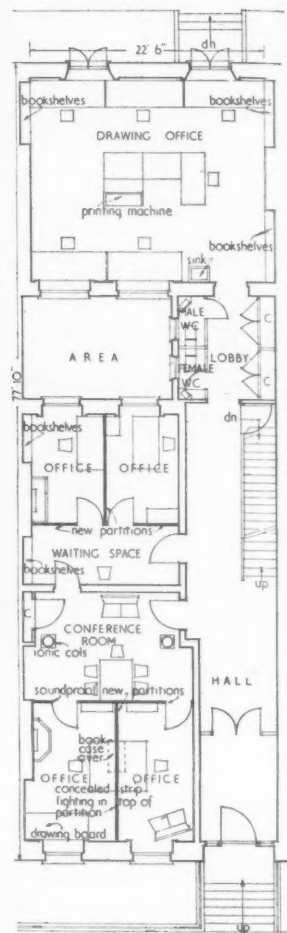


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ARCHITECTS' OFFICES IN GROSVENOR PLACE, LONDON S.W.1

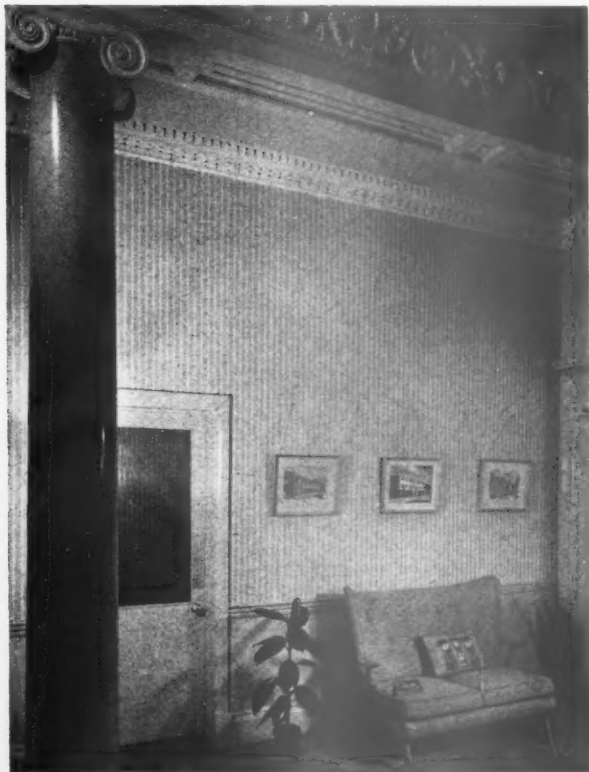


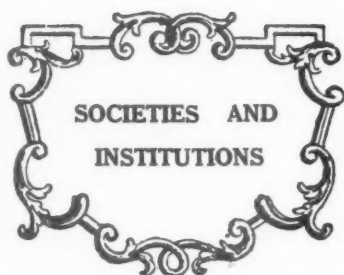
The ground floor of 27, Grosvenor Place has been redesigned by a firm of architects, Davies and Arnold, for their own occupation, to provide offices for the partners, a conference room and waiting space, secretarial offices and a drawing office. Care has been taken to ensure that the proportions of the rooms with their fine plastered cornices, friezes and columns, as seen in the photograph of the conference room below, left, were not destroyed in the replanning. The partners' rooms, which



Ground floor plan (Scale: $\frac{1}{4}$ " = 1' 0")

are seen in the photographs above and below, right, are formed by low level, soundproof partitions. The colour scheme includes French grey walls and columns, cornices flat white and windows glossy white. Ceilings are papered in a linen texture yellow wallpaper. The main wall of the conference room has a yellow Regency striped paper. Lighting fittings to the partners' desks and drawing boards are specially designed by Bernard Schottlander. Contractors, page 752.





The five papers to be read at the British Architects' Conference at Canterbury and Folkestone, starting today, will fill thirteen pages of the next issue of the RIBA Journal. On the following pages are brief excerpts from what may prove to be amongst the most thoughtful and provocative papers ever read at an RIBA Conference.

S. A. W. JOHNSON-
MARSHALL

The Architect's Contribution to Value for Money in School Building and the Role of the Ministry of Education

ALL the indications are that if we are to continue to get higher quality buildings, quickly and at a price the nation can afford, very much more development will have to be done. Almost everything we handle, from bath taps and basins through paints to whole systems of construction, is capable of really striking improvements in this direction.

The architect's contribution here is not confined to stream-lining a manufacturer's existing product, but is that of a man who finds out the user's real need, and who by tradition and training is the only designer concerned with the whole building and therefore with the design and price of every component used in building. As such he can make a unique contribution if he is jointly responsible with the manufacturer for the design of industrial building products. Very few architects are engaged on this type of work and yet there is ample evidence to show that it cannot be wholly successful without their contribution.

It is intended to limit the amount of development work which we undertake by the present size of our branch, but even if it were physically possible it would be undesirable to concentrate too much of this work in one organization. Local authorities with their large programmes—and therefore with considerable potential orders—provide another field in which development can be effectively undertaken, but too few of them have so far been able to spare their best architects to work exclusively on this type of work. The private architect can make a notable contribution; for example Richard Sheppard and Geoffrey Robson in aluminium techniques and S. Morrison in timber.

But if more work of this kind is essential, as I believe it to be, it is worth examining the architect's terms of reference for this new role.

In its present form our code of professional conduct allows an architect to be employed by an industrial firm but forbids him to be a member of that firm. Where he is engaged in this way he usually finds that it is almost impossible for him to attain sufficient authority to be jointly responsible for the product he helps to design. Design cannot be relegated to a subsidiary role in any successful industrial firm. Design and policy are inseparable. In his present capacity the private architect's advice is sometimes taken but often ignored on grounds of policy or "sales." The result is seldom effective. If he is to play his proper role he must be allowed to be a true partner at policy level and this implies a far closer relationship with industry than is attainable by the private architect today.

If it is true that the building industry is technically 50 years out of date, then we must pass through a period of rapid and exciting change sooner or later. I believe that we have already embarked on the beginning of this transitional period. Unless the architect is in a position to take and hold the initiative throughout the field of design he is likely to find himself more and more unhappily placed. He will be unhappy not only because he will be forced to use techniques and components designed by other people—this does not matter from a national point of view—but because the tools of his trade will be indifferently designed.

It would be ironical indeed if we owed this state of affairs to the inhibitions of a code of professional conduct which denies half the profession the opportunity of taking a leading role in perhaps the most thrilling opportunity of regaining for our country the architectural position she held in the 18th century.

RICHARD SHEPPARD

Post-War Development in School Design

THREE factors operate at present in the design of school buildings:

(1) Increasing readiness of local authorities to experiment with new methods of construction and materials and to consider their problems against a long term background. This is partly due to scarcity of orthodox materials and labour and also to the need for speed of construction, particularly in new housing areas.

(2) Experimental attitude towards teaching methods and organization of space. The demands for increased economy in space have stimulated development in this way and forced educationists to consider space in relation to the frequency and duration of use as well as to specialist requirements in teaching. Hence the conception of space for dual and multiple uses and the demand for flexibility in plan arrangements and construction.

(3) The experience gained in the design and construction of schools in the immediate post-war period. Most authorities are now reaping where they have sown and are beginning to profit by their earlier buildings.

The influence of the Ministry of Education must be mentioned for, by exhortation and example, it has kept people thinking hard. By the publication of its bulletins it disseminates information and experiment in a comparative and coherent form, never achieved by any Ministry controlling building. It is an enormous task and the Ministry has courage and vision.

I intend to proceed from the particular to the general and to show how the conception of the use of space within the school is changing, and is affecting the design of schools.

(a) *Classroom to Teaching Space.* The most notable development to which almost everything else is correlated is in the conception of the classroom. The immediate post-war idea, shown in the reports I mentioned earlier, is of a room designed for oral instruction only. The blackboard forms the focus of the room, with the teacher's table and cupboards to one side and the desks packed in so as to allow a precise minimum area for access and no more. Because it is intended primarily for blackboard instruction it is well and evenly lit with a combination of side lighting from the main wall windows and clerestory. This conception is slowly disappearing. The classroom is no longer thought of as being only for blackboard teaching but rather for educational activity on the child's part. The blackboard is ceasing to be the focus and the room loses its directional quality.

Other forms of teaching demand different shapes. The lighting, while even, is no longer axial; the room becomes square or L-shaped; its form is only limited by structural considerations. Total enclosure of the space may even be abandoned. All these different forms in themselves shape the plan; clerestory or top lighting rigidly limits the type of plans, while types of classroom which depend on the use of light from two external walls increase the perimeter and again dictate certain plan and structural forms.

(b) *Assembly Halls and Large Enclosed Spaces.* A very similar educational attitude is to be found in the evolution of the school hall for the same reasons. Multiplicity and spontaneity of use is leading to informality in the arrangement of space. In earlier halls the auditorium concept is dominant, with a proscenium arch, seating formally arranged and with a form giving good acoustic properties for stage and audience. It is, in fact, a small theatre, intended for assembly, drama and music.

In the later forms, while this type of use must still continue, greater allowance is made for group activities, music and dancing, games and entertainments. The hall is consequently being modified both in shape—the abandonment of the rectangle—and by a reduction in height. Above all, the auditorium concept is being broken down. Where a stage is employed it is regarded rather as giving the possibility of dual use simultaneously on two levels.

This brings about alterations in methods of daylighting. The upper part or stage must be lit and all parts of the hall require good light, preferably at lower levels. Hence the elimination of the formal frame of windows and the substitution of comparatively shallow strip lighting. The same occurs in artificial lighting and here the tendency is towards a larger number of fittings of low intensity.

Moreover the position of the hall in relation to the general organization of the school tends to change. When it was regarded as a formal meeting-place it could be isolated in some position of special importance. When it is in constant informal use it must be closely related to the activities of the school. Perhaps we shall yet see the plan of the Middlesex School of 1909 revived.

(c) *Dining Spaces.* This was a new problem after the war, since few schools had included a special space for it. First of all it was regarded as another formal enclosure, its size and shape based upon the number of children using it and the position of the serving hatches. Here economic considerations have somewhat altered the perspective

and the use of so much space for a limited period only during the day has forced architects to develop it for other purposes. This again has led to a greater informality of spatial treatment and to less specialization. It is used to give further space to the hall or as additional rooms for general purposes. Lighting is less important here and most authorities try to give this space a smaller scale and domestic atmosphere.

(d) *Circulation and Entrances.* There has been a continuous reduction in the amount of what we call circulation space. In the years before the war this sometimes amounted to 35 per cent. of the total area, while it was commonly 30 per cent. and over even a few years ago. Various attempts have been made to reduce it or to find some other use for so much area. Two methods may be observed: (1) Dual purpose. By using one side as cloak space or by using it for various forms of educational activity such as modelling or practical work. (2) By elimination and the use of teaching spaces for circulation. This is a reasonable proposal as the educational curriculum permits simultaneous movement, but it cannot be regarded as ideal.

At present it is possible to reduce this area to about 12-18 per cent. of the total. These reductions in circulation areas have been, I think, successful. They have reduced relative costs and have not reduced the efficiency of the school.

Of the two, the use foreshadowed by the Ministry's own school at Wokingham, where some circulation spaces are turned to practical purposes, appears to be the most promising. Also worth commenting upon is the decline of that traditional feature, the ceremonial entrance, designed for use by governors and education officers but kept securely locked at all other times. This entrance, which was traditionally placed upon the main axis of the assembly hall so as to permit the easy entry of sacerdotal processions led by the Bishop in his mitre, has almost disappeared. Instead the entrance, which usually has doors of the same scale and type as in the rest of the school, leads directly into either the foyer of the hall or into the general circulation of the school. Its height and importance in formal terms have disappeared.

C. H. ASLIN

How the Local Authority Works

AT the beginning of this century the pattern of the profession seemed to be rigidly fixed. Most people entered the profession through articles in a private office; relatively few bothered to take examinations, and the profession was, generally speaking, divided into two parts: first, those who had the good fortune to belong to a family practice, or had parents with enough money to buy a junior partnership; and the others who were architects' assistants and were never qualified except by practice.

The whole pattern is now completely changed. The profession is much larger in numbers; all are qualified of necessity and, owing to the conditions left by the war, greater numbers than ever are employed in local government offices, and there is conversely less opportunity of starting a private practice. The post-war conditions have created large offices in which practically every member of the staff is a fully qualified architect, and the set-up is quite a different one from that which obtained when staff generally were unqualified and content to act as assistants to the head or heads of the firm.

This, therefore, in my opinion, suggests an entirely different pattern of working. The old method of designing at the top and passing the work down the office, so

that drawings may be done at the direction of the Chief, does not produce the best results. This is due to the fact that the qualified architect is not fully used to the capacity of which he is capable. The pattern to seek, therefore, is one in which the assistant architect is given charge of the project from the sketch plan stage. It might be said that this method is bound to produce a varied quality of work from the office, because naturally the skill of each individual member is a varying factor. On the other hand the friendly rivalry which this method creates stimulates the individuals, and causes the general standard of the work in the office to be much improved; such standard being inevitably much higher than that which can be produced by the pyramidal office.

The group system is one which, in my opinion, produces the best results, and is worked in the following manner. Let us assume that we have a group of architects of a size necessary to carry out a particular programme. One member of the group will assume responsibility for the design of the first project, and the other members will act as assistants. The second member of the group will take on the next project, and all the other members, including the first, will assist him in the same way. This pattern is repeated until all the members of the group have a project for which they are responsible, so that each architect in turn is responsible for a scheme with the assistance of all the others, and alternatively becomes an assistant himself to the other members of the team.

This method, of course, means that each member of the staff gets an opportunity of acting in his proper capacity as a fully qualified architect, and consequently he both deserves, and is justified in expecting, higher pay than would formerly have been given to an assistant doing hack work. The size of the group in which this method can be successful should not be greater than 10 members, and another necessity for ease of working is that the jobs should be relatively small, say about £50,000 each, of similar character; it will also be clear that they must be continuous.

Obviously, the same method is a little more difficult to work with larger projects, such as secondary schools, which will average somewhere between £150,000 and £200,000 each, but on the other hand this method can be made to work with varied projects—that is, varied both in type and size; and much better results can be obtained by giving the qualified architect, of whatever age and experience, the opportunity to exercise to the full the profession for which he has been trained.

This matter is one of the greatest importance to the profession, because it would obviously be wasteful to train fully-qualified architects and then never to use them for the work which they are capable of performing.

This also raises the question of remuneration, and it appears to be quite clear that the group leader should be paid at a rate more in conformity with his ability and responsibility than was thought to be proper in the past, when he acted as a hack worker to the Chief.

This problem is, of course, also tied up to the actual cost of the architect's services, as there is obviously a limit to what can be paid without the cost of the service to the client, viz., the local authority, being higher than a reasonable charge based on the RIBA scales. This brings me to another point, which has proved to be a contentious one amongst local authority architects, and that is the necessity of keeping cost records; it cannot be too strongly stressed that cost in local government means precisely the same as it does in a private office. In other words, everything is charged against the office—and everything means salaries, rent, lighting,

heating, materials, telephones, transport, and a charge from the clerk and the accountant for the services such departments render to the architect. Costing is essential for two reasons. From the employing authority's point of view it is necessary to show that the office is being run with reasonable economy, and from the chief architect's angle a simple costing system is capable of locating various groups in the office which are doing less well than others; and steps can, therefore, be taken to put the matter right. Otherwise, in a large office, it is possible to have groups working uneconomically, and this deficiency might go on for years without being located.

The whole subject of official architecture needs very careful consideration, because it is at this moment providing, and will continue to provide, a very high proportion of architectural work, and it is essential in the interests of architecture and the profession as a whole that it should be of the best possible quality.

SIDNEY H. LOWETH

Collaboration between Official and Private Architects

IN the light of post-war considerations, a local authority such as Kent had to decide whether to expand its Buildings Department or to employ firms of private architects to carry out some of the work. Bearing in mind that in the years 1931-39 the County Council had successfully employed a panel of twelve firms of private architects to deal with a large building programme, they did not hesitate to adopt the same course in 1945. The permanent staff, therefore, remained at approximately its pre-war establishment and firms of private architects, consulting engineers and quantity surveyors working in collaboration with me were employed to deal with any work which the permanent staff could not absorb.

The main advantages of this arrangement are:—

- (1) It is possible to increase instantly the output of work by employing as many private firms as may be required so that no delay occurs, a particularly important point having regard to the post-war practice of Government Departments of awarding a starting date for each project.
- (2) It produces a greater variety of solutions of similar problems and therefore buildings of greater interest.
- (3) It saves time and expense in advertising for and obtaining additional permanent or temporary staff.
- (4) It saves the cost of providing additional office accommodation, furniture and equipment.
- (5) It would avoid a reduction of permanent staff by the authority should there be serious cuts in the building programme, but only at the expense of the private architects. The extent to which they would then be employed would depend upon the severity of the cut in the building programme.
- (6) It would take advantage of the "bonus" or profit-sharing system under which many private architects run their offices, thus shortening the period for the production of drawings.

