

THE ARCHITECTS' JOURNAL



standard contents

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

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Wanted and Vacant

No. 3107]

[VOL. 120

THE ARCHITECTURAL PRESS

9, 11 and 13, Queen Anne's Gate, Westminster,
S.W.1. Phone: Whitehall 0611

Price 1s. 0d.

Registered as a Newspaper.

★ 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.

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: W. Marlborough Whitehead, "Dyneley," Castle Hill Avenue, Berkhamstead, Herts.	
ABS	Architects' Benevolent Society. 66, Portland Place, W.1	Langham 5721
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1.	Victoria 0447-8
ACGB	Arts Council of Great Britain. 4, St. James' Square, S.W.1.	Whitehall 9737
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Mayfair 7501/8
ArchSA	Architectural Students' Association. 34/36, Bedford Square, W.C.1.	
ARCUK	Architects' Registration Council. 68, Portland Place, W.1	Langham 8738
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Langham 5721
BATC	Building Apprenticeship and Training Council. Lambeth Bridge House, S.E.1. Reliance 7611, Ext. 1706	
BC	Building Centre. 26, Store Street, Tottenham Court Road, W.C.1.	Museum 5400
BCC	British Colour Council. 13, Portman Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 105, Uxbridge Road, Ealing, W.5.	Ealing 9621
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 10, The Boltons, S.W.10.	Fremantle 8494
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Whitehall Gardens, Horseguards Avenue, Whitehall, S.W.1.	Trafalgar 8855
BRDB	British Rubber Development Board. Market Buildings, Mark Lane, E.C.3.	Mansion House 9383
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. British Standards House, 2, Park St., W.1.	Mayfair 9000
BTE	Building Trades Exhibition. 4, Vernon Place, W.C.1.	Holborn 8146/7
CABAS	City and Borough Architects Society. C/o Johnson Blackett, F.R.I.B.A., Civic Centre, Newport, Mon. Newport 5491	
CAS	County Architects' Society. C/o F. R. Steele, F.R.I.B.A., County Hall, Chichester. Chichester 3001	
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Sloane 5255
CCP	Council for Codes of Practice. Lambeth Bridge House, S.E.1.	Reliance 7611
CDA	Copper Development Association. Kendalls Hall, Radlett, Herts.	Radlett 5616
CIAM	Congrès Internationaux d'Architecture Moderne. Dolderstr. 7, Zurich, Switzerland.	
COID	Council of Industrial Design. Tilbury House, Petty France, S.W.1.	Abbey 7080
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.	Sloane 4280
CUC	Coal Utilization Council. 3, Upper Belgrave Street, S.W.1.	Sloane 9116
CVE	Council for Visual Education. 13, Suffolk Street, Haymarket, S.W.1.	Reading 72255
DGW	Directorate General of Works, Ministry of Works, Lambeth Bridge House, S.E.1.	Reliance 7611
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Whitehall 0540
DPT	Department of Overseas Trade. Horseguards Avenue, Whitehall, S.W.1.	Trafalgar 8855
EJMA	English Joinery Manufacturers' Association (Incorporated), Sackville House, 40, Piccadilly, W.1. Regent 4448	
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architects and Surveyors. 67, Oxford Street, W.1.	Gerrard 0021
FASS	Federation of Association of Specialists and Sub-Contractors, Artillery House, Artillery Row, S.W.1. Abbey 7232	
FBBDO	Fibre Building Board Development Organisation, Ltd., Melbourne House, Aldwych, W.C.2. Temple Bar 4561	
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	The Flush Door Manufacturers Association Ltd. Trowell, Nottingham. Ilkeston 623	
FLD	Friends of the Lake District. Pennington House, nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 26, Great Ormond Street, Holborn, W.C.	Chancery 7583
FPC	The Federation of Painting Contractors, St. Stephen's House, S.W.1.	Whitehall 3902
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4041
FS (Eng.)	Faculty of Surveyors of England. 67, Oxford Street, W.1.	Gerrard 0021
GC	Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
GG	Georgian Group. 27, Grosvenor Place, S.W.1.	Sloane 2844
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1.	Sloane 5615
ICA	Institute of Contemporary Arts. 17-18, Dover Street, Piccadilly, W.1.	Grosvenor 6186
ICE	Institution of Civil Engineers. Great George Street, S.W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers. Savoy Place, W.C.2.	Temple Bar 7676
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1.	Abbey 5215



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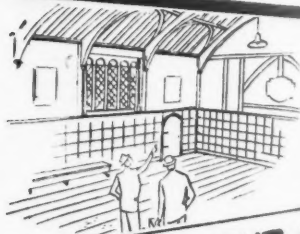
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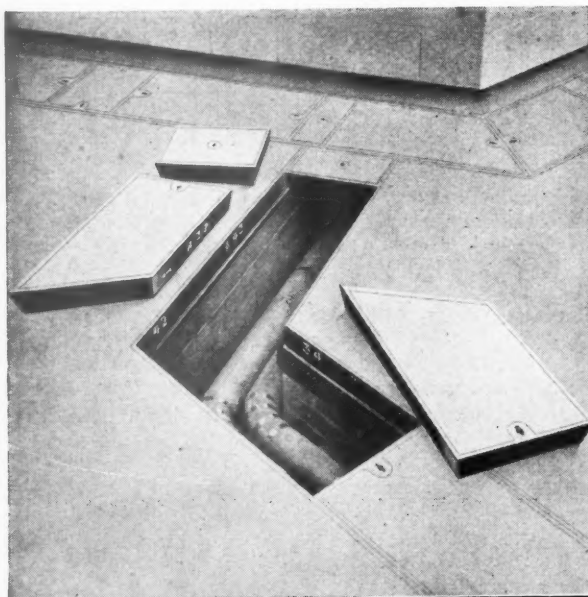
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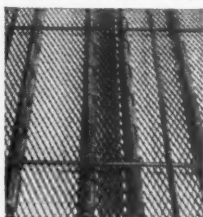
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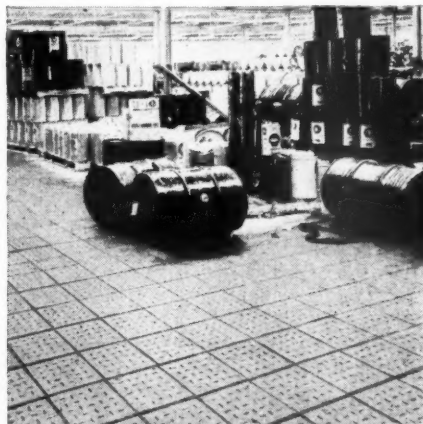
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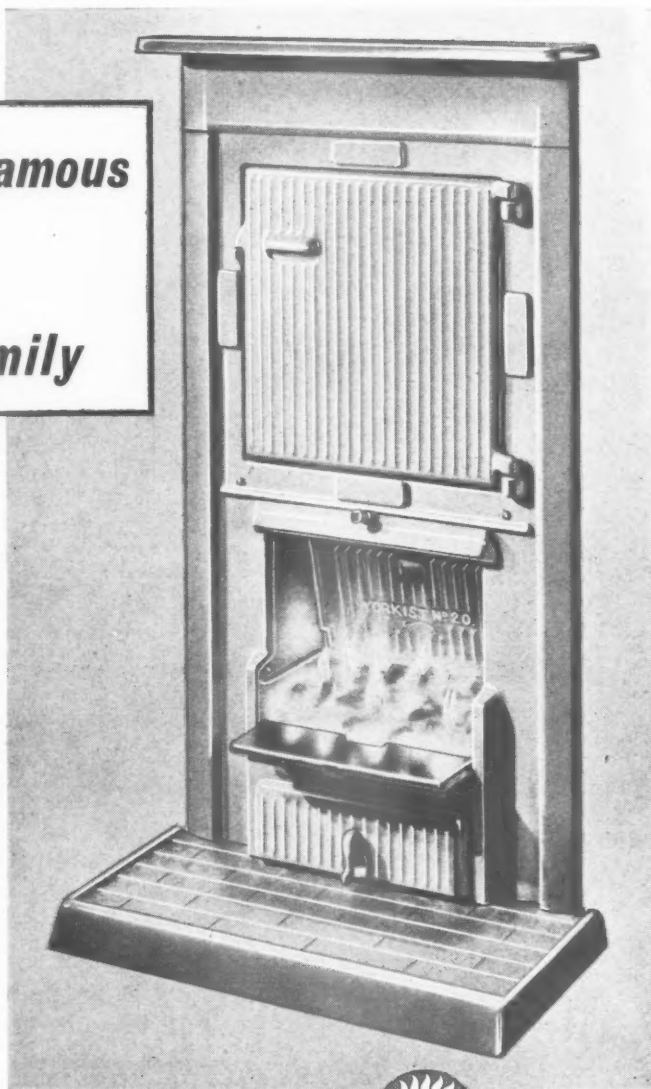
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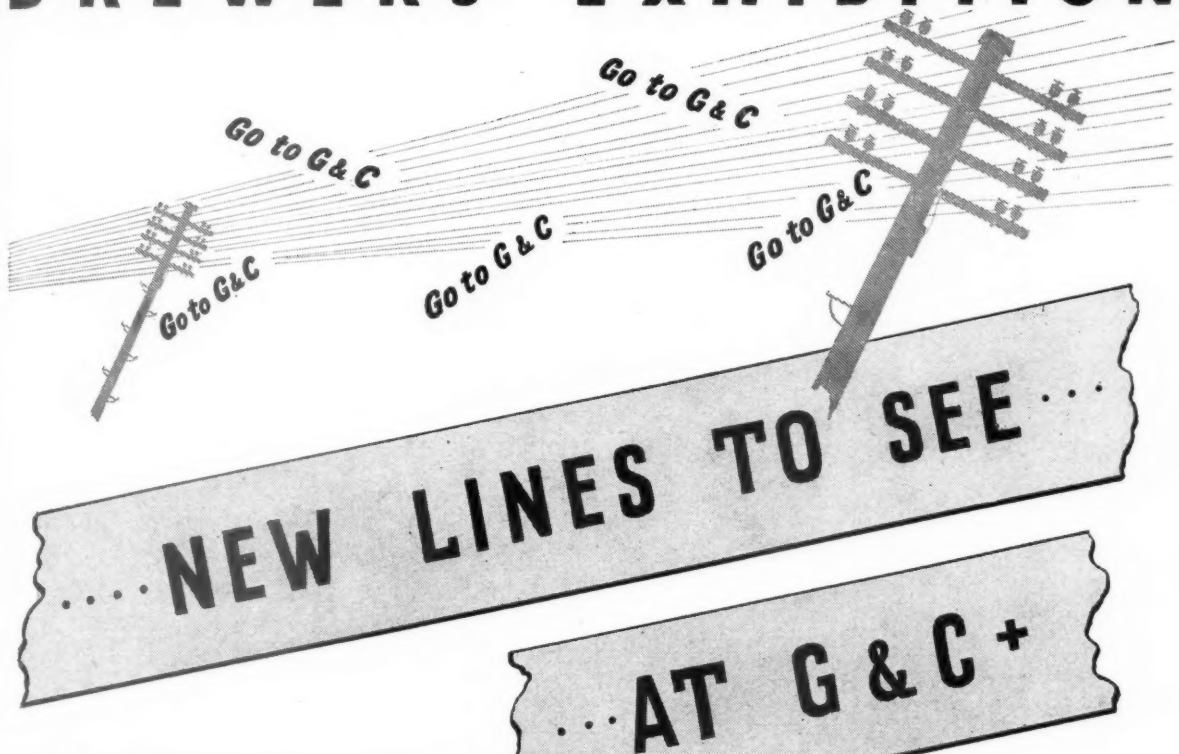
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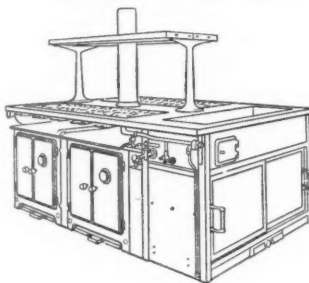
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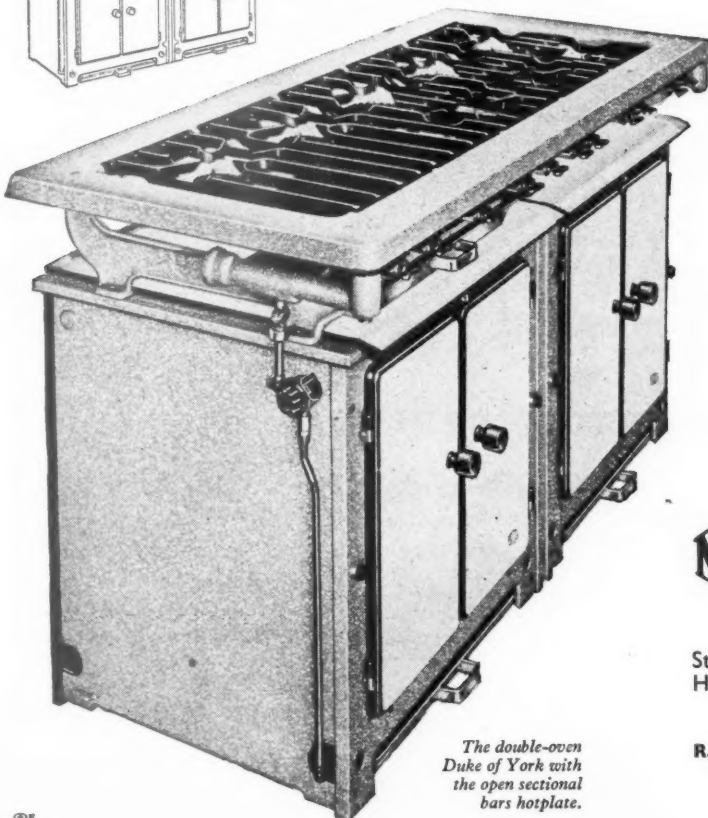
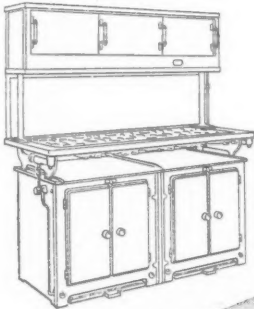
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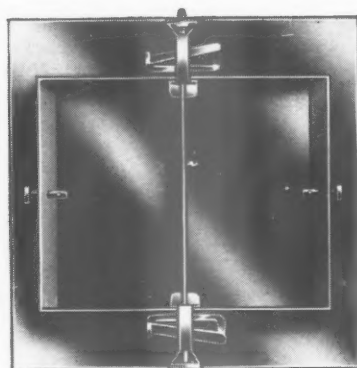
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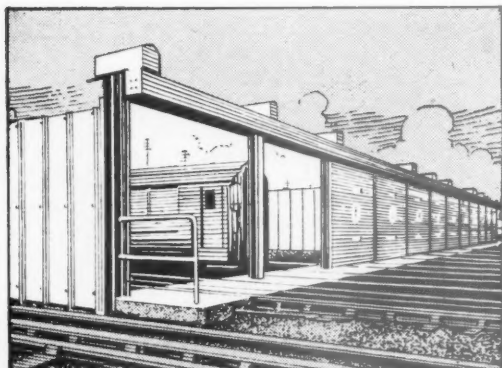
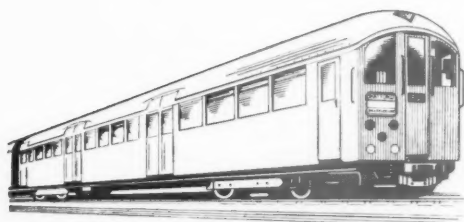
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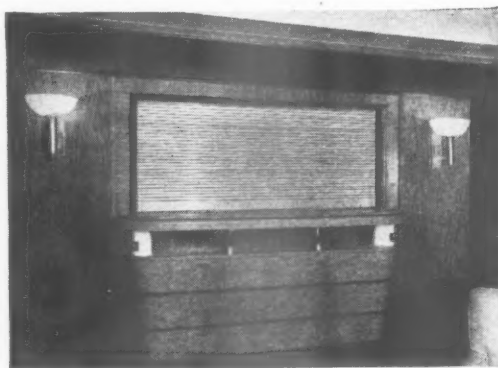
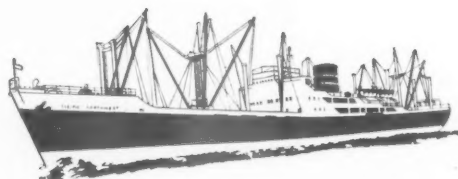
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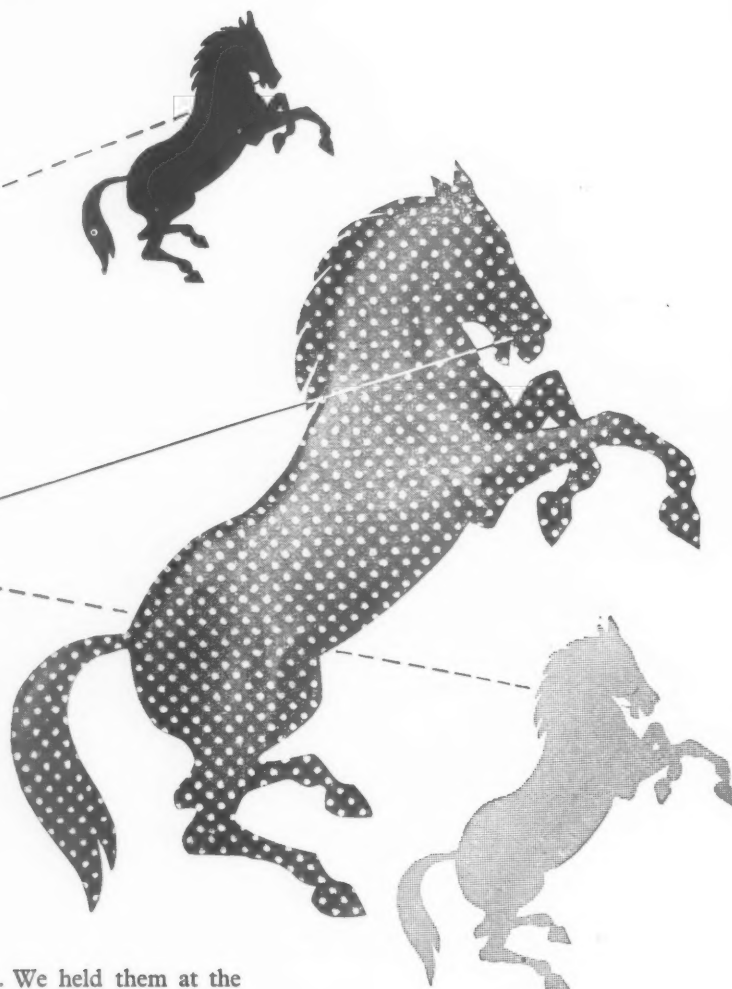
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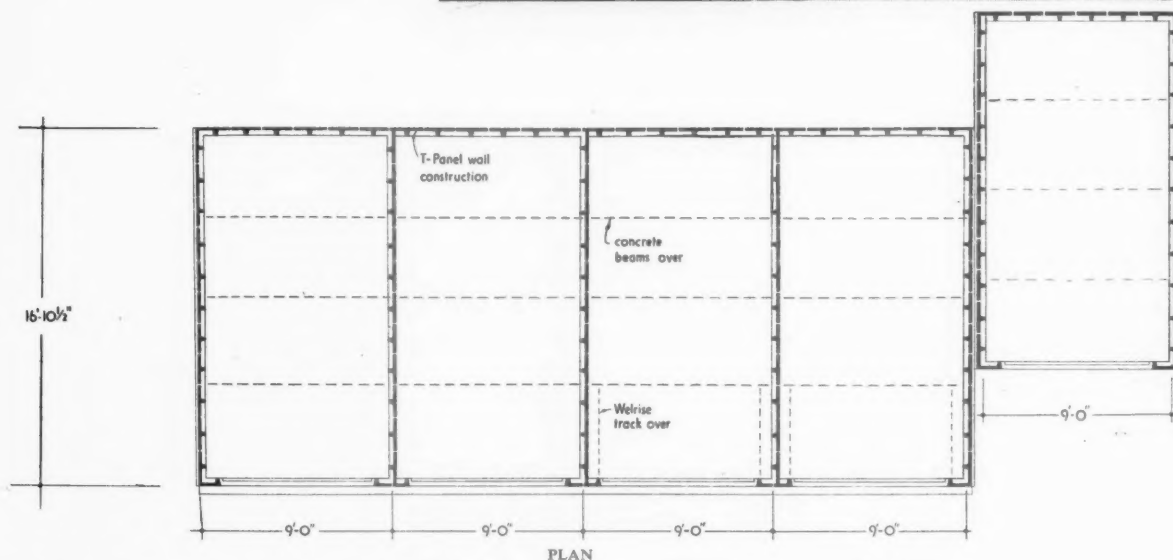
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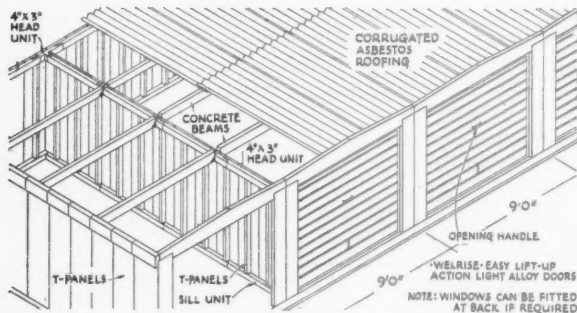
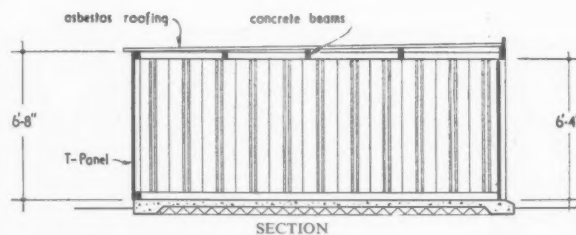
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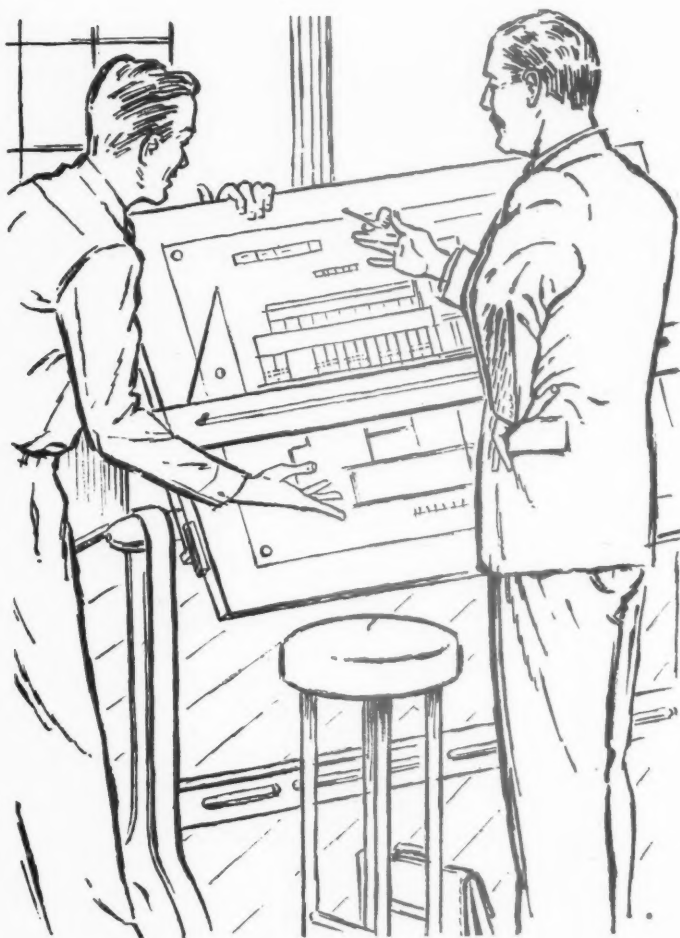
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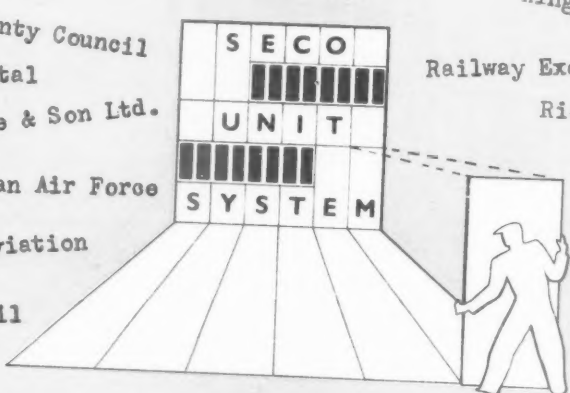


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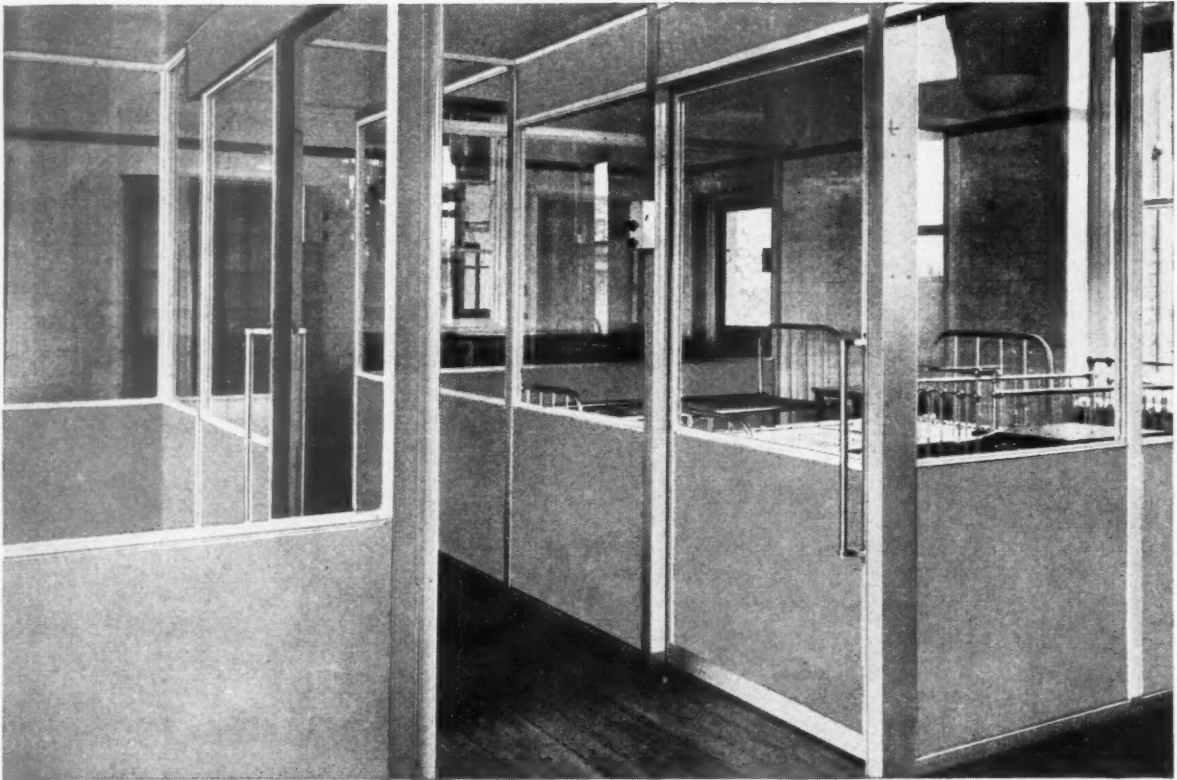
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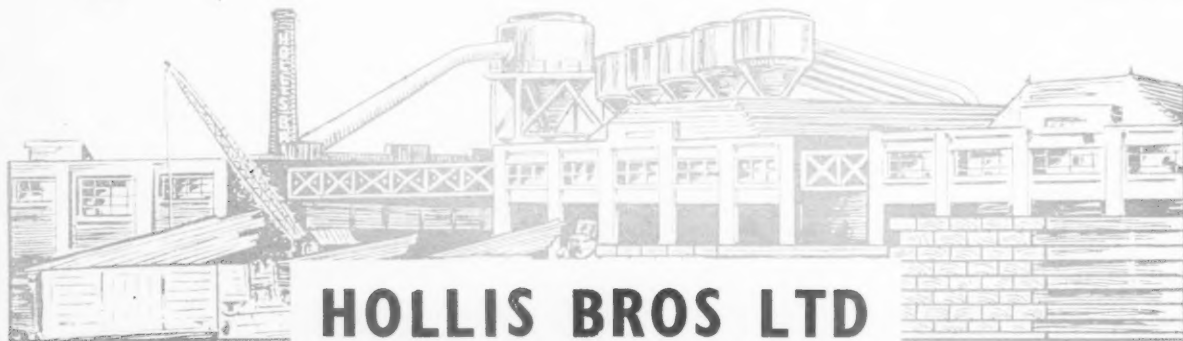
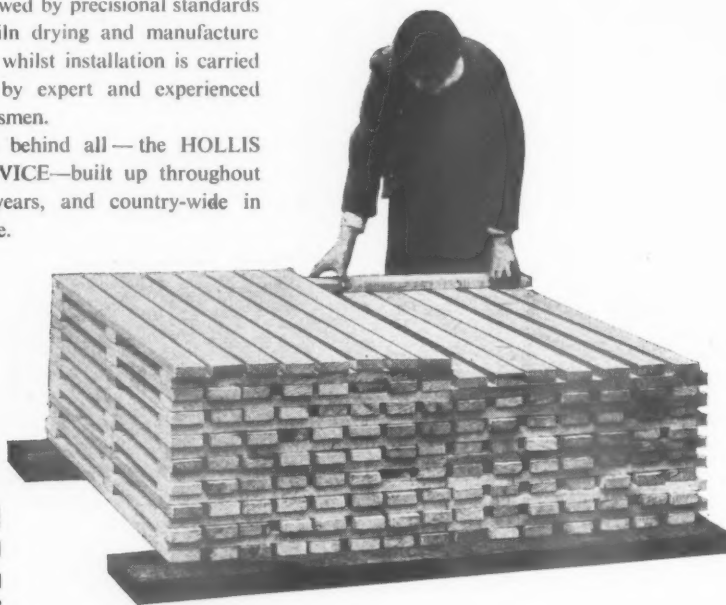
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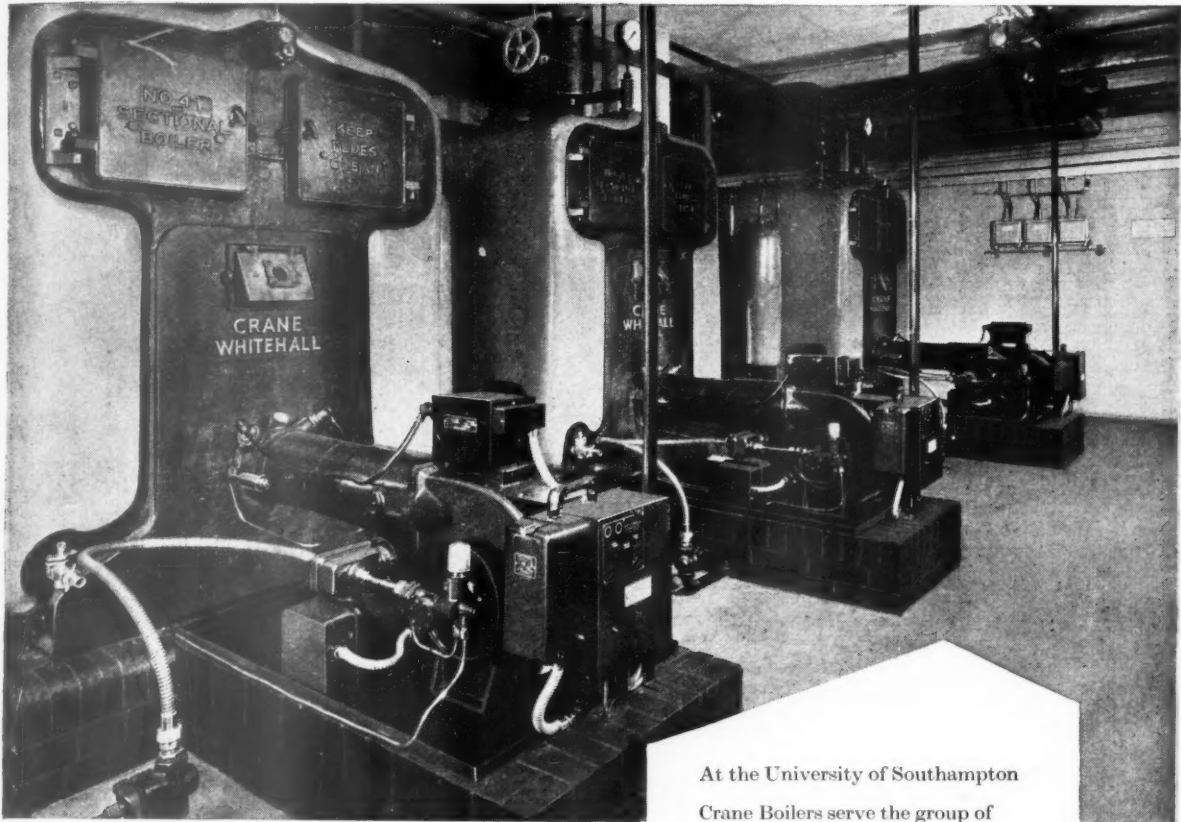
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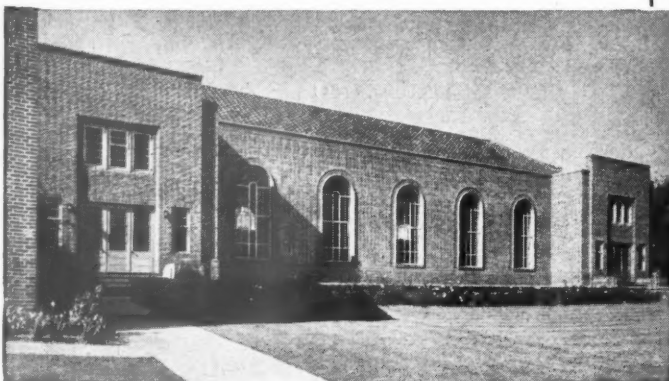
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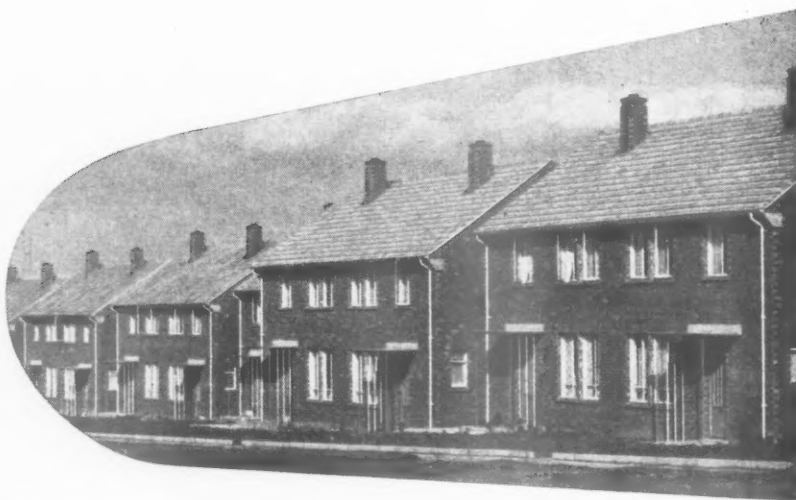
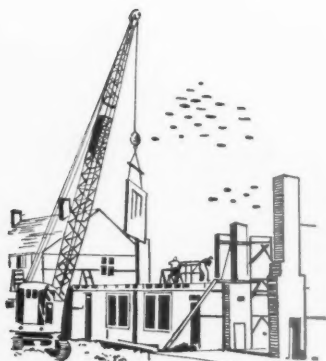
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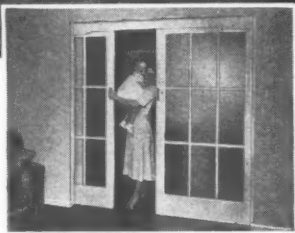
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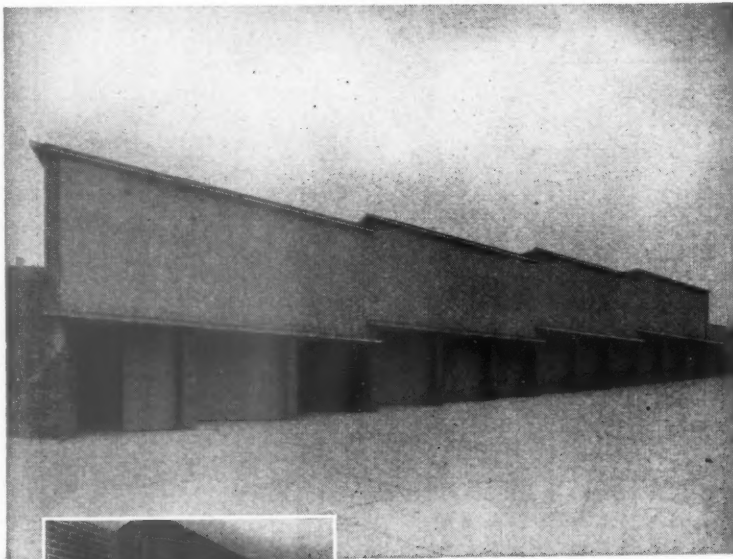
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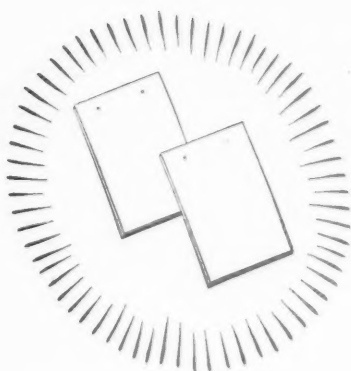
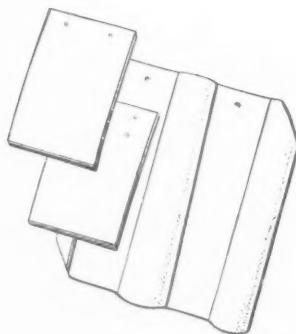
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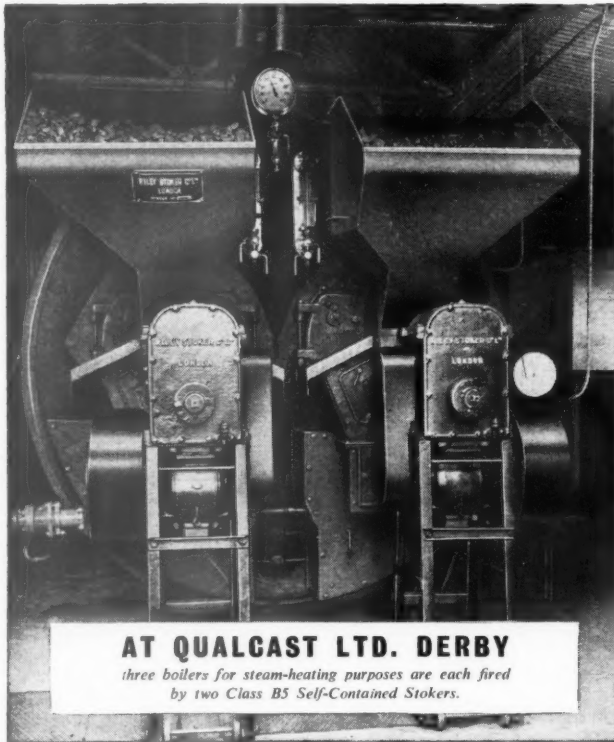
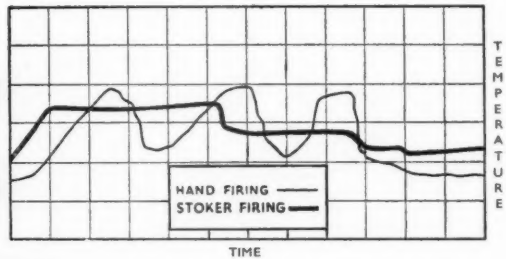
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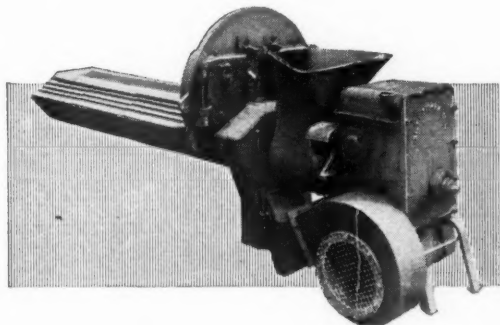