When the policy of employing private architects instead of the inflation of official staffs was advocated to a body of official architects, it met with strong criticism by some, in spite of the fact that the then President of the RIBA, Sir Lancelot Keay (himself an official architect) had strongly supported it. It soon became apparent, however, that many of these critics had not fully appreciated the magnitude of the task before them and the

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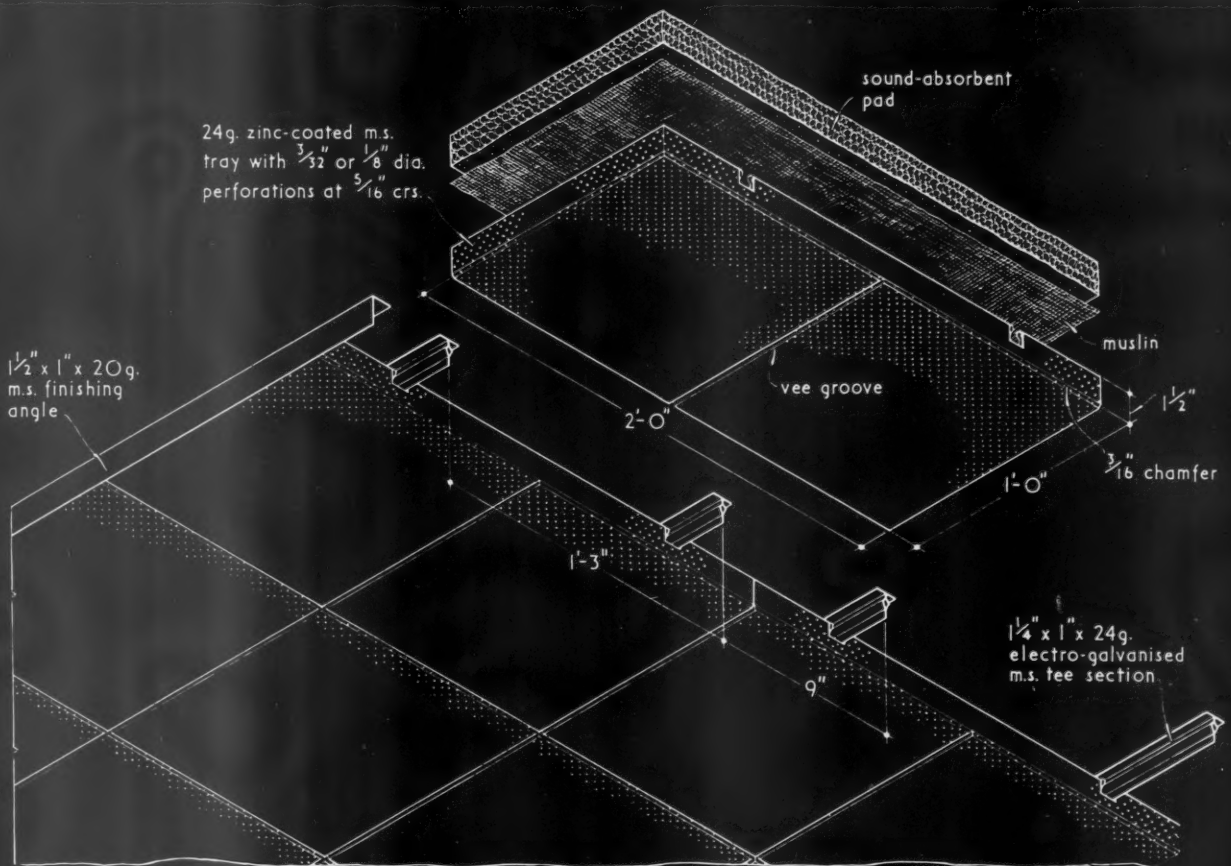
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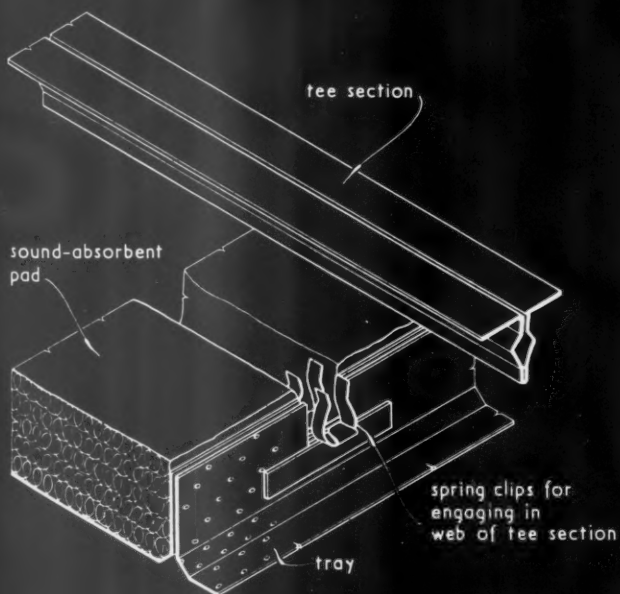
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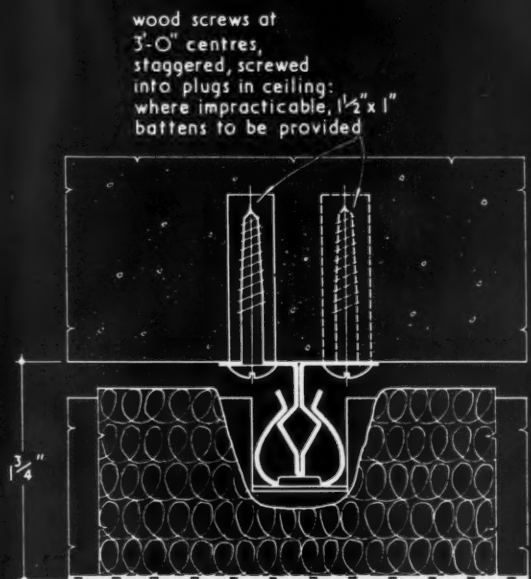
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ASSEMBLY OF COMPONENT PARTS SHOWING CONSTRUCTION OF TILE.



DETAIL SHOWING JUNCTION OF ADJACENT TILES.



SECTION SHOWING TEE IN POSITION.

27.B11 BURGESS ACOUSTIC TILES AND FIXING SYSTEM

This Sheet describes an acoustic ceiling treatment using sound-absorbent tiles supported by concealed mild steel sections. The assembly can be fixed direct to ceiling members or it can be used as a suspended ceiling.

General

The tiles are in the form of perforated pressed metal trays filled with sound-absorbent material. The trays are fitted with four spring-steel fixing clips which are pressed into position from below and engage round the shaped web of the tee section. All arrises on the underside of the tiles are chamfered and a vee groove of corresponding size divides each tile in two, so that the finished ceiling is composed of 12-in. by 12-in. squares separated by vee joints. The tee sections can be fixed direct to most types of ceiling but it may be necessary to provide cross battens; these should be 1½ in. by 1 in. at 3-ft. centres.

Tiles

Trays: These are 24 in. long by 12 in. wide by 1½ in. deep and are made from 24 gauge (0.028 in.) perforated mild steel sheet. They can be supplied with ⅜-in. or ½-in. diameter perforations at ⅝-in. centres. The chamfers on the underside are ⅜ in.

Sound-absorbent material: The bottom of the tray is lined with a piece of muslin and a pad of glass silk or rock wool inserted.

Clips: These are of spring steel and are incorporated in the long sides of the tiles.

Weight: The weight per tile with glass silk filling is 3.2 lb. and with rock wool filling 3.4 lb.

Supporting Tee Sections

Material and size: The tees are 1½ in. by 1 in. by 24 gauge and are rolled mild steel. The sections are fixed at 1-ft. 3-in. and 9-in. centres to correspond with the tile clips.

Weight: 0.24 lb. per foot run.

Sound Absorption

The following table is extracted from the National

Physical Laboratory's Report, reference 1015, 12th June, 1950.

Material as tested (specimen 10 ft. by 10 ft. in area)								
Burgess perforated metal tiles, 24 in. by 12 in. by 1½ in. deep, filled with 1½ in. glass silk sewn sheet with scrim facing and paper backing.								
(a) Perforated with ⅜-in. dia. holes, 2,765 holes per sq. ft.								
(b) Perforated with ½-in. dia. holes, 2,765 holes per sq. ft.								
Tiles clipped on to metal T-bar runners mounted on back wall, the front surfaces being about 1½ in. from the wall.								
Reverberation absorption coefficients (to nearest 0.05) for frequency bands in region (cycles per second)								
	125*	250	500	1,000	2,000	4,000	6,000	8,000*
(a) ..	0.15	0.50	0.75	0.80	0.75	0.75	0.75	0.75
(b) ..	0.15	0.45	0.70	0.75	0.80	0.85	0.85	0.85

* The accuracy is subject to reservation at these frequencies where measurements present special difficulty.

Finish

The trays are zinc-coated and finished with one stoved coat of chromate primer and one stoved coat of matt off-white finishing enamel. They do not require any additional finish after fixing. The supporting tee sections are electro-galvanised.

Maintenance

The surface of the tiles may be easily cleaned by washing.

Compiled from information supplied by:

Burgess Products Company Ltd.

Head Office: Acoustical Division, Hinckley, Leics.

Telephone: Hinckley 700-2.

Telegrams: Burducto, Hinckley.

London Office: 127, Victoria Street, London, S.W.1.

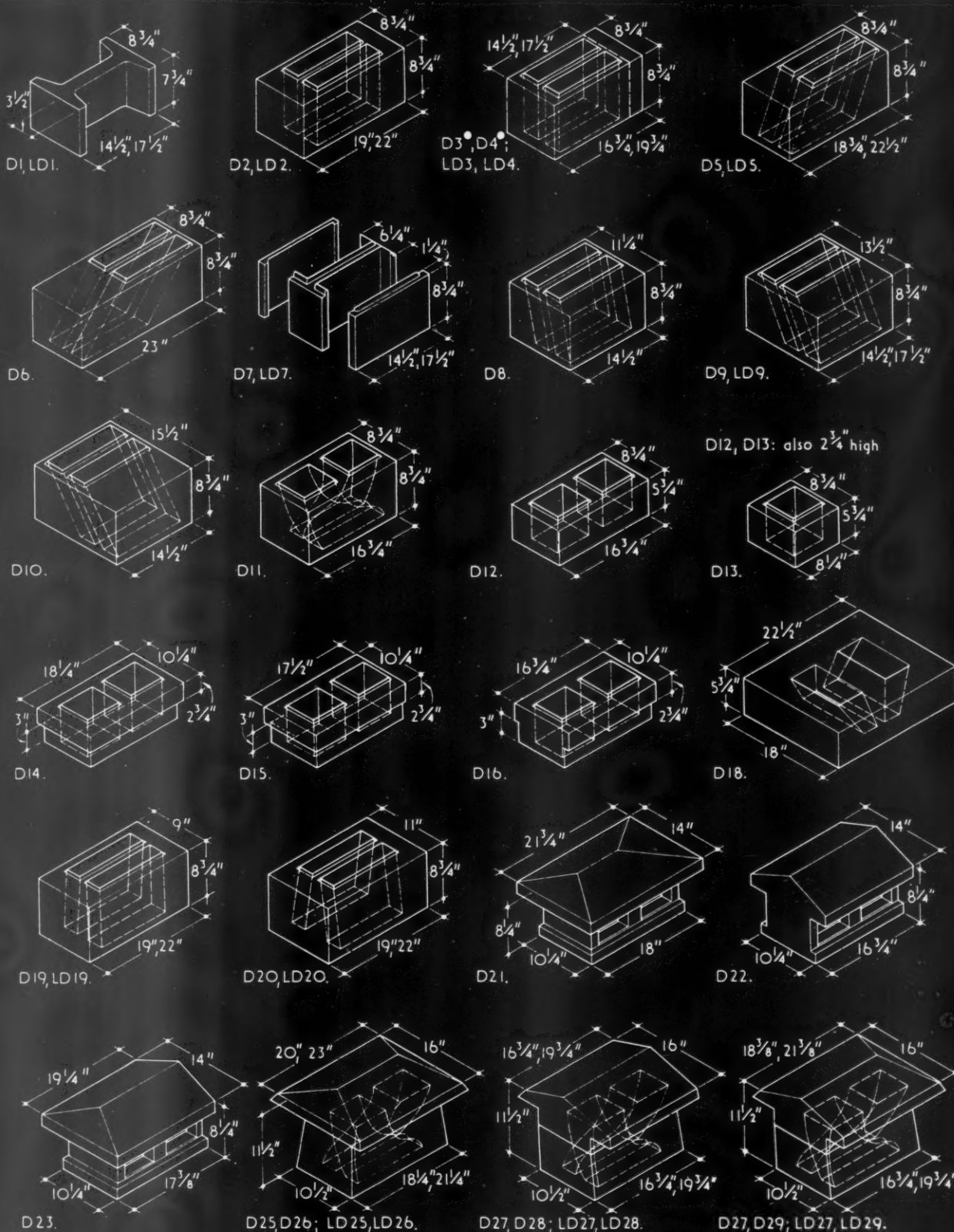
Telephone: Tate Gallery 0251.

Telegrams: Burducto, London.

FLUES | GAS

30.B4

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The sockets are not shown on the drawings of the blocks
 • also $2\frac{3}{4}"$, $4\frac{1}{4}"$ and $5\frac{3}{4}"$ high

• NAUTILUS • FLUE BLOCKS 2: DOUBLE-FLUE TYPE: RANGE OF BLOCKS.

Manufacturer: The Marley Tile Company Limited.

30.B4 · NAUTILUS · FLUE BLOCKS 2 : DOUBLE-FLUE TYPE

This Sheet is the second of a series dealing with Nautilus flue blocks. It describes the various blocks used for building up double flues. Sheet 30.B3 gives general data on the blocks and describes those used for single flues. Sheet 30.B5 shows typical arrangements for both types and gives notes on their installation generally.

Nautilus blocks conform to B.S. 1289 : 1945 *Pre-cast concrete flue blocks for gas fires and ventilation*.

Flue Sizes

Two flue sizes are obtainable, 12 in. by 2½ in. (D) and 15 in. by 2½ in. (LD). The 12-in. by 2½-in. flue is converted to 6 in. by 5 in. at stack level, or to 9 in. by 4½ in. where the flue is taken into a brick stack. Where "old type" terminal blocks are used, the 12-in. by 2½-in. flue is maintained up to the terminal. The 15-in. by 2½-in. flue is used with the "old type" terminal.

Function of Blocks

D1, LD1—*building-in sets*: provide recesses for the gas fires.

D2, LD2—*cover blocks*: this type of block forms a lintel, taking some of the weight of the flue away from the building-in set.

D3, LD3—*straight blocks*: the standard blocks which allow 2½-in. bond with brickwork.

D4, LD4—*closer blocks*: used to maintain bond and to provide a straight face to any exposed blocks.

D5 (65°), LD5 (60°)—*raking blocks*: four courses of these will carry the flue clear of one immediately above.

D6 (47°)—*raking block*: two courses will carry the flue clear of one above. This block should only be used when it is not possible to employ the D.5 block.

D7, LD7—*coring blocks*: used immediately above and below groups of raking blocks to allow flues to be cleaned on completion. Where flues are installed solely as air ducts this may be used at any point where outlets are required, the loose faces of the block being replaced by metal grilles.

D8, D9, D10—*offset blocks*: used to set the flues forward or back 2½ in., 4½ in. and 6½ in. respectively.

LD9—*offset block*: provides a 4½-in. offset for the larger flues.

D11—*conversion block*: used immediately below stack to convert the 12-in. by 2½-in. flues to 6 in. by 5 in.

D12—*stack block*: these provide a stack for a double flue and are also used with D13 blocks for stacks of more than two flues.

D13—*stack closer block*: used with D12 in stacks of more than two flues to maintain bond and straight edges.

D14, D15, D16—*string course blocks*: used below terminals to provide a drip.

D18—*corbel block*: this converts the 12-in. by 2½-in. flues into two 9 in. by 4½ in. for use with a brick stack.

D19, D20; LD19, LD20—*saddle blocks*: the D19 and LD19 blocks are used for converting two single back-to-back flues into one double. The D20 and LD20 blocks convert two single back-to-back flues in an 11-in. cavity wall into one double. Used above top floor ceiling level; they can be made in straight or closer block lengths for bonding if required.

D21—*double terminal*: used at the top of a double flue.

D22—*middle terminal*: the intermediate terminal in a stack of three or more double flues.

D23—*end terminal*: the end terminal in a stack of two or more double flues.

D25, D26; LD25, LD26—*double terminals (old type)*: for use where the stack consists of a double flue only. D25 and LD25 also used at one end of a stack of double flues with caps D29 and LD29 respectively.

D27, D28; LD27, LD28—*middle terminals (old type)*: the intermediate terminal in a stack of three or more double flues.

D27, D29; LD27, LD29—*end terminals (old type)*: used at one end of a stack of double flues (with D25 and D29 or LD25 and LD29 at opposite end).

Applications

Nautilus double blocks with a 12-in. flue may be used for ventilating any gas fire with a rating not exceeding 15,000 B.Th.U. per hour, and those with a 15-in. flue where the rating does not exceed 20,000 B.Th.U. per hour. They may also be used for providing a ventilating duct to rooms where no flues exist and for constructing hot air ducts to convey warmth from a solid fuel appliance to rooms remote from it. The blocks should on no account be used with wash boilers or any type of hot water heater, or for providing main flues to any solid fuel appliance.

Compiled from information supplied by :

The Marley Tile Company Limited.

Head Office : London Road Riverhead, Sevenoaks, Kent.

Telephone : Sevenoaks 2251 (8 lines).

Branch Offices : Aveley, Bedfont, Bridgend, Burton-on-Trent, Delamere, Glasgow, Harrietsham, Leighton Buzzard, Poole, Storrington.

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difficulties with which they were confronted owing to post-war conditions. Later, many of those who criticized came to realize that supplementing the work of the permanent staff by the employment of architects in private practice was the best solution to the problems of: (a) carrying out a large programme in the limited time available; (b) surmounting the difficulty of securing technical staff with the qualifications and experience required, and (c) preventing the salaries of the whole of the permanent staff becoming unduly inflated, and these former critics advised their own authorities to adopt the same policy.

That this policy has been successful in Kent is shown by the fact that the Council has been completing on an average one new school every three and a half weeks for the last four years. It is believed to be the first authority to sign up its hundredth new school contract since the war.

F. R. S. YORKE

The Private Architect's Problem

GENERALLY, the private architect has to work for a number of different authorities, all of whom have slightly varying requirements and several methods of approach to their own problem of dealing with the private architect. For instance, we may find in one authority a section of the architect's department whose sole job is to deal with outside architects, whilst in another we are briefed by the education officer and have scarcely any contact with the architect, and in a third there is no organization at all. This is not a very serious thing, although when one works a second time for the same authority, knowing the drill, it is noticeable that the whole procedure is simplified and speeded up.

Because he works for several authorities, the private architect is unable to develop a single school type for repetition. But because Ministry requirements have been changing so rapidly and costs have had to come down so often, the disadvantage is less than it at first appears, for it is only a very exceptional system that can have stood the strain of these demands. On the other hand, in working for a number of clients a private architect is kept on his toes; he is kept alert and is in some sort of contact with developments that are going on all over the place.

Working for a public authority is on the whole rather less arduous than working for a private client; this is noticeable from the first briefing. Taking the school again as an example, there is a great advantage in that the local authority's representative who deals with the briefing knows what the requirements are, and there is very little going back on the original programme (excepting that different authorities have different ideas on the way to calculate the number of w.c.s). He is not a layman in the same sense as the private client, who has no building tradition and needs a lot of help in clarifying his ideas. And of course he is not spending his own money, which all makes a difference. At the time of briefing the permitted expenditure for a given school is known and from this the number of square feet that can be allowed per child can easily be calculated.

Now we come to the first real problem from the point of view of the Ministry. The architect is briefed as soon as the education authority has been informed that a particular school is in a particular year's programme; and this may be the case for the official architect, but quite often the private architect is not briefed until some time later, when the panic has set in. This may mean that unless sketch designs are

approved at the first submission, the time left between commencement of working drawings and official starting date is too short for drawings to be completed before the quantity surveyor gets them, and so there may be variation orders throughout the whole course of the job.

It normally takes a year from the time of briefing to the commencement of work on the site, or more in the case of a technical college, where much more detail has to be approved by the HMI and the heads of departments. From the time that the programme is known, and on the assumption that the site has been surveyed and there are no complications with services, it will take approximately six weeks before preliminary sketch designs are ready for approval by the architect or education officer, and a further four weeks for presentation to the education committee. Part of this time is really wasted because it is impossible to arrange a meeting to coincide with the completion of the drawings. During this time there are informal discussions with the Ministry and with the client. A little more time may be taken if a particular authority finds it difficult to accept new ideas in planning that follow from the need to economize in circulation space. It is quite possible that a kind of planning that is becoming common in one area and is approved by the Ministry may appear as wildly retrogressive in another.

One of the factors over which the architect has no control is the timing of arrival of new jobs in the office, and the date on which a start can be made on working drawings.

For a school costing around £200,000, five or six assistant architects with additional junior help will be required at the working drawings stage, and one of the most difficult problems is to maintain a staff that is capable of taking the impact without becoming disorganized. It is particularly difficult when one realizes that staff must be kept productively employed for the whole of the year, and that if one is to maintain a high standard of work there can be no question of taking on people for a particular job and dismissing them when the rush is over. The situation is eased, of course, if the office concerned has some large work of a long-term kind, but the problem is a serious one and worth discussing as there may be some solution to it.

The senior assistant on a job of this size will stay with it for two or three years, and will see it through to completion, but as soon as the working drawings are finished four or five people will have completed their part of the work and will be free, and if several jobs happen to arrive at the same stage at the same time—and this is sometimes unavoidable—there may be as many as fifteen people looking for a job at working drawing stage. A little foresight will usually avert the full seriousness of such a situation, but all the same it is a problem; it may not arise with a more highly organized system of group working, but as far as I can see a large office with any kind of team or group work must depend on a steady flow of new jobs into the office.

Another problem is that of paying salaries high enough to relate to the high cost of living. Although building costs have risen roughly three times, salaries have risen to barely twice what they were before the war. This may be due partly to high taxation, which forces a principal to take out more than he might otherwise do in order to create a little reserve, about which I will say more later on. But I think it is also because the materials with which we build now are relatively cheaper than those we used formerly, but at the same time they need much more thought and careful detailing, and an enormous amount of office work goes into the keeping down of building costs. It is not unusual to re-detail

extensively in alternative construction, to escape a rise in price or to avoid a scarce material. So it seems that without an increase in the scale percentage the architect will be relatively poorly paid, and if the assistant in the private office is underpaid this will reflect in the salaries of assistants of official architects.

And this takes me on to the second half of my paper.

The first point I would like to consider, and it is a very significant one, is that while there have been very great changes, and in some ways advances in architectural design and technique during the past fifty years, there seems to have been little change in the machinery for the control and administration of the private architect's office. It is probably true to say that the kind of partnership arrangement entered into by architects today is just the same as that used fifty years ago, and the more one thinks about it, the stranger it seems that little thought is given to this aspect of things. Perhaps the reason for this is that architects have an interesting job and are so fundamentally absorbed in their work itself that they get irritated or bored when they have to apply their minds to such mundane things as administration of the office.

I am, of course, assuming in the remarks that follow that there is and will continue to be room for, and indeed need of, the private architectural firm, working alongside the large public architectural offices that have grown so considerably in the last twenty-five years. I think that both sides of the profession are necessary, if only that the one may be perpetually keeping the other on its toes.

Whilst there is no point in change for its own sake, I do believe there is a need for a fresh approach to this side of the architect's problem, and it should at least be explored for the following reasons:

First, I think everyone will agree that it is much more difficult for a young man to start in practice today than it was fifty years ago. Clients are difficult to find and if he is lucky enough to be given a sizeable job, the necessary capital to equip his office and run it may be even more difficult, and when the job is complete it is still more difficult to find the next one.

Second, it is much more difficult for the small firm to maintain continuity today than it used to be in the past; and it is not possible, because of the high level of taxation, to put enough money away to create a reserve for slack times.

Third, it is almost impossible for the private architect to save sufficient money to allow him to retire from his practice at a reasonable age and hand it on to a younger and more energetic man.

These factors all add up to increasing difficulties for the beginner and for the small or medium-sized firm. It appears that the bigger firms are to a certain extent better off. It seems they are better able to achieve a continuity of work. Because of their size they cover a large variety of work and get well known in many fields and they may become firmly established. This leads the modern kind of multiple client, whether public authority or industrial concern, to place its work with such established firms.

The old personal kind of client did not feel he was taking a risk with a comparatively unknown architect if through his personal knowledge he felt confidence in the man. The public authority or industrial concern has not the same feeling as a personal client. The appointment of architects and other professional men must go before a board of councillors or directors, and boards are traditionally cautious and always tend to place work with firms with big reputations. For these reasons I believe there is a growing ten-

dency for the big jobs to go to the big firms. Strenuous objection may be taken to the trend, but if it is inevitable the fact should be faced and the young man starting up today will adjust his ideas accordingly. It may be that he should consider it more advantageous to look upon the principals of the large firms as his clients rather than struggle on trying to find clients of his own. In an enlightened office he may even find more understanding for his ideas than he will get from the type of client he is likely to land.

One of the most interesting developments in the modern office is the increasing freedom of the employed or assistant architect, and there is a problem in delegating more and more work whilst keeping the principal's responsibility to the client.

All this does not mean that the small firm will die out. I think there will always be a need for it. But I do believe that the bigger firms will tend to increase at the expense of the smaller ones, and if this is correct then it emphasizes even more my point about the need to investigate the legal foundations on which such firms are based.

They may be full partnerships, but they often take the form of an association which is in fact only a looser form of partnership; or they may be group practices with a number of associates practising anonymously; and there are various other systems. But there is one form of association which may have great advantages, although it is frowned upon by the RIBA and prohibited by the Architect's Registration Council, and that is the company structure; and I think that we ought to give some consideration to it.

The great feature of a company is that it is an impersonal structure and consequently can be a continuing entity and need not die or peter out at the death of the principal, as a partnership may well do. This is not to say that the individuals within the structure of a company may not themselves be strong personalities; one can think of many men in industry who act in much the same way as the professional men in the achievement of their objectives and ideals. Can we not imagine the existence of the company which by reason of the skill and personality of its directors and by the care and energy they display in providing worthy succession will enjoy as strong a hold on the esteem of clients as the best professional practice does, and at the same time provide advantages not now open to the professional man?

It may, for instance, be worth consideration whether the company form might provide a better way in which architects could free themselves to some extent from administrative routine so that they could get back to their proper job of designing good buildings. It is true that in a partnership one could have someone—let us call him the office manager—who would attend to administrative detail; but he would not be a partner, and questions of status might arise if he had to deal with certain problems—as for instance material supplies. In the company form one can see the possibility of a director who would not need to be an architect but who could bring his special administrative skill to the assistance of the group as a whole.

Then is there not a possibility that the company form might hold some tax advantages? Although the Inland Revenue authorities have powers to charge surtax on certain companies which may distribute much less than their total profits, it is nevertheless true that many companies which come within the scope of this legislation are able to build up reserves out of profits after income tax and profits tax, whereas the private practitioner or the firm can only set aside what is left after income tax and surtax have been paid. It is possible, therefore, that the company form might not only provide a continuing entity but something which, by reason of the fact that it can set aside some reserve, might prove more attractive to a better type of staff be-

cause it might retain financial resources to cover the occasional lean periods.

It may be, too, that the company form could be used to provide principals with some form of pension scheme which at the moment is not available to the private practitioner or to the partnership. It is true that a committee has been considering the problem of tax relief for partnerships in connection with pension costs, and it may be that in due course the partnership will be put in much the same position as the employees of the larger companies and corporations. I believe it is true that if a man is to have a pension of £2,000 a year at 65 he must have saved £22,000 by that time—a virtual impossibility for the private practitioner. It is true that pension arrangements are not available to the controlling director of a company, that is to say to a director holding more than a 5 per cent. interest in the shares, but is it not possible to envisage an application of the company form to some part of professional activities so as to provide for reasonable pensions?

The traditional Institute objection to the idea of a company is that the architect must for ever remain personally responsible to his client, and particularly in relation to any defects which may appear in the building he designs. But if the architect is allowed to insure against a mishap with a professional indemnity policy, the financial side of this personal responsibility can scarcely be said to remain as a stumbling-block. Is it not possible to envisage the company as providing at least as good a covenant as the firm; financially as strong or possibly stronger than the individual or firm, and as a continuing entity able to provide an even wider range and higher quality of services?

I think there is something deeper that underlies the traditional Institute attitude that there is something rather "indecent" in the idea of the architect as a limited liability company, or as an unlimited liability company. This perhaps is a hangover from the times when it was still not quite the thing for a gentleman to enter commerce and when the professions were much more respected. But it is an idea that does not fit in with the economic and social life of the country today.

The architect is working at a disadvantage which is not only a personal one but one that affects the profession as a whole, when it is compared with civil engineering. The civil engineer is allowed to be a director of a building or civil engineering company but the architect is not. But it seems that the cause of architecture might be better served if some of the big building firms had on their board an architect, in the same way that they have a civil engineer. The position as it stands is that the engineer is on the board and the architect is employed in a salaried capacity much lower down on the scale, where he has no say in policy.

I do not mean that all architects should rush to form themselves into companies or even that I would particularly like to be a company myself; but I do believe it would be a good thing if the opportunity were there, and I think it would be worth while to explore the advantages and disadvantages.

To summarize, the possible advantages as I see them are:—

- (1) The company structure, being less dependent on personalities, is more likely to achieve continuity.
- (2) The company structure might enable the architect to be stronger financially, to carry the firm over slack periods, and so to achieve continuity.
- (3) Clients might be more secure because of the stronger financial position of the architect and the continuing entity of the company.
- (4) The architect director, by delegating administrative work to the administrative expert, would be able to devote himself to architecture and better building.
- (5) There would be a possibility of retirement through participation in a pension scheme.

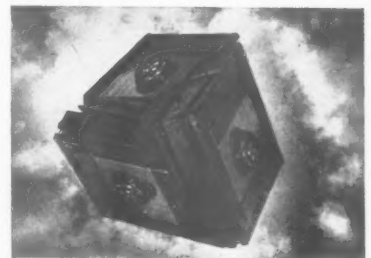
LETTERS

A. Thompson

R. Furneaux Jordan, F.R.I.B.A.

Cloudscape

SIR,—In your issue of May 7 you illustrated a flat development scheme in Surrey, the photographs being complete with some strikingly architectural clouds. These clouds also appeared in the working details, in one case having slipped up to see London.



On May 21 they were still hanging over London—the Waterloo Air Terminal, to be precise. Surely it is time they were rested? Perhaps a rota of your other (?) cloudscapes is the answer, as the photographer obviously cannot photograph the cloud and building simultaneously.

Bristol.

A. THOMPSON.

The Untutored Peasant

SIR,—May I, through your columns, thank ASTRAGAL JOURNAL for May 21) for his very kind remarks on a recent article of mine in the BBC Quarterly. He takes exception only to the statement that "the untutored mediaeval peasant could neither weave a basket, make a pot nor thatch a cottage in an ill-manner." I am guilty of having failed inadvertently to admit cribbing this "celebrated piece of Ruskinian wish-thinking" direct from William Morris. This explains its old-fashioned ring; it in no way invalidates its truth, nor that it is one of the most disturbing truths that a sophisticated world has to face. The Mexican Exhibition at the Tate—although not all strictly mediaeval—contained hundreds of objects that were crude, clumsy, crooked, obscene; not one that was ill-made. The intellect and money were all in another room, coping with Political Prisoners.

Not owning a wireless set I have never heard of "Grimble" and so cannot comment upon ASTRAGAL's third paragraph, except to say that the conjuring up of visual images by the spoken word alone—as opposed to the written word—has had no supreme master since the death of Homer, probably an untutored peasant.

R. FURNEAUX JORDAN

London.

HOUSES

in MANOR ROAD, COVENTRY

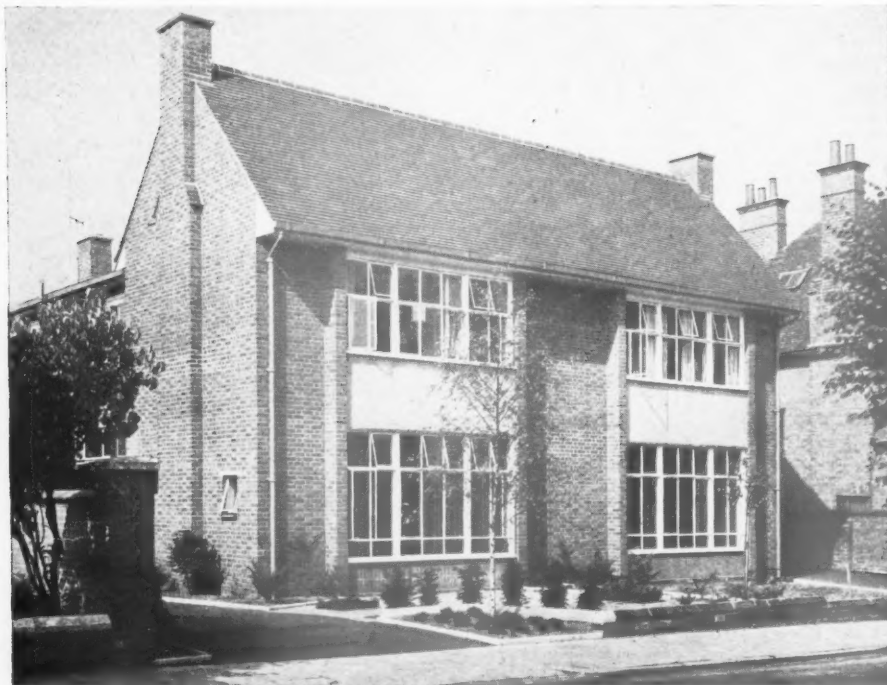
designed by ROLF HELLBERG (HELLBERG and HARRIS)

quantity surveyors, C. H. OSBORNE and PARTNERS

These two houses at 4 and 6, Manor Road, Coventry, are a war-damage rebuild, replacing a pair of three-storey semi-detached houses. Although the main external and internal walls generally follow the lines of the original houses, the block has been replanned completely on two floors. The site is leasehold and the estate owners withdrew approval of a low-pitched roof (see sketch on next page) and insisted on a high pitch "to conform with surrounding buildings." This increased the cost and the timber content and forced the architect to use a combined pitched and flat roof.

The garden of No. 6 from the garden room.





Above, the pair of houses from the south-east. No. 6 nearer the camera.



Below, architect's sketch of original design for which approval was withdrawn.

HOUSES

in MANOR ROAD,
COVENTRY
designed by
ROLF HELLBERG

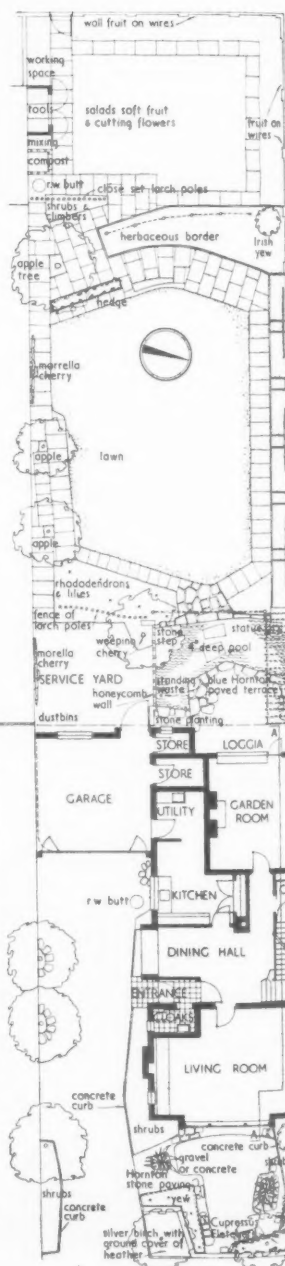
PLAN.—The plan for each house is very similar, but No. 6 was purchased by the architect during construction and modified to include experimental features. In No. 4 there is a combined kitchen and dining recess, while in No. 6 the dining space is in the hall. In the flower window beside this dining space and in the garden room at No. 6 there is double glazing with special insulated glass. The ground floor ceiling height of 9 ft. 9 in. allows clerestory lighting at the side and back of both houses.

CONSTRUCTION.—The superstructure is of 9-in. load-bearing brickwork as in the original building. The cellars have walls of 14-in. brickwork and floors are of reinforced concrete. Flat roofs are carried on lattice steel joists.

FINISHES.—Red ripple facing bricks are used

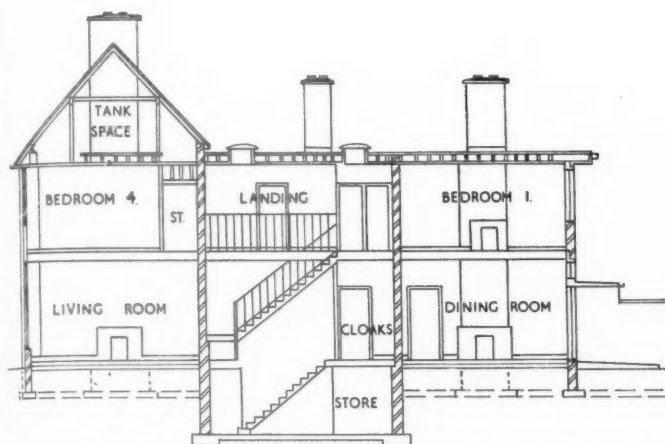


First floor plan



Ground floor clerestory level and basement plans

Ground floor plan and garden layout of No. 6.
[Scale: $\frac{1}{4}$ " = 1' 0"]

Section A-A (the dining room is now known as the garden room) [Scale: $\frac{1}{8}'' = 1' 0''$]

externally throughout. The external walls of the living room at No. 6 have inner skins of plastered vermiculite blocks. Pitched roofs are covered with sand-faced tiles on felt. Flat roofs have built-up three-ply roofing with a white spar finish on screeded woodwool slabs. Internally, ceilings are plastered on expanded metal; walls are distempered on plaster; both houses have wood-block floors, mahogany in No. 6 and oak in No. 4.