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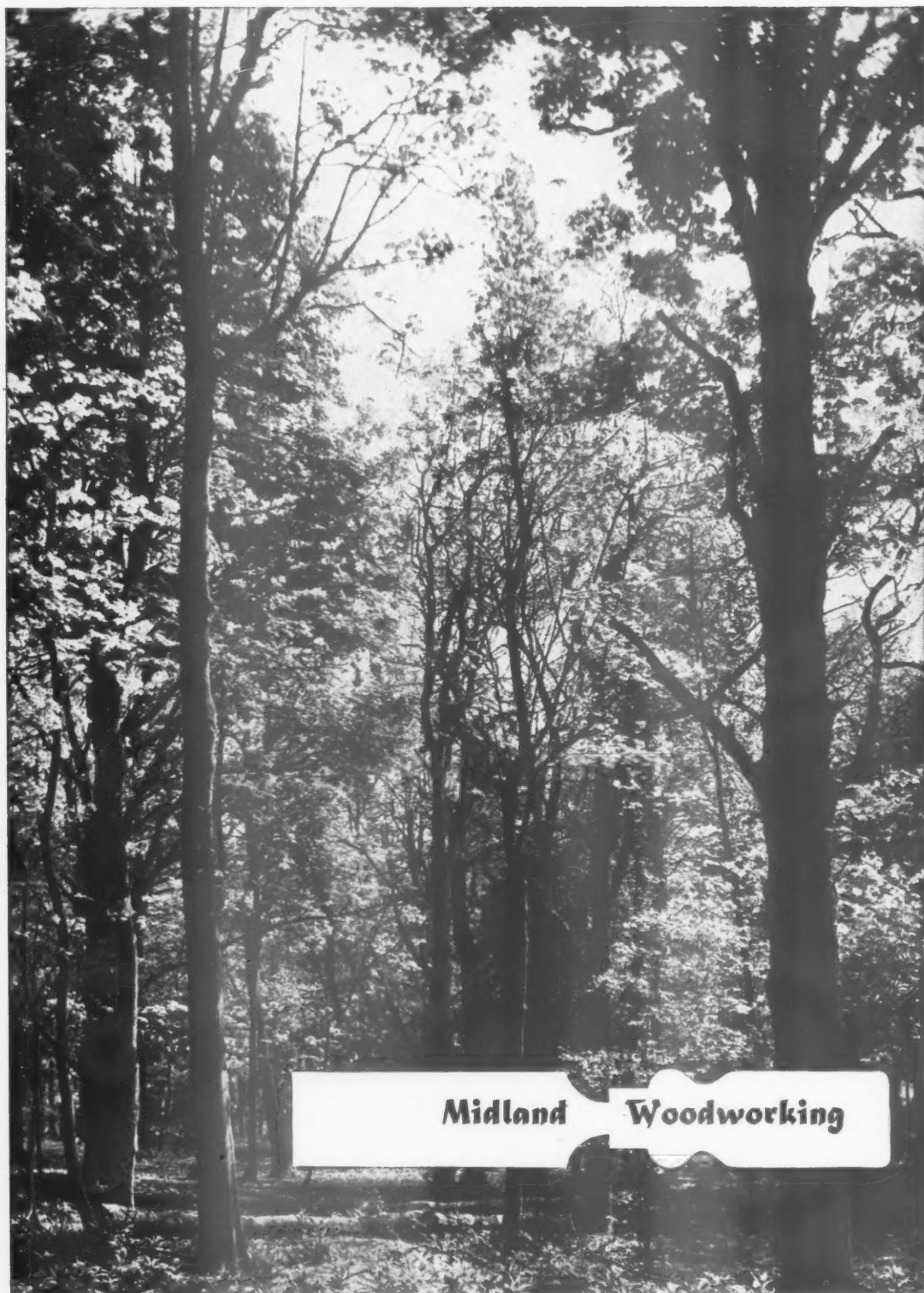


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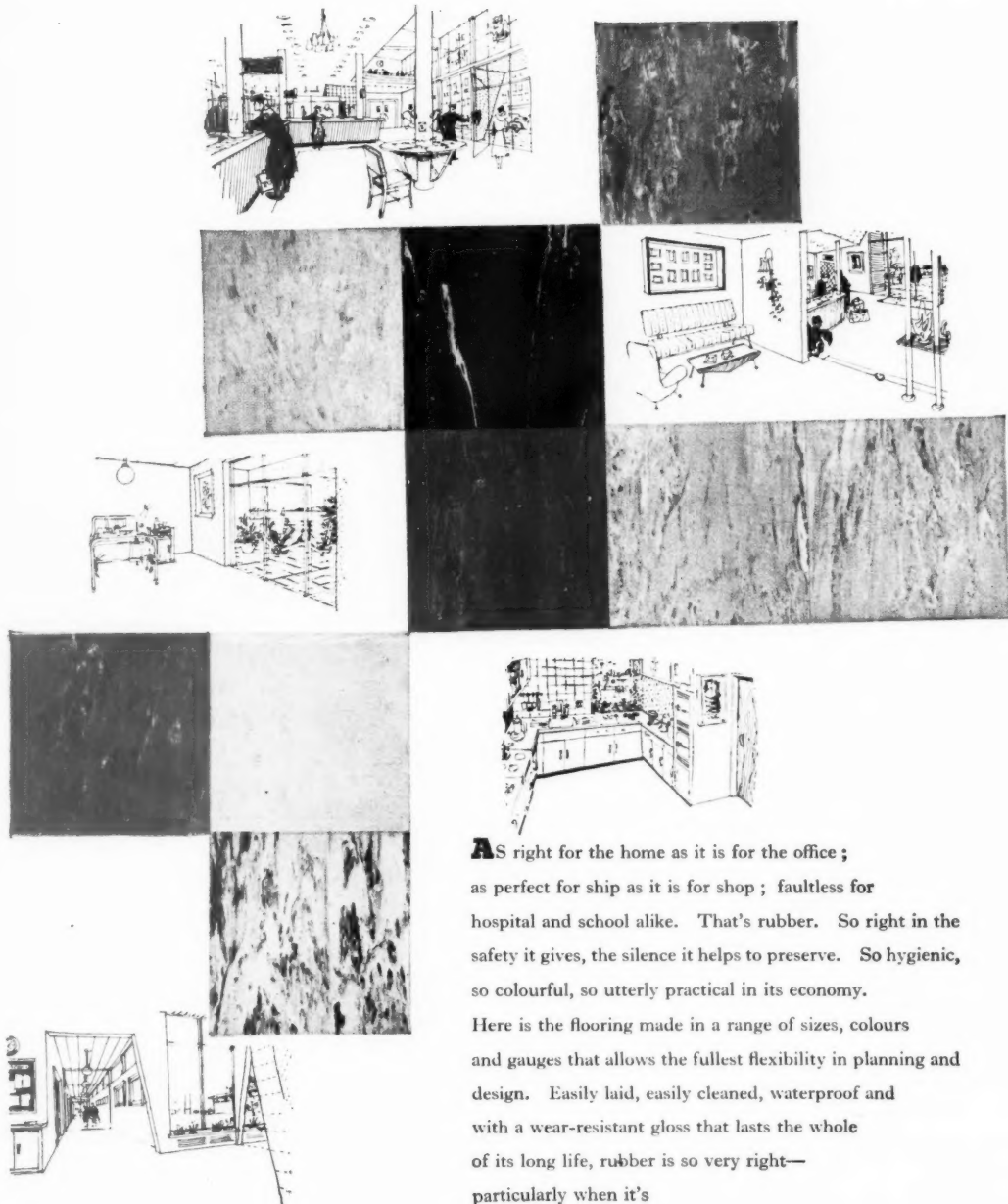


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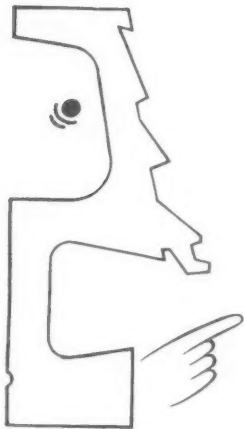
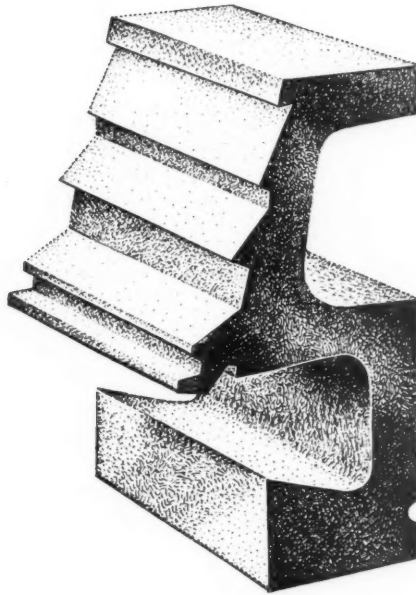
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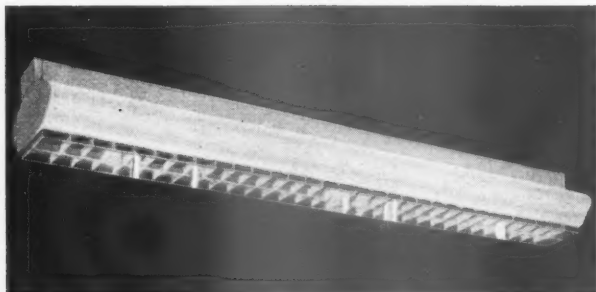
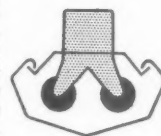
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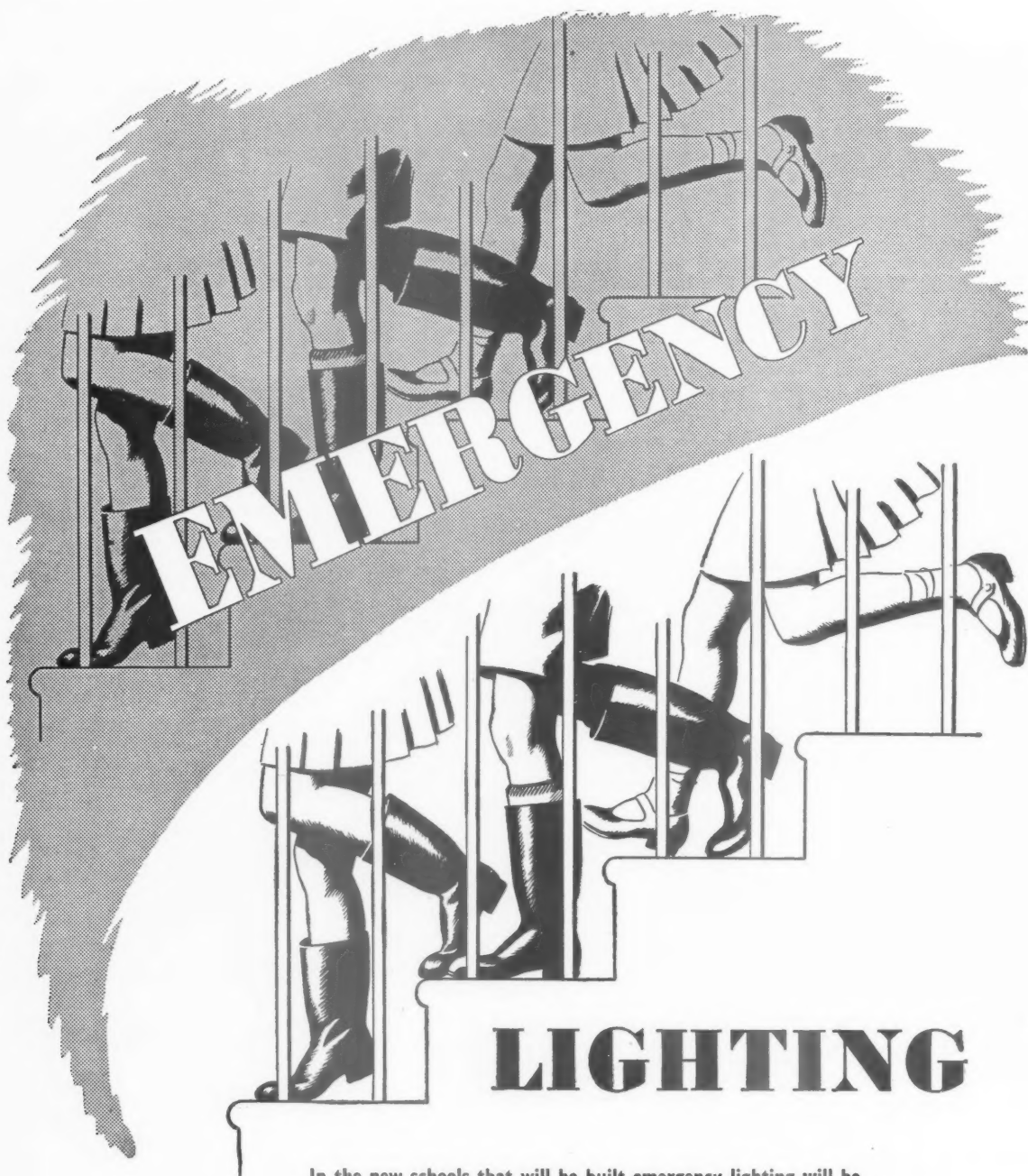
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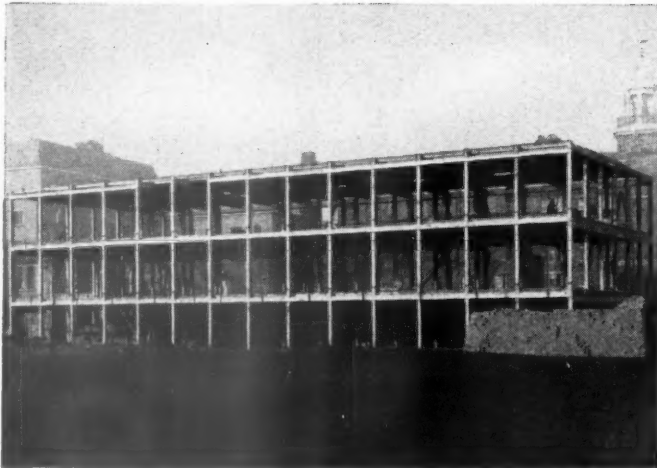
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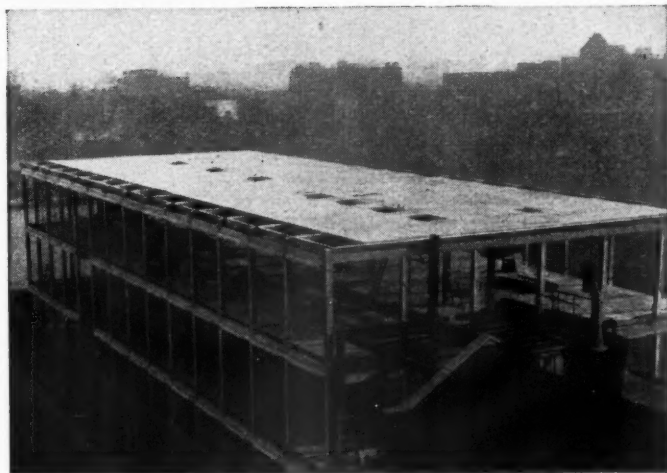
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Above: South elevation showing framework of multi-storey precast structural units.

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Right: Taken from above this photograph illustrates the floor and roof slabs.

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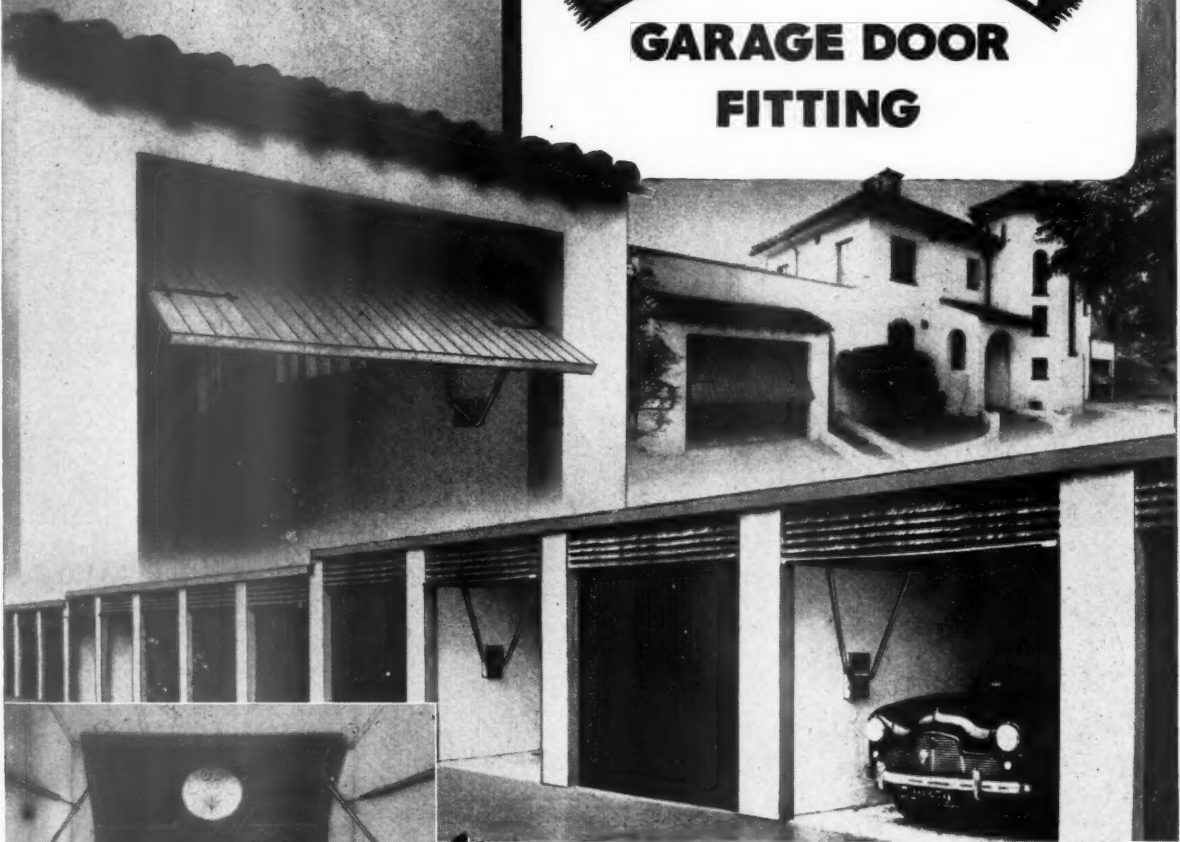
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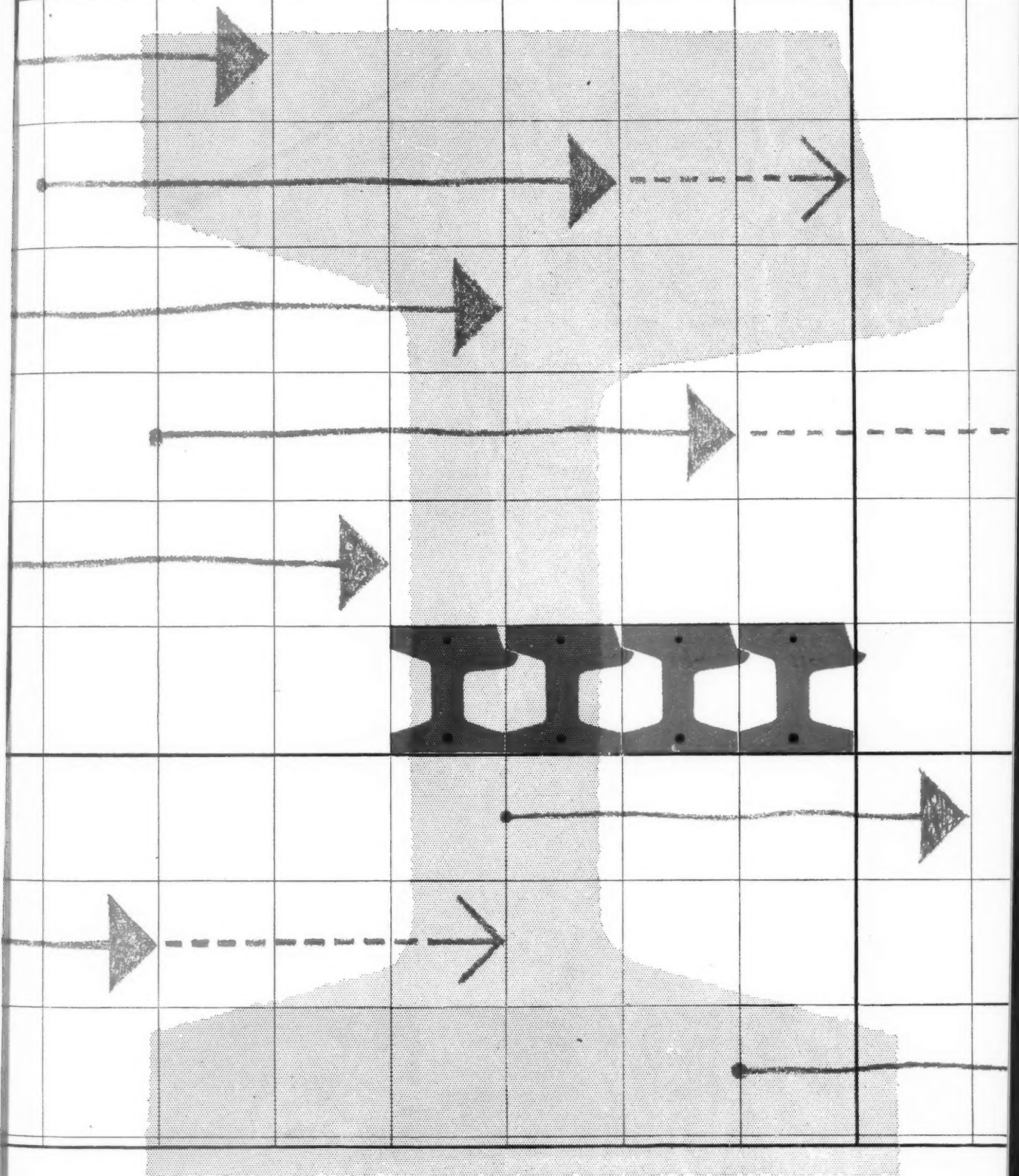