SERVICES.—The ground floor of No. 6 is heated by ceiling panels served by water at 100 deg. through a heat exchanger from a gas-fired sectional boiler operating at 160 deg. This boiler also directly supplies hot water and a radiator on the first floor landing. The ceiling heating adopted is only made possible by the ceiling height of 9 ft. 9 in. This compares with a height of 10 ft. in the destroyed house. The owner preferred close-carpeting in the living rooms, which would have rendered floor heating ineffectual, also kitchen extractor fans can be run without appreciable loss of heat. The inevitable small heat loss upwards provides a limited degree of heating for the bedroom floor. The heat exchanger in the basement is a tall, narrow tank with an internal coil, fed directly from the boiler. The temperature of the water in the heating circuit can be regulated by a control valve which strangles the flow of higher temperature water. The differential between the two circuits is therefore controlled by increasing or decreasing the volume of the direct flow through the heat exchanger. The heating water from the exchanger is pumped through the circuits continuously. The boiler is a normal sectional type converted to gas from solid fuel by blocking the firedoors with fire brick and inserting internal baffles of firebrick. The usual automatic

Below, the main entrance to No. 6 and flower window to dining recess, which is double glazed. Bottom, the dining hall. The external wall appeared as a Working Detail in the JOURNAL of October 23, 1952.

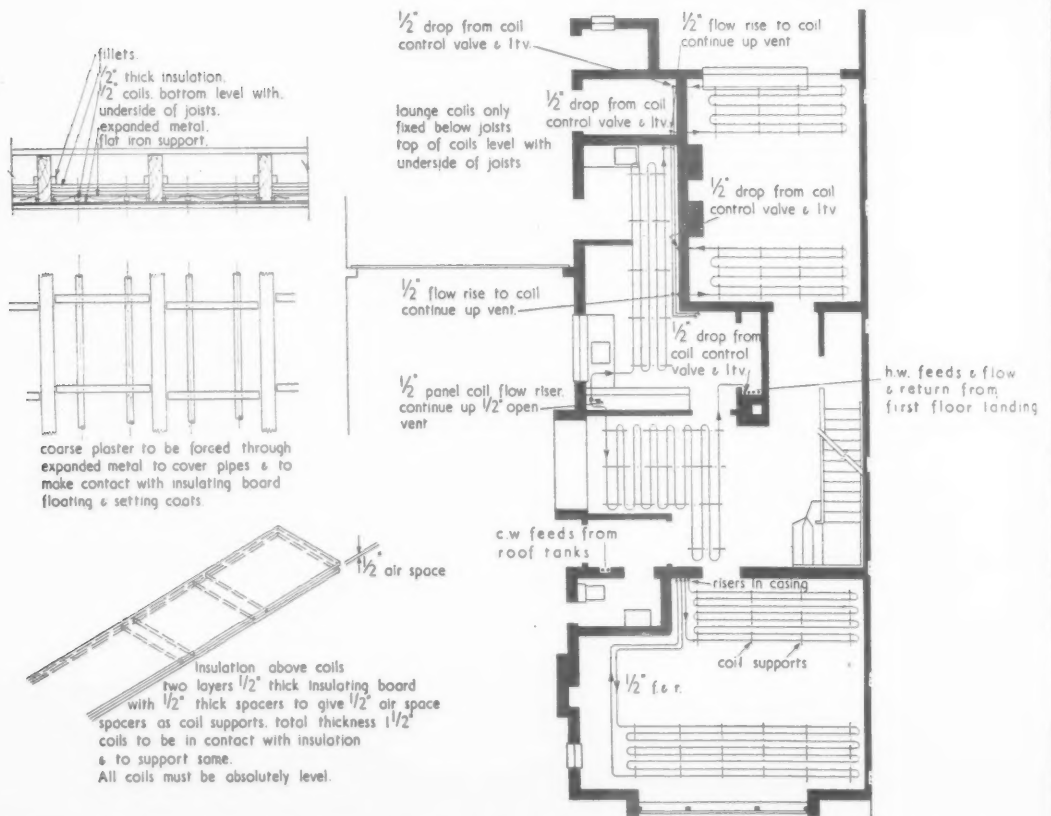




HOUSES

in MANOR ROAD, COVENTRY
designed by ROLF HELLBERG

Above, living room fireplace and built-in cupboards and bookshelves. Right, ground floor hall and staircase. Both are at No. 6.



Ground floor plan of No. 6 (with radiant heating ceiling panels superimposed) and details. [Scale: 1/8" and 1/4" = 1' 0"]

valves cut off the gas if the supply fails or if the pilot light goes out. The running cost is 24s. per week at 12½d. per therm. The normal radiator installation to ground floor and circulation space, with hot water supply, coal-fired, in No. 4, costs 30s. per week to run.

The contract price for the two houses was £9,178. This is 2s. 10d. per ft. cube and 33s. 8d. per ft. sq. The general contractors were Cross & Sons. For sub-contractors see page 752.

TECHNICAL SECTION

The difference between the "classical" and the "collapse" methods of design is not easy for the layman (and in this respect most architects are, perhaps unfortunately, laymen) to understand. In brief, however, with the classical method the stresses set up by the assumed loading are calculated, and the structure is designed so that these do not exceed the permissible working stress (i.e., the yield stress or the ultimate stress divided by a given safety factor), as laid down in byelaws, codes of practice, etc.

The snag is that in some structures (e.g., warehouses) the *actual* loading often greatly exceeds the *assumed* loading, whereas in others (e.g., open water reservoirs) they do not. Yet no provision is made in any regulations for varying the permissible working stresses according to the type of building.

With the collapse method, as the name implies, the structure is designed by considering its condition at the point of collapse. The figure required in the calculations is the collapse design load (i.e., the load which will cause collapse), not the working load.

It is illogical to calculate this figure simply by multiplying the working load by the safety factor. And the full economic benefits of using the collapse method will never be gained unless, by means of an extensive "site" investigation into actual loadings, reliable and comprehensive data on these loadings can be established.

18 CONSTRUCTION : THEORY structural steelwork

This week's
survey

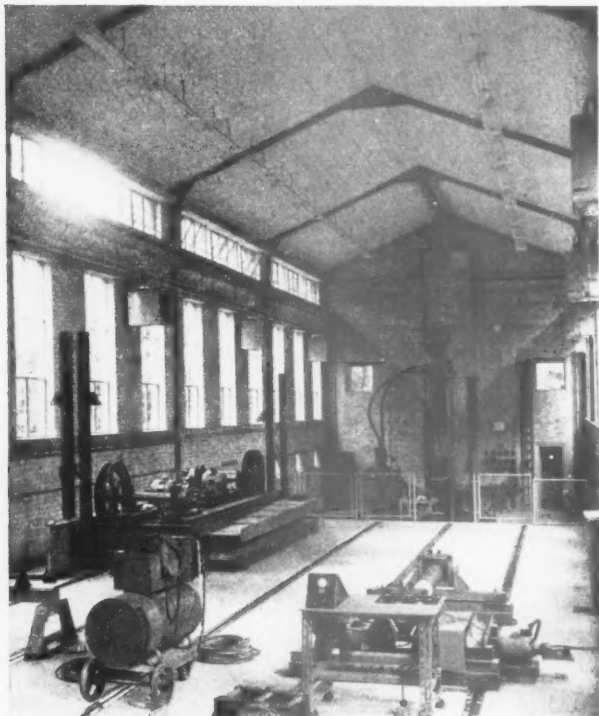
The number preceding the week's special article or survey indicates the appropriate subject heading of the Information Centre to which the article or survey belongs. The complete list of these headings is printed from time-to-time. To each survey is appended a list of recently-published and relevant Information Centre items. Further and earlier information can be found by referring to the index published free each year.

Fifteen months ago (March 6, 1952), Specialist Editor No.14 (Structural Engineering) wrote a Survey of post-war developments in reinforced concrete technique. Below is his companion Survey on developments in structural steelwork. He deals with the use of welding, light-gauge sheet steel, and composite (R.S.J./R.C.) construction, and considers the use of steel for stressed skin structures.

This review takes place in a period unfavourable to the use of structural steelwork. After a series of increases in the price of steel, MOW issued the steel economy bulletin* which, by precluding the use of structural steelwork for many purposes, has forced architects to use reinforced concrete and to realize its

cheapness and the freedom it gives them to use whatever shapes they like. During the acute steel shortage of 1952 the writer had the opportunity of re-designing two structures in reinforced concrete for both of which steelwork had previously appeared to be the obvious choice. In each case the concrete contractor's price was well below that of

* *The Design of Buildings.* (HMSO, 1952. 3d.)



Above, Fig. 1, 72-ft. span portal frames at the British Nylon Spinners factory extensions, Pontypool. (Architects, Sir Percy Thomas and Son.) Left, Fig. 2, 28-ft. span, single-bay portal frames at the Abingdon Laboratory of the Welding Research Association.

the steelwork contractor and 60 per cent. by weight of the steel was saved.

If structural steelwork absorbs such a weight of steel, which the country can ill afford, what is the future for steelwork? There are still obvious uses for steel in buildings whose structural frames must be erected quickly or where it is required that the structure be changed, moved or strengthened. On account of its high strength, steel is suitable for large-span structures and, as the span increases, the price of steelwork (compared with reinforced concrete) becomes more favourable. This is also true when loads are great. However, compared with aluminium and prestressed concrete, even for large spans and heavy loads, steelwork can barely

hold its own on initial cost, while maintenance costs are obviously higher. In my opinion, steelwork is no longer economical for multi-storey buildings, especially where beams must be cased, but there is still plenty of scope for its use in single-storey buildings, particularly factories, and long-span structures.

WELDED STEELWORK

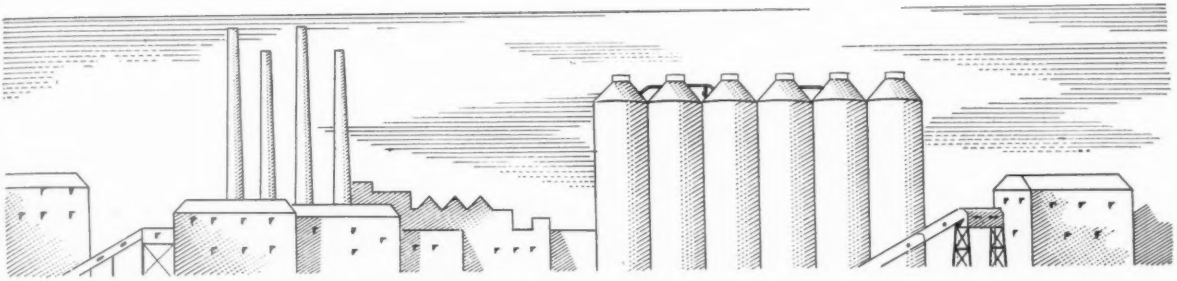
The future of structural steelwork appears to depend largely on the use of welding. Welded structures can be more pleasing in appearance (Fig. 1) than riveted structures. They have neater contours, and save steel, since the angles and cleats which must be used to join together members or parts of members of riveted structures are not required.

Yet, despite the fact that structures were being welded nearly 30 years ago, few large welded structures were erected in this country until after World War II. There are two reasons for this, the main one being the usual time lag which occurs when any industry changes its methods. The structural fabricating industry has immense sums of money invested in modern plant for riveting and bolting processes and has trained many employees in these processes. Similarly, contractors' design and detailing staffs are skilled in the design of these structures, and the BS range of steel sections has been built up from experience of this work. Some firms have adapted their shops to welding procedure, but the situation is such that welded steelwork is likely to remain at much the same price as riveted steelwork for some time to come.

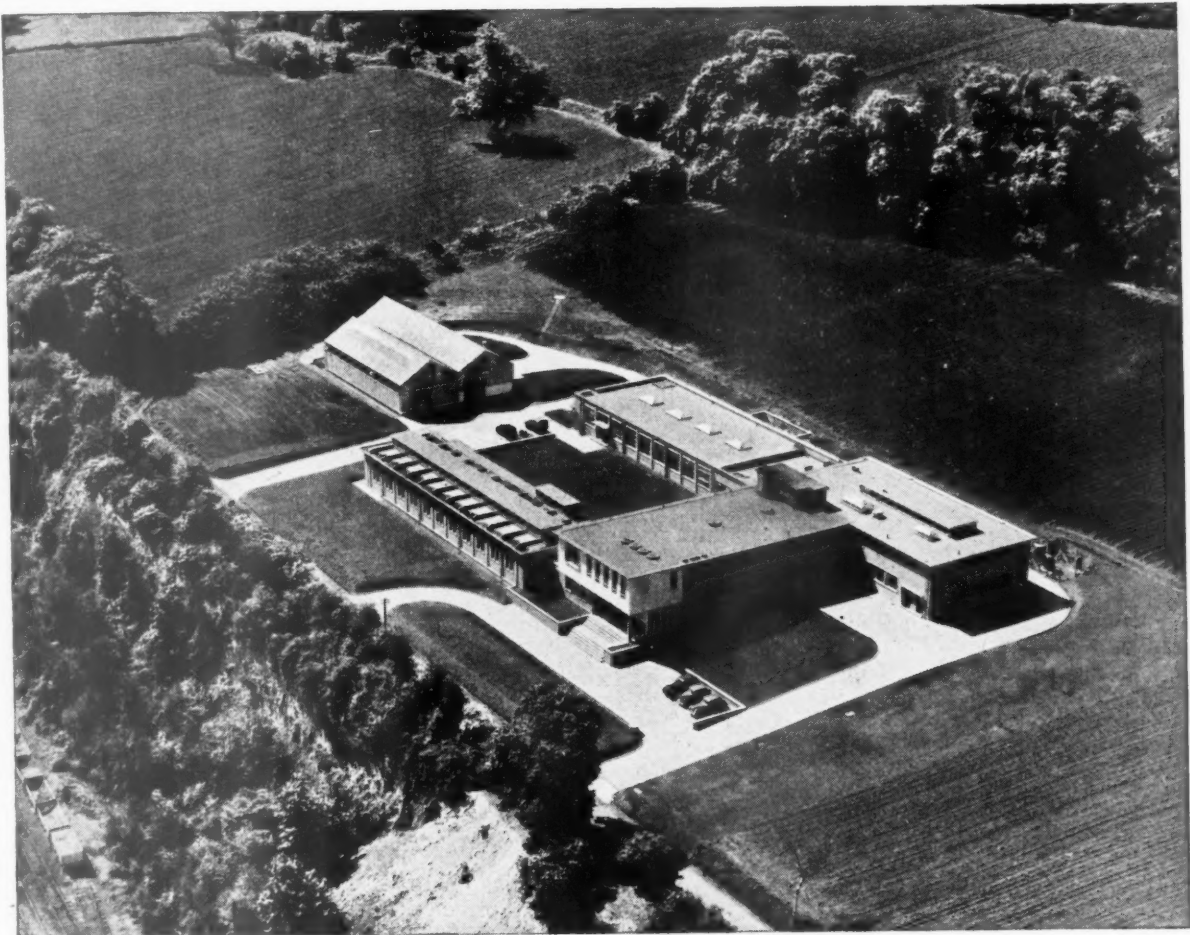
However, there seems no doubt that riveted processes will eventually be largely superseded by welding, and this will cause various changes in all branches of the industry. In steel making, welding will influence not only steel specifications but also the manufacture of rolled products. The ultimate requirement will be a high-strength, high-corrosion-resistant steel, with good "weldability" and no weak strata. As welding develops, it will be necessary to review the range of rolled sections, thin cold-rolled sections and tubes. The designer must adapt his technique, giving thought to maximum standardization in the work, balancing the demand from the workshop for simple or plain sections, jigged work and manual details. A variety of members will be available for use—tubes, castellated beams, split joists, etc., and the use of rigid-jointed structures will become easier.

Light steel welded lattice trusses are already on the market, made up in standard lengths and sizes that can be economical. Their widest application has been in school structures. This does not mean, however, that any combination of angles for top and bottom chords and rods for the web will be economical; if the member is not a standard one, it is most likely that a heavier joist will be no dearer.

There have been some spectacular failures in welded bridges which have conveyed the impression that welding is unsound. To suggest that welded work is doubtful because it depends too much on the quality of the welder is not a reasonable argument; the welder has to pass tests and the weld can always be tested by ultrasonic means. There is, perhaps, even more scope for error in the mixing and placing of concrete. If the joint has been designed so that down-hand welding can be employed, there is every reason to expect a sound weld. Naturally, if the welder is expected to work on a swaying scaffold



Building for the Industries of the World



CEMENT

The new Research Laboratories of the Associated Portland Cement Manufacturers Ltd., recently constructed by Richard Costain Ltd. to the design of the Architects, Westwood, Sons & Harrison, FF.R.I.B.A.

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Finlock forms the eaves and gutters

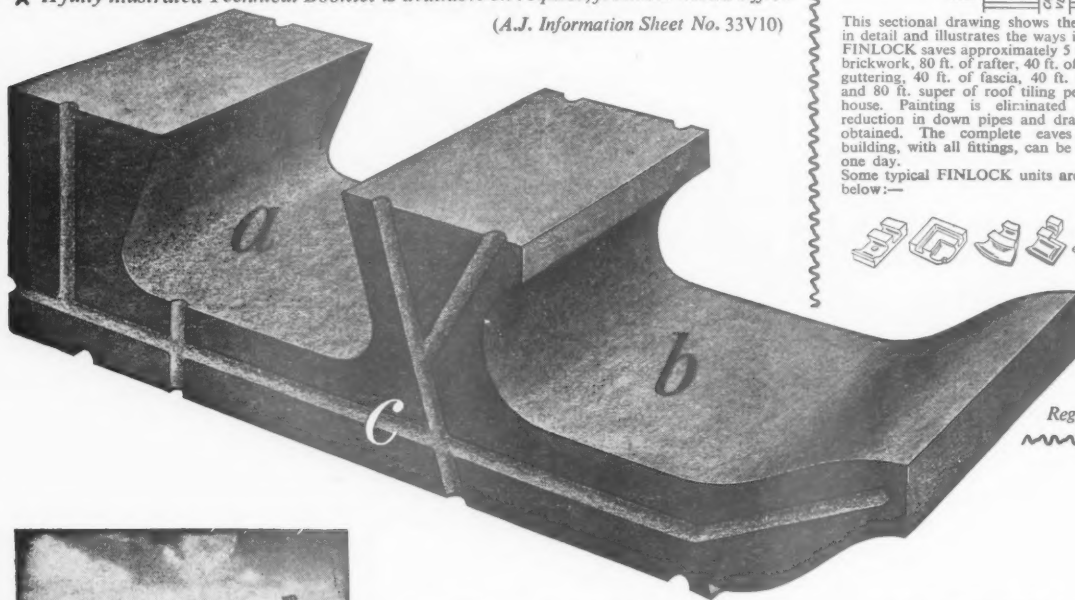
... and saves £15 per house! (says Mr. Lock)



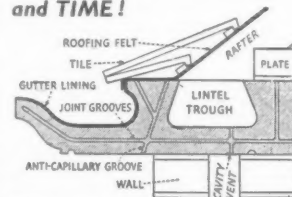
USING this system of Guttering shows a tremendous saving in cost, material and maintenance charges. Finlock Gutters are made with a fine waterproof concrete—simple in design, easy to use and permanent.

On the illustration below "a" shows the trough in which lintels can be cast *in situ* if required, "b" shows the large sectioned gutter channel which permits laying without fall. Strong enough to walk in and to withstand all building stresses. Completed by a "FINLOCK" waterproof mastic after laying. "c" indicates the jointing grooves.

★ A fully illustrated Technical Booklet is available on request, from our Head Office (A.J. Information Sheet No. 33V10)



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Regd. Pat.



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Over 300 local authorities are now using Finlock.

* The buildings shown are in accordance with the winning design in the £1,000 low cost housing competition organised by "THE BUILDER". By courtesy of J. L. Womersley, Esq., A.R.I.B.A., A.M.T.P.I., late Borough Architect for Northampton.

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DHB

with a badly designed joint, the risk of getting poor quality welds increases.

PLASTIC DESIGN

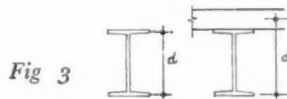
Welding should lead to the use of "rigid" steel frames, which should be lighter, stronger and stiffer than their "simple" counterparts. With a truly rigid frame eliminating the possibility of uncertain action in the joints, the next step forward is the use of the collapse method of design.* So far, research into this method has been concerned mainly with the simple joist and the welded compound joist. Generally, such members are used so that they are more likely to fail in bending than shear and, consequently, much experimental work will have to be carried out on built-up plate and web girders, with which shear or web failure is more likely to be critical.

So far, the "collapse method" has been used successfully for fixed-base portals and it is being developed for multi-bay portals, but the ultimate objective is the design of rigid-frame structures in general and frames for multi-storey building in particular. Publications 3/1951 and 5/1952 of the British Constructional Steelwork Association† provide an excellent survey of the plastic theory and give a good range of designs.

The research laboratory for the Welding Research Association at Abington and the school at Hunstanton designed by Alison and Peter Smithson were both designed on the collapse method, while a dock shed at Southampton for which members weighing up to 15 tons have been designed on the collapse method is on the drawing board. The Abington laboratory is a single-bay, pitched-roofed, portal-framed building, 28 ft. wide, with frames at 24-ft centres. It was designed with the object of producing the most economical structure without aesthetic sacrifice and the pleasing result is shown in Fig. 2. The purlins are 4½-in. × 1½-in. × 6.5 lb. RSJ's at 4-ft. centres, site welded so as to be continuous, and cambered so as to be level under dead load. Traditional purlins would have been about 60 per cent. heavier. The frames are of 8-in. × 4-in. × 18 lb. RSJ's, giving a saving of 17 per cent. over the 9-in. × 4-in. RSJ's which would have been required if the classical method of design had been employed. With further research the saving in weight may be even more marked; for example, by varying the section of a fixed-ended beam there could be a saving of over 30 per cent., but there are, of course, limited applications for members of varying section.

COMPOSITE CONSTRUCTION AND PRESTRESS

Concrete slabs have seldom been used to the best advantage in steel-framed buildings. We are familiar with the concrete T beam, but forget that a concrete slab bonded to a steel joist produces exactly the same effect. In the case of the joist, the lever arm is the distance between the centres of the



flanges, while in the composite unit (assuming the sectional area of the concrete slab is about 20 times that of the steel flange) the lever arm is increased by approximately half the depth of the slab (see Fig. 3). This is especially important with cased beams. In Belgium, research has been carried out in which only the lower half of the joist was used and the composite section was shown to be of equal working strength to a cased I beam.

The composite method of construction has been employed in this country since 1938, though perhaps it is more popular on the continent and in America, where engineers have thereby reduced the cost of their bridge work

by 10-20 per cent. Having accepted the composite method, there are several ways of providing further economy in the steel by, in effect, applying prestress to the steelwork. One method proposed by Belgian engineers involves the application of the concrete casing to a high tensile beam in two stages: first, the beam is deflected as it would be when in use and concrete is cast around the lower flange. After the concrete has hardened, the deflecting force is removed so that when the beam attempts to resume its normal shape the concrete is subjected to compression forces. The top flange composite portion of the concrete is then poured. Tests have shown that the working range of this type of beam has twice the carrying capacity of a similar beam that is not "prestressed," without cracks occurring in the lower flange concrete. The ultimate load is not affected, of course, as the lower concrete cracks before this point is reached.

Prof. Soete, the Belgian engineer, put forward various suggestions at the 1951 welding congress. His first method is to cast the concrete slab

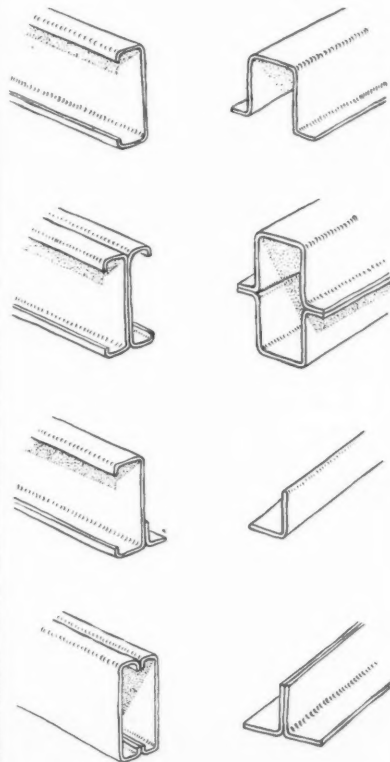
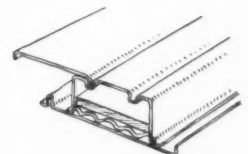
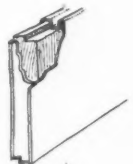
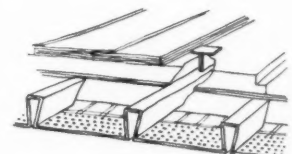


Fig. 4, typical commercial light-gauge pressed steel sections (above) and composite wall, floor and roof units (right) in use in the USA.

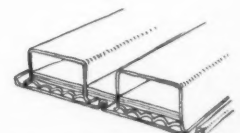
Insulated wall panel, steel or aluminium, width 16 in., depth 3 in.



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Roof/ceiling panels, width 18 in., depth 1½ in., over which light concrete and reinforced concrete is laid.



Sound absorbing panels for roofs, floors and ceilings. Width 16 in., depth 1½-7½ in.

* See Leader on page 745

† These publications can be obtained free from the BCSA, Artillery House, Artillery Row, London, S.W.1.

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around the top flange when the beam is deflected in the opposite direction to its normal bending. As the concrete hardens it is compressed by the beam, which is attempting to straighten itself out. Again, the tension flange of the beam is in compression and, thus, the girder is prestressed. Alternatively, without the use of concrete, the lower flange could be welded to the deflected web and top flange. Little progress has been made in the application of prestress directly to steelwork since Prof. Magnel's work in 1950.

LIGHT GAUGE STRUCTURES

The use of light-gauge sheet steel is not by any means new; as far back as the 18th century a house was erected in Tipton, Staffs., from thin iron sheets. Corrugated sheet for roofing and wall cladding has been in use for many decades, though roof decking is comparatively new, but in the last ten years light-gauge members 0.03 in. to 0.15 in. thick have been developed for use where moderate loads and spans would make heavy, hot-rolled members uneconomical. Cold-formed in rolls or "press-breaks" and connected by spot or seam welds, screws, bolts or cold rivets, this form of construction is now widely used in the USA. In Fig. 4 are shown some current American structural shapes and appropriate uses. The American Iron and Steel Institute issued in 1946 a specification to cover the use of light-gauge structural members, and some work has been done in this connection in this country, too. It is interesting to note that the American specification is based on a factor of safety of 1.85, as against 1.65 for conventional steel construction. This is because the specified thickness tolerances for sheet steel, by percentage, are necessarily larger than for conventional steel members and, as strength and rigidity are proportional to thickness, the extra safety factor is required.

Light-gauge structural steel can be used for roof-trusses, rigid frames, and portable and industrial buildings of a temporary nature. Fig. 5 shows a frameless utility building of 50 ft. span with tractors suspended from the ridge to provide a test load. Each trough member is 34 in. wide, with three troughs 7½ in. deep. A popular type of structure is the "Quonset" hut, which

Fig. 5, a frameless utility building, span 50 ft., with a roof of light-gauge trough units. (The tractors hanging from the roof were used for test loading.)

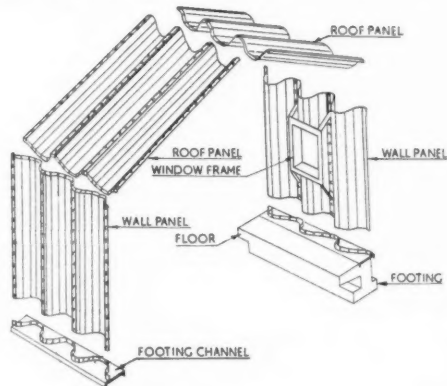
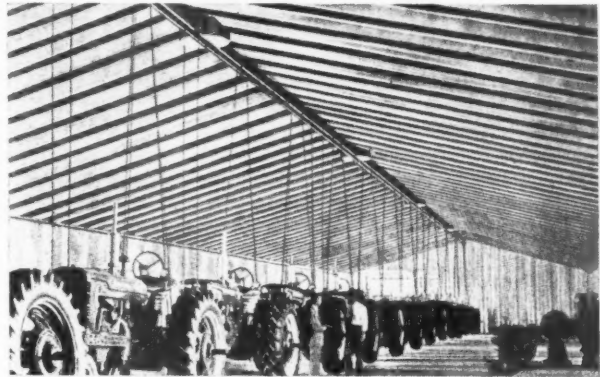


Fig. 5a, diagram showing the components of the building seen in the photograph above.

had great military use during the last war. It is mass produced in spans from 20 to 40 ft., light-gauge arches being covered by corrugated steel sheet to provide a building which is easily shipped and quickly erected. A building with steel floor units was illustrated in the JOURNAL for July 10, 1952, p. 56. With this type of floor unit, a conventional steel-framed building can be erected at great speed, the trough flooring following on, say, three storeys behind the steelwork erectors and being screeded by lightweight concrete to pro-

vide a floor system of minimum dead weight.

SPACE FRAMES

Space frames are a logical development from aeronautics and have a wide, but not yet fully explored, potential in structural engineering.

Most structures in the past have been designed two dimensionally, mainly because a three dimensional frame is both difficult to visualize and to analyse. Triangular section trusses have been used in other fields, such as for radio

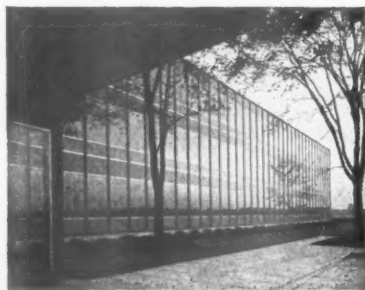
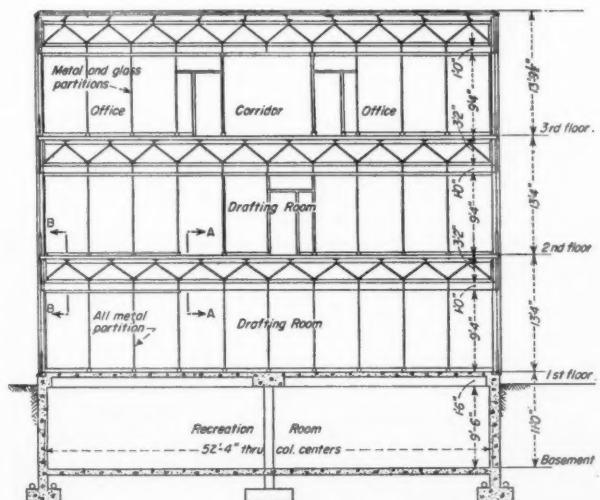


Fig. 6, "perhaps the best example of space frames to date"—the General Motors Building, Detroit. Right, Fig. 6a, cross-section; left, general view of the office block.





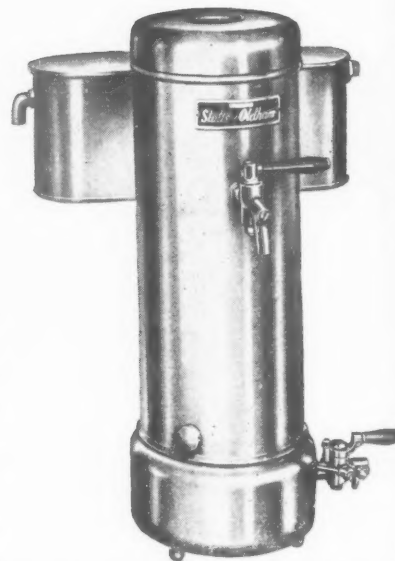
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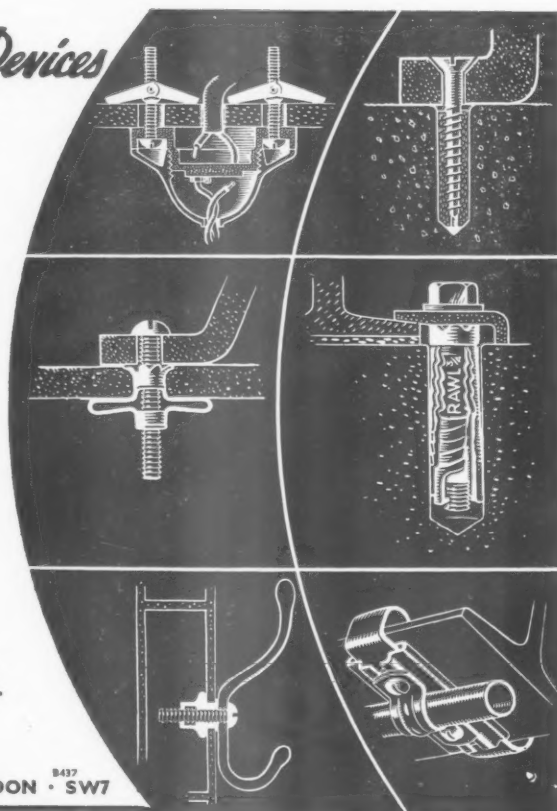
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Fig. 7, traditional type roof trusses at the factory on the Aintree Trading Estate, Liverpool, designed by R. Bradbury, City Architect and Director of Housing.

towers, and in 1950 an American professor presented a paper on welded deck bridges of triangular section, in which he suggested that a saving in weight of up to 20 per cent. over conventional structures may be achieved. By using space frames in lieu of conventional trusses, and purlins of similar form, the main frames can be spaced at much greater distances apart and the purlin has greater stability owing to its ability to resist torsion. This ability to absorb torsion is important, for several dock shed "umbrella type" roofs

damaged in air raids during the last war collapsed like packs of cards when the wind bracing was subjected to blast and damage, whereas a space frame, with its torsional resistance, would be independently stable. There were many examples of space frames at the South Bank Exhibition—the Skylon, the roof of the Lion and Unicorn Pavilion and several welded tubular staircases. Perhaps the best example to date is the General Motors Building at Detroit (Fig. 6), where the system of continuous double glazing has been made possible by having small section box columns at 5-ft. 2-in. centres, with space frames spanning 52 ft. across the building with a structural depth of only 29 in. The trusses are triangular in section, the apex pointing downwards, and have a top chord width of 5 ft. 2 in. The open nature of the frame allows all the services to be carried within it.

SKIN STRUCTURES

The skin structure is another form of structure which has been used success-

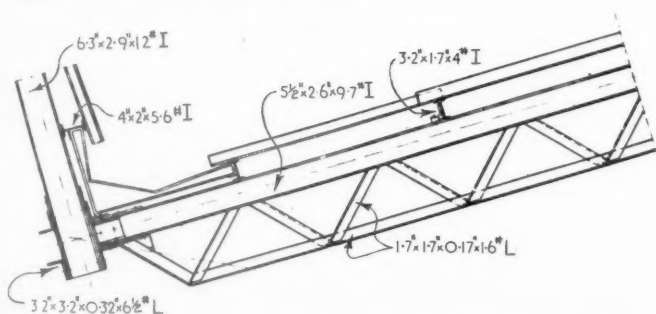
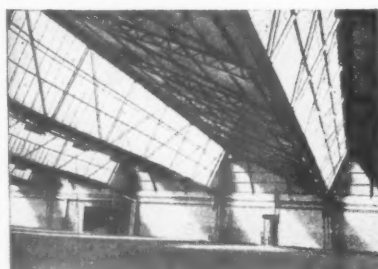
fully in aircraft; the early fabric covering has given way to sheet metal which acts not only as a covering but also forms an integral part of the stressed skin system. Applying the stressed skin principle to structural steelwork, we find that the skin becomes, in effect, a structural member lying in the plane of the skin. The Transport Building at the Festival of Britain had a skin roof, consisting of trusses placed so as to form a series of ridges and valleys supported only on columns at each end of the valleys. A truss which is not vertical is subjected to loads at right angles to its own plane in addition to the normal loads in its plane. (In Fig. 8a can be seen the members which are introduced to resist these additional loads.) This form of structure may be compared directly with the prismatic slab structure in concrete. It is difficult to make any remarks about the economy of this type of construction as so little has so far been achieved, but certainly the headroom and general appearance are vastly improved.

Figs. 7 and 8 show 2 examples of recent construction, the first in traditional form, the second as a skin structure, which has all the advantages of the north-light shell roof. The skin structure is part of a Brussels automobile factory. It spans 156 ft., has a bay width of 39 ft. and a rise of 15 ft. The north light lies at an angle of 65° to the horizontal. Fig. 8a shows the type of member used, the sizes quoted being translated from the metric system. The total weight of the roof structure is quoted as being 6 lb./sq. ft. of floor area which compares favourably with traditional structures under the same conditions.