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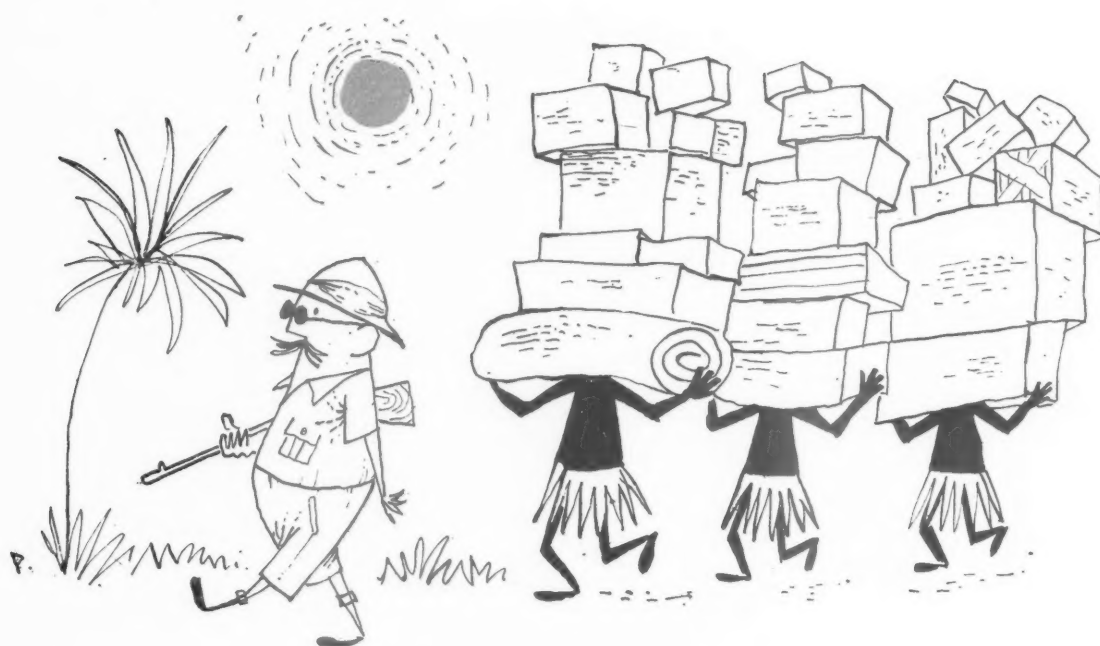
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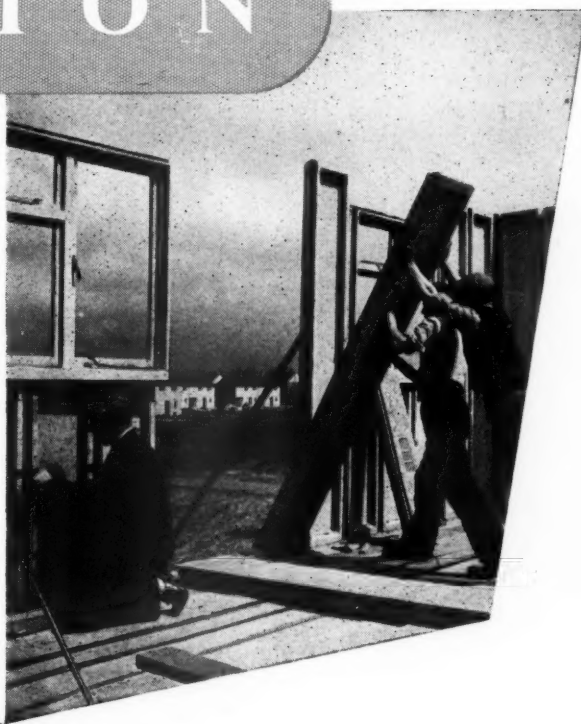
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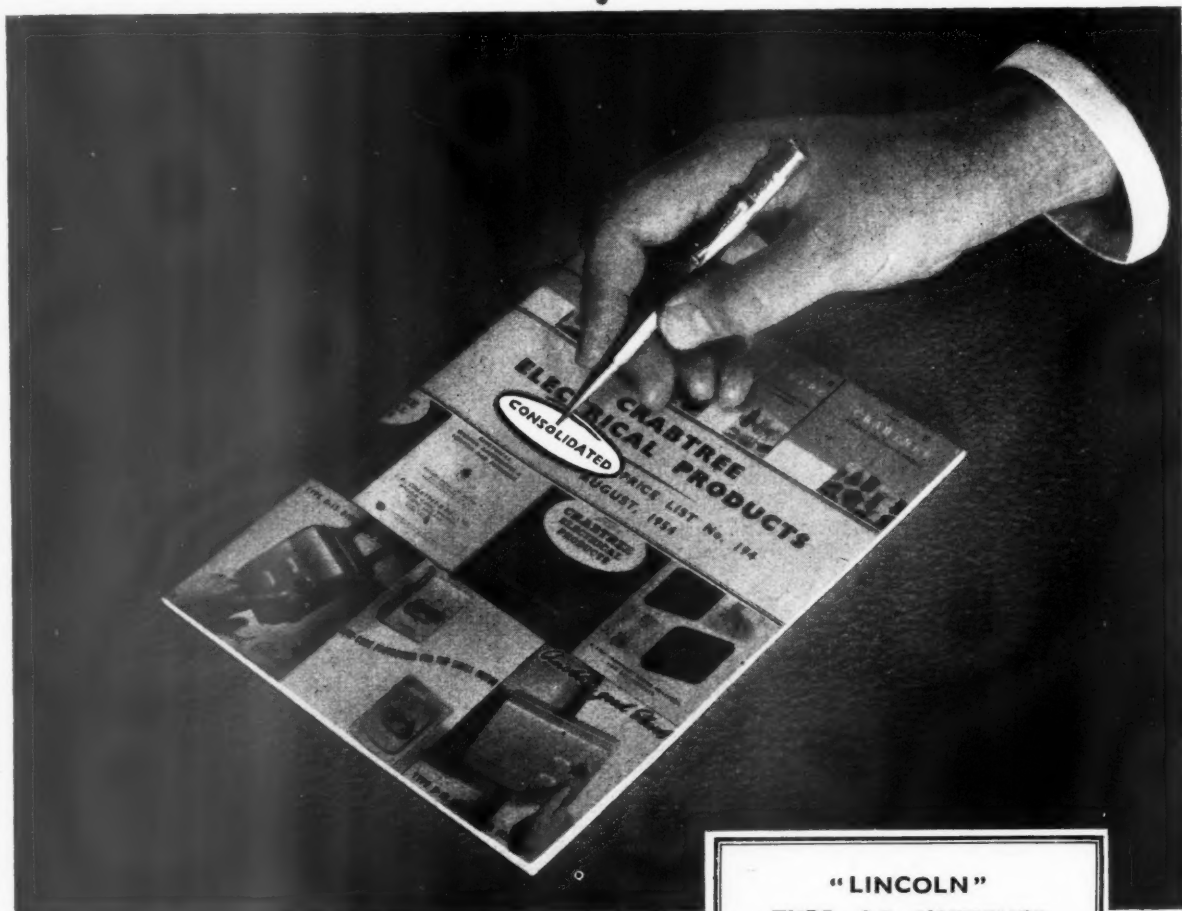
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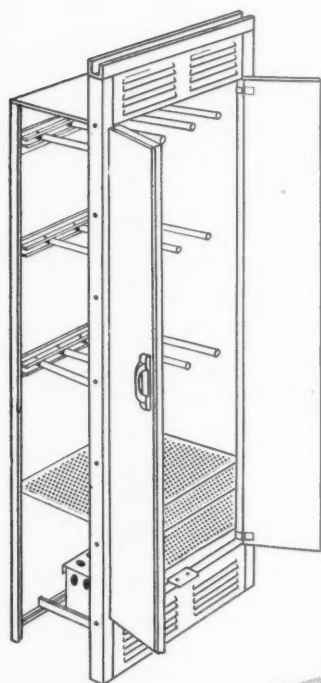
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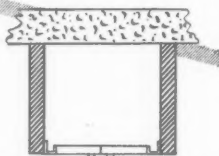
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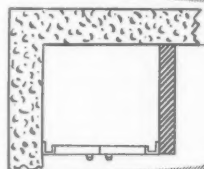
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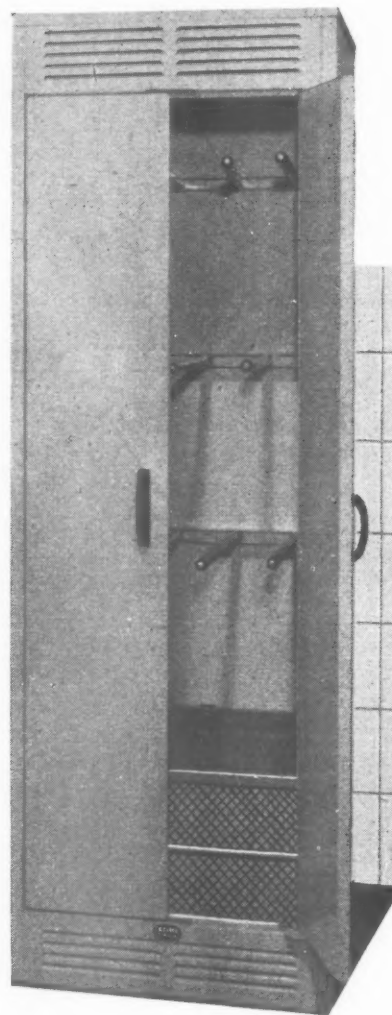
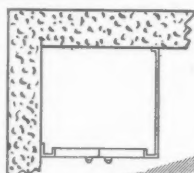
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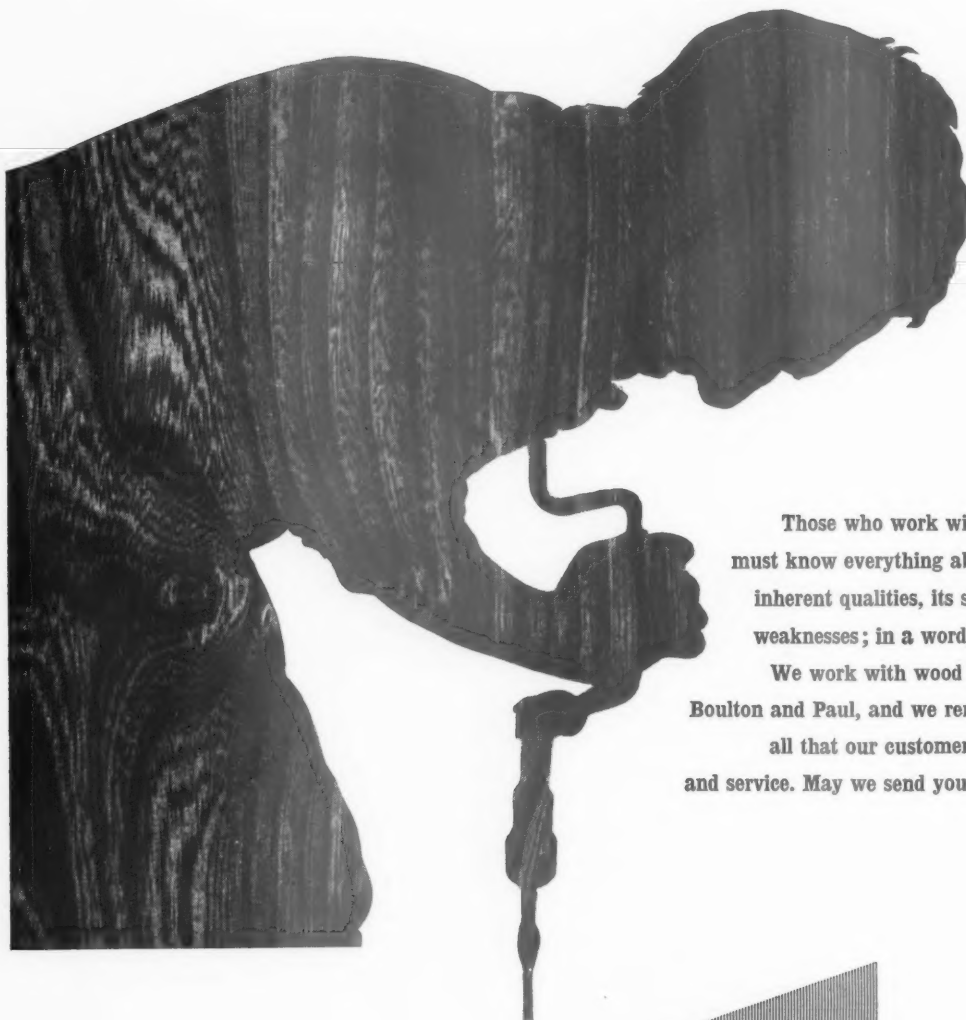
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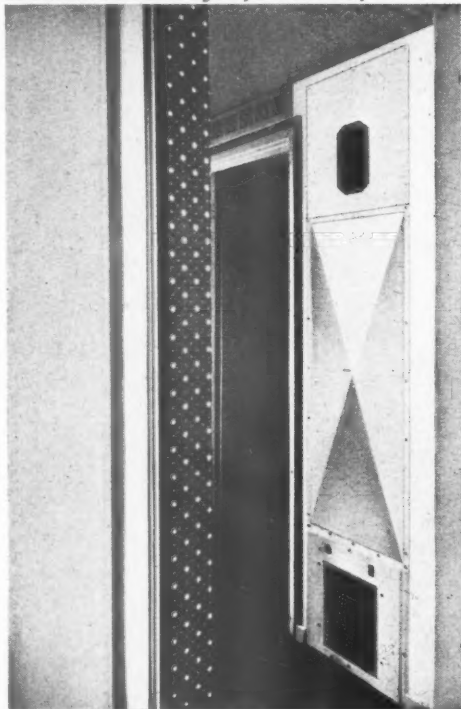
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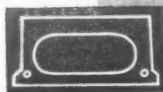
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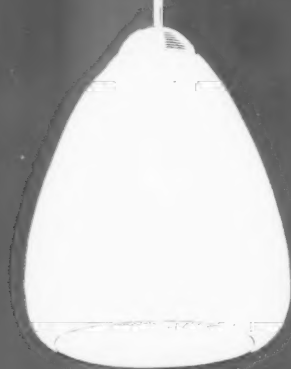
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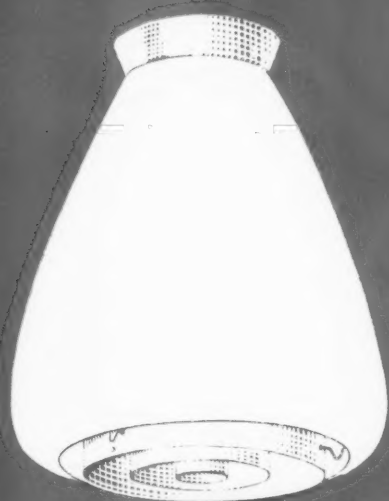
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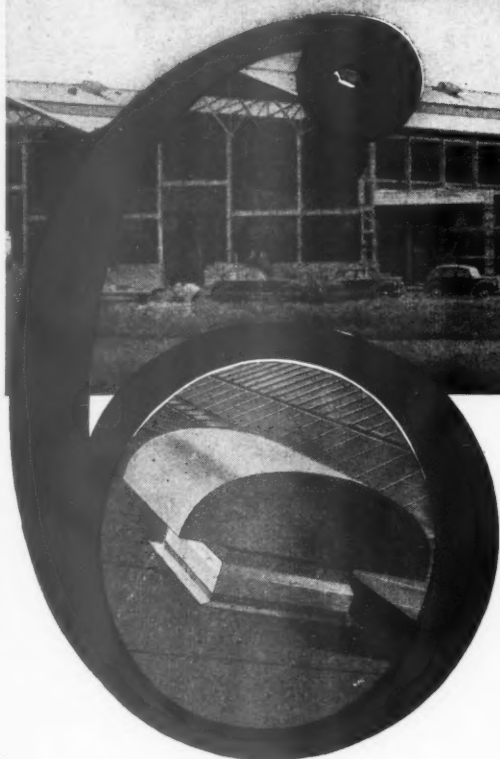
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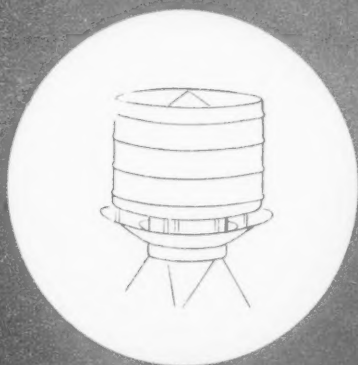
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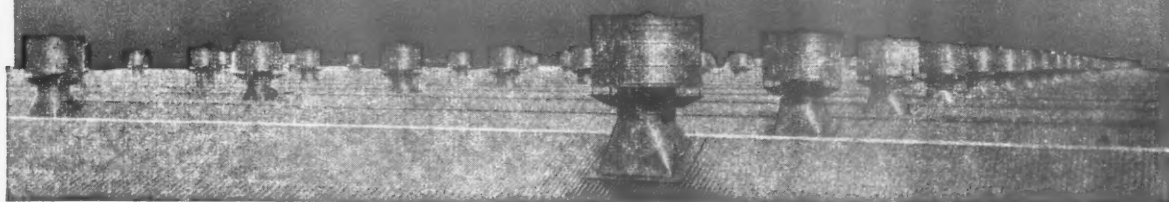
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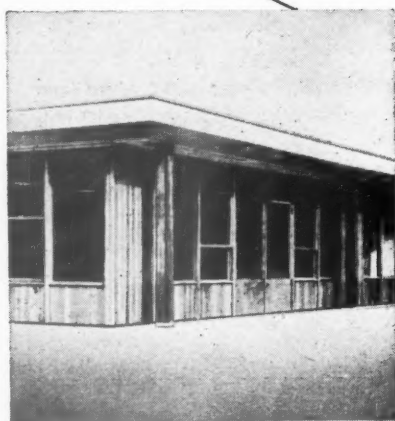




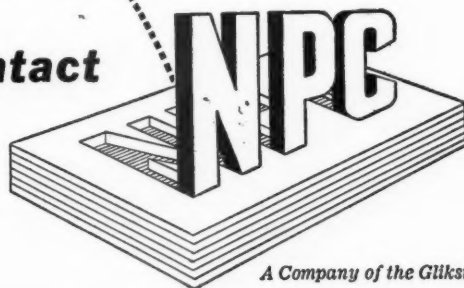
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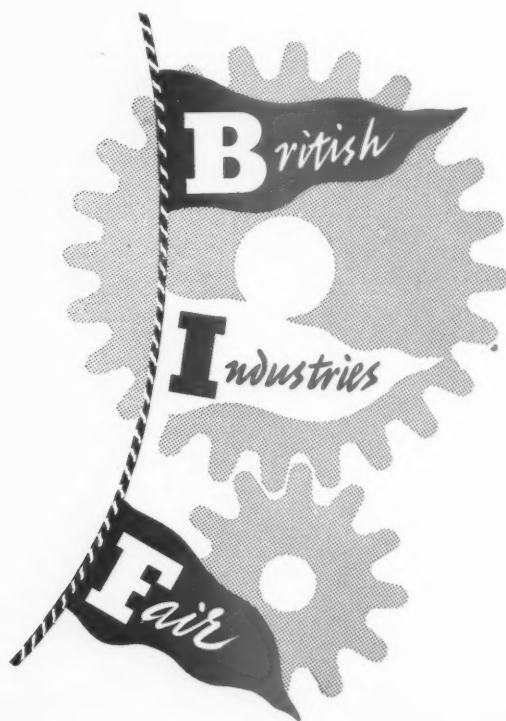
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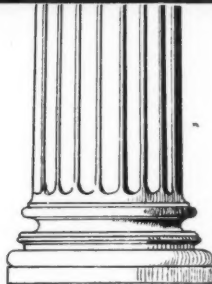
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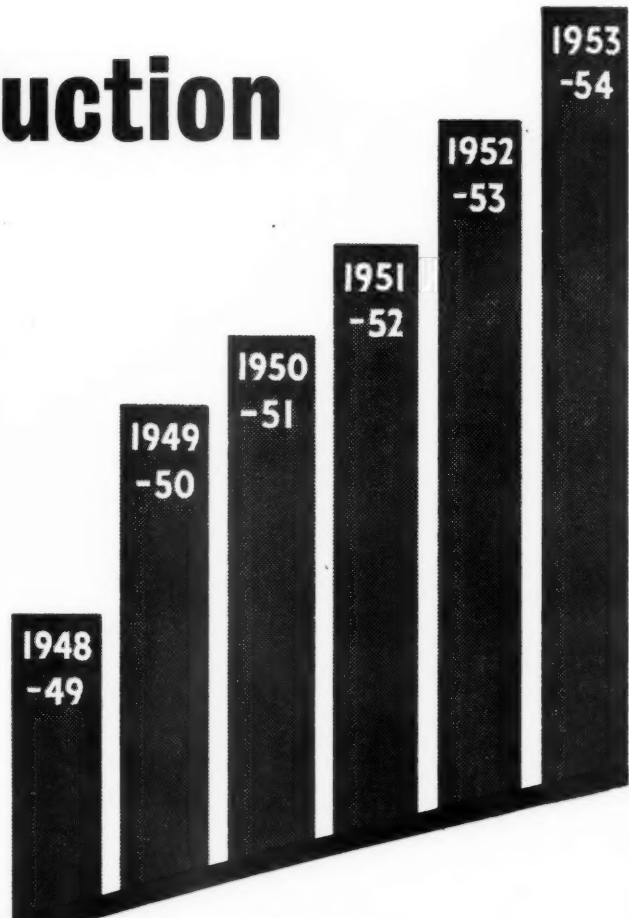
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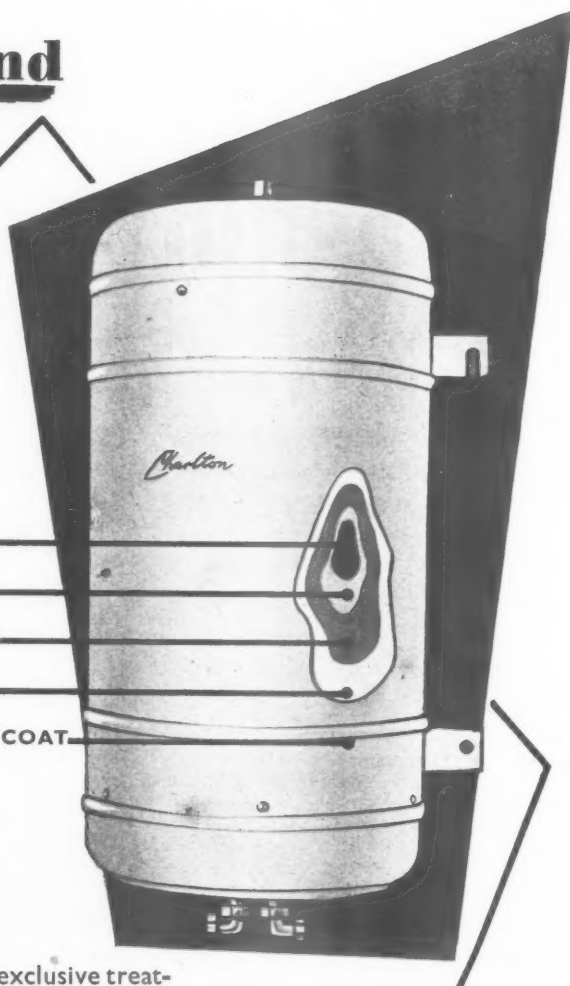
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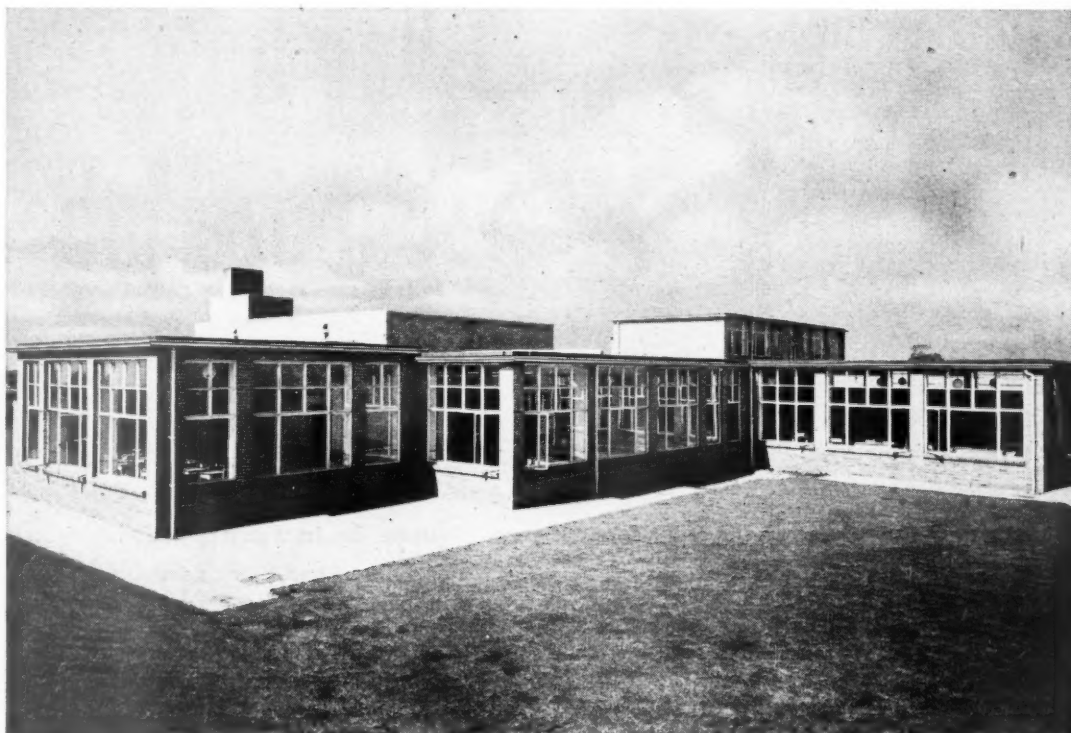
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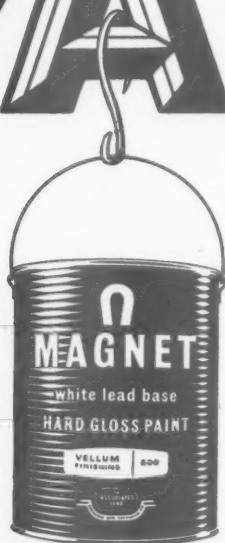
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No. 3107 September 16, 1954 VOL. 120

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KIDBROOKE AT THE BC

A great and progressive social experiment, given an architectural setting of its own, should surely have a great and progressive architecture. Public interest in architecture, though not always as informed as it might be, is in these days such that a fine building can do a lot to convert people to an idea. Views differ and will continue to differ about the comprehensive school.

Kidbrooke, ASTRAGAL fears, will do little to soften the hearts of the opposition. The plans and photographs now on show at the Building Centre seem to intensify rather than mitigate the institutional character of a very large

school. The plan is a blown-up version of a recognised type, and the architecture that clothes it is a muddle. No doubt the whole job is, by average standards, efficient; no doubt the plan will work . . . but great and progressive—No! It is ammunition for Miss Horsburgh, and we shall look forward to the designs from the LCC's own architects, for comprehensive schools at Dulwich and Holland Park, in the hope that they will create a better impression.

CASSON IN CHINA

That whirlwind traveller Sir Hugh Casson is this week on the way to Peking, via Moscow, in a party of four including painter Stanley Spencer, A. J. Ayer, Professor of philosophy at London University, and poet and writer Rex Warner. They will be guests of the Chinese People's Society for Cultural Relations with Foreign Countries and are going for three or four weeks—"to have a quick look." His report should be interesting; he may even be able, when he comes back, to remove prejudices that still linger in high quarters.

*

When R. T. F. Skinner, of Tecton, made the same trip some two years ago, and brought back much fascinating photographic material, neither the RIBA nor the AA would give him a platform. Will the same thing happen again, or is China now respectable? Or will Sir Hugh, perhaps, succeed in making it respectable?

*

To be more serious: these delegations and missions are interesting and useful, but what is really wanted now is, surely, more return matches. We, in the West,

are all pretty stale and frustrated or, at best, over-burdened by too many complicated ideas. A few pungent and direct comments about our architecture, as seen through the fresh and unjaundiced eye of a visitor from—very nearly—another planet, might be like a breath of cold but fresh air. Perhaps Sir Hugh will set the ball rolling.

FARNBOROUGH

Since it isn't by any means my business to decide whether the Air Force top brass, the MOS or the aircraft industry is responsible for the unconscionable delay in producing military aircraft I went to Farnborough mainly for its entertainment value and spent the time looking at air liners to a background of supersonic bangs and polyglot chatter. Most handsome of the lot is the Comet III, large and plump but very swift-looking. Much more so than the far more conventional but no doubt excellent Britannia. The Comet III interior was viewable only with a special pass and I don't even know if it is furnished or still full of recording instruments and miles of wire, but if it is as good inside as it is out it will really be something. Apart from that the Show is fairly stolen by the little Auster, which does such astonishing things with such apparent ease that one almost feels one could fly it oneself.

VERNACULAR ARCHITECTURE

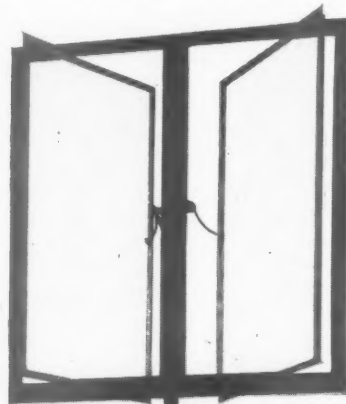
ASTRAGAL has at last managed to get hold of a copy of the much reviewed and much praised book: "English Cottages and Farmhouses."* This is certainly one of the best illustrated

* English Cottages and Farmhouses. Text by Clive Cook, illustrations by Edwin Smith. Thames & Hudson, 42s.

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books on the subject produced in recent years. The photographs avoid being "clever" and the layout—while lavish in the size of illustrations (they are largely whole or half-page) is straightforward.

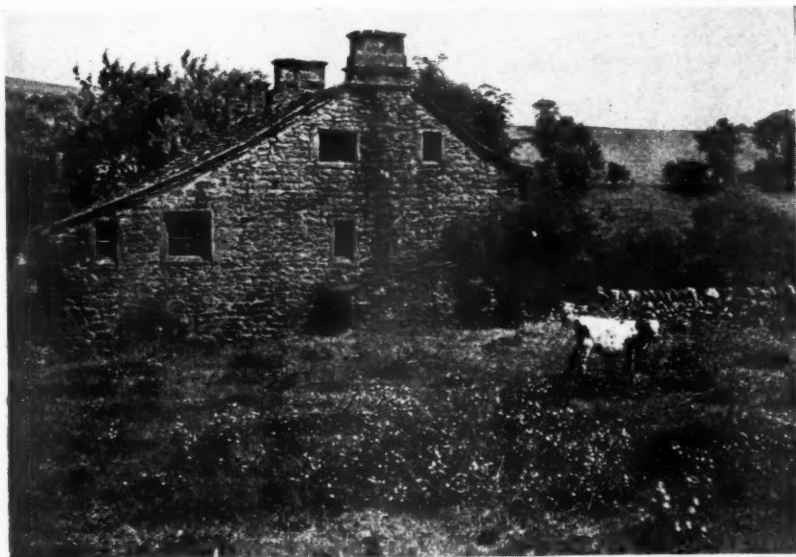
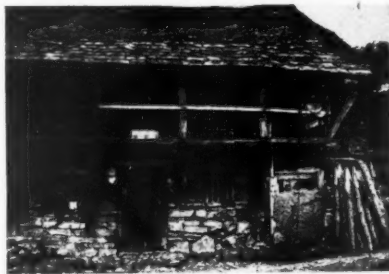
The subject is, of course, a gift to publishers. ASTRAGAL, as much as anyone, falls for lofty, heavy timbered, once-ecclesiastic, barns; tile-hung and weather-boarded cottages with spick and span white trim; and slate-roofed cottages of the kind Beatrix Potter introduced to one at an early age as an authentic countryside background to her voluble livestock. But what one wants to know is why these buildings fit so well into the landscape and exude such charm and almost inevitable "rightness" of appearance?

How much are we admirers of vernacular building because we have grown up with it and it has been an unconscious influence on our sense of design, and how much are we impressed by pseudo-romanticism? How much conscious—or unconscious—design is there, in fact, in these seemingly crude buildings? Why does every cottage up to the 19th century fit into the landscape and every house since sit on top? This is a delightful picture book. What, however, someone should next set about producing is an analysis of structure and proportions, which needs an architect-historian coupled with a boy with a tape.

Such a study might help architects to pick up the thread of tradition—when designing with traditional building materials—rather more expertly than the self-styled "traditionalists" do. Is it too late to acquire the continuity of style—in the right sense of the word—for this class of building which is still achieved so unselfconsciously in Scandinavia? A style to last, of course, only while the use of traditional materials is still valid.

And mentioning Scandinavia reminds me of this week's illustrations, taken from this book. Visitors to the Skansen Museum will delight that at Coniston we have comparable buildings still "in

Four illustrations from English Cottages and Farm Houses, by Olive Cook and Edwin Smith, referred to by ASTRAGAL on this page. Right, stable and spinning gallery at Yew Tree Farm, near Coniston, Lancashire. Below, three cottages at Hebden, Yorkshire. Bottom left, a cottage at Chiselborough, Bottom right, whitewashed cottage at Stoddah, Cumberland.

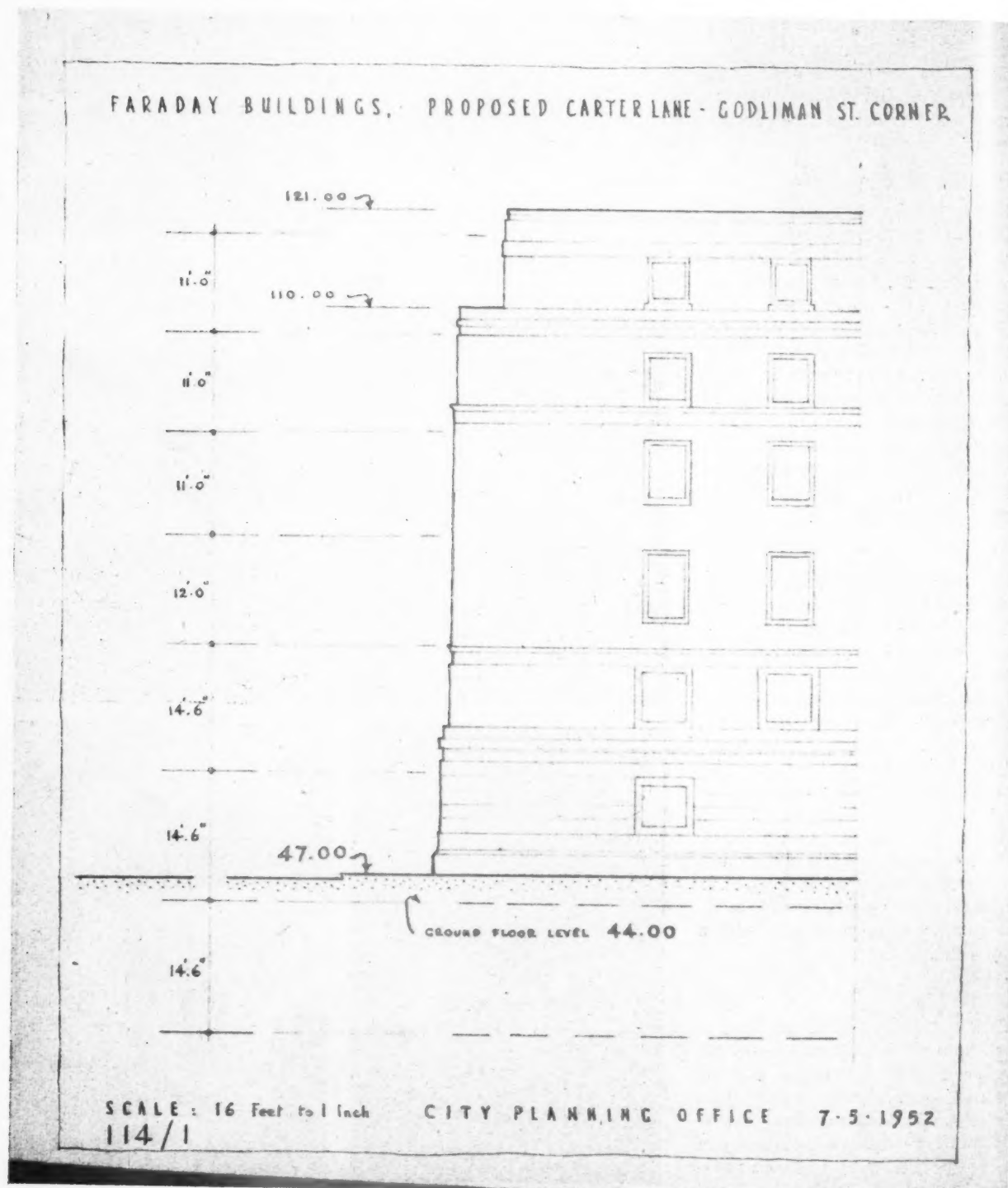


the wild." Admirers of Danish vernacular will appreciate the red surrounds to the door and window openings of the cottage at Stoddah. Those who put electric light bulbs in paraffin lamps will envy the cottager's set at Chiselborough. And, lastly, modular boys will enjoy the doubling and quadrupling of the glass unit in the windows of the terrace at Hebden—an illustration

which seems more 19th century painting than 20th century photography.

HUNGRY FIFTIES

Being as greedy as the next man, or more so, ASTRAGAL went to the Food Fair but *not*, unfortunately, on Press Day. So you can't be told how good Soviet caviare is nowadays, nor is there any other news, as ASTRAGAL will not



A Guide to the City

"Dr. Holden" explains an article in this month's *Architectural Review*, "has provided the City Corporation planning office with a drawing of a portion of his design for the Faraday building. This has been duplicated and a copy sent for his guidance to every architect engaged to design a building in the area." The area referred to is that round St. Paul's Cathedral, and the drawing is reproduced above. It embodies the recommendations contained in Clause No. 118 of the Holford-Holden report which is being used by the City Corporation; "as a precise yardstick by which the external appearance of all buildings

facing on to the precinct is judged for the purpose of approving the designs." Clause 118 calls for "... a brick treatment for the buildings around the precinct ... using Portland stone for the ground storey and for the stone dressings. The MOW are adopting this treatment for the Faraday House extension ... and will thereby establish the general precedent for the remaining buildings." To which might be added that this well-intentioned strait-jacket will ensure that the present low levels of design—"mediocre and characterless neo-Georgian," in Sir David Eccles's words—will be maintained too. See this week's first leader.

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POINTS FROM THIS ISSUE

ASTRAGAL comments on the Kidbrooke School Exhibition at the Building Centre	page 331
Sir Hugh Casson goes to China	page 331
Hunstanton Secondary School criticised and illustrated on pages 336 and 341 to 352	
British exhibit at Milan Triennale	page 339

stand in a queue while dumb samplers make up their minds which soup they want. ASTRAGAL left the show as ravenously hungry as he has ever been, but, apart from that, it's worth seeing if only to discover what a lot of exciting stuff you can get in tins nowadays. But even so, there is not much that you can't see any day, shop-gazing in Old Compton Street.

HOMEWORK AND . . .

Next door to the Food Fair—in the Empire Hall, Olympia, in fact—is the second Handicrafts Exhibition. This is of interest to architects for only two reasons. Firstly it is just the place to take the family if they have been suggesting that you do not earn enough: there is enough advice on knitting, weaving, toymaking and so on to keep tiny domestic fingers fiddling for years. Secondly, it is from this sort of exhibition that ideas will spread on home repairs, decorating and equipping which will in time radically affect the building industry (G. H. A. Hughes, Director of the LMBA has recently expressed concern on just this point). And others may be affected in time too. One firm, for instance, is selling equipment and instructions for making refrigerators which will cost the average handyman about half the normal shop price. Surely, with package furniture, another straw in the wind?

. . . SUNDAY WORK

From the free-time decorating of houses we turn to free-time picture painting. The first of the ICA's autumn exhibitions is devoted to the latter. Sunday Painters is the title of the exhibition, which has been arranged by Robert Melville, and the ICA believe that "Sunday Painting is the only aspect of representational art that has not become academic and ineffective in the 20th century." The term "Sunday Painters" is not, of course, all-embracing of amateur efforts. Robert Melville limits it mainly to those of the Henri Rousseau school—that is to say; untutored naïve painting, or child-art by tidy adult hands—or just, well, child art. Some are charming, one or two are competent paintings in their own right anyway, and most aroused a faintly patronising air on the part of the elderly doe-eyed and their sensitive escorts who attended the private view, try though they might to fight against it.

ASTRAGAL

The Editors

THE DANGER OF UNIFORMITY

VERY few have publicly expressed their satisfaction with the designs put forward for the rebuilding of the City of London, and, in particular, for the area around St. Paul's. Opposite is reproduced a drawing, provided by Dr. Holden for the City Corporation, of a portion of his design for an extension to Faraday House. This drawing incorporates Dr. Holden's recommendations regarding cornice lines, string-courses, stone dressings and other Georgian-style details, and copies are sent out to every architect who has to design a building within the St. Paul's precinct. "This procedure," J. M. Richards writes in this month's *Architectural Review*, "... explains the City Corporation's content with the much criticized, tamely neo-Georgian, design for the new Bank of England offices north-east of the Cathedral."

The control of building heights around St. Paul's is reasonable enough. Indeed, the control of *mass* is very important when the height limit—120 ft.—is ten feet higher than the facade of St. Paul's. But what is even more important is that the Cathedral should not be ringed by a band of uniform facades with standard trimmings. There is little need to play down to St. Paul's—it will hold its own with most buildings. What is wanted is not a stylistic strait-jacket but freedom to allow contemporary structural techniques to be expressed in design. Contemporary framed structures would act as a foil to St. Paul's. An enclosing ring of pseudo load-bearing masses of neo-Georgian buildings is a very real danger to the whole concept of a St. Paul's precinct.

The malaise which affects City rebuilding is not, however, confined only to the area around St. Paul's, and it is therefore encouraging to learn from a report in *The Times* of last Thursday that plans are afoot for a comprehensive plan for rebuilding a forty-acre site in the City known as "New Barbican." This scheme for mixed development—it will include underground warehouses, light industries and car parks, multi-storey offices and flats, schools, shops, houses, and an open space—is being designed by Sergei Kadleigh, William Whitfield and Patrick Horsburgh. If this scheme is allowed to go forward it may well act as a guide and a yardstick for future City development and show clearly—once and for all—the great advantages of comprehensive over piecemeal development in built-up areas.

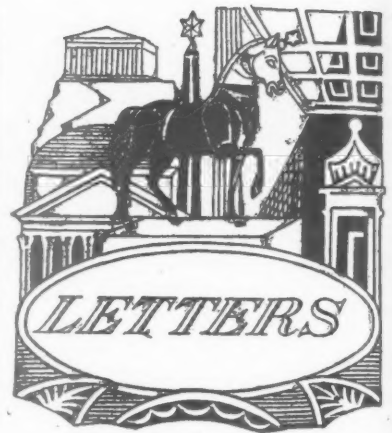
THE NEW BRUTALISM

In 1950, the Norfolk County Council Education Committee held a competition for a new school at Hunstanton, appointing Denis Clarke Hall as the assessor. The competition was won by Alison and Peter Smithson, and the result—illustrated on pages 341 to 352—has been the creation of a building of particular interest by hitherto little-known architects. From this point of view the competition was highly successful.

Hunstanton school, now finished, is without doubt one of the most controversial buildings since the war, for it carries certain ideas further than any other building so far. The plan, within the self-imposed limits of the architects formal approach to design is "brilliant" and the detailing, almost without exception, is quite consistent. What by many another architect might have been a clumsy botch, a forgotten detail, an inconsistency detracting from the whole, is at Hunstanton extraordinarily disciplined so that it is all quite in keeping. To other architects this may be almost unnerving. Within its own laws—and that is the vital point—it is an almost perfect building. The handling of proportions both in plan and section give a mathematical perfection and elegance which is reinforced by the use of very limited colours and materials. Elsewhere in this issue the structural techniques are explained, and the plan, details and materials given, but these alone cannot convey the impression received by an actual visit to the building. Architects should walk into the assembly hall and the classrooms and see for themselves the gault brick walls, the exposed black RSJ's, the exposed rough pre-cast concrete floor units painted white, the troughed asbestos ceiling in the assembly hall, everywhere the exposed pipes and conduits, the black and dark brown thermoplastic floors, the concrete tile floors, the unpainted, galvanised-steel door-frames, the unpainted, galvanised, pressed-steel switchgear, the calorifier pushed under the stairs, and the industrial, steel, light-shades. There is not one single piece of soft material anywhere in the building. It will be interesting to know the noise level when it is full of children.

Due to the unorthodoxies of the plan and of the details, this building is likely to attract a great deal of attention as an example of "modern architecture." It cannot, however, fairly be said to deserve the full implications of this title. It is published here because it is a technical achievement and because it is interesting as a stark statement of unadorned elements used to form a building. In matters of sound control, daylight control, aspect, and other important details of educational requirements, however, the building has still to prove that it is satisfactory.

Indeed, in that this building seems often to ignore the children for which it was built, it is hard to define it as *architecture* at all. It is a formalist structure which will please only the architects, and a small coterie concerned more with satisfying their personal design sense than with achieving a humanist, functional, architecture. It is likely to prove an expensive venture into a blind alley.



D. Walford Locke, L.R.I.B.A.

Ruth Edwards, A.R.I.B.A.

C. R. Vinycomb

*R. C. Mortimer, UK Representative
Department of Labour of the Government of Canada*

H. G. Dunn

Private Work Ban for Public Architects

SIR,—I feel I must write to you with reference to the leading article in the September 2 number of the JOURNAL. I think you have missed the whole point. We private Architects are ratepayers of our towns, pay our assistants and have the cost of running our private offices. We also pay the rates which pay the public architects and allow them to dwell in over-staffed luxury buildings which are also paid for and decorated by us under the same rates.

Why therefore should these full time dwellers in a safe land of plenty be allowed to take on private work in addition? It doesn't make sense. The whole matter is a very sore point with the private architect who, although he is well aware of what is going on in council offices, at the same time, is unwilling to scream the facts aloud and so put paid to these under-cover activities.

D. WALFORD LOCKE.

Newton Abbot.

[It may be difficult for individual private architects to complain if local authority offices are misused in the manner Mr. Locke claims. It should not be impossible, however, if evidence is forthcoming, for the RIBA to handle such matters—or even, and more drastically, local electors.—EDS.]

SIR,—Your editorial of September 2 sets out the position very fairly, though even if a system of incentive schemes were adopted in public offices, the complete banning of private work would still fall very hardly on the young architect getting experience as an assistant but hoping eventually to set up on his own, since he would not be able to acquire even the first small beginnings of a practice before leaving the office.

In the case of assistants intending to remain in public offices for all or most of their careers, the arguments against running

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SIR.—In tember Director again ex really th almost of heat external pain " tion is b British soi-disa (Princip the Cou ings (C Ridley The D porters consid will be it is ne much a neys o arises narrow chimne Containing extern branch built o flue re A fir cold f Model Flues Journa to it i lished now throat econo flue, v and position tion t press windo (for t ing t office by p These Geor Pancr stack It is Gene Jour mitte

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a definite private practice are very strong; but I feel that it would be a pity to forbid the odd private job now and then, particularly for the newly qualified architect, as the experience gained in tackling a job single handed, without recourse to section head or clerk of works in case of emergency, must surely add to his usefulness as a member of the office team.

RUTH EDWARDS.

Coventry.

[We do not see how there can be any relaxation of the rule without risk of abuse. The one concession which might be made is to allow an assistant to design his own house.—EDS.]

Chimneys on External Walls

SIR.—In the issue of the JOURNAL for September 2 the Coal Utilisation Council's Director-General, Mr. Eric Bellingham, again expresses the hope that no one will really think it modern to provide what he almost alone alleges is a wasteful method of heating: a domestic chimney on an external wall. Mr. Bellingham's "campaign" against such methods of construction is but a rearguard action in defence of British insularity, albeit supported by the *soi-disant* Building "Research" Station (Principles of Modern Building, Vol. 1) and the Council for Codes of Practice for Buildings (C.P. 131, 101: 1951) and also the Ridley Committee.

The Director-General and his three supporters make the tacit assumption that a considerable part of the heat of a fireplace will be dispersed into the chimney and that it is necessary to minimize this heat loss as much as possible by placing domestic chimneys on internal walls. This assumption arises from incomplete research and a narrow regard for customary techniques in chimney building in the U.K. only.

Continental practice is for a chimney containing a single straight flue open to the external air at the bottom to receive several branch flues. It is immaterial whether it is built on an external or internal wall for the flue remains cold in operation.

A fireplace based on this principle of the cold flue and adapted to comply with the Model Bye-laws in respect of Common Flues was described fully in the RIBA Journal of November, 1953, and I referred to it in a letter which you very kindly published on July 1 of this year. This fireplace now renders obsolete all the restricted throats, smokeselves, patent metal fuel economizers and dampers to shove up the flue, venturi chimney pots to B.S., louvred and "aero-dynamic" terminals, careful positioning and height of chimneys in relation to pitched roofs, zones of suction and pressure, weather stripping of doors and windows, etc. Using this revolutionary (for the U.K.) fireplace, architects (including those called such in local authority offices) can enjoy a new freedom in planning by putting chimneys on external walls. These chimneys can vary between Sir George Gilbert Scott's porte-flechères at St. Pancras Station (M.R.) and Voysey's raking stacks to the Municipal-Traditional.

It is possible that the C.U.C.'s Director-General does not subscribe to the RIBA Journal and reads the "A.J." only intermittently.

C. R. VINYCOMB.

Luton.

Canada's Comeback

SIR.—I am sorry that ASTRAGAL felt it incumbent to repeat in your issue of September 2 the cutting remarks quoted from the Brantford *Expositor*, without endeavouring to ascertain the facts. Far from attempting any "sharp practice" this office

BUILDINGS IN THE NEWS



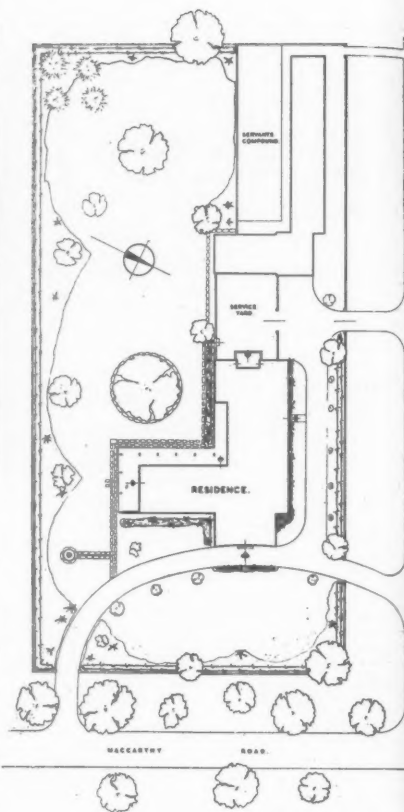
Government Offices in New Zealand

The photograph above shows a model of the proposed Government departmental building designed by F. Gordon Wilson, Architect to the New Zealand Government. Assistant architects, J. F. Wright, D. J. Beere and T. Hazeldean. The building, which will have a total floor area of 170,000 sq. ft., will be mainly occupied by the offices of various government departments, except for the ground floor, which will be a post office, the top floor, which is designed as a staff cafeteria and caretaker's flat, and the basement, which is mainly taken up by a car park. Construction will be of reinforced concrete with special provision made for earthquake resistance by the use of horizontal and transverse stiffening walls. Tenders are about to be called and it is hoped to commence building in the New Year.



High Commissioner's Residence, Colombo

This residence was designed in the Chief Architect's Division, MOW, and was first illustrated in the JOURNAL of September 2. Above is a further view, from the north, showing the main entrance and the kitchen wing. The lounge, entrance hall and dining room can be thrown into one by removing the glazed and folding partitions between them. Construction: part reinforced concrete, part load-bearing walls of local brick and rough-hewn stone. Roof: aluminium. The residence is fully air-conditioned, with an automatic plant controlled to give a temperature of 75 deg. F., with a relative humidity of 50%.



Site plan



Ground floor plan



First floor plan

Hangar Conversion

The Sophia Gardens Pavilion, Cardiff, has been converted from an RAF Bellman transportable hangar. Additions, consisting of stage, dressing rooms, offices, etc., at the rear, and cafe, kitchens and lavatories on the entrance front were designed by E. C. Roberts, Cardiff City Surveyor.



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British Exhibit at the Milan Triennale

As reported in the JOURNAL of August 26, Hille of London and Ernest Race Ltd. combined to stage a small exhibition at the tenth Triennale in Milan. Above is the section designed by Robin Day and displaying Hille furniture. Below, the section designed by Misha Black of Design Research Unit, showing the Race furniture. Kenneth Rowntree contributed a painted panel and Nigel Henderson the photographic wall panel to be seen on the right, above.



has co-operated most whole-heartedly with the Central Mortgage and Housing Corporation, a Canadian Crown Company, in respect of the opportunities being offered to United Kingdom planners and architects, in the Dominion.

The Central Mortgage and Housing Corporation anticipate that over the next two or three years there will be a comparative shortage of qualified town planners—engineering and architectural—in the Dominion of Canada. In order that such persons might be available when needed, and might have a sound knowledge of Federal and Provincial legislation in respect of planning, they are creating openings on their own staff until such time as this anticipated demand materializes. In addition, a special course of indoctrination has been established at Ottawa to assist in acquainting these newcomers with such conditions.

In point of fact, the age range stipulated in the advertisement, referred to by the *Expositor*, was not adhered to, and the average salary offered to the 11 persons engaged for such employment was well in excess of \$3,600 per annum. It is anticipated that the Municipal vacancies, when they occur, will carry a starting salary in the neighbourhood of \$5,000 per annum, with a range to \$7,000. Any persons not eventually acceptable to the municipalities will be retained on the staff of the Central Mortgage and Housing Corporation. I should also point out that all salaries over \$3,600 per annum with the Corporation are reviewed yearly.

In addition to this generous plan of the Corporation, there is an outright grant of \$500 given to assist accepted married persons with their transportation costs. Family transportation west of Ottawa is also paid completely by the Corporation.

I would like to comment in detail on ASTRAGAL'S incorrect remarks in respect of the cost of living in Canada being twice what it is in the United Kingdom, but as (to quote one of the planners who sent this clipping to us) "the usual destructive criticism of ASTRAGAL is no doubt known to the membership," I feel no useful purpose would be served.

R. C. MORTIMER.

London.

[ASTRAGAL comments: I am glad to be corrected over this matter and to learn of the Central Mortgage and Housing Corporation's farsightedness. It seems a pity, however, that the advertisement was not more carefully prepared, if, in fact, the conditions offered were not adhered to. That is hardly the way to get the type of applicants one wants.]

"Mansard" Corrugated Sheet

SIR,—We have followed with interest the correspondence arising out of your reviewer's criticism of the use by an aluminium sheet producer of the term "Mansard" applied to a pattern of corrugated sheet having a trough section corrugation in place of the normal half-round.

Mr. Latham in defending his company's use of the term has, we think, fallen into error in assuming that the name "Mansard," as applied to a particular pattern of corrugated sheet, derives from the sectional shape of the roof developed by that architect in the 17th century.

Its origin, we believe, lies in the fact that while the steep slopes of Mansard's roofs were tile-hung, tiles could not be used on the upper slopes owing to their low pitch. These were covered in lead, which was laid on half-round batten rolls. Looked at from immediately below, the junction of the two slopes appeared as the highest point of the roof, and had the familiar "half-round-and-a-flat" pattern, and when the steel sheet rollers first rolled a pattern having a similar

profile they borrowed the name Mansard.

This pattern was well established under the name Mansard when the two aluminium producers who were first in the field with corrugated aluminium sheet in this country started manufacture, and any departure from the generally accepted nomenclature would merely have caused the confusion about which Brian Grant now complains.

H. G. DUNN

London.

[Brian Grant writes: Mr. Dunn's explanation of "Mansard" as a name for "half round and a flat" sheet, whether in aluminium or steel, seems to me both reasonable and logical. Which shape is rightly named and which is wrong, however, seems to me to matter less than the fact that two different sections are now produced with the same name.]



RIBA

Health Buildings Conference

There are still some seats available for the RIBA Conference on the design of health buildings, which will be held on October 21 and 22. The organizers will be greatly helped if members who wish to attend apply for tickets without delay. Tickets cost 10s., and can be obtained from the Secretary, RIBA. Envelopes should be marked "Hospitals Conference" in the top left corner.

USA

Visiting Lectureship

Brian Hackett, of the Department of Town and Country Planning, Durham University, has been invited to serve as Visiting Lecturer to the School of Design, University of North Carolina, USA, for February, 1955.

CUC

Fuel Stores

The Coal Utilisation Council have opened their new drive for more and better fuel stores by issuing a booklet entitled *Fuel Stores for Houses and Flats*. This booklet, which is obtainable from the Council, price 2s. 6d., gives useful data on the bulk of different classes of fuel, and makes specific recommendations for the minimum capacity for stores in different types of dwelling. But the greater part of the booklet is devoted to the working drawings of seventeen different designs for stores, beginning

with the Council's own "basic design" (which is presented together with estimated costs) and passing on to a series of alternative versions using different materials and to suit various characteristic situations. Among these alternative versions are two prepared by the CCA and two prepared by the TDA.

EDINBURGH

Housing and Planning Conference

From September 19 to 25 the International Federation for Housing and Town Planning are holding a conference in Edinburgh, to which delegates are coming from twenty-seven countries. At general sessions Leo Gribler of Columbia University will chair a discussion on slum clearance and rehousing, André Prothin of the French Ministry of Reconstruction will chair a discussion on National Land-Use Planning and Sir Patrick Dollan, chairman of the East Kilbride Development Corporation will conduct a discussion on housing density. The following subjects will be discussed by study groups: 1. Slum Clearance and Rehousing; 2. National Land Use Planning; 3. Housing Density; 4. The Role of the Voluntary Housing Association; 5. Rent and Family Income; 6. Town Planning Education; 7. Problems related to Declining Areas; 8. Hydro-Electricity in Planning; 9. The Basis of Site Selection for Industry; 10. Problems common to the work of City Housing Directors; 11. Problems common to the work of Regional Planning Officers; and 12. Regional Planning for Under-developed Countries.

PRODUCTIVITY

Industrial Engineering Report

The British Productivity Council (formerly the Anglo-American Council on Productivity: UK Section) have just published a report entitled *Industrial Engineering* which records the conclusions of the British specialist team on industrial engineering which visited the USA last year. The report discusses among other matters the use of research, time and motion studies and cost control, and attributes the high productivity of American industry to three factors:

1. The sharp and urgent competitiveness of the US economy.
2. The ever-present cost-consciousness among all ranks in industry and commerce and the rapid marshalling of cost figures.
3. The concerted application of modern managerial techniques by the industrial engineer.

The report concludes by discussing the relatively new concept of the industrial engineer as the man whose business it is to co-ordinate scientists, technologists and administrators—and discusses the kind of training he should undergo. Though the report is marginal to the practice of architecture as now understood, it is a useful document for architects to read as it describes factors which become increasingly pertinent as building becomes more fully industrialized.

AA

Evening Design Classes

The Council of the AA again wish to offer facilities for evening classes in Design to architectural students who have passed the

RIBA Intermediate Examination, and who are not attending at any School of Architecture. The classes are not intended as a preparation for the RIBA Finals, but are to provide opportunities for discussion and criticism of students' work. The course will be staffed on an honorary basis. No charge will be made for tuition, but students will be required to pay a termly registration fee of 10s. 6d. All students who might be interested are asked to write to the Principal's Administrative Assistant, 34/36, Bedford Square, London, W.C.1.

R. F. JORDAN

Architectural Lectures

Series of six architectural lectures by Robert Furneaux Jordan to be given at Crosby Hall, Cheyne Walk, Chelsea. Organized by the Chelsea Society in conjunction with the Extra Mural Department of London University. The lectures are open to anyone on payment of 2s. per lecture or 9s. for the course of six. Tickets can be obtained at the door or from the Hon. Secretary, The Chelsea Society, 8, King Street, St. James's, S.W.1. They take place at 8.15 p.m. Thursday, October 28, *Romanticism, the Picturesque and the Gothic Revival*; Thursday, November 4, *The Railway Age*; Thursday, November 11, *The Crystal Palace*; Tuesday, November 16, *William Morris and the Pre-Raphaelites*; Thursday, November 25, *Pioneers of the Modern Movement*; Thursday, December 2, *Today and the Future*.

RSI

Sir Hugh Casson to Preside

The Royal Sanitary Institute announces that Sir Hugh Casson has accepted an invitation to preside over the Housing and Town Planning Section of its annual Health Congress to be held at Bournemouth next April.

BC

Austrian Architects See New Towns

The British Council has arranged a week's programme for a group of 43 Austrian architects and town planning experts who are visiting the UK from September 12 to 19. The object of the visit is to study the administration and industrial development of housing estates and new towns and they will visit the LCC Lansbury estate and the new towns of Crawley, Harlow and Hatfield.

They will meet members of the RIBA, the TPI and the TCPA. The group is led by Dr. Fritz Kastner of the Austrian Institute for Country Planning and includes architects and town planning experts from Vienna and other Austrian cities. The cost of the visit is being met from Austria.

DIARY

Kidbrooke School. Exhibition of plans, photographs and furniture of the L.C.C.'s first comprehensive school, at the BC, Store Street, W.C.1. 9.30 a.m. to 5 p.m. 9.30 to 1 p.m. Saturdays. UNTIL SEPTEMBER 30

Conference on the Design of Health Buildings. At the RIBA, 66, Portland Place, W.1. Tickets 10s. each.

OCTOBER 21 TO 22

SECONDARY SCHOOL

at HUNSTANTON, NORFOLK

for the Norfolk Education Committee

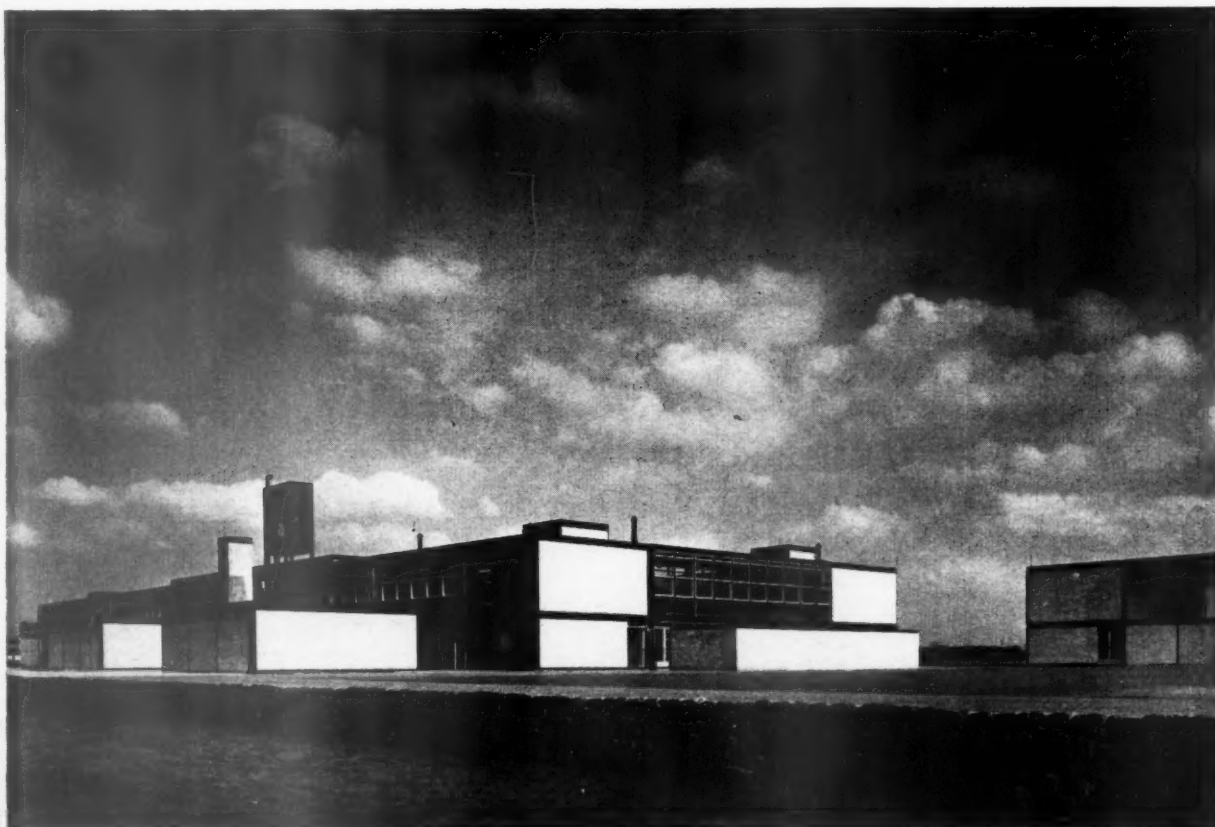
designed by ALISON and PETER SMITHSON

consulting engineers, OVE ARUP and PARTNERS

partner-in-charge, R. S. JENKINS

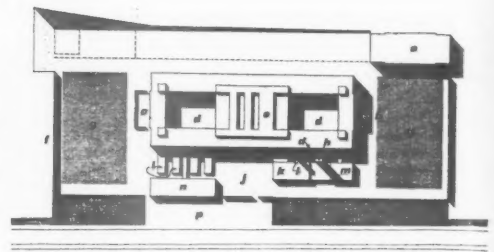
This three-form entry secondary modern school forms part of the 1950 MOE building programme, and was won in open competition in the summer of that year. The assessor for the competition was Denis Clarke Hall. The school, which forms the subject of the leading article on page 335 of this issue, was also discussed in the JOURNAL for September 10, 1953, when the architects and consulting engineers answered questions on planning and construction put to them by the Editors of the JOURNAL. This discussion was illustrated by a number of progress photographs.

The school and separate gymnasium block from the north-west.



SITE.—The site, which is of 22 acres and rectangular in shape, lies just outside the town of Hunstanton, which is a seaside resort built mainly in early Victorian times. To the west is the main Hunstanton-Kings Lynn road and there is a secondary road on the north boundary. Although there are no existing trees on the site itself, it is surrounded by hedges and a few small trees. The ground slopes

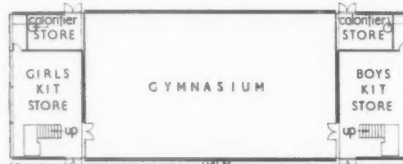
Key
 a, gymnasium and changing rooms.
 b, caretaker's garden.
 c, school garden.
 d, green court.
 e, main block.
 f, 7 ft. high wall.
 g, pitch.
 h, water tower.
 i, cycle sheds.
 j, forecourt.
 k, kitchen.
 l, chimney.
 m, adult housecraft.
 n, workshops.
 o, ha-ha revetment.
 p, car park.



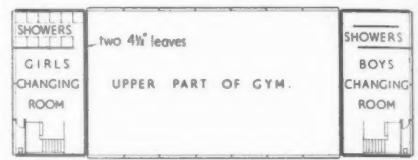
Site plan

SECONDARY SCHOOL

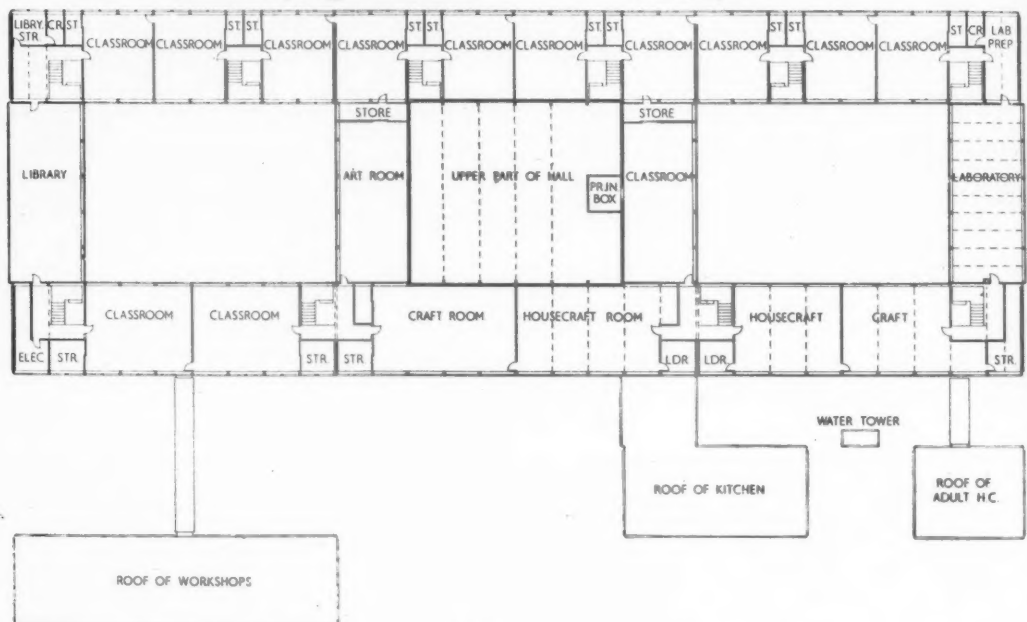
at HUNSTANTON, NORFOLK
 designed by ALISON
 and PETER SMITHSON



Ground floor plan gymnasium block



First floor plan



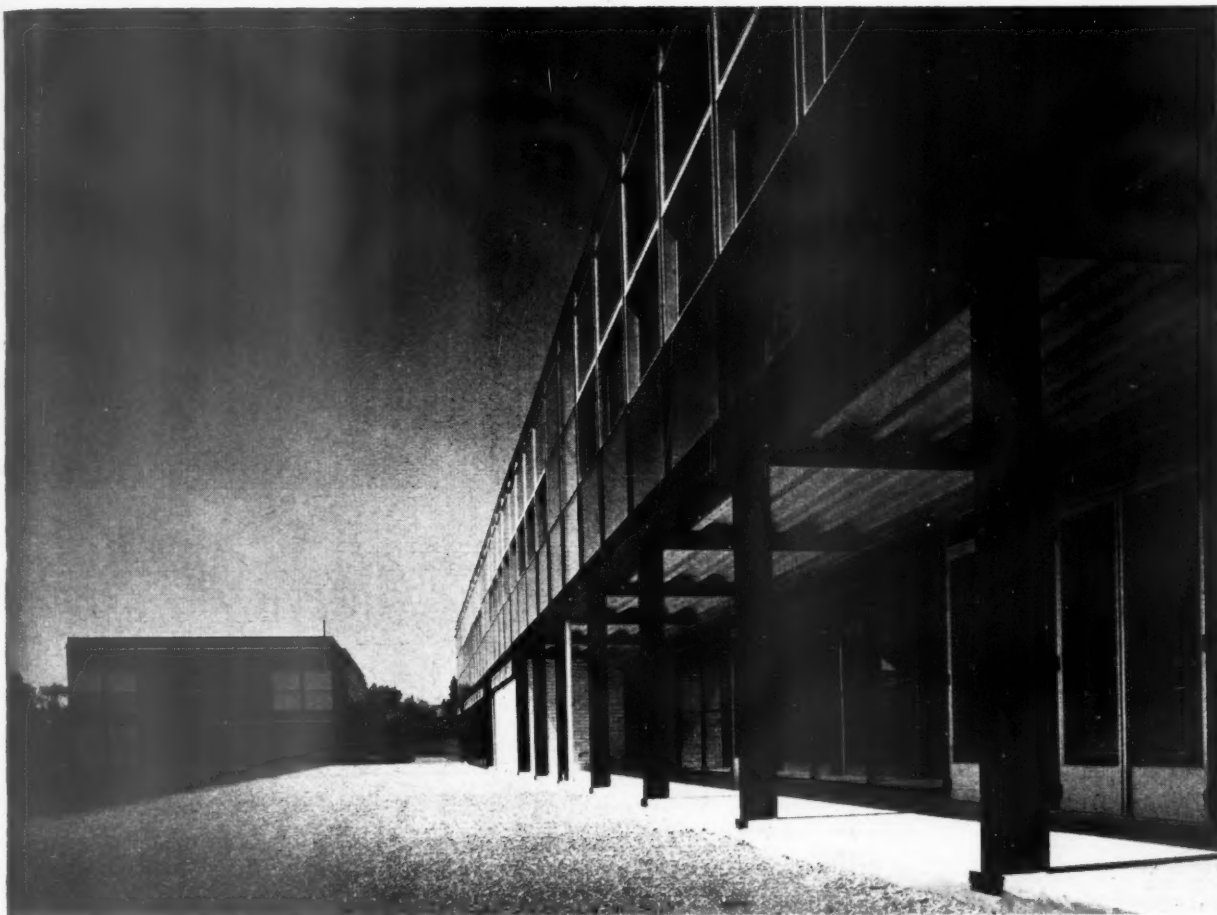
First floor plan



Ground floor plan of main block. The boilerhouse is below the kitchen. The caretaker's flat is in the centre of the west block

[Scale: 1/4" = 1' 0"]

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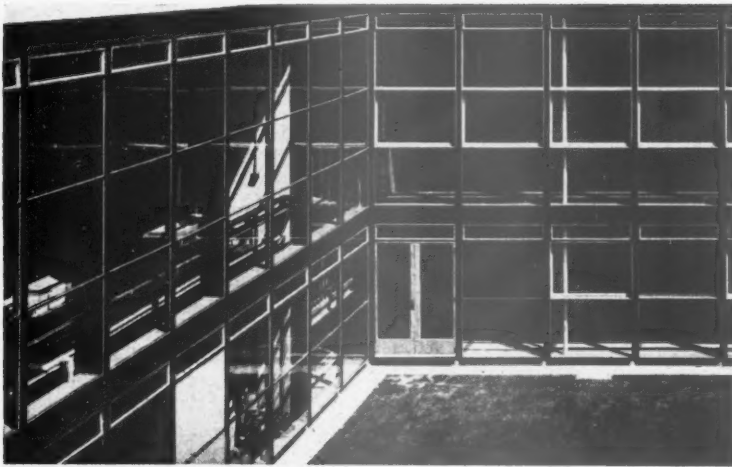


Above, the south facade of the main block and, on the left, the east facade of the gymnasium block. On the right are the doors to the main south exit. Below, a general view of the south and east facades.