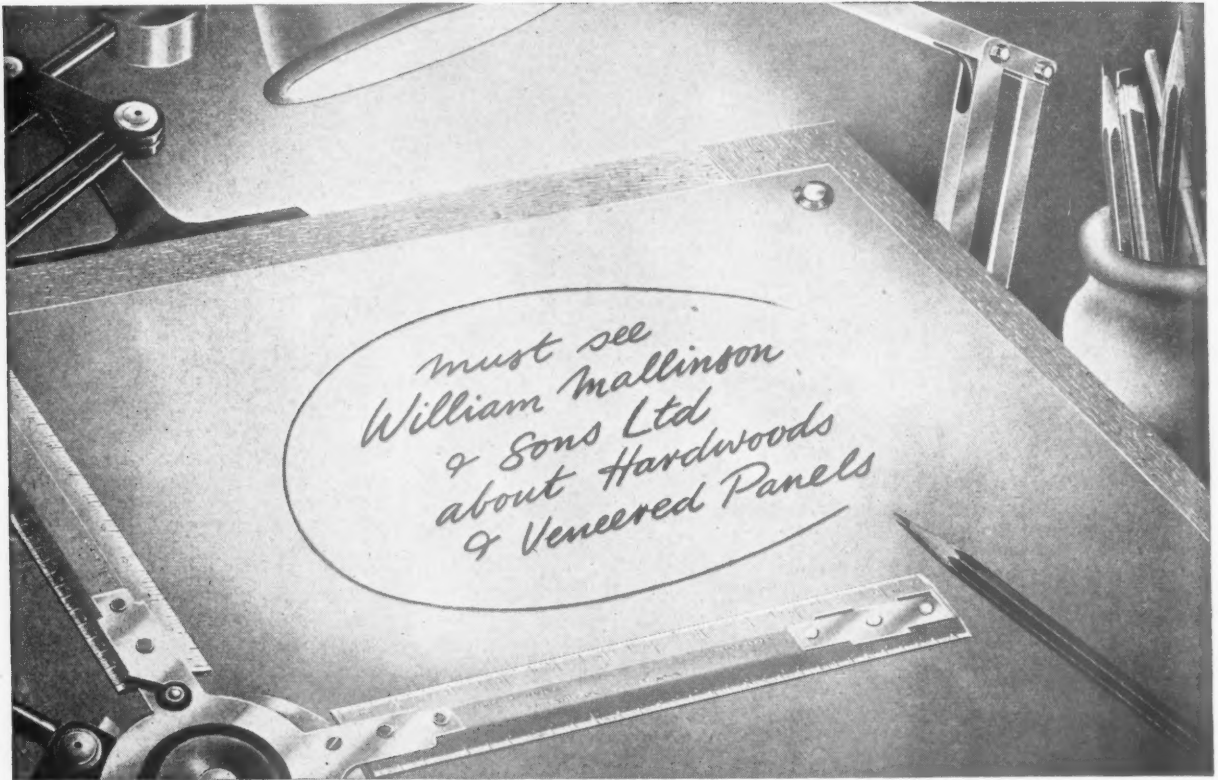
With barrel vault roofing, it is quite feasible that, at a certain span and width, the dead weight of a reinforced concrete structure would require reinforcing steel in such a quantity that the structure could be completely replaced by steel members in tension or compression, or, alternatively, by a grid of members to which is welded a roof deck capable of acting as a stressed skin when resisting the live load.

INFORMATION CENTRE ITEMS ON STRUCTURAL STEELWORK

Are welded construction.....	17.79 : 8.11.51
Recent British welded structures	17.80 : 8.11.51
Structural steelwork designed for economy	17.88 : 3.4.52
Structural steelwork design, textbook	18.112:23.10.52
Forces in framed structures....	18.114:23.10.52
The collapse method of design	18.119: 29.1.53
Live loads on floors in buildings	18.123: 30.4.53



Above, Figs. 8 and 8a, general view of interior and elevation of roof members of stressed-skin roof structure of Brussels automobile factory. (Span, 156 ft.; bay width, 39 ft.)



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THE INDUSTRY

From the Industry this week, Brian Grant reports on a new form of dry partitioning, a hardwood surfaced floor tile, a window lock, a lightweight roof decking and the provision of baths in factories.

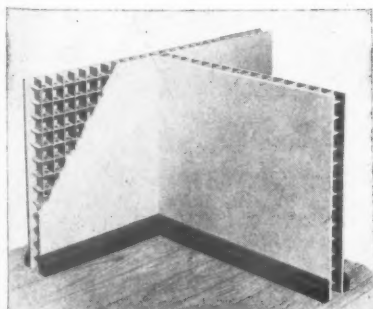
DRY PARTITIONS

British Plaster Board, Ltd., recently announced their new "Paramount" dry partition, made up from two layers of plaster wallboard separated by a fibre "egg crate" core, the complete panel forming a rigid unit which is resistant to fire and vermin and, at the same time, light in weight. Standard thicknesses are 2½ and 2¼ in., depending on whether the facing boards are ½ or ¼ in. thick, and the weight per sq. ft. is 4.2 and 5.3 lb. respectively. Stock lengths are 7 ft. 6 in. and 8 ft.; width, 3 ft. Lengths from 6 ft. to 12 ft. and a width of 4 ft. will be made to special order. Prices are 11s. to 12s. 6d. per sq. yd. for the 2 thicknesses respectively, in quantities of 300 sq. yd. or more.

Site fixing is comparatively simple, with a batten on the floor along the whole length of the partition, and a temporary batten to the ceiling joists; the first panel is placed against the battens, and a timber slip (1½-in. square) coated with glue is pressed into a groove in the panel, forming a projecting tongue over which the second panel is slipped, and so on until the partition is finished, when a second batten is fixed to the floor. The temporary batten at the ceiling is removed, and the ceiling is completed with plasterboard, thus fixing the top of the partition.

For fixing door frames, plugs of timber are tapped sideways into the panels, breaking away the core, and side nailed through the plaster board. The door frame can then be screwed to these plugs. Similar fixing methods can be used for angles and T junctions. Shelves and coat hooks can be fixed to the panels with "Rawlnuts" (see *Industry* for May 7).

The makers suggest that the panels could also be used for the inner skin of an external brick wall. NPL figures give U factors of 0.38 and 0.36 for the two thicknesses and sound reduction figures of 29.3 and 32.3 db. There is also a panel with aluminium foil on one face which has a calculated U factor



Cut-away section of "Paramount" dry partitioning, showing "egg-crate" core.

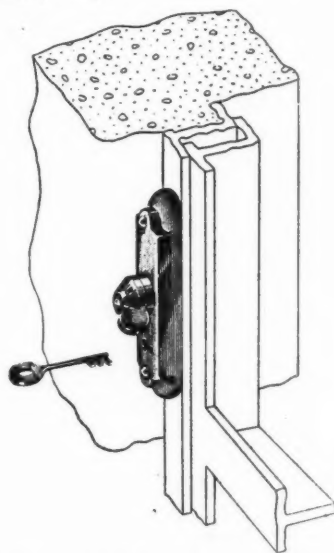
of 0.23. (*The British Plaster Board, Ltd., Morris House, Jermyn Street, London, S.W.1.*)

WOOD FLOORING

Messrs. Aero Research have been mentioned from time to time in these notes as the makers of high-strength adhesives for many different purposes. They have now started to produce the "Ardur" floor tile, which has a hardwood surface and a resin-bonded sand base. This base is entirely inert and will not harbour vermin or support moulds. Moisture movement in it is small, so that the tiles are suitable for use with floor heating systems and, as their moisture resistance is also high, there is no need to use any sealer in the concrete sub-floor. The tiles are produced in a light or dark finish which can be stained or treated by any of the usual methods. The dimensions of the tiles are 9 in. by 9 in. with a thickness of ¾ in., and they can be cut and trimmed with an ordinary saw. They are laid on a normal cement-sand screed. (*Aero Research Ltd., Duxford, Cambridgeshire.*)

LOCKS FOR WINDOWS

While a lock on a window is not by any means a completely thief-proof device, it at least provides a certain amount of discouragement and is probably quite a useful fitting. The illustration shows a new type recently produced by Chubb's. It is quite easily fitted to the frames of metal windows and has a tongue which projects into the space between the frames and prevents the window from being opened. A turn of the catch secures the window, which can then only be opened with the key. Price is 8s. 6d., with keys at 1s. 9d., and it is best to have all the window locks in the house operated by the same key. (*Chubb & Sons Lock & Safe Co. Ltd., 40-42, Oxford Street, London, W.1.*)



Chubb's new lock for metal windows.

BATHS IN FACTORIES

While the Factory Act makes perfectly clear the washing facilities which must be provided for workers, it says nothing about baths, which are left to the discretion of the individual firm. The Miners' Welfare Fund, of course, provided them years ago, and other industries, like the gas industry, do the same sort of thing, but if anything beyond the Factory Act requirements is provided it is more often because the particular process demands exceptional cleanliness rather than



New shower baths at the John Harper & Co., Ltd., factory at Willenhall, Staffs. The provision of bathing facilities is not a statutory obligation, but, says Brian Grant, "pays dividends in goodwill."

as a matter of general welfare; in fact, the provision of baths is the exception rather than the rule.

It is interesting to note, therefore, that a Willenhall firm that manufactures domestic hardware, etc., provided a bathroom for its foundrymen as far back as the early 1920's. Immediately after the war, the firm converted its A.R.P. decontamination block into a works shower bath, thereby providing accommodation for about 100 men a day. However, the demand for further accommodation was so insistent (an interesting commentary for the few who still maintain that baths are always used for coal storage) that two further blocks have been erected—one to provide for 80 men at a time; the other for women who work in the core shop.

Foundry work is admittedly a particularly dirty trade, but welfare work of this kind probably pays a considerable dividend in good will in any factory, and architects would be doing their clients, as well as their clients' employees, a good turn by recommending them to provide adequate bathing facilities. (*John Harper & Co. Ltd., Willenhall, Staffs.*)

ROOF DECKING

A new leaflet from Permanite Ltd. gives details of the firm's lightweight insulated steel roof decking. This consists of pre-formed steel sheets bolted to the purlins and covered with a ½-in. layer of insulating board, over which are one or more layers of bituminous felt. The designs are adaptable to flat, pitched or curved roofs, or for vertical constructions, and the U factor is 0.35. The roofing is sold under the name of "Permadek." (*Permanite Ltd., 455, Old Ford Road, London, E.3.*)

Announcements

Robb's Cement Enamel Finishes Ltd. have moved to 245, Vauxhall Bridge Road, London, S.W.1 (Tel: Tate Gallery 0091-2).

The Association of Steel Conduit Manufacturers have moved to 96, Hagley Road, Edgbaston, Birmingham, 16 (Tel: Edgbaston 4148/9 and 4140).

Small & Parkes Ltd. "Don" Brake Lining Depot have moved to 216, Moseley Street, Birmingham 12 (Tel: Midland 4659).

Readers requiring up-to-date information on building products and services may complete and post this form to the Architects' Journal, 9, 11 and 13, Queen Anne's Gate, S.W.1

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A.J.11.6.53

J. Newel Lewis, A.R.I.B.A., has sailed for Trinidad, British West Indies, to take up partnership with Colin Laird, A.R.I.B.A. They will practice under the style of Colin Laird and Newel Lewis, A./A.R.I.B.A., chartered architects, at 9, St. Claire Avenue, St. Clair, Port-of-Spain, Trinidad, B.W.I. (Tel: 23662), where they will be pleased to receive trade catalogues.

The "Investigation into the Function and Design of Hospitals" has moved from 33, Doughty Street, W.C.1, to the Nuffield Provincial Hospitals Trust headquarters, at Nuffield Lodge, Regent's Park, N.W.1 (Tel.: Primrose 8871).

A. Gordon Young, M.INST.C.E., M.I.MECH.E., and Douglas S. Young, M.INST.C.E., M.I.MECH.E., have transferred their practice to their nephew, Harvey B. Young, A.M.INST.C.E., A.M.I.MECH.E., M.I.STRUCT.E., who will conduct the business (from the end of June) from 5, Budge Row, London, E.C.4 (Tel.: City 7324). A. Gordon Young and Douglas S. Young will still be available for consultations.

Aberdare Electric Company Ltd. have pleasure in announcing that all their business in the British Isles will now be under the sole control of Thermadore (Great Britain), 36, Victoria Street, S.W.1 (Tel.: Abbey 1060).

L. W. Knight, sales manager of Dimplex Ltd., has moved from Southampton to London; his address is now 9, Stane Way, Ewell, Surrey (Tel.: Ewell 8297). The area covered by the Northern Representative for Dimplex, T. E. Green, of 40, Longley Lane, Northenden, Manchester (Tel.: Wythenshawe 2679) has been extended to include Northumberland, Durham, Cumberland and Westmorland.

Eric Heywood Smith, A.M.I.H.V.E., has recently been appointed a director of The Standard & Pochin Brothers Ltd., of Evington Valley Road, Leicester.

Buildings Illustrated

Architects' offices at 27, Grosvenor Place, London S.W.1. (Page 736.) Architects: Davies & Arnold. Sub-contractors: partitions, Triplewoods Ltd.; glass ("Pin Stripe" (vertical and obscured sheet), Pilkington Bros. Ltd.; stoves, Aga Heat Ltd., and W. N. Froy & Son Ltd.; electric wiring, Electrical Contracts & Maintenance Co. (1925) Ltd.; light fixtures, Electrical Contracts Co. (concealed lighting), and Bernard Schottlander (independent fittings); door furniture (anodized aluminium), W. N. Froy & Son Ltd.; wallpapers, Cole & Son (Wallpapers) Ltd., and Arthur Sanderson & Sons Ltd.; furniture and textiles, Heal & Son Ltd.

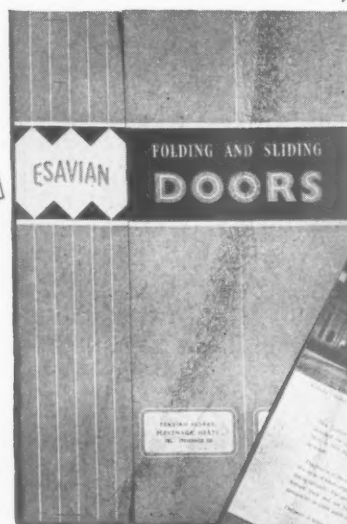
Houses at 4 and 6, Manor Road, Coventry, Warwickshire. (Pages 741-744.) Architect: Rolf Hellberg, F.R.I.B.A. (Messrs. Hellberg & Harris). Quantity surveyors: C. H. Osborne & Partners. General contractors: Cross & Sons. Sub-contractors: roof tiling (Acme Farmhouse Brown), Wormwells (Roofing) Ltd.; roofing felt, William Briggs & Sons Ltd.; partitions, Bellrock Gypsum Industries Ltd. (between bedrooms 3 and 4); glass, Glass (Coventry) Ltd.; bricks (red ripple bricks), E. H. Smith (Westhaven) Ltd.; domelights, Pearce & Cutler Ltd.; wood-block flooring, J. A. Hewetsons & Co. Ltd.; central heating, K. L. Paton Co. Ltd. (No. 6). F. C. Ward (No. 4); door furniture, K. S. Neale; metal casements, John Gibbs Ltd.; electric wiring, Lee, Beesley & Co. Ltd.; electric light fixtures, Merchant Adventurers of London Ltd., and Finmar Ltd.; sanitary fittings, Edwin H. Fryor; sunblinds (Venetian blinds to flower box, No. 6), J. Avery & Co. Ltd.; plaster, McAleer & Co.; tiling, Coventry Tile Co. Ltd.; shrubs and trees, Burbage Nurseries; garden layout (No. 6) designed by the Architect, executed by J. J. O'Malley & Co.



ESAVIAN
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This latest Datasheet, featuring the Type 1200 sliding and folding hangar door, completes the set of 12 comprising the Esavian Datasheet Folder. Architects who have not received this folder are invited to write for one—it contains illustrations of the many applications of the Esavian principle.

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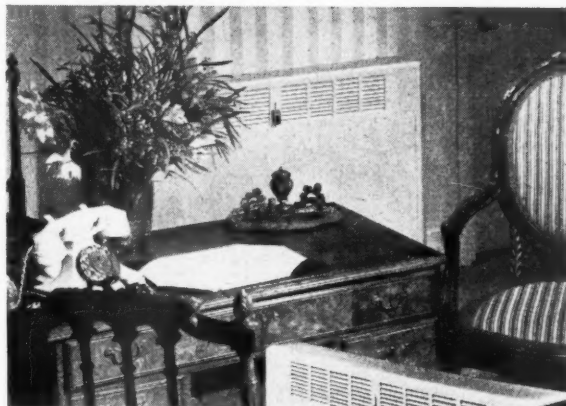


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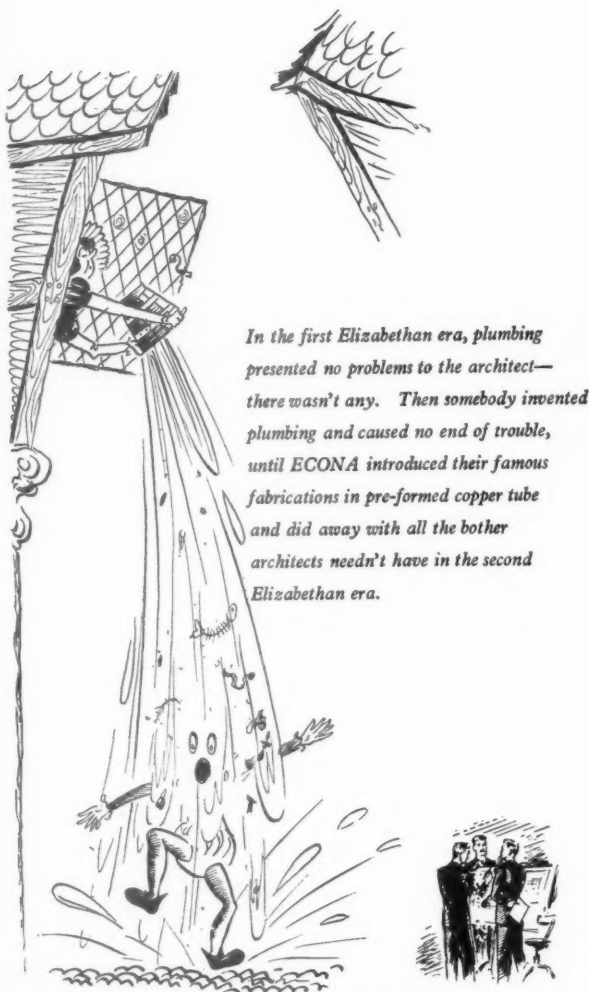
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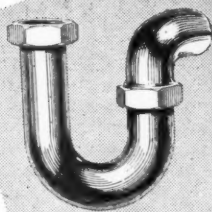
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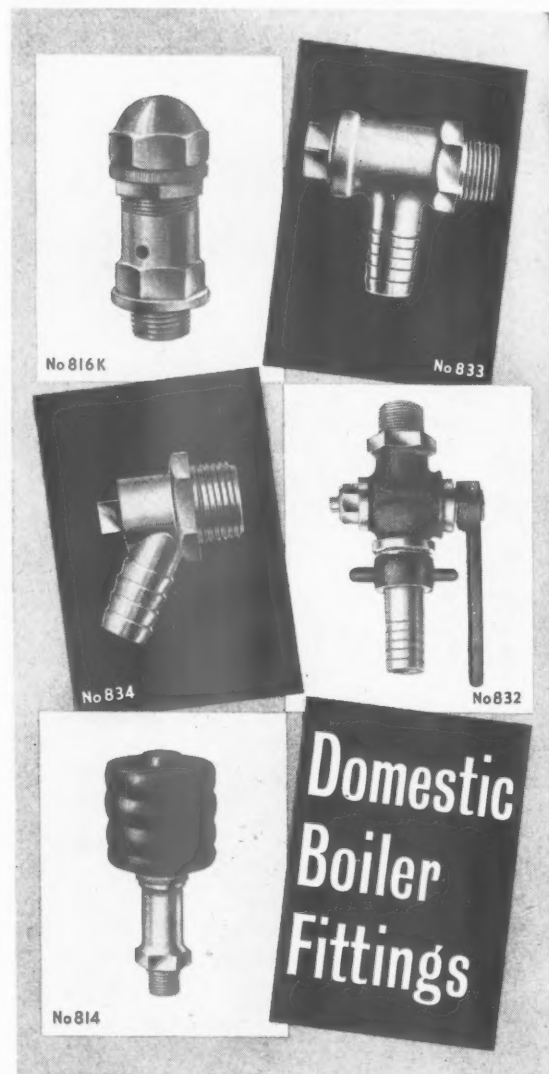


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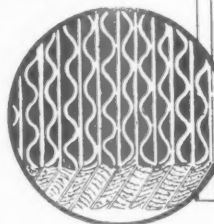
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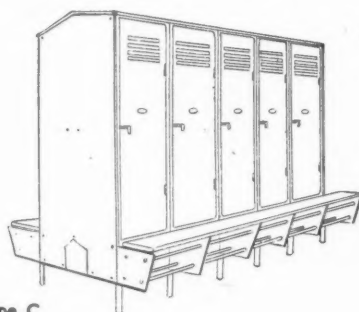
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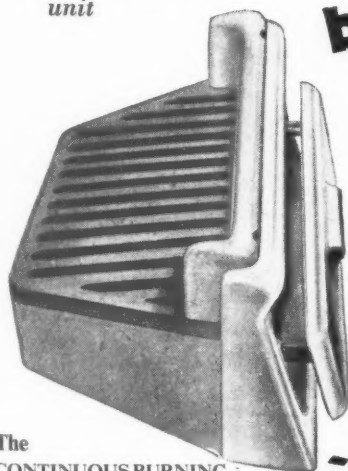
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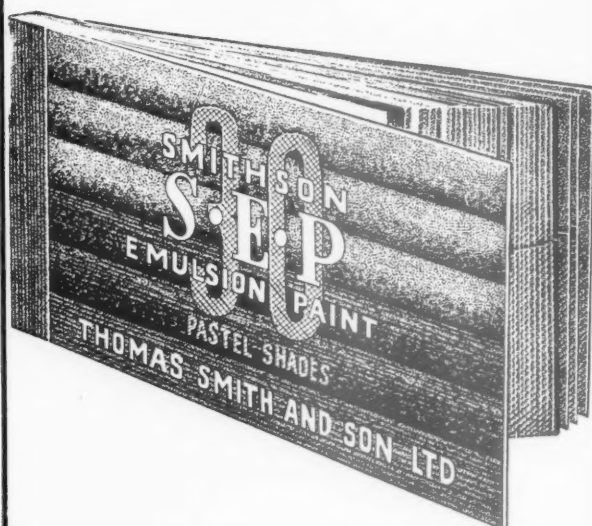
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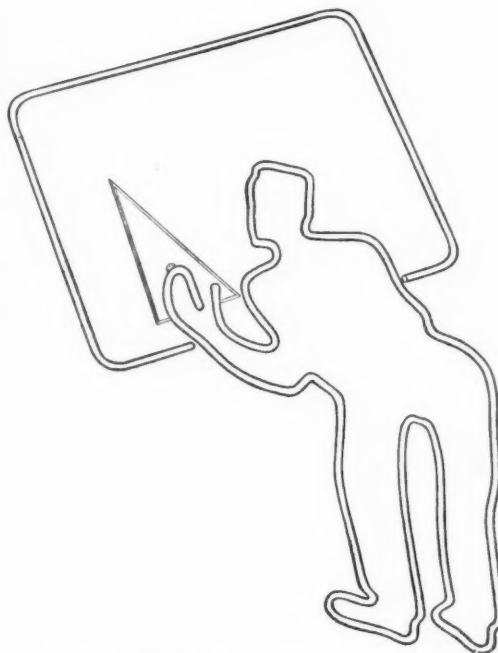
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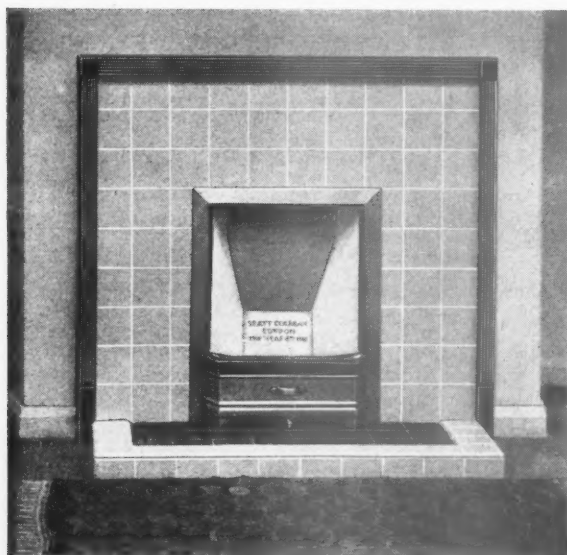
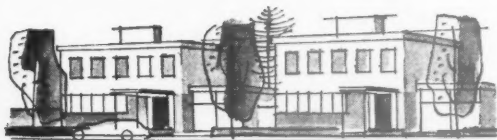
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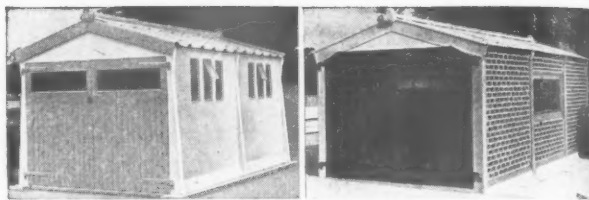
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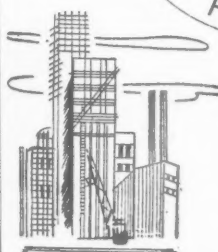
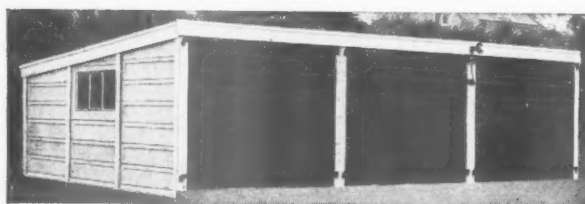


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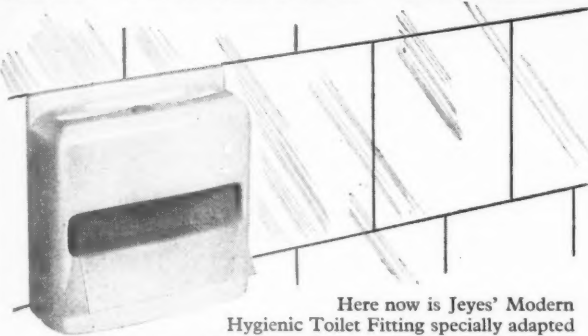
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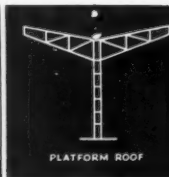
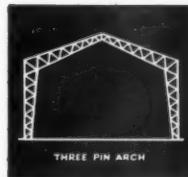
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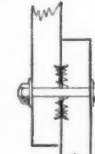
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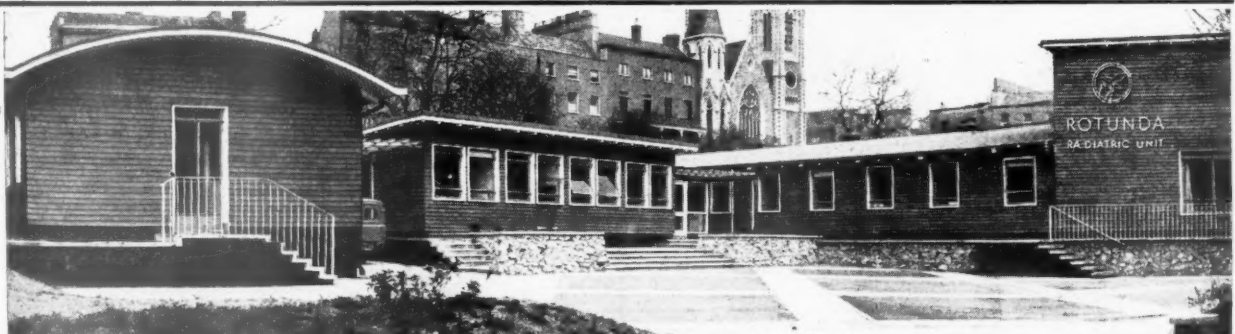


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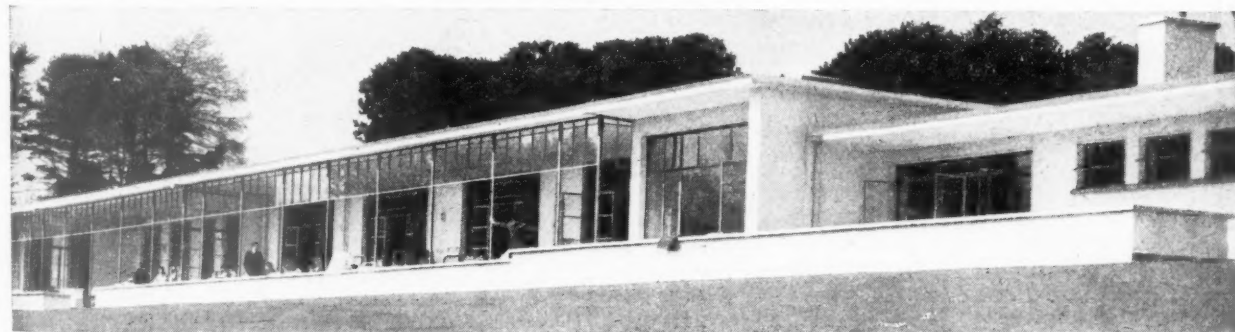
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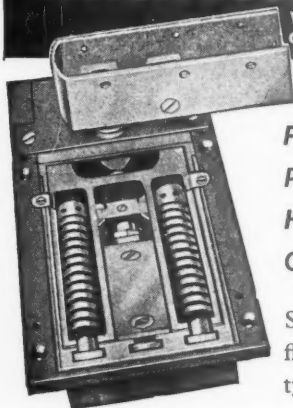
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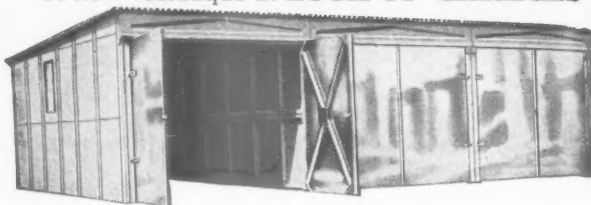
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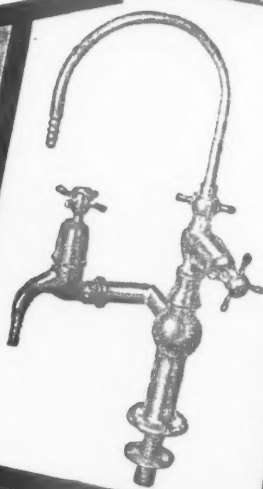
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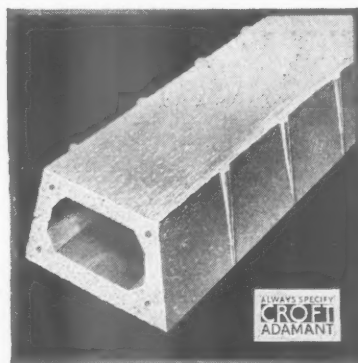
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CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, and should reach there by first post on Friday morning for inclusion in the following Thursday's paper.

Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

Public and Official Announcements

25s. per inch; each additional line, 2s.

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she, or the employment is excepted from the provisions of the Notification of Vacancies Order, 1952.

COUNTY BOROUGH OF WEST HAM.
BOROUGH ARCHITECT AND PLANNING
OFFICER'S DEPARTMENT.

Architects of imagination and initiative required.

(a) (2) SENIOR ASSISTANT ARCHITECTS, A.P.T. VIII, £760 by £25 to £835.

(b) SENIOR ASSISTANT PLANNING (ARCHITECT/PLANNER), A.P.T. VIII, £760 by £25 to £835.

(c) (2) ASSISTANT ARCHITECTS, A.P.T. VI, £670 by £20 to £735.

(d) ASSISTANT ARCHITECT, A.P.T. V, £595 by £15 to £645.

(London Allowance in addition to salary.)

Applicants must all have Housing experience, and in addition for post(s)

(a) should be A.R.I.B.A., capable of controlling large Contracts;

(b) should be A.R.I.B.A., and A.M.T.P.I. with experience in layout of Housing development in reconstruction areas;

(c) should be A.R.I.B.A. or Registered Architects and able to supervise Contracts.

(d) should be A.R.I.B.A. or Registered Architects.

Applications also invited from

GENERAL ASSISTANTS, TECHNICAL (aged 18 years and upwards with some experience);

General Division, £190-£450 and London Allowance.

Application forms (returnable by 22nd June, 1953)

Research and Thomas E. North, O.B.E., F.R.I.B.A.,

Dist. T.P., 70, West Ham Lane, Stratford, E.15. 8897

LONDON COUNTY COUNCIL.
DISTRICT SURVEYORS' SERVICE.

(a) GRADE II POSITIONS (£837 10s.-£1,002);

(b) TECHNICAL ASSISTANTS (up to £695).

Candidates should be A.M.I.Struct.E. (or equivalent), A.R.I.B.A. or A.R.I.C.S. Structural knowledge essential. Interesting pensionable career.

Particulars and application form (for return by 30 June) from Architect, AR/EK/DS/5, County Hall, S.E.1. Specify (a) or (b). (570)

8899

MINISTRY OF WORKS.

Vacancies exist in the Chief Architect's Division for ARCHITECTURAL ASSISTANTS with recognised training and fair experience.

Vacancies mainly in London and Risley (Nr. Warrington). Successful candidates will be employed on wide variety of Public Buildings including Atomic Energy and other Research Establishments, Telephone Exchanges and Housing.

London Salary: Up to £628 per annum. Starting pay according to age, qualifications and experience. Rates outside London slightly lower.

Reasonable prospects of promotion to Leading and Senior Architectural Assistant. Although these are not established posts many have long-term possibilities and competitions are held periodically to fill established vacancies.

Write stating age, nationality and full details of training and experience, to Chief Architect, W.G.10/C.A.2, Ministry of Works, Abell House, John Islip Street, London, S.W.1. 8760

BOROUGH OF WORTHING.

NEW SECONDARY TECHNICAL SCHOOL.
APPOINTMENT OF CLERK OF WORKS.

Applications are invited for the appointment of a temporary Clerk of Works in connection with the erection of the above School, at a salary of twelve guineas per week paid monthly. The duration of the appointment would nominally be for 18 months, and the appointment would be terminable by one month's notice on either side.

Applicants must be thoroughly experienced in the supervision of all building trades and should have a sound knowledge of pre-cast concrete work.

Applications, giving full particulars of age, training and experience, together with copies of at least two recent testimonials, should be sent in an envelope endorsed "Clerk of Works-Secondary Technical School" to the Borough Engineer and Surveyor, Town Hall Worthing, so as to reach him not later than Wednesday, the 17th June, 1953.

ERNEST G. TOWNSEND, Town Clerk.

Town Hall, Worthing. 27th May, 1953. 8929

NORFOLK COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications invited for permanent appointment of ASSISTANT ARCHITECT, A.P.T. Grade V (£595-£645). Candidates must be Members of the R.I.B.A. or hold equivalent qualifications, and have a sound knowledge of design, construction and specifications.

Local Government Superannuation Acts and National Joint Council Conditions of Service.

Applications, stating age, training, experience, present appointment and salary, names of three referees (including present employer), to reach C. H. Thurston, L.R.I.B.A., F.R.I.C.S., County Architect, 27, Thorpe Road, Norwich, by 26th June, 1953. 8942

COUNCIL OF THE COUNTY OF ABERDEEN.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments in the Department of the County Architect:—

TWO ASSISTANT ARCHITECTS, on salary scale A.P.T. VI (£675 to £740).

ONE ASSISTANT QUANTITY SURVEYOR, on salary scale A.P.T. VI (£675 to £740).

Candidates for the architectural appointments must be Registered Architects, preferably holding the qualification A.R.I.B.A., and should have experience in Local Authority educational work.

Candidates for the quantity surveying appointment should be professional members of the R.I.C.S. (Quantities Division).

The appointments are subject to the Local Government Superannuation (Scotland) Act, 1937, and the successful candidates will require to pass a medical examination.

The County Council are prepared to make housing accommodation available to the successful candidates within a reasonable time if required.

Conditions of appointment and forms of application are obtainable from the undersigned, and should be returned not later than 26th June, 1953.

Canvassing of members of the Council, directly or indirectly, in connection with these appointments shall disqualify the candidate.

CHAS HORNAL, County Clerk.

County Buildings, 22, Union Terrace, Aberdeen. 8944

1st June, 1953.

NIGERIAN COLLEGE OF ARTS, SCIENCE
AND TECHNOLOGY.

Applications are invited for the post of LECTURER IN BUILDING. Duties will consist of instruction in Theory of Structures, Building Research and Building Construction to students of Architecture and in building to Civil Engineering students.

The College is to be developed along the general lines of a U.K. Technical College for work of post-School Certificate standard, and has branches at Zaria, Ibadan and Enugu.

Applicants should preferably have had previous Technical College experience, and must possess either a professional qualification in Architecture, Structural and Civil Engineering, or Quantity Surveying or a Technical College Diploma in Building.

Post is pensionable, but appointment on contract or secondment possible in certain circumstances. Salary scale: £750-£1,560 p.a., including overseas allowance. Point of entry into scale determined by experience. House provided at rent £57-£129 p.a., depending on basic salary. Free first-class passages once each way for each tour of service for person appointed and wife; either a passage allowance or a maintenance allowance for up to two children under 18. Income tax rates much lower than in U.K. Leave on full salary at rate of 7 days for each completed month of resident service. Tours of service likely to be 10-18 months.

Write for further information to the Secretary, Advisory Committee on Colonial Colleges, 15, Victoria Street, London, S.W.1. Closing date for applications: 22nd June, 1953. 8943

CIVIL SERVICE COMMISSION-DUBLIN.

Position vacant ARCHITECTURAL INSPECTOR, Department of Health, Dublin.

Current salary scales: Man, £890-£1,071; woman, £708-£890. Age limits: 27-50 years, with extensions of the upper limit in certain circumstances.