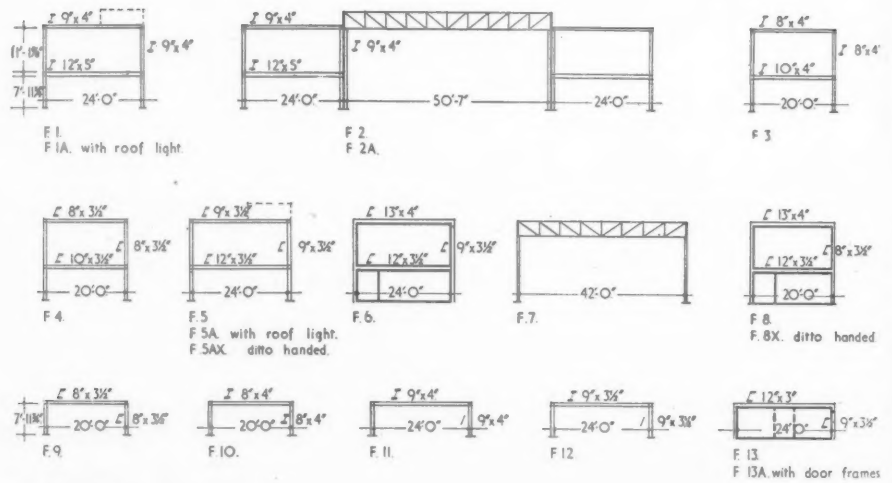
down about 1 in 260 west to east in the building area and about 1 in 330-400 from north to south. There is a pleasant view of rural landscape to the south. The buildings, with their surrounding paths and area, are raised on a level podium measuring approximately 600 ft. by 240 ft., starting at ground level on the west side and finishing 2 ft. 3 in. above existing ground level on the east side. On the south side is a bank at a slope of 1 in 10 and along the north side there is a ha-ha, except at the entrance and car park. The site is 107 ft. above sea level with a subsoil of chalk and no ground water was encountered. The construction of the podium involved considerable filling and hardcore was brought to the site for the purpose, although some chalk from the boiler house and duct excavations and from the ha-ha revetment, was used.

PLAN.—The total area inside walls, excluding the adult housecraft room and the caretaker's flat, which is at the west end of the main block, is 45,748 sq. ft. The school is designed for 510 pupils, which provides 89.7 sq. ft. per place and 61.25 per cent. of the total area is occupied by the teaching area. The main block, which is a rectangle about 290 ft. by 103 ft., encloses two open courtyards, each 72 ft. by 52 ft. and contains all the accommodation except the gymnasium and changing rooms, the wood and metal workshops, the kitchen, adult housecraft room and boiler house. In the main block all the teaching rooms are on the upper floor, which is 11 ft. high and all the circulation, administration and services are on the lower floor, which is 7 ft. 8 in. high. Access to classrooms is by staircases which serve pairs of rooms, or groups of three.

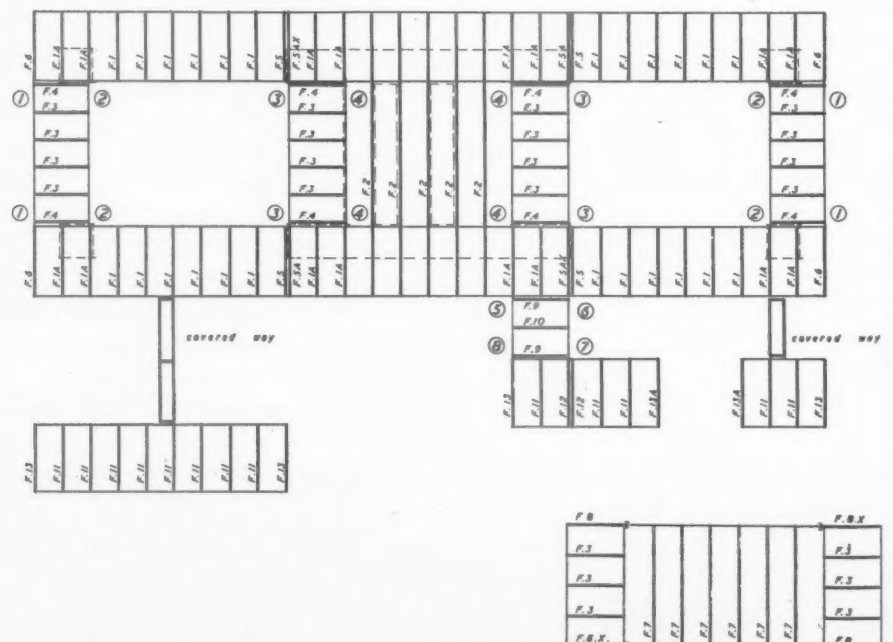




Above, the north-west corner of the east open courtyard. Above right, a typical site welded facing frame being hoisted into position for fixing to the main frames, on October 31, 1952.



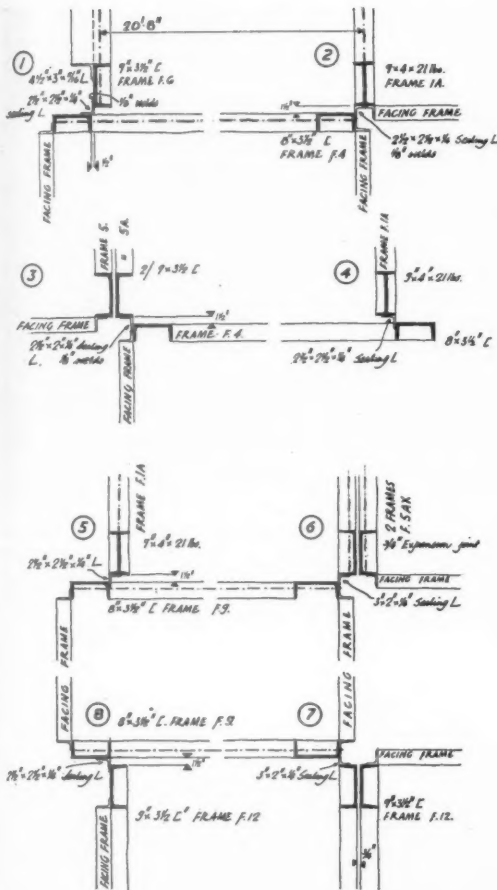
Sections of structural frames



Plan showing layout of structural frames. Numbers refer to details on opposite page

SECONDARY SCHOOL

at HUNSTANTON, NORFOLK
designed by ALISON
and PETER SMITHSON



The assembly hall, which takes the form of a third courtyard, roofed in, is the core of the school and is surrounded by the dining area, entrance hall and green rooms.

CONSTRUCTION.—The structural framework was fabricated by welding the beams and stanchions of rolled steel section into frames on the site. In order that all the welding could be carried out down hand (because the best welding is obtained by working from top to bottom in the vertical plane), a jig was specially designed for the job to allow each frame to be turned upside down. The completed frame was then picked up by a caterpillar crane, carried to its position on the site slab, which consists of 4 in. of concrete, on building paper and hardcore, and bolted down. Frames were then held steady with temporary ties and bracing until angle ties could be welded on at eaves and floor level. Apart from the assembly hall and gymnasium, the building is constructed of two-storey frames of 20 ft. or 24 ft. span at 10 ft. 4 in. centres. Facing frames built up from 3-in. by 2-in. by 1-in. angles and 3-in. by 3-in. flats in 1-in. plate pressings, were then welded together into full bay width and two-

Left, showing junctions of frames and site-welded sealing angles. Numbers refer to key plan opposite

Below, the adult housecraft room on the left, the tank tower and chimney centre and north facade of main block, left.

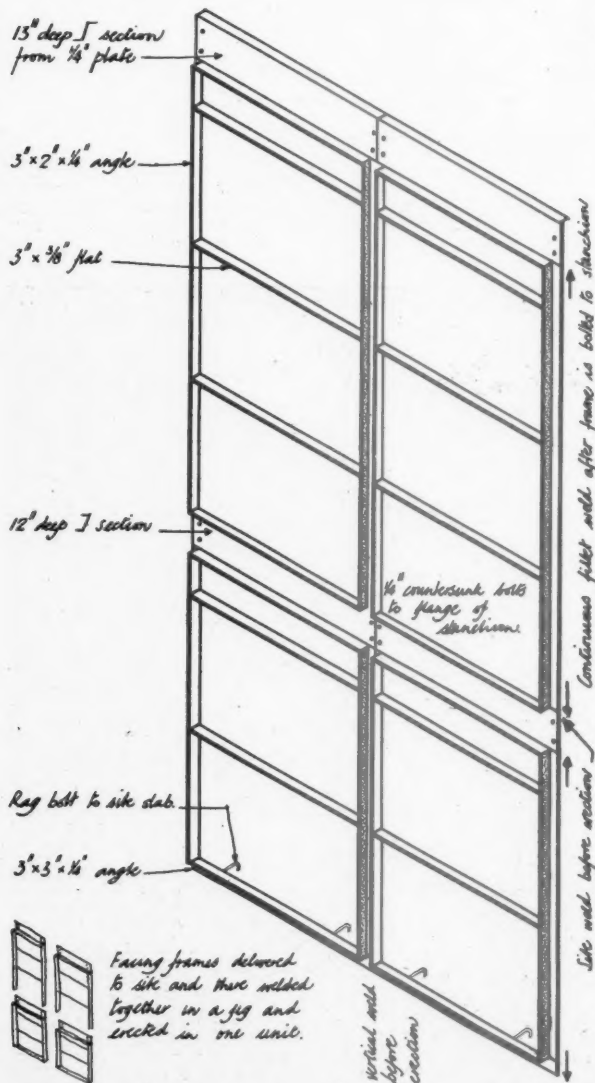
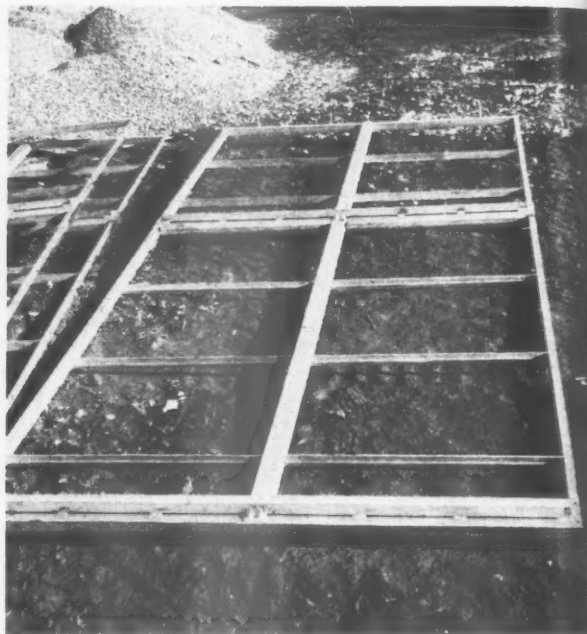




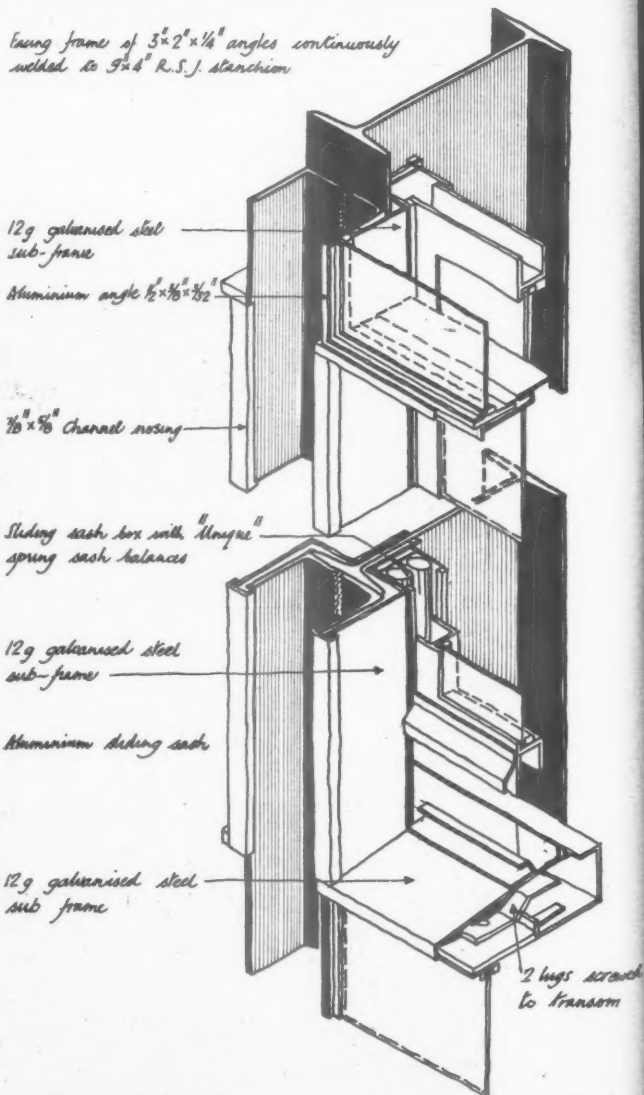
SECONDARY SCHOOL

at HUNSTANTON, NORFOLK
designed by ALISON and
PETER SMITHSON

Above, wall detail in one of the courtyards. The centre pivoted ventilators occur on both floors on each facade. Right, unglazed facing frame after site welding.



Isometric projection of facing frame after site welding [Scale: $\frac{1}{2}" = 1' 0"$]



Detail of vertical sliding window and steel sub-frame bolted to facing frame



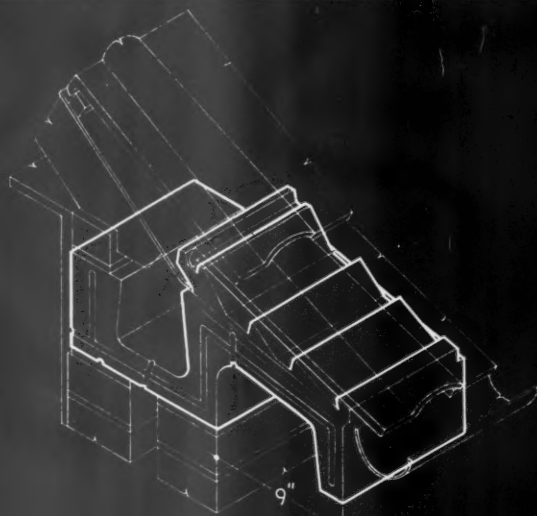
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room

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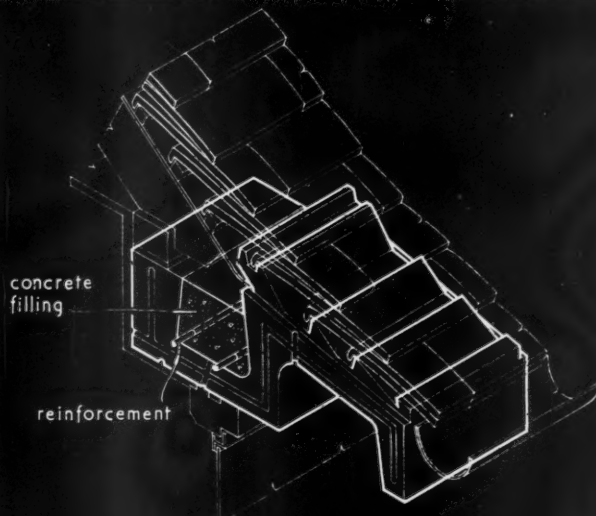
ROOF STRUCTURAL ELEMENTS | CONCRETE

The Architects' Journal Library of Information Sheets 485. Editor: Cotterell Butler, A.R.I.B.A.

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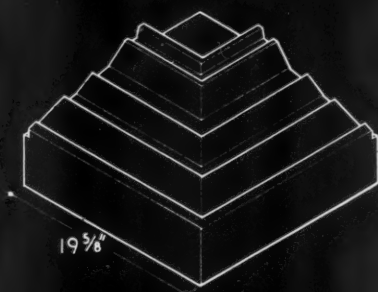
STRAIGHT BLOCK FIXED OVER 12" CAVITY WALL.



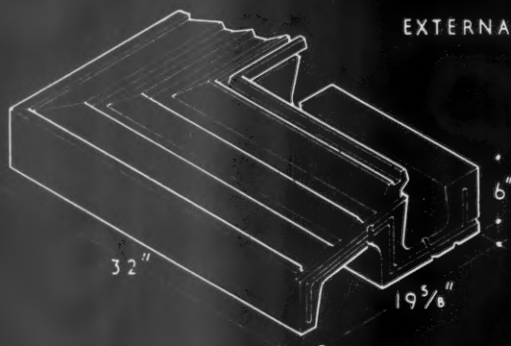
STRAIGHT BLOCK USED AS LINTEL.



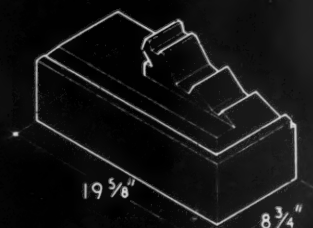
INTERNAL ANGLE.



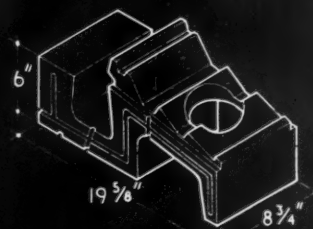
EXTERNAL ANGLE.



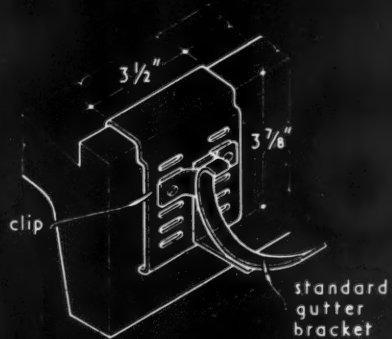
EXTERNAL ANGLE. (lintel type)



GABLE STOPPED END.



SOIL VENT BLOCK.



CLIP FOR GUTTER BRACKET.

20.D1 • FINLOCK • PRECAST CONCRETE SPROCKET BLOCKS

This Sheet describes the Finlock precast concrete sprocket block which provides in a single operation an eaves construction, for use with any type of roof tile, and which at the same time compares in finished appearance with the traditional method. It also enables the eaves to be completely sealed. Sheet 33.U10 describes the Finlock precast concrete gutter, eaves and lintel assembly.

Material

The sprocket blocks are accurately manufactured from waterproofed and compressed fine concrete.

Design

The sprocket blocks have been designed to accommodate all the types of tile in general use, namely, plain tiles, pantiles, 15-in. interlocking and double Roman tiles. When the blocks are jointed together drainage channels are formed between them to take off any water that may penetrate the roof covering. An anti-capillary groove and cavity vent is cast in the side of each block. The trough at the back of the sprocket block may be filled with concrete, suitably reinforced, to form a lintel where required. One of the details at the top of the face of this Sheet shows the straight block fixed in position as a sprocket alone and the other shows it used as a lintel as well. Plain tiles are suggested on one drawing and double Roman on the other to show the possible variations. The lower drawings show some of the fittings available which include stopped ends, internal and external angles and closers, as well as straight blocks provided with holes to take soil vent pipes. Special rustproofed clips are provided at no extra cost (together with nuts, bolts and washers) for fixing any standard type of gutter bracket to the face of the blocks. The clip fits over the front nib of the sprocket block and is locked in position. It has a series of perforations to give vertical adjustment for the fixing of the gutter brackets so that the correct fall may be obtained. Special fittings may be made to suit individual requirements.

Sizes

The straight block is 19½ in. deep by 8½ in. wide, the upstand at the back of the trough being 6 in. high. The sizes of the fittings are given on the face of the Sheet.

Weight

The weight of the standard block is 48 lb. This is approximately 10 lb. more than the weight of brickwork which would normally be required.

Fixing

No special setting-out is required. Blocks to take soil vent pipes are laid in position first. Intermediate blocks are then bedded as closely as possible, closers being used where necessary to avoid cutting. The joints are cut off flush, no pointing being necessary. Where blocks are used on 9-in. walls they will project slightly from the wall face.

Lintels

The blocks are supported over openings on temporary hangers and supports, until the in-situ concrete has set. Lintel sets for this purpose may be obtained on hire from the manufacturer. For spans of up to 6 ft. 6 in. two ½-in. reinforcing rods are sufficient; for greater spans the reinforcement must be increased accordingly. The concrete should be run for a distance of at least one foot on either side of the opening.

Orders

It is only necessary when ordering to send a dimensioned plan; the manufacturer will calculate the number of blocks and fittings required.

Patents

Manufactured under Snazell Patents 21231/48, 5770/49, 32527/49 and Provisional Patent 12212/54; Registered Designs 861112/4, 854745/6.

Further Information

The manufacturer maintains a Technical Department and an outside staff who will visit sites and are available to answer questions and advise generally on technical problems dealing with the use of the sprocket blocks. Delivery to the site is carried out by the manufacturer.

Compiled from information supplied by :

Finlock Gutters, Ltd.

Address : Finlock House, 25 Frant Road, Tunbridge Wells, Kent.

Telephone : Tunbridge Wells 3396.

Works : Belfast, Crewkerne, Cwmbran, Leeds, Musselburgh, Royston, Southborough, Wakefield.

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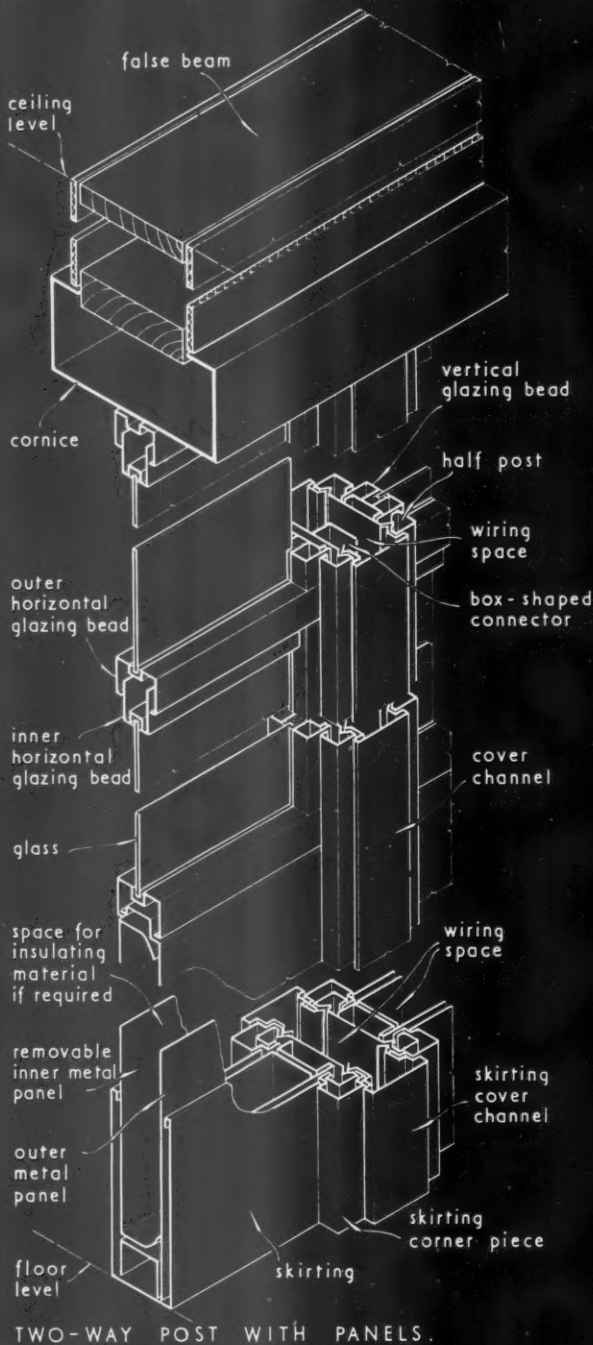
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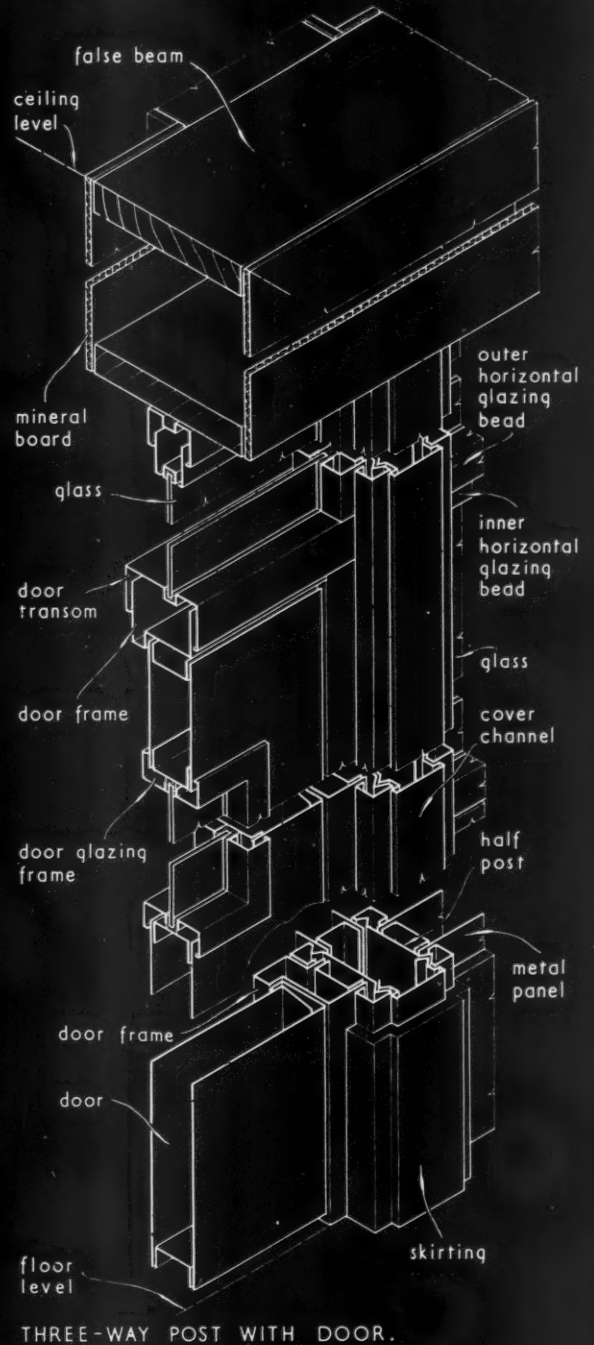
PARTITIONS | METAL

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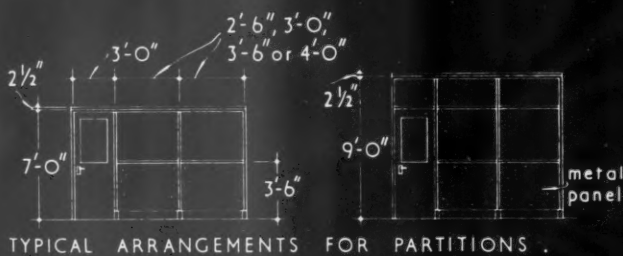
21.C1
21.C1



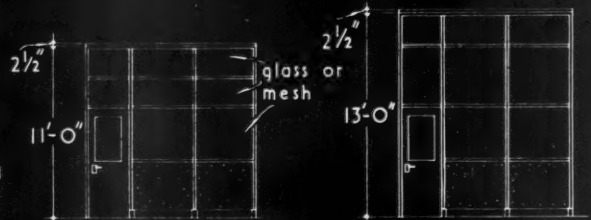
TWO-WAY POST WITH PANELS.



THREE-WAY POST WITH DOOR.



TYPICAL ARRANGEMENTS FOR PARTITIONS.



21.C1 MOVABLE METAL PARTITIONS FOR OFFICES (Patent No. 654,508)

This Sheet is the first of a series dealing with Constructors Movable Metal Partitions, and describes those for use in offices (patent no. 654,508).

General

The use of metal for partitions makes possible simplicity and standardisation of design and a saving in space. Fire risk is virtually eliminated, depreciation is negligible, and resistance to damp, rot and vermin makes this form of partitioning permanently satisfactory under almost any conditions. In addition, panel units are interchangeable and can be re-used whenever alterations to office layouts are required.

Material

These partitions are available in steel, or steel with aluminium panels.

Construction

Each unit consists of a bottom panel fitted with two half-posts. The panel is formed from two sheets of metal with sound-deadening material between. The upper part of the unit is provided with the appropriate framing to take glazing, welded mesh or a solid panel. An acid- and alkali-resisting skirting is supplied to protect the partition from floor-cleaning liquids.

Doors: Door units 3 ft. 0 in. wide are available, interchangeable with panel units of the same width. The door is flush on both sides, 1½ in. thick and hung on 4-in. steel butt hinges. The upper part of the door is prepared for glazing by means of spring-on glazing beads. Each door is supplied with lever furniture, back plate and lever mortice lock (the locks are in series of 50). The rebated floating frame is adjustable to suit differing thicknesses of floor covering.

The panel and door units are connected by patent connector boxes and finished with clip-on metal covers and skirting sections. A cornice section can be provided for all partitions but is only essential, to ensure alignment and stability, if they are not ceiling height.

Sizes

Panel units are made in standard widths of 2 ft. 6 in. to 4 ft. 0 in. in 6-in. increments. Filler panels are used against walls where necessary to make up uneven

lengths. Heights of posts are 7 ft. 0 in., 9 ft. 0 in., 11 ft. 0 in., and 13 ft. 0 in. Doors are 3 ft. 0 in. and 5 ft. 0 in. wide by 7 ft. 0 in. high.

Electrical Services

Electrical wiring for power, light and services may be run through hollow posts, cornices, etc., and flush-fitting switches and plugs can be mounted in the hollow post covers or double panelling. Provision is also made for Panelec low-temperature space-heating panels to be fitted in the double lower panels.

Installation

Unless otherwise specified, all partitions are delivered ready for erection by the manufacturer on the prepared site. The partitions are screwed to the floor and walls by means of screws and plugs and lateral stability is obtained by the rigid cornice top. Where it is required to enclose completely the space between the top of the partition and the ceiling, a false beam in mineral board may be provided above the cornice.

Finish

All partitions are normally finished in standard olive green, or grey, enamel. Other colours may be supplied, if required, selected from a range of nine, as follows: eau de nil, polychromatic near-black, blush grey, polychromatic light grey, dove grey, aluminium, deep bronze green, turquoise blue, and pale cream.

Accessories

A full range of accessories e.g., ventilators, hinged and sliding hatches, roofs, pivoted transoms, picture hooks, nameplates, etc., are made for use with the partitions to cater for all requirements.

Compiled from information supplied by:

Constructors Ltd.

Head Office and Works: Tyburn Road, Birmingham 24.

Telephone: Erdington 1616

London Office: 98, Park Lane, London, W.1.

Telephone: Mayfair 3074.

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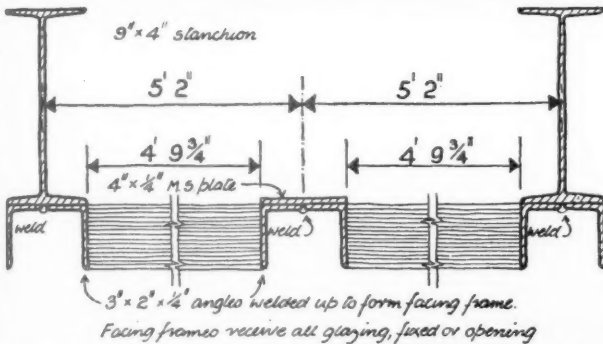
SECONDARY SCHOOL

at HUNSTANTON, NORFOLK

designed by ALISON and

PETER SMITHSON

storey height on the site, and applied to the main frames at right angles. The facing frames were first bolted with counter-sunk bolts to the outer flanges of the stanchions at eaves, first and ground floor levels and by four cranked crag bolts to the site slab. The fixing was then completed by vertical fillet welded to the outer flange of the stanchions. These facing frames act as lateral bracing to the structural frames and also as window frames and transoms. Where the structural frame changes direction, two stanchions are used at the internal corners and these stanchions are joined together and sealed by an angle welded to both. There are two expansion joints in the length of the main block and these are filled with two pieces of $\frac{3}{4}$ -in. thick impregnated cane fibreboard and finished on the outside with a sealing compound. The external walls are mostly glazed, but some have panels of yellow gault bricks consisting of two $4\frac{1}{2}$ -in. skins, with the outer face of the inner skin painted with two coats of thick bitumen paint. Where this brickwork abuts steelwork, wire reinforcement is



Plan of facing frame welded to stanchions

Above, general purpose room west of the assembly hall and extreme right, cat ladder approach to projector room. Below, laboratory at the west end of main block.



SECONDARY SCHOOL

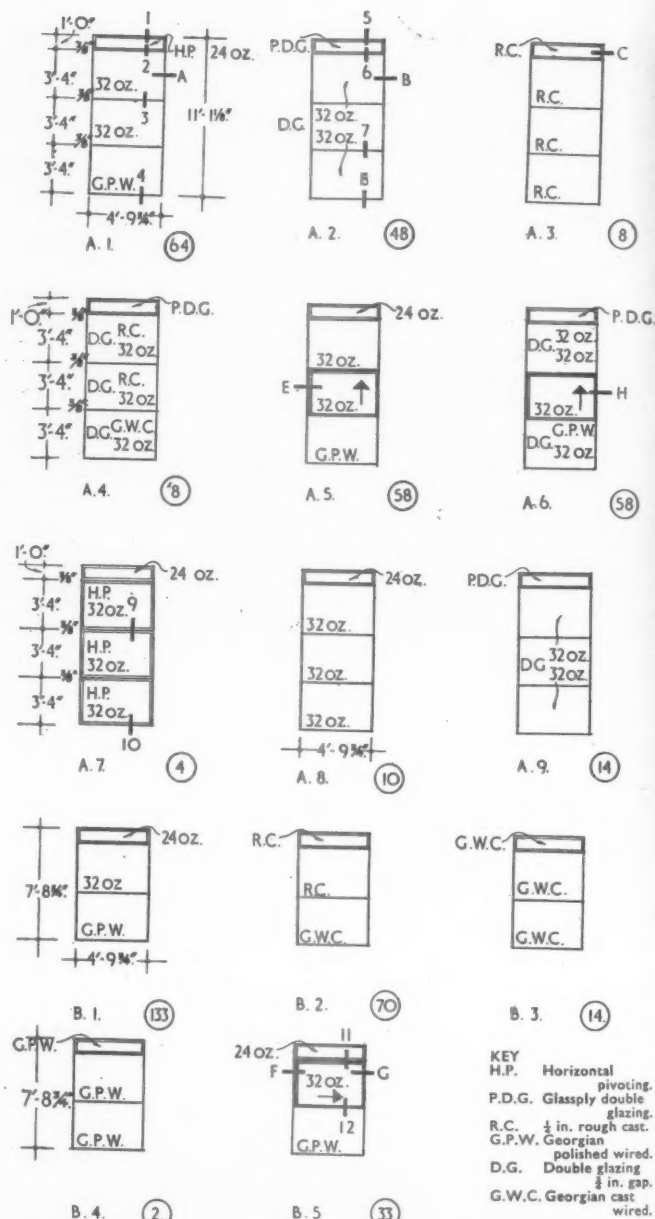
at HUNSTANTON, NORFOLK

designed by ALISON and

PETER SMITHSON

used and is fixed to the steel with bolts and washers fired from a rapid-hammer gun. Where brickwork was cut round steel members, to form a flush face, a small circular-saw bench with an $\frac{1}{8}$ -in. carborundum cutting wheel was used. This method was used where a 9-in. brick wall abuts a 9-in. deep I-section steel stanchion and it was necessary to tuck in the brickwork for weatherproofing. In certain places, mainly on return walls at ground floor entrances, a $4\frac{1}{2}$ -in. brick wall is used, consisting of two thicknesses of 2-in. gault bricks with thick bitumen paint between. These 2-in. bricks were made specially for the job by cutting normal bricks with a wire before they entered the kiln. Due to having less body than a standard brick the sides of the 2-in. bricks become slightly concave after firing, but it has been found that this is not noticeable after they have been built into a wall. The gault bricks were found to be very porous and a 9-in. garden wall built with 1 : 2 : 9 cement-lime-sand mortar cracked badly when subjected to the local weather conditions. The garden wall was rebuilt using 1 : 2 lime mortar, and when this proved satisfactory it was used for the brick external panel walls in the school. The internal walls are built of $4\frac{1}{2}$ -in. fair-faced gault brickwork with 1 : 2 : 9 cement-sand-lime mortar, with two leaves each of $4\frac{1}{2}$ -in. being used at expansion joints. Floors are constructed of prestressed concrete beams, 16 in. wide, seated on cleats welded to the steel beams. They are 4-in. deep, of an inverted trough section and covered with a $\frac{1}{4}$ -in. layer of insulation where required. On this are laid the panel heating coils and the whole is then screeded over. At floor and eaves level, behind the facing frames, in-situ concrete beams were cast, continuity being obtained at the stanchions by passing bars through holes in the web. Roofs are constructed of the same concrete beams as the floors.

Right, south facade of the metalwork and
woodwork rooms and cycle stores on the
left.



Glazing assemblies used within facing frames. Numbers in circles refer to the quantities used



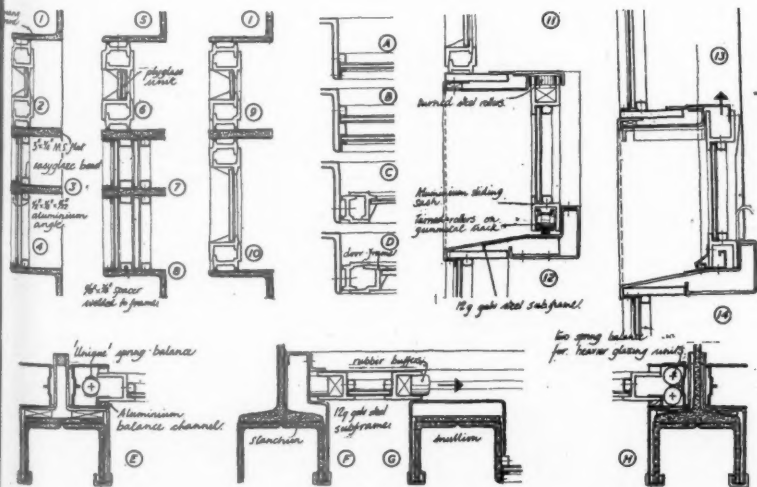
Above, the
centre of the
right is the



Above, the assembly hall in the centre of the main block. On the right is the projection room.

FINISHES.—The beams and stanchions were delivered to the site with a coat of aluminium paint. After being welded together they were retouched with aluminium paint, then after erection, a coat of red lead primer was applied overall followed by an undercoat of standard black bitumen paint. After all fixing was completed, a final coat of bitumen paint was added inside and out. The facing frames welded to the main frames are glazed directly, without sub-frames. On the south and west walls single glazing is used and on the north and east walls

double glazing. Up to 3 ft. 4 in. above floor level $\frac{3}{4}$ -in. wired glass is used and a 12-in. deep horizontally pivoted ventilator is used continuously round the building on both floors. Specially designed vertically and horizontally sliding windows are also used. Roofs are finished with 3 in. of insulation screed and 3-layer bituminous felt with fine white chippings. Floor finishes are $\frac{3}{16}$ -in. thermoplastic tiles in classrooms, science laboratories and wood workshops; a similar finish, but greaseproof, in housecraft rooms; 20-mm. terrazzo tiles laid on sand in circulation areas and kitchen; 4-in. by 1-in. gurjun strips laid on impregnated dovetailed timber battens on the site concrete, with a waterproof membrane and held in place by a $\frac{3}{4}$ -in. screed in the main hall and the gymnasium (where beech was used instead of gurjun); linoleum in staff rooms and granolithic in metal workshops.



Detail sections and plans of facing frame glazing. Letters and numbers refer to key elevations opposite.



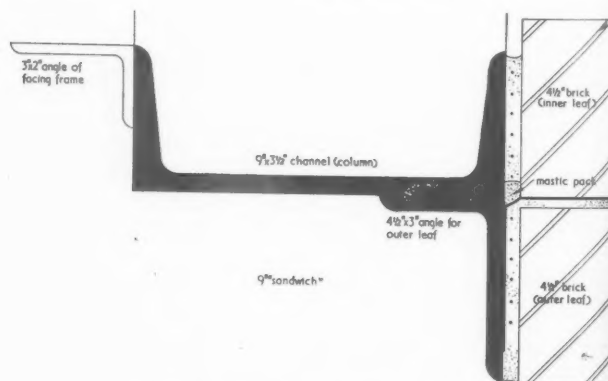
SECONDARY SCHOOL

at HUNSTANTON, NORFOLK

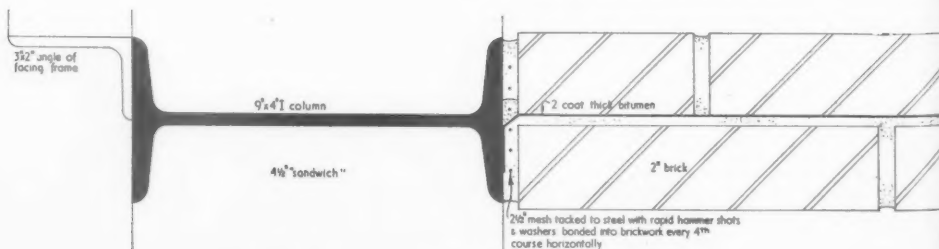
designed by ALISON and PETER SMITHSON

SERVICES.—The main services run in a reinforced concrete duct under the floor with corrugated iron used as permanent shuttering for the slab over. The space heating of the school is from a low pressure, accelerated hot water system served by boilers with automatic mechanical stokers and intended to burn on bituminous coal. The first floor classrooms are heated by embedded copper pipe floor panels which also supply some heat to the rooms on the ground floor, though the amount is reduced by floor insulation so as not to be uncomfortable. In

Above, the gymnasium block on the left and the main teaching block on the right from the south-west.



Detail plan of 9-in. external panel wall with bitumen layer between brick leaves

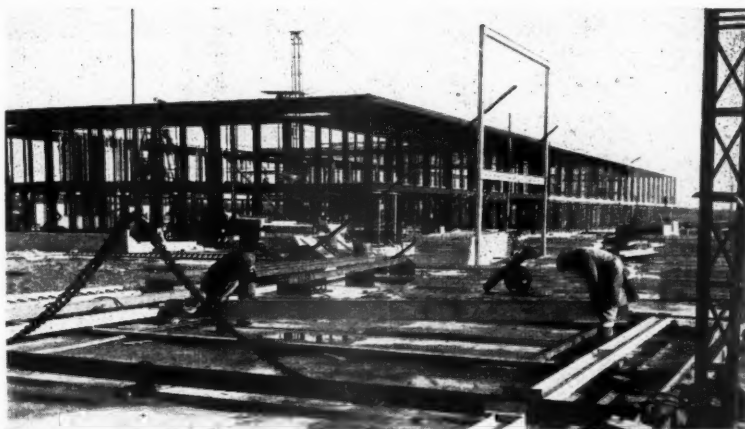
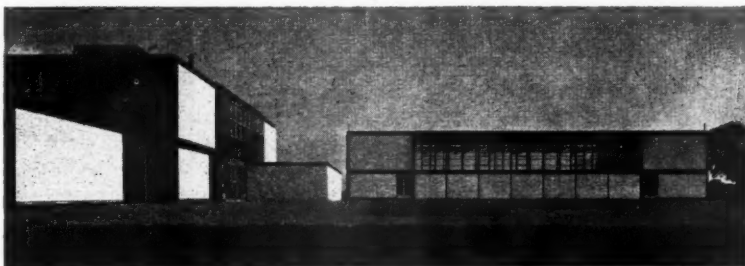


Detail plan of 4 1/2-in. brick "sandwich" wall [Scale: 3" = 1' 0"]

the gymnasium, workshops, kitchen and adult housecraft rooms where there is no heat from ceilings, convector heaters and pipe coils are also used. The pipe circuit supplying the pipe coils and convectors is a high temperature circuit with a maximum boiler flow temperature of 180 deg. F. and also supplies the local hot water storage calorifiers. The circuit supplying the embedded floor panels has a maximum flow of water temperature of 120 deg. F. to give a maximum floor temperature of 80 deg. F. The heat input to this circuit is controlled by a regulator affected by outdoor and indoor conditions. The high temperature circuit is controlled by the boiler temperature thermostat and the convectors are fitted with dampers, so that they can be controlled manually. The floor panels are formed from $\frac{1}{4}$ -in. bore copper tube. Economy in pipework was considered and cut lengths greater than 15 ft. were used up. The joints are capillary fittings using silver solder. The coils have to penetrate the web of the 24-ft. span R.S.J. and they are insulated at these points against electrolytic action by a split taper plug. After laying, each coil was tested by means of a force pump for half an hour

to a pressure of 400 lb. per sq. in. Each coil was also tested for water flow before and after screeding. In all first floor teaching rooms, except those facing south and those facing east and west with one outside wall only, $1\frac{1}{2}$ -in. pipe coils on the high temperature circuit are fixed at low level under the

Below, the gymnasium block from the north. Centre, progress photograph looking south-east from the site of the gymnasium, showing, centre right, one of the facing frames (see type F3 on page 344) to the two-storey east end of the block. Bottom, interior of the gymnasium.



in the left
the right

10" brick
(inner leaf)

plastic post

10" brick
(inner leaf)

SECONDARY SCHOOL

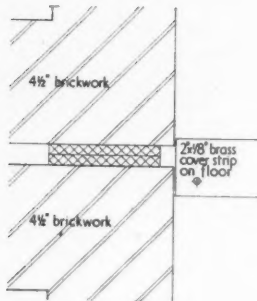
at HUNSTANTON,
NORFOLK

designed by ALISON
and PETER SMITHSON

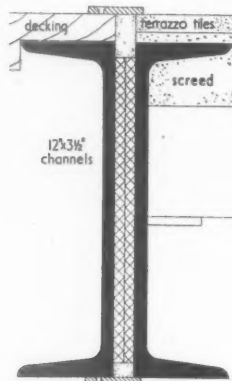
windows to supplement floor panels. Four forced flow convectors are used in both the main hall and the gymnasium. A time switch is used to change over to a night setting of approximately 50 per cent. of the day load and this is also operated at week-ends. There are also manually-operated valves to prolong either the day or night settings. There is approxi-

mately 1,800 gallons in the cold water storage tower. The cost per place at the time of letting the contract was £258, but the final cost due to increases in the cost of labour and materials was approximately £290 per place.

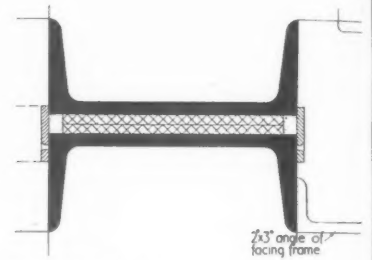
The general contractors were F. W. Shanks, Ltd. For sub-contractors see page 360.



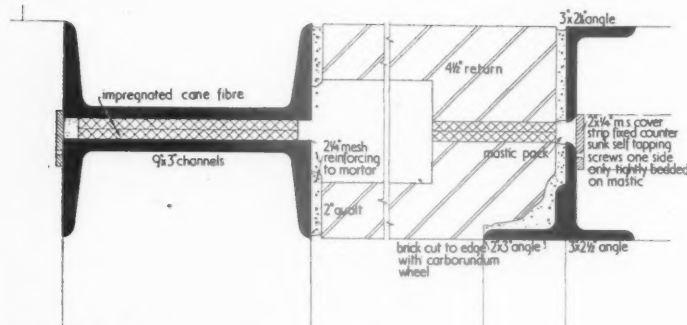
Detail F



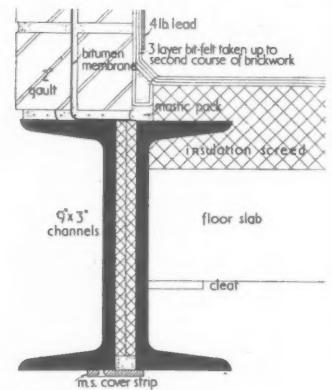
Detail, section at R



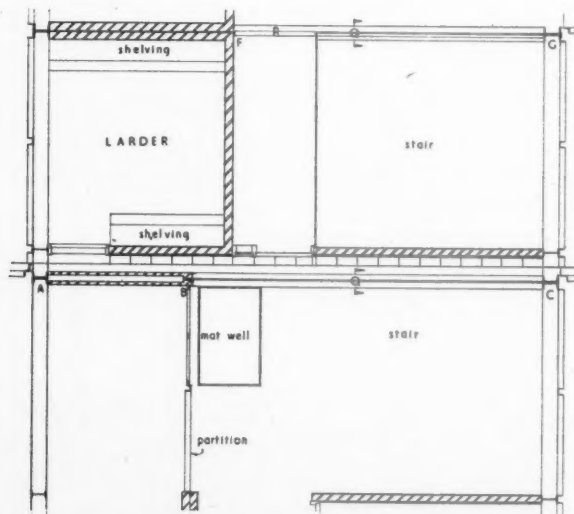
Details C and G



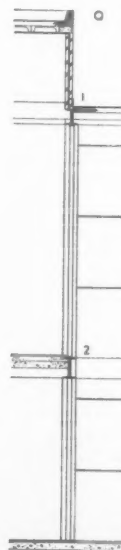
Details of expansion joints. Details A and B [Scale: 2" = 1' 0"]



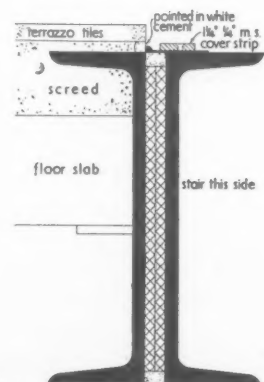
Detail Q 1



Key plan, ground floor, and immediately above, first floor plan showing position of expansion joints detailed on this page. [Scale: 1/4" = 1' 0"]
Top right is the north-east corner of the west courtyard



Section Q



Detail Q 2

TECHNICAL SECTION

FASS have issued a new form of direct contract designed for use where a contract for work is placed by a building owner directly with a specialist firm. As the Federation point out, the various current forms of contract assume the presence of a general contractor and therefore are not suitable in the many cases which arise—as, for instance, where a new heating system is being installed in an old building—where there is none. One difficult point which arises in connection with the new form is that, since so many different kinds of person may be supervising the work, the drafters of the form have found it convenient to refer only to “the employer” and to describe him to “include any person for the time being appointed by the Employer to act as his duly authorized agent for the purpose of the Contract.” Architects may feel that this description takes insufficient account of their special status, but—remembering always that the form will be chiefly used in connection with engineering services—it is difficult to see that FASS could have found a manageable alternative.

This week's
special article

8 SURVEYING AND SPECIFICATION cost analysis

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.

It is now more than three years since the MOE published their Building Bulletin No. 4 entitled “Cost Study.” This week C. M. Nott, A.R.I.C.S., a Quantity Surveyor working for a County Council, discusses the value of the proposals put forward in that Bulletin and their practical effect on the work in his office. Among other points he suggests a new layout for Bills of Quantities and that it may require the architect to work out a corresponding change in his drawings and specification.

The objectives of the cost study outlined in the Ministry of Education Building Bulletin No. 4 have two main aspects: firstly, the “cost analysis” of existing data, and secondly, “cost planning” for future projects.

At the time this Bulletin was written “cost analysis” meant the examination of the priced bills of quantities in

their current form under the various trade headings, and then their analysis by abstracting the cost of items or groups of items to the appropriate “elements.”

When it is necessary to build within a limited cost, as in the case of schools, some method of cost control during the design stage must be exer-

cised and "cost planning" is a suggestion intended to meet the requirement.

Before cost planning can be exercised effectively, it is necessary to build up a small library of cost information by means of cost analysis. It is, perhaps, worth noting that a large volume of information is not required. A few jobs carefully analysed together with concise specifications is all that is needed.

Our Local Government Architects' Dept., who considered cost planning as essential to their work, required cost information at short notice, and the Quantity Surveyors' Section, whose task this was, enlisted the aid of a number of quantity surveyors in private practice and in the Ministry of Education in analysing bills of quantities for new schools. While doing this it occurred to them that the operation of analysing normal bills of quantities in reverse could be eliminated if the bills of quantities were to be set out initially under constituent elements and not trade by trade. At tender stage bills so divided into separately priced sections for each element, such as walls, roof, etc., provide a cost analysis ready made. The team of client, architect and surveyor now not only have another set of cost planning information for future works, but also pricing information immediately available for closer control of the cost of the various stages of construction during the progress of the actual works; while the builder has a priced bill which he can readily refer to his actual costs of operations, and one that will assist him in planning the ordering of materials and the programming of his works.

MODIFICATION OF THE LIST OF HEADINGS

Some thirty headings are suggested in Bulletin No. 4 for the analysis of school costs, but for certain forms of construction this would appear to be excessive. For example, it is considered to be more useful to dispense with the element of decorations and apportion its cost to the elements such as external walls, fittings, etc., on which they occur. In this way the effect on cost of the material to which the decorations are to be applied may be seen, and the advantages of a self-finished material can be properly compared with others requiring finishing treatment.

For a prefabricated system of school building, the following headings for the sections of bills of quantities are now used:—

1. Preliminaries.
2. Foundations, site slab, slate sills and D.P.Cs.
3. Drainage.
4. Structural frame.
5. Stairs and steps.
6. Walling, external.

7. Walling, internal.
8. Floor deck.
9. Roof deck and roofing.
10. Rooflights.
11. Ceilings.
12. Floor finishes.
13. Fire equipment and furniture.
14. Plumbing.
15. Electrical.
16. Gas.
17. Heating and hot water.
18. Paved playgrounds.
19. External works.

The scope of each element is covered in a "taking off" check list under simple sub-headings, in the same way as practised by certain offices, particularly for the trade by trade method of taking off.

Here is an example of the sub-division under the heading of:

- "4. Structural frame
- "Frame (excluding infilling members for floors and roofs).
- "Mortices in concrete for holding down bolts.
- "Grouting up under base plates.
- "Stanchion casings.
- "Painting on steelwork."

OFFICE TIME

The new layout of the bills of quantities under elements involves little or no more time in taking off the quantities, and saves a considerable amount of abstracting before preparing the actual bills of quantities.

It has also been possible to employ relatively more of the junior taker-off and working-up class of surveyors who are engaged on some of the more straightforward sections of the taking off, thereby reducing the overall costs of the surveyor's service. This is particularly so with partly prefabricated modular structures used on a programme of buildings all of similar construction, where one can also obtain the advantages of standard details and schedules.

Bills of quantities prepared by elements, in addition to providing a cost analysis ready made, should, after the initial readjustment period, allow bills to be prepared at less cost and in a shorter time than that normally required.

With the sub-division of a bill of quantities into element sections, there may be instances where a particular item could be in either of two sections, but if the office concerned have a system and adhere to it (taking off check lists) then all analyses will be on the same comparative basis. This problem seems to be greatest in dividing works below ground from the superstructure, especially with basement works, but this is also true of taking off a normal

bill of quantities where several takers off are engaged on one project.

THE FUTURE OF ARCHITECTS' DRAWINGS

The new bills of quantities layout undoubtedly has an effect on the future of architects' drawings generally, as it seems logical to arrange the drawings in groups under similar headings to the bills of quantities, with the usual plans, elevations and general arrangement drawings to $\frac{1}{8}$ in. or similar scale, with the specification prepared in a parallel form. It would be advantageous if the drawing (and specification) were devoid of information irrelevant to that section, so that the taker-off can clearly see the extent of the particular work he is measuring. The architects in the office concerned have undertaken to prepare the drawings and specifications in this way for a programme of secondary and primary schools all of a similar construction, and a saving in architects' time is also expected.

CONCLUSIONS

Some of the other advantages and points to be overcome are now dealt with in more detail.

The analysis of elements has been found eminently suitable for comparing costs of factory-made buildings. Most of the firms producing such buildings provide different combinations of elements, e.g., some produce only the shell of a building above foundations, and others provide the whole building except for services, etc. This raises insuperable problems for those wishing to make a comparison of cost using the traditional classification. But using the new system it is a relatively easy matter to compare any proprietary system of construction with any other construction by extracting the appropriate element costs from cost analyses. This allows an architect to make a decision on cost with some considerable assurance.

It has been suggested that bills of quantities prepared by elements increase their size, but experience has shown that the same item only occurs in other elements on few occasions, so duplication of items in the bills will not materially affect the length of the bills or time taken in estimating, particularly if items of the same description are cross referenced in the margin when the bills are prepared. The builder's estimator may then consider whether the level of prices for an item in the two or three elements should be the same after consideration of the totals and the conditions under which the operation is to be carried out, and the quantity surveyor's checking of the tender will be simplified too.

This ensuring of the correct level of pricing of similar items is no greater



Architect: Cecil C. Handisyde, A.R.I.B.A., A.A.Dip.

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task than the estimator or quantity surveyor has to do with normal bills that are sectionalized into various blocks or phases of construction.

There may be some grounds for criticizing the elemental bill as preventing the contractor copying consecutive pages of the bill to send out to his private sub-contractors for pricing. In practice this does not appear to be a serious objection, since a trade tends to be located in one element, and in any case many bills prepared in the

customary method require the contractor to make a thorough examination of the bill before he can send out enquiries to sub-contractors or suppliers.

The certification of interim payments during progress of the works should be extremely clear and simple to make, providing the specialist quotations are obtained in sufficient detail, e.g., steel frame to be split so that infilling members for floors and roofs can be extracted. This again should be borne in

mind in preparing the drawings and the specification.

Variation accounts and the final cost summary will follow the same outline. Here the client may wish to know the cost of a variation embracing many elements, say the extension of some stores, and it may well be that the total would not be immediately available without a small summary being made specially. But insufficient experience is available to assess the merits of variations accounts based on the new layout.

24 LIGHTING

calculation of the indirect daylight component for roof-lights

In the issue of August 5, 1954, R. G. Hopkinson of the Building Research Station, presented a new method for calculating the indirect component of the daylight factor. This presentation, though complete in itself, related only to side-lit buildings. This week, by way of a postscript to the main article, we publish the calculation data for roof-lights together with the instructions on how to use it.

The instruments required for calculating the indirect daylight component for top-lit rooms are four in number: they are the BRS daylight protractors, the table for ascertaining the average reflection factor of the room (Fig. 1), the set of four tables (Figs. 2, 3, 4 and 5) which give the Obstruction Factor (K) for different angles of obstruction for the four most usual types of roof light (i.e., when the glass is vertical, is at 30° to the horizontal, is at 60° to the horizontal, and is horizontal), and lastly the nomogram presented in Fig. 6.

Procedure is as follows:

1. Find the ratio of the window area to the total surface area.
2. Work out the proportion of the wall area to the total surface area of the room.
3. Decide the reflection factor of the walls. If they are dark, (i.e., wood panelled) the factor will be of the order of 10 per cent.; if they are of normal strong modern colours they will be more nearly 30 per cent.
4. Find the average reflection factor

Wall R.F. (per cent.)					
Wall: Total surface		10	30	50	70
	0.3	33	38	43	48
	0.4	30	37	44	51
	0.5	26	36	44	54
	0.6	23	34	45	56
	0.7	20	33	46	59
		Average R.F. (per cent.)			

Fig. 1

Table for ascertaining the average reflection.

Angle of obstruction from centre of window (degrees above horizontal)	K
0° (no obstruction)	37
10°	34
20°	30
30°	26
40°	21
50°	16
60°	12
70°	10
80°	9

FIG. 2

Variation of the function K with angle of obstruction when the nomogram is used for vertically-glazed roof-lights (overcast sky conditions).

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Angle of obstruction from centre of sloping roof-light (degrees above horizontal)	Obstruction opposed to slope of glazing					
Obstruction facing slope of glazing	0°-30°	40°	50°	60°	70°	80°
0°	82	82	81	79	74	69
10°	81	80	80	77	73	67
20°	78	78	77	74	70	64
30°	74	73	72	70	66	60
40°	68	68	67	64	60	54
50°	61	61	60	58	53	48
60°	54	54	53	50	46	40
70°	46	45	45	42	38	32
80°	37	37	36	33	29	23

FIG. 3

Variation of the function K with angles of obstruction when the nomogram is used for roof-lights sloping at 30° to the horizontal.

Angle of obstruction from centre of sloping roof-light (degrees above horizontal)	Obstruction opposed to slope of glazing		
Obstruction facing slope of glazing	0°-60°	70°	80°
0°	70	70	68
10°	65	65	64
20°	59	59	58
30°	52	52	51
40°	44	44	43
50°	36	36	34
60°	28	28	26
70°	21	21	20
80°	16	16	15

FIG. 4

Variation of the function K with angles of obstructions when the nomogram is used for roof-lights sloping at 60° to the horizontal.

of the interior by reference to the table in Fig. 1. This table (which is the same as that reproduced in Fig. 8 of the original article) assumes that the ceiling and floor reflection factors are approximately 70 and 15 per cent, respectively.

- Obtain the K value from one of the tables given in Figs. 2 to 5, according to the angle of the glazing and taking into account the angle of any obstruction there may be.
- Refer to the nomogram in Fig. 6 and run a straight edge between the known reading on scale A (ratio of window area: total surface area) and the known reading on scale B (average reflection factor of the interior) and mark the point where the straight edge crosses scale C.
- Still using the nomogram, run the straight edge from the point just determined on scale C and the known K value on scale D. The reading at the point where the straight edge crosses scale E gives the indirect component. This is an average value which is assumed to apply over the whole room.

The total daylight factor will, as previously described, be equal to the sum of the indirect component as obtained above, and the direct component computed by the aid of the BRS protractors or other direct sky-light device.

Angle of obstruction from centre of horizontal roof-light (degrees above horizontal)	Obstruction on second side of roof-light								
Obstruction on one side of roof-light.	0°	10°	20°	30°	40°	50°	60°	70°	80°
0°	88	87	87	85	82	78	72	65	57
10°	87	87	87	85	82	77	71	64	56
20°	87	87	86	85	82	77	71	64	56
30°	85	85	85	83	80	75	69	62	54
40°	82	82	80	77	72	66	59	51	47
50°	78	77	77	75	72	68	62	54	47
60°	72	71	71	69	66	62	56	48	41
70°	65	64	64	62	59	54	48	41	33
80°	57	56	56	54	51	47	41	33	25

FIG. 5

Variation of the function K with angles of obstruction when the nomogram is used for horizontal roof-lights.