Essential qualifications include satisfactory practical experience in the design and construction of buildings, the preparation of designs and contract drawings from sketches or instructions, and the supervision of building contracts. Application forms and further particulars obtainable from the Secretary, Civil Service Commission, 45, Upper O'Connell Street, Dublin. Latest time for accepting completed application forms: 5 p.m. on 7th July, 1953. 8951

ARGYLL COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of a QUANTITY SURVEYING ASSISTANT, A.P.T. Grade III (£520-£565). The appointment will be on the permanent staff and will be subject to the provisions of the Local Government Superannuation (Scotland) Act, 1937. The successful candidate will require to pass a medical examination.

Applications stating age, qualifications and experience, accompanied by copies of two recent testimonials, to be lodged with the County Architect, County Offices, Dunoon, within ten days of the appearance of this advertisement.

A. D. JACKSON, County Clerk. 8926

BRITISH ELECTRICITY AUTHORITY.
EAST MIDLANDS DIVISION.

Applications are invited for the following positions within the Division:—

CIVIL ENGINEERING DRAUGHTSMEN CONSTRUCTION DEPARTMENT.

Vacancy No. 22/53.

Candidates should have experience in design and detail of reinforced concrete structures, piled and slab foundations for heavy plant, culverts, cable subways, etc., for general building construction drainage and sanitation schemes, associated with offices and administrative buildings.

The salary will be in accordance with Grade 5 (£567-£671 per annum) or Grade 6 (£433-£567 per annum) of Schedule D of the National Joint Board Agreement.

DRAUGHTSMAN, TRANSMISSION DEPARTMENT, DIVISIONAL HEADQUARTERS, NOTTINGHAM. Vacancy No. 42/53.

Candidates should preferably have had experience in one or more of the following:—

Design and construction of High Voltage substations or overhead Transmission Lines and underground cable systems. Civil Engineering.

Electrical Engineering, including layouts and diagrams for H.V. transformers and switchgear.

Salary and conditions of service will be in accordance with the National Joint Board Agreement, Grade 6 of Schedule D (£433-£567 per annum) according to qualifications and experience.

ENGINEERING DRAUGHTSMEN (MECHANICAL) CONSTRUCTION DEPARTMENT. Vacancy No. 44/53.

Senior Draughtsmen are required in the Mechanical section of the Construction Department. Candidates should have experience in one or more of the following:—

(i) Design and layout of power station equipment, including Turbo-alternators, boiler plant, coal and ash plant, and general station auxiliaries.

(ii) H.P. and L.P. steam and feed pipework. Condensing Plant and feed heating systems.

(iii) Conveyor plant, coal handling systems and material handling of station auxiliary equipment.

Salary and conditions of service will be in accordance with the National Joint Board Agreement, Grade 5 (£567-£671 per annum) and Grade 6 (£433-£567 per annum) of Schedule D according to experience.

ENGINEERING DRAUGHTSMEN (ELECTRICAL) CONSTRUCTION DEPARTMENT. Vacancy No. 61/53.

Candidates should have experience in the preparation of layouts and diagrams for the installation of E.H.T. and L.T. switchgear, transformers, E.H.T. and L.T. cables; knowledge of protective gear systems would be an advantage.

The salary will be in accordance with Grade 5 (£567-£671 per annum) or Grade 6 (£433-£567 per annum) of Schedule D of the National Joint Board Agreement.

The closing date for this appointment will be the 31st June, 1953.

The above appointments will be pensionable within the provisions of the British Electricity Authority and Area Boards Superannuation Scheme.

Applications should be submitted on the official form which may be obtained from the Divisional Establishments Officer, British Electricity Authority, Barker Gate, Nottingham, and should be returned to the undersigned by the dates stated. Please quote Vacancy Number.

L. F. JEFFREY, Divisional Controller. 8924

ISLE OF ELY COUNTY COUNCIL.

Applications are invited for the under-mentioned appointments on the staff of the County Architect:—

(a) SENIOR ASSISTANT ARCHITECT, Grade A.P.T. VII (£710-£785).

(b) JUNIOR ARCHITECTURAL ASSISTANT, Grade Misc. I-III (£300-£440).

Appointment (a) is on the permanent staff, and appointment (b) is temporary.

Both are subject to the provisions of the National Scheme of Conditions of Service, the Local Government Superannuation Act, and to the passing of a medical examination.

Forms of application may be obtained from the County Architect, County Hall, March, and must be returned not later than Saturday, 11th July, 1953.

R. F. G. THURLOW, Clerk of the County Council. 8956

MIDLANDS ELECTRICITY BOARD.

Birmingham and District Sub-Area, require SENIOR DRAUGHTSMEN in the Architectural and Constructional Section of the Engineer's Department. Thorough technical training and practical experience required in the design of new buildings and alterations to existing buildings. Should be capable of preparing complete working drawings for Service Cables, Substations, foundations for heavy plant, etc. Appropriate qualifications desirable. Salary £567-£780 (N.J.B. Schedule "D," Grades 5 or 4) according to qualifications and experience.

Apply within 14 days, stating age, experience, salary and position to: Emil Braathen, Manager, Midlands Electricity Board, Birmingham and District Sub-Area, 14, Dale End, Birmingham, 4.

A. STEPHENS, Secretary. 8928

COUNTY COUNCIL OF INVERNESS.
COUNTY ARCHITECT'S DEPARTMENT.
Applications are invited for the appointment of ARCHITECTURAL ASSISTANT in the County Architect's Department. Salary A.P.T. V. £600-£650, with placing according to experience.

Candidates should be Associates of the Royal Institute of British Architects and have had experience in the preparation of sketch plans and working drawings for housing, schools, and other local authority projects.

The appointment will be subject to the provisions of the Local Government Superannuation (Scotland) Act, 1937, and the successful candidate will be required to pass a medical examination.

Applications, stating age, qualifications, experience and present position, accompanied by copies of not more than three recent testimonials, should be submitted to the undersigned within ten days of publication of this advertisement.

R. WALLACE
County Clerk.

County Buildings,
Inverness. 8927

CITY OF SHEFFIELD.
RESIDENT ENGINEER, COLLEGES OF TECHNOLOGY AND COMMERCE.

Applications are invited for this appointment to supervise the foundation and superstructure contracts for the above building, under the direction of Messrs. Gollins, Melvin, Ward & Partners, Chartered Architects, of London, in association with the City Architect (Mr. J. L. Womersley).

The salary will be £1,000 per annum. Candidates must have considerable experience of large scale structures in City areas involving site excavation, shoring, reinforced concrete and steelwork erection. Only applicants possessing such experience and a recognised examination qualification will be considered.

The post is established for the duration of the contract, which may be several years, but the appointment will be subject to one month's notice on either side.

Applications, stating age, qualifications, present and past appointments (with dates and salaries), experience, and the names of two referees, should reach the undersigned by the 30th June, 1953.

J. HEYS,
Town Clerk. 8952

1st June, 1953.

Architectural Appointments Vacant

4 lines or under, 7s. 6d.; each additional line, 2s.

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she is, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

ARCHITECTURAL DRAUGHTSMAN wanted Maidenhead; permanent position; good salary and prospects. Full particulars training, experience, age, salary, to Box 8668.

ARCHITECTS ASSISTANT required, intermediate to final standard. Write giving full particulars of previous experience and salary required to Graham Crump & Denis Crump, F.A.R.I.B.A., 43, George Street, Croydon. 8908

B.C. requires THREE ARCHITECTURAL ASSISTANTS (Grade IV) for Building Dept., London. Must have passed Inter. R.I.B.A., have at least 2 years' office experience. Salary £500 (possibly higher if qualifications exceptional) to £685 max. Promotion prospects. Applications to Engineering Establishment Officer, B.C.C., London, W.1. within 7 days. 8938

ARCHITECTURAL ASSISTANT required. R.I.B.A. Intermediate standard, preferably with office experience and capable of preparing detail drawings under qualified supervision. Chance to develop contemporary design ability. Write, stating age, experience, and salary required. Box 8939.

ASSISTANT (Final standard) required for varied work over wide area. Experience desirable, ability in design and construction essential. J. D. & B. Tetlow, B.Arch., A./A.R.I.B.A., 39, Bore Street, Lichfield. 8940

JUNIOR ASSISTANT for small office in West Essex. State age, experience, and salary required. Box 8941.

JUNIOR ARCHITECTURAL ASSISTANTS required. R.I.B.A. Intermediate standard, with office experience preferable. Varied contemporary work. Write, with full details, to Edward D. Mills, 16, Carlisle Street, Soho Square, W.1. 8937

VACANCIES occur in Architect's office for working drawings, details, etc., of commercial premises. Also for BEGINNER holding General Certificate of education. Box 8934.

SENIOR ASSISTANT required to work on large industrial projects in the Architectural Department of a London Consulting Engineer. Applicants must be capable of controlling all stages of detailing and works generally. State experience and salary required to Box 8935.

ASSISTANT required for large general Architectural Practice with offices in Maidenhead. Some experience in specification writing essential. Salary £300 to £500, according to experience. Box 8933.

ARCHITECTURAL ASSISTANT required in a small private office, W.1 district, to prepare surveys, sketch plans, working drawings, and undertake site supervision. Varied practice. Please write, stating experience and salary required to R. P. Sharman, A.R.I.B.A., 55, Queen Anne Street, Cavendish Square, W.1. 8931

JUNIOR ASSISTANT required; completed National Service. Very varied work. State age and salary. A. E. Wiseman (F), 10, Duke Street, Chelmsford. 8930

COMPETENT, experienced ASSISTANT required. Intermediate standard. Good prospects and salary. Watkin, Willis & Cooper, F.M.A., A.R.I.B.A., Burslem, Stoke-on-Trent. 8950

QUALIFIED SENIOR ASSISTANT, with sound practical knowledge and experience, required for progressive position in busy West Riding Architect's office. Write, giving full particulars. Box 8949.

REQUIRED, in City Architect's office, one **JUNIOR ASSISTANT**, up to Inter. standard, and one **BEGINNER** starting in the profession. Apply Alan A. Briggs, F.R.I.B.A., 10, Fleet Street, London, E.C.4. 8948

ARCHITECTURAL ASSISTANTS required in North-West London office engaged on Housing and Industrial work, involving Framed and New Tradition Construction. Applicants should be student R.I.B.A. minimum standard. Salary will be according to qualifications and experience. Apply in writing, stating age and experience, to Sydney Greenwood, A.R.I.B.A., 33, Burns Lane, Mill Hill, N.W.7. 8946

A YOUNG and qualified ARCHITECT, with enthusiasm for prefabrication, required for training in planning, design, and production of non-traditional buildings. Location Salisbury. Salary: £550-£650 per annum. State married or single. Reema Construction, Ltd. 8947

QUALIFIED GENERAL ARCHITECTURAL ASSISTANT required. Salary by arrangement. Write, stating age and experience, to: Gerald Shenstone & Partners, F.A.R.I.B.A., 34, Bloomsbury Way, W.C.1. 8954

JUNIOR ASSISTANT required, up to R.I.B.A. Final standard. Apply in writing, stating age, training and salary required, to Trehearne & Norman, Preston & Partners, Windsor House, 83, Kingsway, W.C.2. 8955

Architectural Appointments Wanted

ARCHITECTURAL ASSISTANT, Dip.Arch. (28), experience of design, working drawings, seeks part-time employment. Box 8833.

QUALIFIED SENIOR ARCHITECT (44) seeks responsible appointment, preferably in London. Wide domestic, general and hospital experience, including overseas. Box 707.

ASSISTANT (24), A.R.I.B.A., Dip.Arch., seeks position in a Leicester office end July, 1½ years' varied experience. Own car available. Box 8925.

Other Appointments Vacant

4 lines or under, 7s. 6d.; each additional line, 2s.

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she is, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

POSITION VACANT. An old established London building contracting company requires a senior executive. Must have extensive knowledge and experience of the building industry, and considerable administrative ability. The position offers scope for one with a flair for organisation. Age preferably not over 45. Salary in the neighbourhood of £2,000 p.a. Apply Box 8910.

METALWINDOW DRAUGHTSMAN required. Good salary; pension scheme; canteen on premises; modern drawing office. Morris-Singer Co., Ferry Lane Works, Walthamstow, London, E.17. 8936

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OAK. Seasoned English oak in lengths of not less than 7 feet is required for use in Company's Board Room. Best prices paid for excellent timber. Box 8873.

YOUNG ARCHITECT with family urgently requires house to rent; minimum 2 beds, 2 living rooms, or g.l. flat with garden. Greater London or Home Counties, within reasonable travelling distance of London. Phone WHI. 8818 in office hrs. or write Evans, 125, Westbourne Terrace, W.2. 8894

BUILDINGS FOR SALE.—Prefabricated Factories, Stores, Workshops, Canteens, Offices, Halls, Clubs, Garages, etc.; large and small. Apply for details and prices, stating your requirements, to J. Thorn & Sons, Ltd., Box No. 126, Brampton Road, Bexleyheath, Kent. (Tel.: Bexleyheath 305.) 7941

M.O.W. Standard Concrete Buildings for Sale. Limited number only. 60 ft. by 24 ft. by 13 ft. £110, including delivery. D'Arcy, Gospel Oak, London, N.W.5. Tel.: Gulliver 3644. 8953

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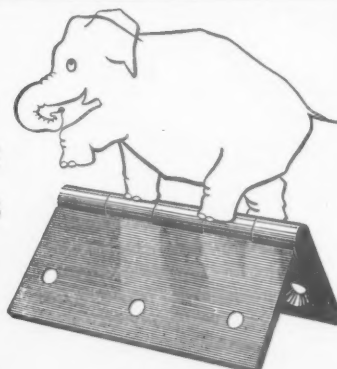
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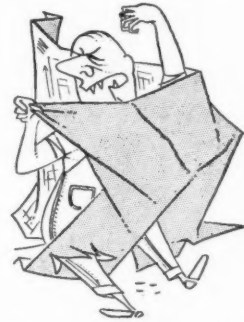
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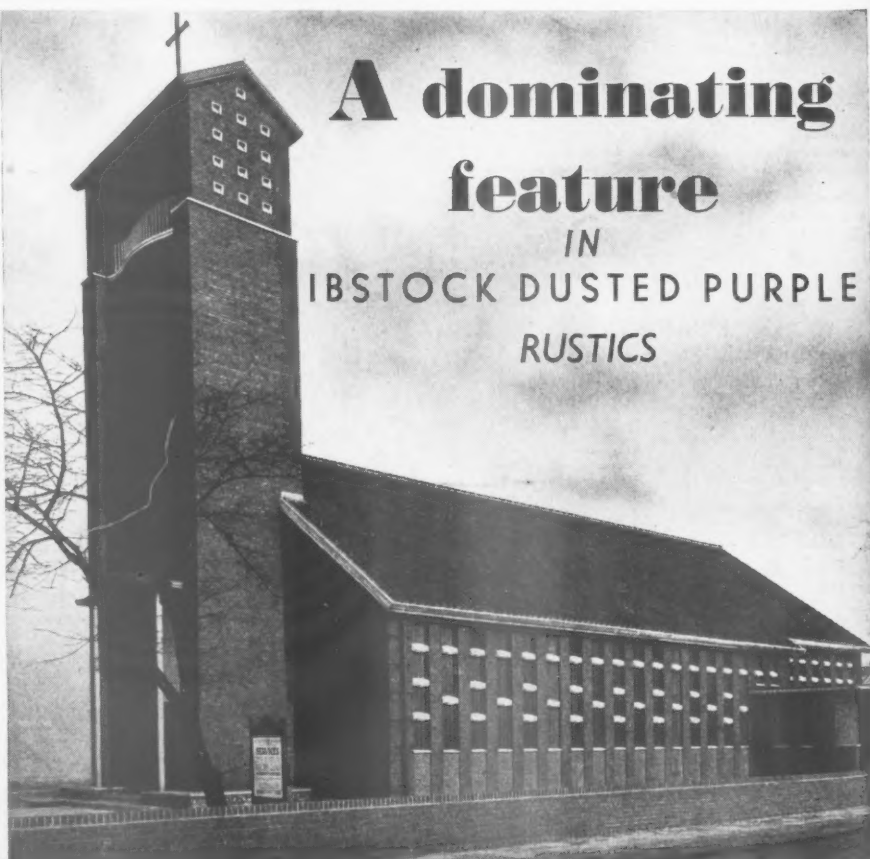
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Contractors: Hammond & Miles Ltd.

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feature
IN
IBSTOCK DUSTED PURPLE
RUSTICS**

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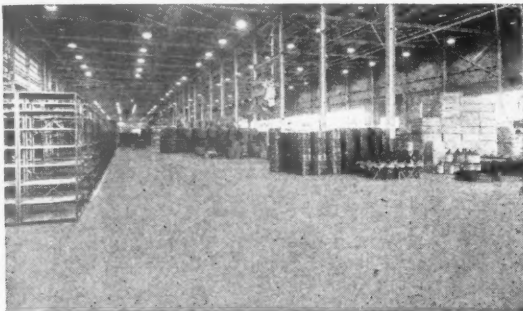
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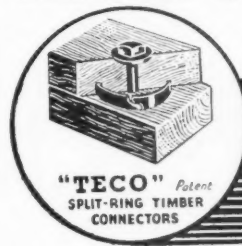
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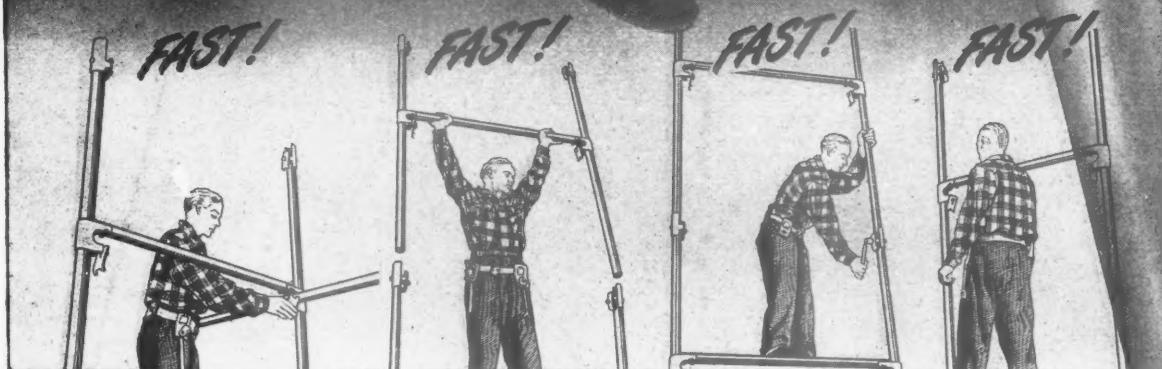
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