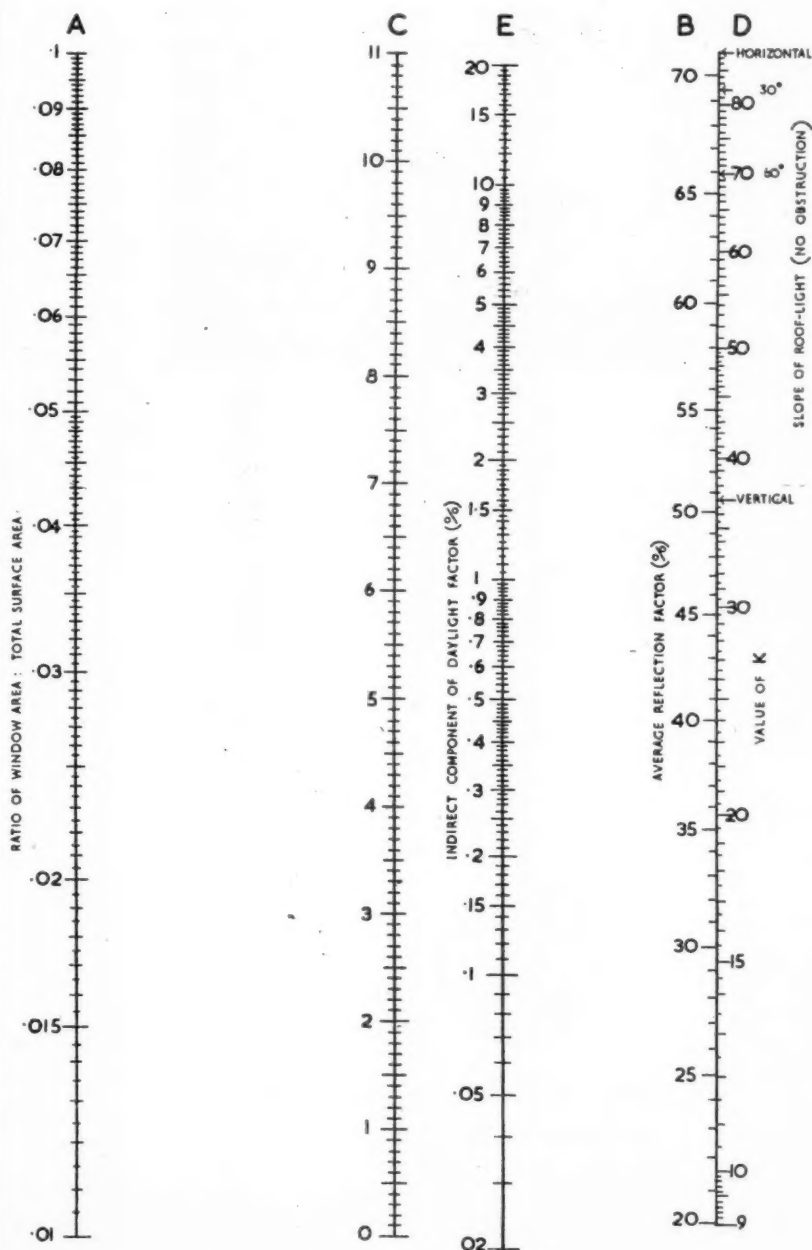


Fig. 6. Nomogram for ascertaining the average indirect component of the daylight factor for roof-lights



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THE INDUSTRY

From the Industry this week Brian Grant reports on a system of wall cladding, a new lighting fitting, precast floor beams, lightweight plaster, some Swedish plastic floor tiles, polythene tubes for cold water services, a corrugated sheet for roof lighting, automatic cooker controls and a wood framed sink unit.



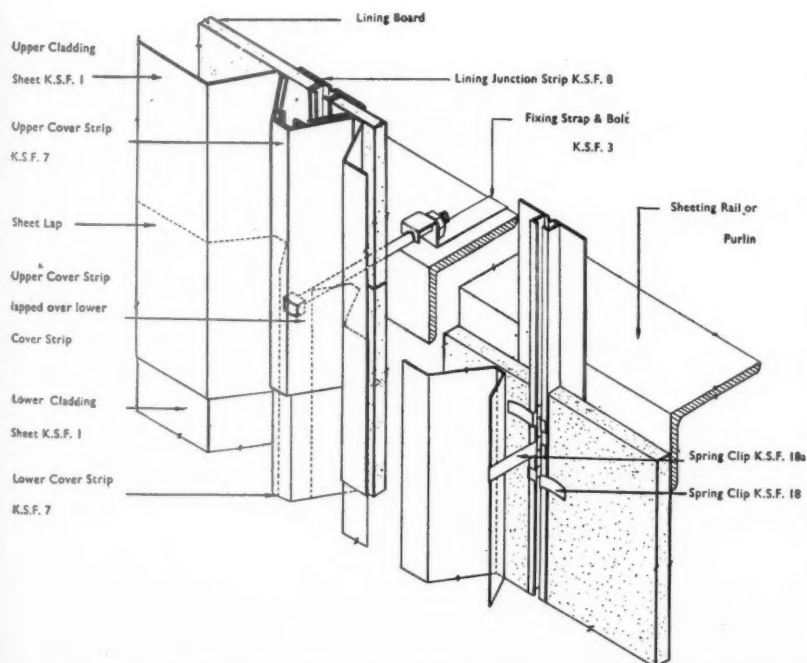
Merchant Adventurers new Ventura 80 lighting fitting.

ALUMINIUM WALL CLADDING

The sketch below shows the general arrangement of the Kynalok secret fix cladding method, originally patented by Arcon and licensed to I.C.I. Profiled sheets are used to a module of 1 ft. 8 in. and are fixed by extruded cover strips which conceal the heads of the fixing bolts. The system is easy to erect on any metal or wood framed structure and is readily demountable. Behind the aluminium sheeting insulating board is fixed, and the profile of the sheet provides an almost continuous 2 in. air space, the U value of the whole being 0.171. The normal span is 7 ft. 6 in. on roofs and

10 ft. on walls, at which the system will carry loads in excess of those required by the relevant codes of practice.

Sheets are in 20 gauge for roofs, 22 gauge for walls, and lengths up to 16 ft. can be supplied. A sill for use with wall cladding is also standardized, and also a range of standard flashings for verges, ridges, eaves and corners. Provision is made for the inclusion of proprietary types of glazing and standard industrial or domestic windows, and Perspex sheets to the same profile as the aluminium sheet are also produced in lengths up to 7 ft. 6 in. (I.C.I. Ltd., Metals Division, Kynoch Works, Birmingham, 6.)



Isometric of Kynalok secret fix cladding. Based on a 1 ft. 8 in. module, normal spans are 7 ft. 6 in. for roofs and 10 ft. for walls.

LIGHTING FITTINGS

The photograph on the left shows Merchant Adventurers' new Ventura 80 fitting which is to be produced about the end of next month. It has been developed primarily as a classroom fitting, to provide efficient lighting with low brightness at an economical figure, but it seems likely that much wider uses will be found for it. Price is only 27s. retail, including purchase tax. The fitting consists of a 12 in. diameter louvred diffuser, hung by three equidistant chains from the anodised lamp-housing, the upper ends of the chains being fixed in three alternative keyhole slots so that the position of the diffuser can be adjusted for a 100, 150 or 200 watt lamp. The diffuser is moulded in a temperature resistant grade of cellulose acetate and the louvres give direct downward illumination within a 90 degree cone. The top of the diffuser is open, so that some light is reflected from the ceiling and the translucent sides give general illumination. The whole assembly can be attached to the shade ring of any b.c. lampholder, and other units are produced, including tubular and flex suspension types and a ceiling version which is only 10 in. overall. (Merchant Adventurers Ltd., 43, Portland Road, London, W.11.)

PRECAST FLOOR BEAMS

Rapid Floors have just issued a fourth edition of their design handbook. This contains a number of useful tables—floor loadings, material weights and safe spans—and notes on the handling of precast beams. (The Rapid Floor Co. Ltd., Africa House, Kingsway, London, W.C.2.)

LIGHTWEIGHT PLASTER

The Gotham Company is now producing Carlite lightweight insulating plasters premixed with expanded perlite. This is a glassy volcanic rock which includes in its chemical make-up a small percentage of combined water. The process of expanding the perlite is somewhat similar to the exfoliation of vermiculite, and depends on the expansion of the combined moisture when the material is subjected to sudden high temperatures. Before expanding, the ore is crushed and screened to sizes which produce, after expansion, the required size. Weights can vary over a large range, but for normal purposes are kept between 3 and 10 lb. per cubic foot. The expanded material can be mixed with plaster in fairly high proportions, giving a free-working mix which is considerably less than half the weight of sanded plasters. Fire resistance is excellent and the plasters are highly elastic, so that there should be almost complete freedom from cracking.

A further use for expanded perlite is as a concrete aggregate or for screeding coats on roofs or in sub-floors below heating coils, where the cellular structure gives good heat insulation. (The Gotham Co. Ltd., Bentinck Buildings, Hull.)

PLASTIC FLOOR TILES

Tiles in p.v.c. made in Sweden under the name of Tarkett are now being marketed in this country. Two sizes, 30 by 30 and 20 by 20 cm. are standardized (about 8 in. and 12 in. square), with a thickness of 2½ mm. The tiles are easy to lay provided that the sub-floor is flat, and can be cut and bent at room temperatures. The range consists of nine marbled colours, the marbling going through the full thickness of the tile, and official tests in Sweden have shown that the tiles will stand up to heavy traffic and trucking. (Horsley Smith & Co. (Hayes) Ltd., Hayes, Middlesex.)



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A simpler type of cooker control unit by Metalform Ltd. This can be set to switch the oven on or off at any time up to 12 hours ahead.

PLASTIC TUBE FOR PLUMBING

The Marley Tile Co., who have for some time been producing thermoplastic floor tiling, are now making polythene tubing (to the appropriate B.S.) for cold water services and mains supply pipes. The material is not suitable for hot supplies, but will withstand temperatures up to 60 deg. C., so that it can be used for bath and sink wastes where there is no pressure build-up of warm water.

From the builder's point of view its use is quite simple, as the heavier gauge can be threaded and used with ordinary fittings, while compression joints are more suitable for the light gauge. Both thicknesses can be "welded" by heating the ends of the tubes and butting them together. Ideally the tube should be continuously supported, but fixings at 12 times the pipe diameter for horizontal, and 24 times for vertical runs is enough.

The tube is resistant to many acids and alkalis, and is recommended for chemical works, laboratories and also for farm dairies. The tube is produced in coils up to 500 ft. long, and can be laid by mole plough in these lengths: since the elasticity of the tube allows it to be frozen time after time without bursting the makers suggest that it may often be reasonable to lay it at less depth than metal pipe. The trade name under which the pipe is marketed is Marleythene. (The Marley Tile Co. Ltd., Riverhead, Sevenoaks, Kent.)

ROOF LIGHTING

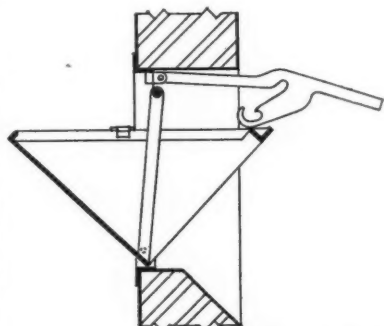
Messrs. Durasteel are now producing a laminated galt-glass-resin bonded roof lighting sheet which is available in the majority of the standard roofing sheet corrugations. In the past some local authorities have been doubtful about the fire-resisting qualities of the earlier types of thermo-plastic roof lighting, but Messrs. Durasteel now produce a type FRX sheet whose specification has been agreed with the Joint Fire Research Station and the L.C.C. General approval has not been given, but specific applications will be allowed subject to certain relatively simple fixing conditions. Both the FRX and the standard grade of laminate give a diffused light and from figures quoted by the manufacturers it appears that the material could be used satisfactorily for South aspect roof lighting in direct sunlight. Tinted roof lights are available in various colours. (Sole distributors: Allan Blunn Ltd., 29 Craven Street, London, W.C.2.)

AUTOMATIC COOKER CONTROLS

There are several electric cookers now on the market which have built-in controls for switching the oven on and off at selected times, but most of them are luxurious and fairly expensive. Messrs. Metalform have now produced a logical answer to this problem, and their unit is only slightly larger than the normal cooker control. The clock control can be set for anything up to 12 hours ahead and there is the usual 13 amp. socket and red signal lamp. This unit is made for flush or surface mounting and retails at £7 10s. 0d.: It can, of course, be used with any make of electric cooker. (Metalform Ltd., 258 Grays Inn Road, London, W.C.1.)

HOPPERS FOR FUEL STORES

The section below shows the new Finch automatic locking fuel hopper which has been designed so that the usual padlocks, projecting handles or counter balance weights are not necessary. The hopper door is set an inch or so open by raising a lever from within the fuel store, after which it can be fully opened by the coal man, who closes it afterwards, when it is automatically locked. The hopper is designed to fit into an 18-in. square opening and has four lugs for building into mortar joints. Price is £4 10s. 0d., plus 2s. 6d. if a remote control chain pull for the lever is required. (B. Finch & Co. Ltd., Belvedere Works, Barking, Essex.)



SECTIONAL SIDE ELEVATION
Showing hopper fixed in fully open position.

A new fuel hopper by Messrs. Finch. This can be set for the coal man to open and fill, but when shut can only be opened from the inside.

SINK UNITS

Messrs. Easicle are now producing sink units in timber, with vitreous enamel or stainless steel sinks and draining boards. Dimensions are on the usual 21 in. module with a height of 36 in. and single drainer models with sinks to right or left are produced as well as the double drainer version illustrated. Prices are £18 10s. 0d. and £27 10s. 0d. for the single and double drainer models in cream, white or green vitreous enamel, about £10 more for the stainless steel models. Prices do not include taps. In all models the outer pair of doors opens to more than 180 degrees so that access to the storage space is particularly easy. (Easicle Porcelain-Enamel (1938) Ltd., Darlaston, South Staffs.)

INFORMATION CENTRE

A digest of current information prepared by independent specialists; printed so that readers may cut out items for filing and paste them up in classified order.

5.51 planning: public utilities

CAR PARKING

Multistorey Parking Project for Bristol City Centre. (The Surveyor and Municipal and County Engineer. pp. 577-580. July 10, 1954.)

A description of the proposal by the City's Engineer and Surveyor for a seven-storey building to accommodate 760 cars to be located in the reconstructed City Centre.

The description is accompanied by typical floor plans showing the layout of the parking and a section showing the ramps and floor levels. This article is worth reading by anyone faced with a similar problem.

13.118 materials: timber

CREOSOTING TIMBER

Coal Tar Creosote for the Preservation of Timber. B.S. 144: 1954. (British Standards Institution, 3s. 0d.)

Replaces 1936 edition. All that architects need really know is that there is such a standard and that they should ask for material which conforms.

13.119 materials: timber

PRESSURE CREOSOTING

Pressure Creosoting of Timber. B.S. 913: 1954. (British Standards Institution, 2s. 6d.)

A number of revisions are included. Really adequate preservation of timber by creosoting is not always insisted by architects and they would do well to refer to this B.S. when ordering any such material. The amount and depth of penetration obtainable varies with type of timber, size of members treated and proper seasoning before treatment.

19.179 construction: details

DAMP-PROOF COURSES

Damp-Proof Courses. BRS Digest No. 68. (HMSO, July, 1954. 3d.)

Brief notes on general requirements, materials, and positions of damp-courses. All fairly elementary but few people will fail to learn something new from it.

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

ENQUIRY FORM

I am interested in the following advertisements appearing in this issue of "The Architects' Journal." (BLOCK LETTERS, and list in alphabetical order of manufacturers names please.)

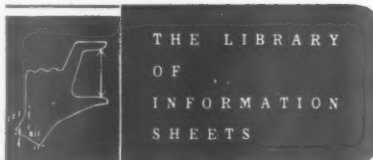
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REFERENCE BACK

22.D16, 24.J2, 24.M3 and 24.N3. Readers are asked to note the following revision and to amend their copies of the Information Sheets in question: The London address of W. H. Heywood & Co. Ltd. is now: Hope House, Great Peter Street, S.W.1. Telephone: Abbey 1077/8.

Buildings Illustrated

Secondary Modern School, Hunstanton, Norfolk, for the County Education Committee. (Pages 341-352.) Architects: Alison and Peter Smithson, A./A.R.I.B.A.. Consulting Engineers: Ove Arup & Partners, partner-in-charge, R. S. Jenkins. General Contractors: F. W. Shanks Ltd. Sub-contractors: steelwork, Boulton & Paul, Ltd.; glazing and metal windows, Luxfer, Ltd.; heating and hot water, G. N. Haden & Sons, Ltd.; felt roofing, Wm. Briggs & Sons, Ltd.; roller shutters, Seftan Lift & Shutter Co. Ltd.; lightning conductor, T. W. Gray & Sons, Ltd.; seeding and planting, E. B. Le Guice; asphalt pitches, Ayton Asphalt Co. Ltd.; pitch surrounds, E. Doe & Sons (Contractors), Ltd.; asphalt shavers, Cambridge Asphalt Co. Ltd.; water storage, Braithwaite & Co. Ltd.; w.c. partitions,

Flexo Plywood Industries, Ltd.; chain link fencing, Boulton & Paul, Ltd.; cycle racks, Alfred A. Odoni & Co. Ltd.; wallpaper, Arthur Sanderson & Sons, Ltd.; cables, British Insulated Callenders' Cables, Ltd.; lighting, Benjamin Electric, Ltd., and Veritys, Ltd.; fittings, Benjamin Electric, Ltd., Veritys, Ltd., Hailwood & Ackroyd, Ltd.; sliding door gear, E. Hill Aldam & Co. Ltd.; sanitary (fireclay items), Adamsez, Ltd.; sanitary (valves, etc.), Barber Wilsons & Co. Ltd.

Announcements

K. Bradley Miller, T.D., DIP.ARCH.(ABDN.), A.R.I.B.A., has now closed his office at 72, Coleshill Road, Ward End, Birmingham, 34, and opened a new office at Devereux House, Church Hill, Coleshill, Birmingham (Tel.: Coleshill 2353), where he will be pleased to receive trade catalogues.

Williams & Williams Ltd. is showing a range of its products at the Metal Agencies building, Colston Street, Bristol. During the week commencing September 27 it will be fully staffed by the firm's representatives until 8 p.m. every evening and 5.30 p.m. on Saturday. All interested in Williams & Williams' products are invited to visit the showroom during this week.

Mr. R. A. Boxall, A.R.I.B.A., of 161, London Road, Chelmsford (Tel.: Chelmsford 3912), has opened new offices at 81, Moulsham Street, Chelmsford (Tel.: 51212). In addition a new branch office has been opened at 7, Market Place, Saffron Walden, in association with Mr. Ronald H. Mobbs, A.R.I.B.A.

The Kersons Manufacturing Co. Ltd. has a new address: "Wayland Works," Kings Road, Tyseley, Birmingham, 11, to which all correspondence should be addressed. (Tel.: Acocks Green 0616/7/8.)



The new modern store of Messrs. David Greig at Canterbury lit with Philips internal reflector lamps. Installations planned in collaboration with the Architects, Messrs. Robin Paine & Partners, Canterbury.



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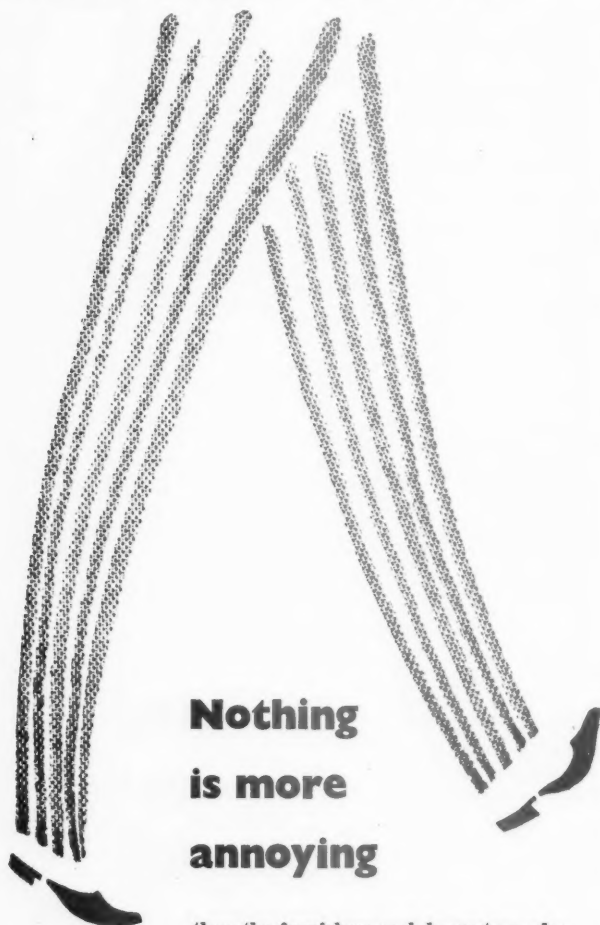
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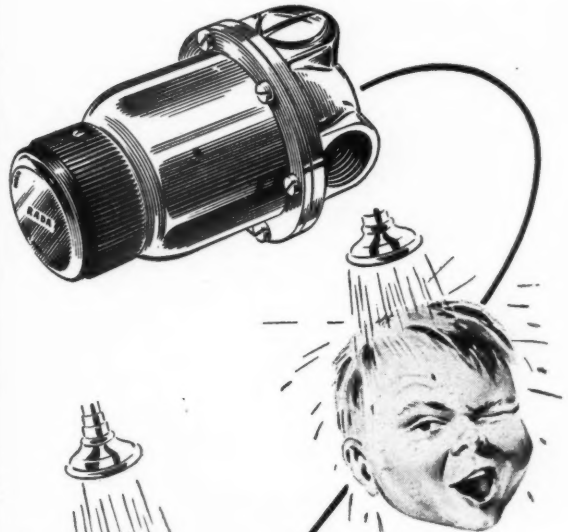
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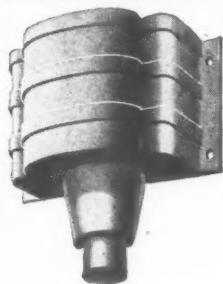
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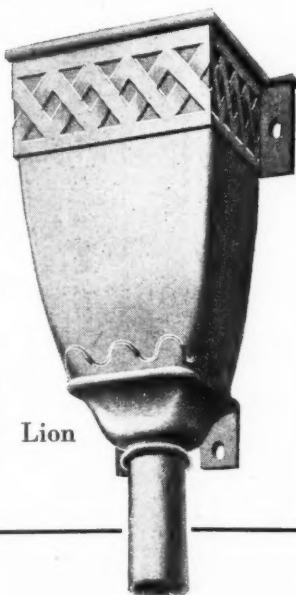
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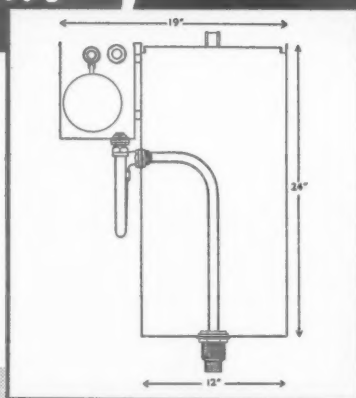
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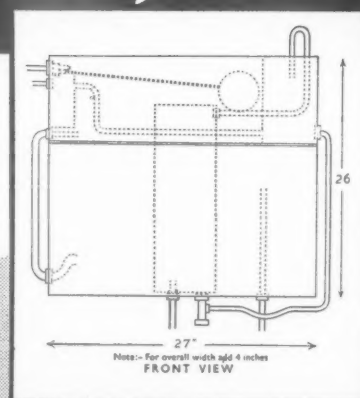
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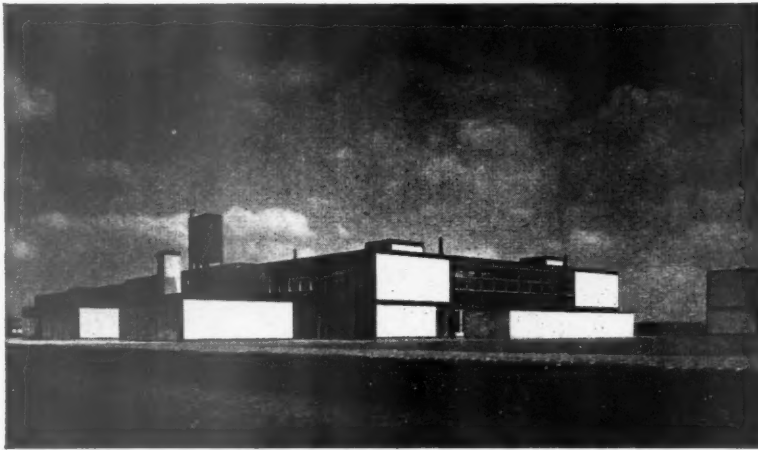
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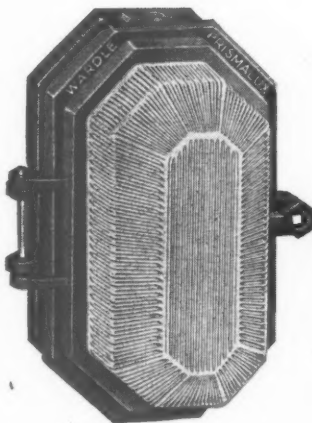
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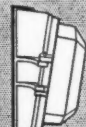
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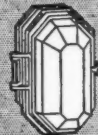
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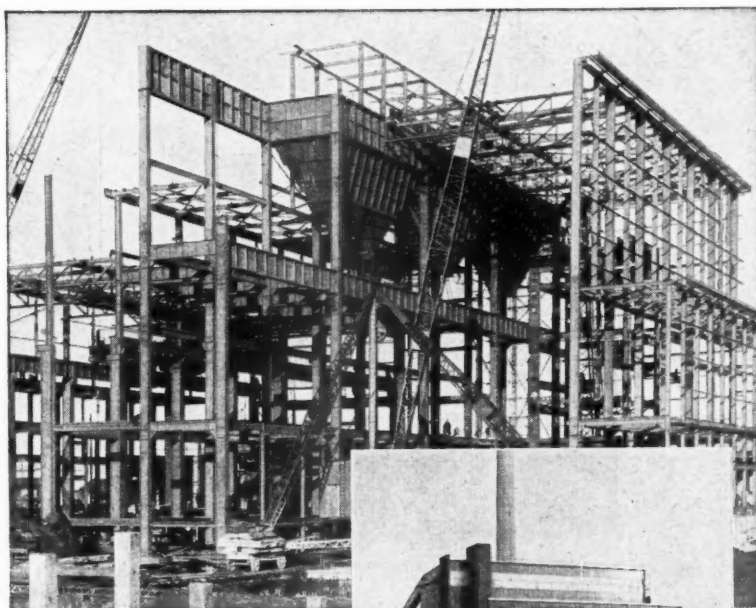
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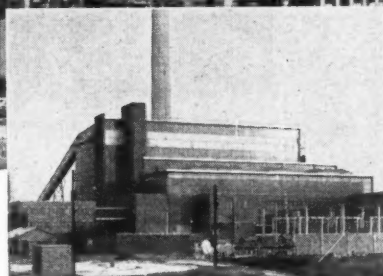
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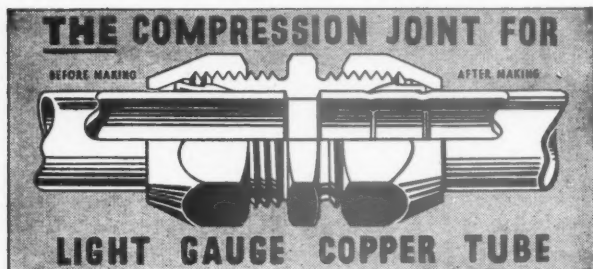
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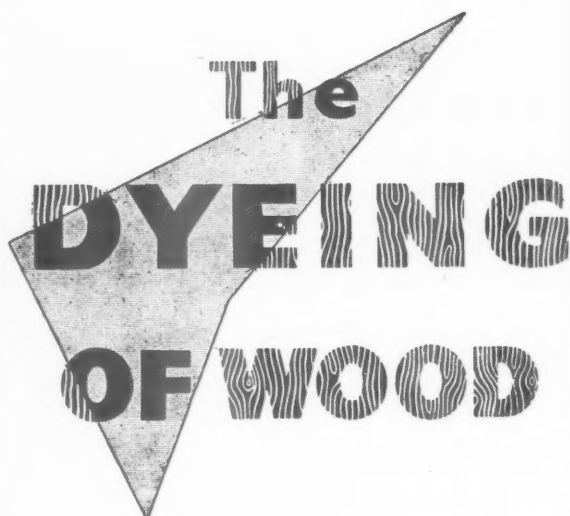
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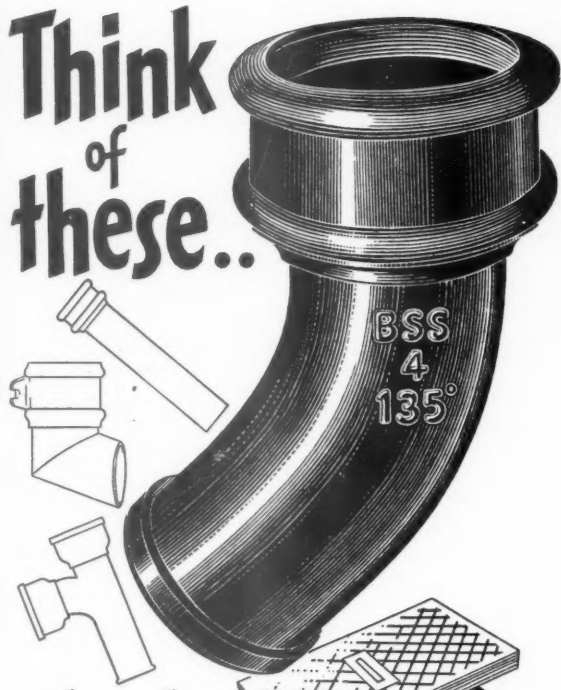
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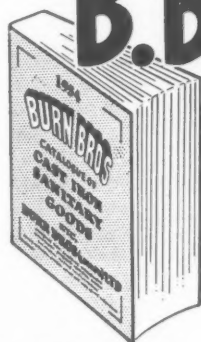
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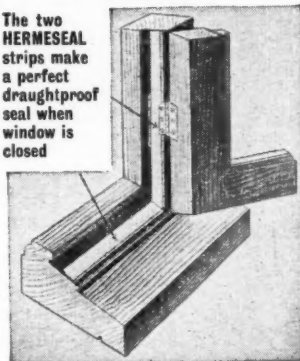
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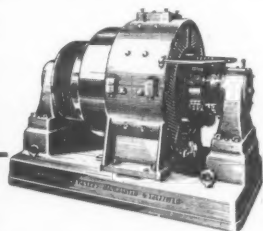
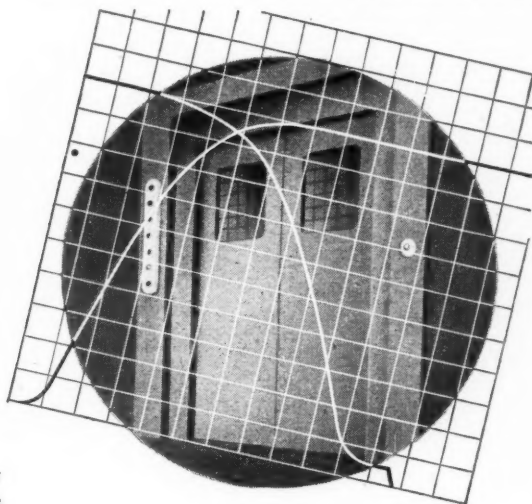
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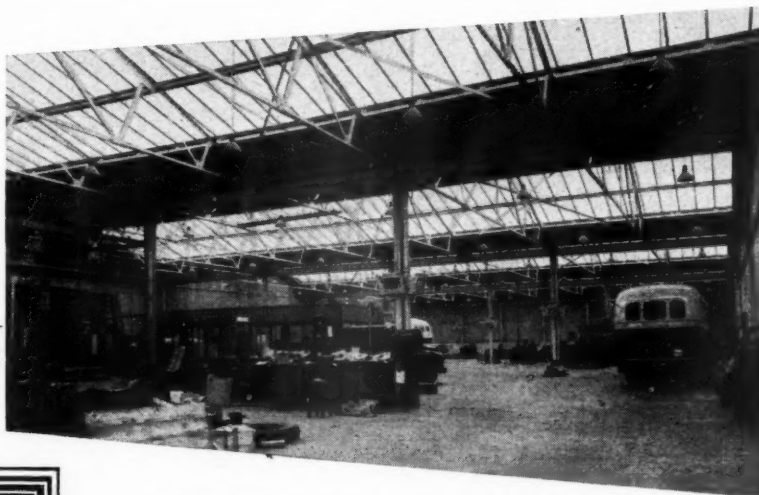
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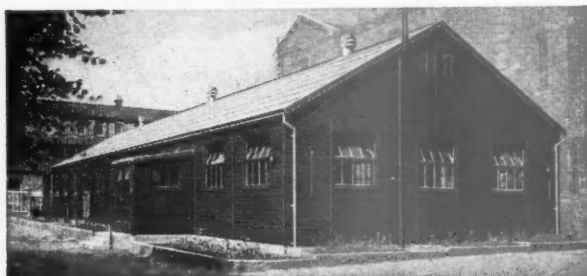
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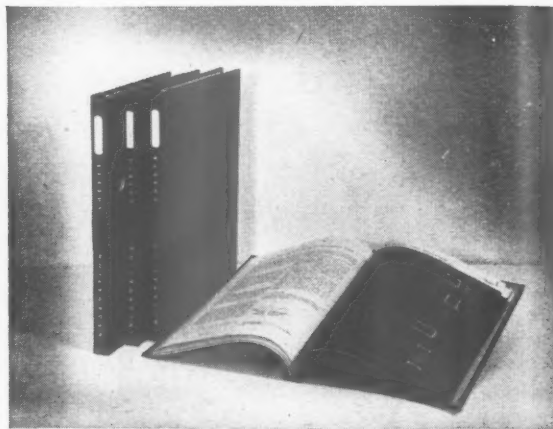
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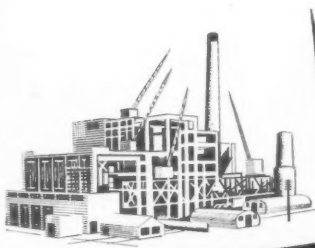
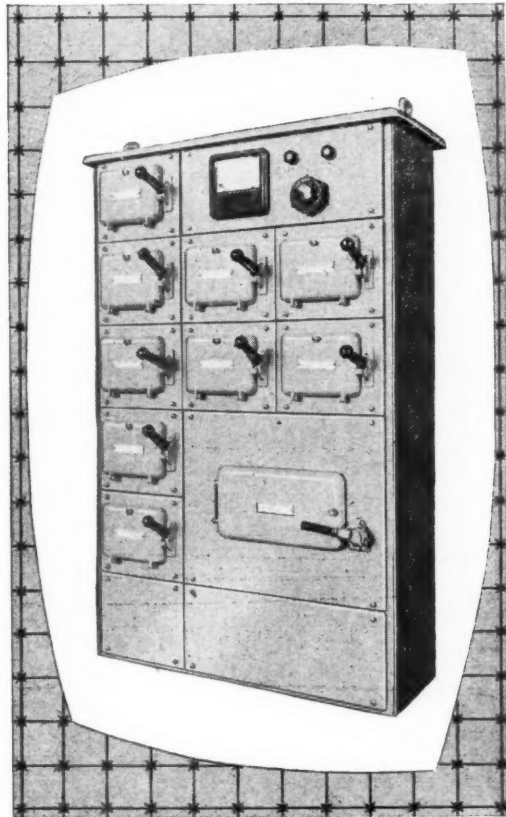
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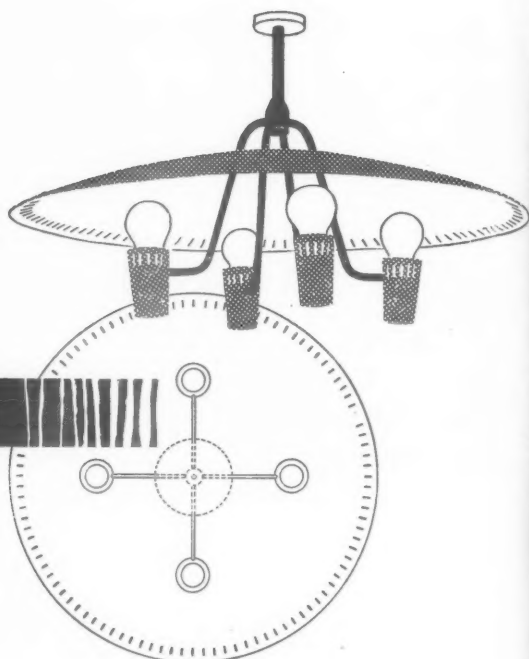
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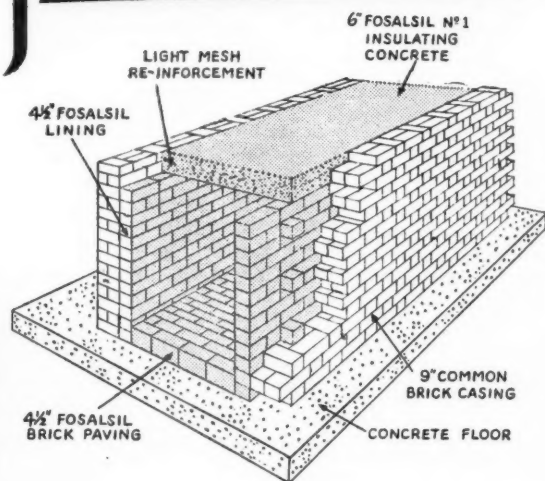
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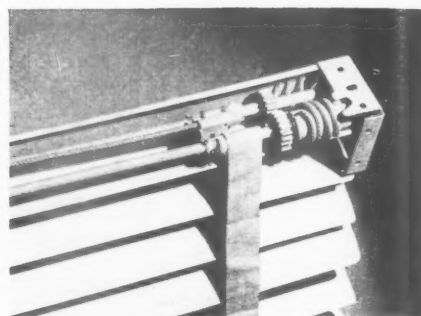
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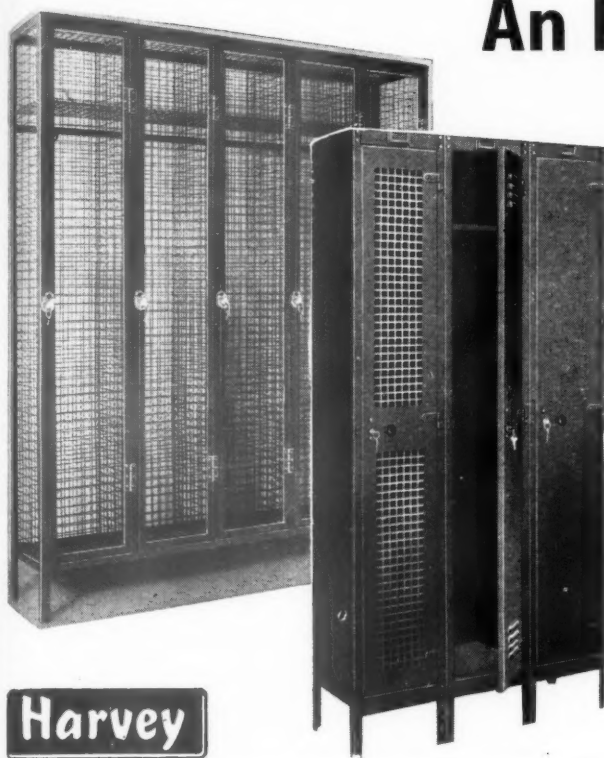


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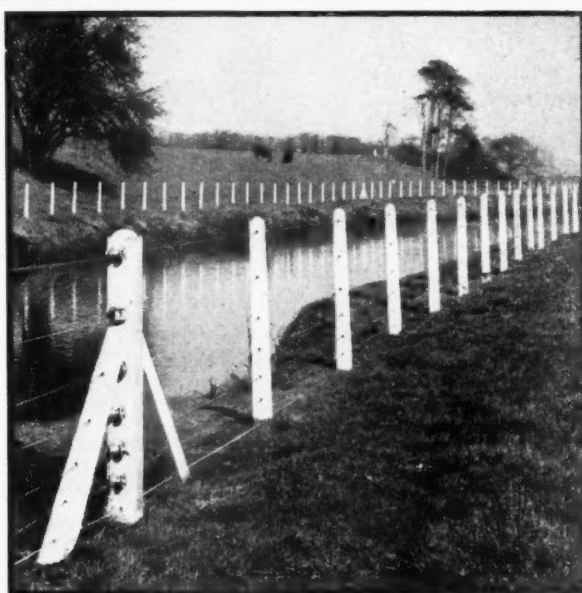
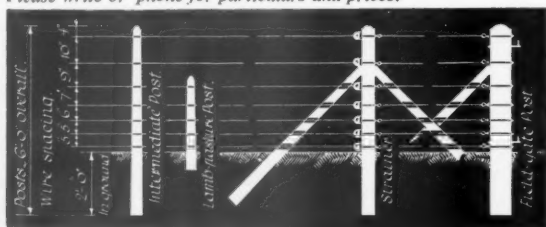
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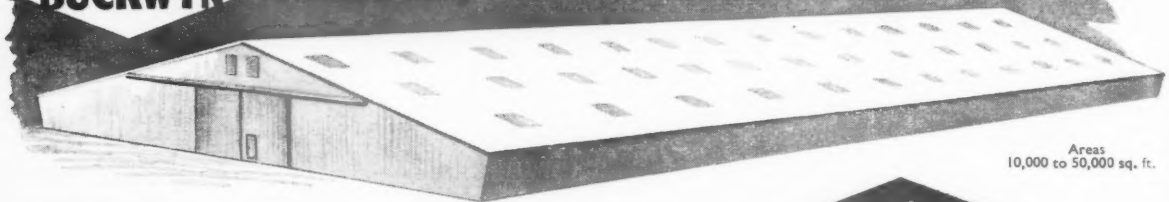


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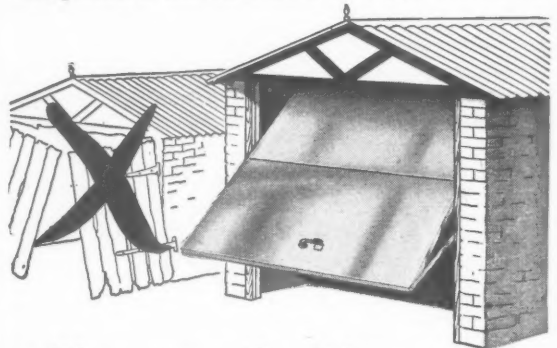
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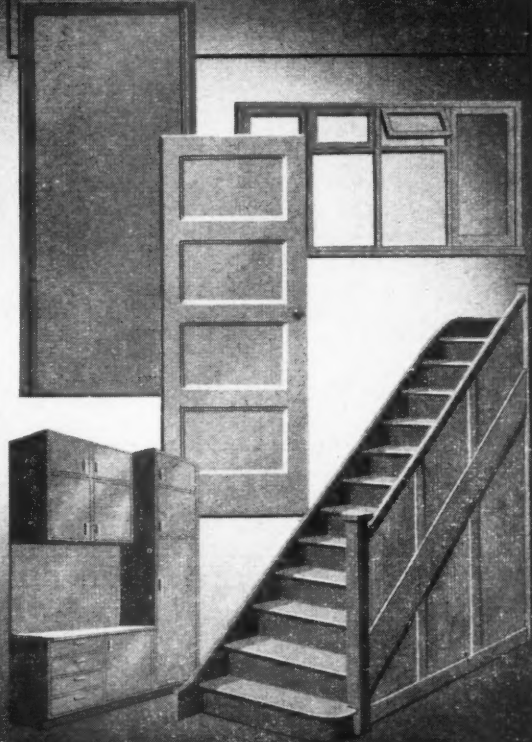


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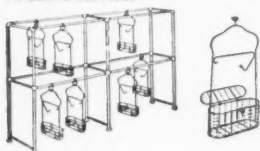
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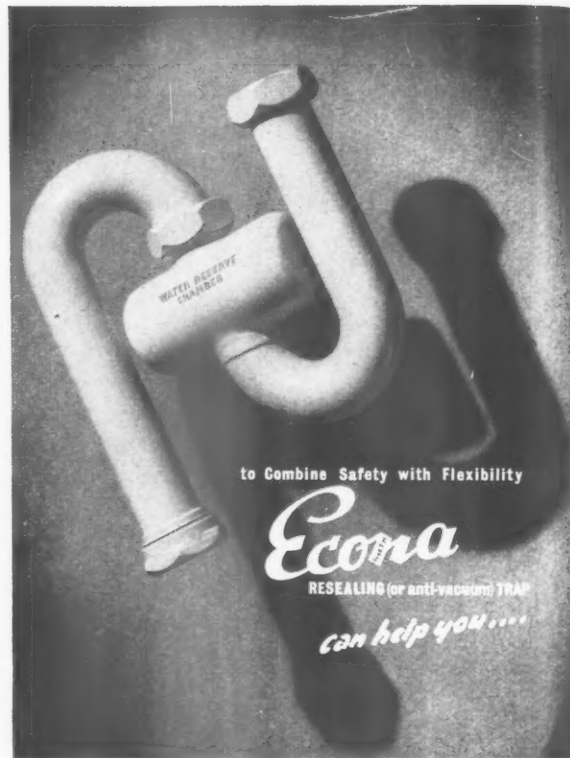
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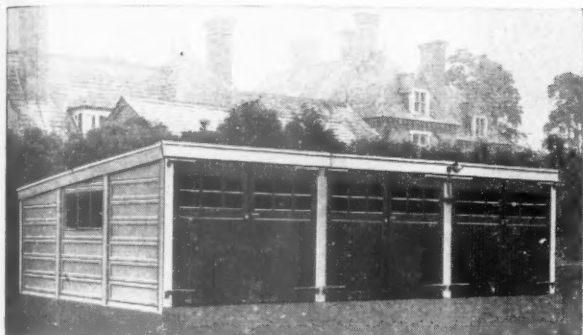
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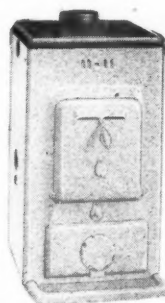
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Preference will be given to suitably qualified ex-Service applicants if the Committee is satisfied that such applicants can, or within a reasonable time, will be able to fill the post efficiently.

J. MALONE, Chief Education Officer.

Education Office, Enniskillen, Co. Fermanagh, Northern Ireland. 9th September, 1954. 4016

LONDON ELECTRICITY BOARD. ENGINEERING DRAUGHTSMAN.

Applications are invited for the above position in the Western Sub-Area Drawing Office in Central London.

Candidates should have a good general and technical education with experience of tracing, lettering, isometric and freehand drawings.

The post is graded under Schedule "D" of the National Joint Board agreement as Grade 6-£458 to £595 7s. per annum, inclusive of London Allowance.

Application forms obtainable from Personnel Officer, 46, New Broad Street, E.C.2, to be returned completed by 18th September 1954. Please enclose addressed envelope and quote ref.: V/1810/A.

PUBLIC SERVICE OF TASMANIA. DEPARTMENT OF PUBLIC WORKS. QUANTITY SURVEYOR.

Applications are invited for three positions of

QUANTITY SURVEYOR.

Salary ranges: £A1,252-1,369 (one position); and £A1,096-1,252 (two positions).

Applicants should have had experience of "taking" for all types of building works and the preparation of complete Bills of Quantities. They must also be qualified for membership of a recognised Institute of Quantity Surveyors. Candidates for the senior position must also have had wide practical experience over several years.

Further particulars regarding conditions of appointment and service, assisted passages, and housing on arrival, may be obtained from the Agent-General for Tasmania, 457 Strand, London, W.C.2, with whom applications for the above positions should be lodged within three weeks after the date of publication of this advertisement. 3983

BRITISH ELECTRICITY AUTHORITY. EAST MIDLANDS DIVISION.

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

DRAUGHTSMAN, TRANSMISSION DEPARTMENT, DIVISIONAL HEADQUARTERS.

A draughtsman is required in the Transmission Department at this Divisional Headquarters on the design and construction of H.V. Sub-Stations or overhead transmission lines an advantage.

Salary in accordance with Schedule D of the National Joint Board Agreement, Grade 6 (£433-£567 per annum) for Engineering Draughtsman or Grade 5 (£567-£671 per annum) for Senior Draughtsman, according to experience and ability. Closing date for receipt of applications: 21st September, 1954.

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

Applications should be submitted on the official form A.E.6/ACT which may be obtained from the Divisional Establishments Officer, British Electricity Authority, P.O. Box 25, Barker Gate, Nottingham, and should be returned to the undersigned by the date stated. Please quote Vacancy Number.

L. F. JEFFREY, Divisional Controller.

3rd September, 1954. 3952

SURREY COUNTY COUNCIL. APPOINTMENT OF CHIEF STRUCTURAL ENGINEER IN THE COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of CHIEF STRUCTURAL ENGINEER to commence at a salary of £1,250 p.a., rising by annual increments of £50 to £1,450 p.a.

Applicants should possess:—

(a) Appropriate Degree of a British University and/or be a Member of the Institution of Civil Engineers and/or Institution of Structural Engineers;

(b) adequate experience in the design of steel framed buildings, reinforced concrete structures and foundation works, and a good knowledge of commercial practice, costs and site procedure.

(c) Adequate experience in the control and organisation of professional staff.

Full details of this experience, together with age, present position and salary, should be given in the application.

Applications accompanied by copies of three recent testimonials and names and addresses of three referees, should be forwarded to the County Architect, County Hall, Kingston-on-Thames, by the 25th September, 1954. 3964

CITY OF BATH. CITY PLANNING AND ARCHITECTURAL DEPARTMENT.

Applications are invited for the appointment of CHIEF PLANNING ASSISTANT, Grade VII (£735-£810). Applicants must be Corporate Members of the Town Planning Institute and preference will be given to candidates who possess an additional qualification.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and to the successful candidate passing a medical examination. Applications, stating age, qualifications and experience, together with the names of three referees, should be forwarded to the City Planning Officer & Architect, 7, North Parade Buildings, Bath, not later than 30th September, 1954.

JARED E. DIXON, Town Clerk.

Guildhall, Bath. 3971

METROPOLITAN BOROUGH OF FULHAM. BOROUGH ARCHITECT'S AND HOUSING DEPARTMENT.

(a) ASSISTANT QUANTITY SURVEYOR A.P.T. VIII (£785-£825 to £860 p.a., plus £30 p.a. London Weighting). Experienced in taking off, preparation of bills of quantities for large contracts of multi-storey flats and public buildings, dealing with valuations for interim certificates and finalising accounts.

(b) ASSISTANT ARCHITECT, A.P.T. VI (£695-£760 p.a. plus London Weighting £30 p.a. over 26 years). Applicants should be registered architects and must have had experience in handling jobs in progress, dealing with contracts and in planning and designing schemes of multi-storey flats.

Application forms from me. Closing date 27th September.

CYRIL F. THATCHER, Town Clerk.

Town Hall, Fulham, S.W.6. 3969

COUNTY BOROUGH OF READING. BOROUGH ARCHITECT'S DEPARTMENT.

Applications are invited for the following:—

(a) SENIOR ASSISTANT ARCHITECT, salary A.P.T. Grade VI (£695-£760 p.a.).

(b) ASSISTANT ARCHITECT, salary A.P.T. Grade V (£620-£670 p.a.).

(c) ARCHITECTURAL ASSISTANT, salary A.P.T. Grade I (£490-£535 p.a.).

Commencing salary within the grade being according to qualifications and experience. Applicants for (a) and (b) must be Registered Architects or Associate Members of the Royal Institute of British Architects, and (c) have passed the Intermediate Examination of the R.I.B.A.

Applications should be received by the Borough Architect, Town Hall, Reading, by Monday, 4th October, 1954, from whom application forms can now be obtained. 3977

CITY OF BELFAST—EDUCATION COMMITTEE

APPOINTMENT OF ARCHITECTS.

Applications are invited for seven posts of Architect Class II on the permanent staff of the Education Committee (Donald A. Shanks, Dipl. Arch. A.R.I.B.A.).

Salary scale—£550 × £25—£825 per annum. Minimum linked to age 26 with one increment for each year up to 32.

A large new schools building programme has commenced and the work will be chiefly in this field; preference will be given to applicants who have experience in up-to-date school design, and who have a good knowledge of contemporary construction and materials. Previous Local Authority experience is not necessary. Applicants must be Registered Architects.

Superannuation contributions payable at the rate of approximately 6% of remuneration. Reciprocal arrangements for superannuation purposes exist between Local Authorities in Great Britain and the Belfast Education Authority.

Canvassing for the appointment in any form oral or written direct or indirect will disqualify a candidate for appointment.

Further particulars and application forms may be obtained from the Education Offices, Academy Street, Belfast. Applications should reach the undersigned not later than Thursday, 30th September, 1954.

JOHN DUNLOP,
Town Clerk.

City Hall, Belfast.
P.O. Box 234. 4008

CITY ARCHITECT'S DEPARTMENT, MANCHESTER.

Applications are invited from persons having suitable qualifications and/or experience for the following appointments:—

Permanent Staff.

- Senior Assistant Quantity Surveyor: salary Grade A.P.T. VII (£735 to £810 per annum).
- Assistant Quantity Surveyor: salary Grade A.P.T. VI (£695 to £760 per annum).
- Assistant Quantity Surveyor: salary Grade A.P.T. Va (£650 to £710 per annum).
- Assistant Quantity Surveyors (two): salary Grade A.P.T. V (£620 to £670 per annum).
- Assistant Structural Engineering Assistant: salary Grade A.P.T. V (£620 to £670 per annum). Candidates must be experienced in the design of structural steelwork and reinforced concrete.
- Assistant Heating, Ventilating and Mechanical Engineer: salary Grade A.P.T. V (£620 to £670 per annum). Candidates must be experienced in the design and detailing of all types of heating and hot water installations.
- Heating, Ventilating and Mechanical Engineering Assistant: salary Grade A.P.T. IV (£580 to £625). Candidates should be graduates of the Institution of Heating and Ventilating Engineers.
- Architectural Assistant: salary Grade A.P.T. IV (£580 to £625). Candidates must be students R.I.B.A.

Temporary Staff.

- Senior Assistant Architects (three): salary A.P.T. VII (£735 to £810 per annum). Candidates must be registered Architects and Associates R.I.B.A.

Further particulars and forms of application may be obtained from the City Architect, Box No. 488, Town Hall, Manchester, 2. The completed form to be returned to the same address by 4th October, 1954.

Canvassing is prohibited. 3992

BOROUGH OF ILKESTON

- ENGINEERING ASSISTANT A.P.T. III to V, according to qualifications and experience.
- ARCHITECTURAL ASSISTANT—General Division to A.P.T. III, according to qualifications and experience.

N.J.C. conditions. Housing accommodation available.

Application forms available from A. O. Marshall, Esq., M.I.Mun.E., M.I.Struct.E., F.I.A.A., Borough Surveyor and Water Engineer, Town Hall, Ilkeston, Derbyshire. Closing date 27th September, 1954.

Canvassing disqualifies. 3997

J. YATES,
Town Clerk.

LONDON ELECTRICITY BOARD.

SENIOR DRAUGHTSMAN

Applications are invited for the above position in the Design & Planning Branch of the Northern Sub-Area at Aldersgate, London, E.C.1.

Applicants should have had training and experience in building construction and the design of steelwork and reinforced concrete structures, and be capable of preparing drawings and making calculations for the alteration of existing premises and the conversion of basements into sub-stations and transformer chambers. Experience in the layout of electrical equipment up to 11kV., whilst not essential, would be an advantage.

The post is graded under Schedule "D" of the National Joint Board agreement as Grade 5—£595 to £784 11s. per annum, inclusive of London Allowance.

Application forms obtainable from Personnel Officer, 46, New Broad Street, E.C.2, to be returned completed within ten days of the publication of this advertisement. Please enclose addressed envelope and quote ref.: V/1692/A. on all correspondence. 3980

BRANDON AND BY SHOTTLES URBAN DISTRICT COUNCIL.

ARCHITECT'S DEPARTMENT.

Applications are invited for two ARCHITECTURAL ASSISTANTS in the above Department at a salary applicable to Grade II of the National Scheme of Conditions of Service for Local Authorities Administrative, Professional, Technical and Clerical Services. The appropriate scale commences at £520 per annum and rises to £565 by £15 increments.

The appointments will be of a temporary nature, with the prospect of a fair period of employment, and candidates should have a good general experience, particularly in the design and layout of Municipal Housing Schemes.

The appointments will be terminable by one month's notice, in writing, on either side.

Form of application can be obtained from the undersigned and it will be necessary for applicants to declare whether or not they are related to any Member or Senior Officer of the Council. Closing date for applications, Wednesday, 29th September, 1954.

A. A. LUXMOORE,
Clerk to the Council.

Clerk's Office,
Brownlow House,
Brownlow Colliery,
Durham.
7th September, 1954. 4006

COUNTY BOROUGH OF BARROW-IN-FURNESS. BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT. ARCHITECTURAL ASSISTANT—GRADE III—IV.

Applications are invited from candidates of Inter. R.I.B.A. standard for the permanent post of Architectural Assistant on Grade III or IV (£550—£625 p.a.).

The commencing salary will be fixed according to the qualifications and experience of the successful candidate.

Housing accommodation cannot be provided. Further particulars, conditions of appointment and forms of application may be obtained from the Borough Engineer and Surveyor, Town Hall, Barrow-in-Furness, to whom completed applications must be returned not later than Monday, 27th September, 1954.

LAWRENCE ALLEN,
Town Clerk. 3946

BOROUGH OF PRESTWICH. APPOINTMENT OF PERMANENT ARCHITECTURAL ASSISTANT, BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the permanent position of Architectural Assistant in the A.P.T. Division, Grade VI. (£530—£760 per annum). Applicants should hold suitable architectural qualifications and have had experience in housing and public buildings, including baths and assembly halls.

The appointment will be terminable by one month's notice on either side, and will be subject to the provisions of the Local Government Superannuation Acts, 1937 and 1953.

Applications, stating age, qualifications, experience, etc., together with the names and addresses of two persons to whom reference may be made, should be sent to the undersigned in envelopes endorsed "Architectural Assistant" so as to be received not later than Saturday, 25th September, 1954.

Canvassing disqualifies, and applicants must state whether to their knowledge they are related to any member or senior official of the Council.

C. A. CROSS,
Town Clerk.

The Town Hall,
Prestwich, Lancashire.
September 3rd, 1954. 3948

MIDDLESEX COUNTY COUNCIL—COUNTY ARCHITECT'S DEPARTMENT.

ASSISTANT ARCHITECT required, A.P.T. VI (£695 to £760 p.a. plus London Weighting). Appointment at grade minimum and to established staff. Subject to medical assessment and prescribed conditions. Must be Registered Architect and experience of design of Educational Buildings an advantage. Application forms (stamped addressed fscap env.) from County Architect, 1, Queen Anne's Gate Buildings, Dartmouth Street, S.W.1, returnable by 4th October (quote P.100 A.J.). Canvassing disqualifies. 3955

HEMEL HEMPSTEAD DEVELOPMENT CORPORATION.

Applications invited for the appointment of PLANNING ASSISTANT. Salary scale £510—£635 p.a. Starting salary according to age and experience.

Experience in Planning office essential and applicants should have passed Intermediate Examination of R.I.B.A. or other recognized Institute.

Conditions of appointment broadly similar to Local Government Charter, with opportunity of entering or continuing in Local Government Superannuation Scheme.

House or Flat may be available. Applications (endorsed "Vacancy No. 127"), giving age, qualifications and experience, and names of two business referees, to reach undersigned by 27th September.

W. O. HART,
General Manager.
Westbrook Hay,
Hemel Hempstead,
Hertfordshire. 4007

EDINBURGH COLLEGE OF ART.

Applications are invited for the post of ASSISTANT INSTRUCTOR in BUILDING CONSTRUCTION in the School of Architecture; salary scale, £690 × £30—£990 per annum; commencing salary will be determined according to qualifications and experience.

Applications are also invited for the post of ASSISTANT INSTRUCTOR in the School of Architecture; salary scale £690 × £30—£990 per annum; commencing salary will be determined according to qualifications and experience.

Forms of application and conditions of appointment can be obtained from the Secretary, Edinburgh College of Art, Edinburgh, 3, and should be returned to him not later than 30th September, 1954. 3950

CWMBRAN NEW TOWN (MONMOUTHSHIRE).

Applications are invited for the appointment of JUNIOR ASSISTANT QUANTITY SURVEYOR in my department.

The post is superannuable and the commencing salary will be in accordance with the experience and qualifications of the applicants on a scale of £490 × 1 @ 25 + 2 @ 30—£575.

Candidates should preferably have passed the Intermediate Examination of the R.I.C.S. and should have a sound knowledge of Working-up, preparation of Bills and some taking-off.

Housing accommodation will be made available in suitable cases, or otherwise lodging expenses in accordance with the Corporation's Scale will be allowed to married men for a limited period.

Applications, stating age, experience, qualifications, details of present and past employment (together with applicable salaries) must reach the undersigned by not later than Monday, 27th September, 1954.

J. C. P. WEST, A.R.I.B.A., A.M.T.P.I.,
Chief Architect. 3984

HERTFORDSHIRE COUNTY PLANNING DEPARTMENT.

SENIOR PLANNING ASSISTANT (ARCHITECTURAL) GRADE VIII.

Sound architectural and planning training required, preferably with experience of planning design in New Towns, central and rural areas; the control of elevations and the pictorial presentation of ideas. Appointment is the second position in Design Section, and calls for ability in negotiation with builders and architects. Applicants must be Corporate Members of R.I.B.A., and T.P.I.

Permanent appointment with Car Allowance. Forms of application from County Planning Officer, County Hall, Hertford. Closing date 30th September. 3976

BOROUGH OF WIDNES. BOROUGH ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of an ARCHITECTURAL ASSISTANT, at a salary in accordance with A.P.T. Grade IV to V of the National Scale of Salaries.

Applicants must be student R.I.B.A. and have worked in an Architectural Office for at least two years subsequent to having passed the Intermediate Examination. Preference will be given to applicants having experience on municipal housing.

The appointment will be subject to the National Scheme of Conditions of Service as adopted by the Council and to the Local Government Superannuation Act, October, 1937, and to the successful candidate passing a medical examination.

Housing accommodation may be provided. Applications stating full particulars of age, experience and qualifications, etc., together with names and addresses of two referees, to be sent to the Borough Architect, Brendan House, Widnes Road, Widnes, not later than 10 a.m. Friday 24th September, 1954.

Canvassing directly or indirectly will disqualify.

FRANK HOWARTH,
Town Clerk. 3887

Town Hall, Widnes.

MIDDLESEX COUNTY COUNCIL—COUNTY PLANNING DEPARTMENT.

PLANNING ASSISTANT required, A.P.T. VI, (£725—£790 p.a. if 26 or over) in Headquarters' Section. Preference given if full qual. in Planning and Architecture. Should be capable of controlling staff working on Statistical and Territorial Analysis. Established pensionable, subject to medical assessment and prescribed conditions. Application forms from County Planning Officer, 10, St. George Street, London, S.W.1, returnable by 1st October (quote P.79 A.J.). Canvassing disqualifies. 3955

SURREY COUNTY COUNCIL.

Applications are invited for the following appointments:—

- ASSISTANT ARCHITECT GRADE VIII, salary £785 × £25 to £860 p.a. plus London Allowance. Must be Associate Members of R.I.B.A.
- ASSISTANT ARCHITECT GRADE V, salary £620 × £15/£20 to £670 p.a., plus London Allowance. Preference given to applicants who are Associate Members of R.I.B.A.

Applicants for both Grades must have had good training and adequate experience in design and construction of modern buildings.

Applications giving full details of present and previous appointments and salary attaching thereto, accompanied by copies of 3 recent testimonials, to the County Architect, County Hall, Kingston-on-Thames, by 25th September, 1954. 3997

**LINDSEY COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.**

Vacancies on the permanent staff for:—
(a) ASSISTANT ARCHITECT, A.P.T. VII/VIII (£735 rising to £860). Candidates must be A.R.I.B.A. and preferably have experience in the design of schools.

(b) SENIOR ARCHITECTURAL ASSISTANT, A.P.T. V/VI (£520 rising to £750). Candidates must be A.R.I.B.A.

(c) TWO SENIOR QUANTITY SURVEYORS, A.P.T. VII (£735 rising to £810). Preference given to candidates holding A.R.I.C.S. or equivalent qualification.

(d) BUILDING INSPECTOR, A.P.T. IV (£580 to £625). Duties in connection with repair and minor improvements to County Buildings. Preference for person able to prepare rough estimates, explanatory drawings and brief specifications.

(e) ELECTRICAL ASSISTANT, MISCELLANEOUS GRADE VI (£550 to £610). Experience in preparation of schematic plans for installations and specifications.

Allowance of 25s. per week and return fare home bi-monthly may be paid up to six months to married men unable to find housing accommodation.

N.J.C. Conditions of service. Canvassing will disqualify. Candidates must disclose in writing whether to their knowledge they are related to any member or senior officer of the Council.

Applications stating age, qualifications and experience, with names of two persons to whom reference can be made, to be sent to the undersigned by the 24th September, 1954.

A. RONALD CLARK, A.R.I.B.A., A.M.T.P.I.,
County Architect,
County Offices, Lincoln. 4015

ARGVILL COUNTY COUNCIL.

Applications are invited for the appointment of a QUANTITY SURVEYING ASSISTANT for the County Architect's Department, Salary Scale Grade IV-V (£580 to £680), with placing according to experience and qualifications. The post is supernumerary. HOUSING ACCOMMODATION WILL BE PROVIDED IF REQUIRED.

Apply giving details of qualifications and experience along with copies of two recent testimonials to County Architect, County Offices, Dunoon, not later than one week after the date of publication of this advertisement.

A. D. JACKSON,
County Clerk. 4017

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH require TWO TEMPORARY ARCHITECTS (Basic Grade) at Building Research Station, Garston, Watford, Herts., for the study and application of modular coordination in building design and construction. Appointments will be for a period of one year. Candidates should be Registered Architects with good ability in designing and an interest in construction and development work. Inclusive annual remuneration for a 45-hour week:—

Men: £638-£989. Women: £638-£880, according to age. Application forms from M.L.N.S., Technical and Scientific Register K, 26, King Street, London, S.W.1, quoting reference J284/54.A. Closing date 16th October, 1954. 4019

**UXBRIDGE URBAN DISTRICT COUNCIL.
ARCHITECTURAL ASSISTANT.**

Applications are invited for the appointment of ARCHITECTURAL ASSISTANT on the Unestablished Staff of the Department of the Engineer, Surveyor and Architect on Grade A.P.T. IV (£580-£625 per annum plus London Weighting at present £30 for age 26 and over).

Applicants should have had a good architectural training and preference will be given to candidates with experience of local authority housing. The appointment is subject to the National Conditions of Service, the Local Government Superannuation Acts and the passing of a medical examination. Applications stating age, marital state, present and previous appointments, qualifications and details of experience, together with the names and addresses of three persons to whom reference may be made, should be forwarded to Harold E. G. Stripp, A.M.I.C.E., F.R.I.C.S., M.Inst.R.A., 263, High Street, Uxbridge, not later than Monday, 27th September, 1954. HOUSING ACCOMMODATION AVAILABLE IF REQUIRED. Candidates are required to disclose in writing whether, to their knowledge, they are related to any member or senior officer of the Council.

JOHN POOLE,
Clerk of the Council. 4018

LONDON COUNTY COUNCIL.

Architects and surveyors required for safety regulations of theatres and special buildings, and for general building regulation work. Salaries up to £892 10s., according to experience. A.R.I.B.A. or A.R.I.C.S. essential. Particulars and application form from Architect (AR/EK/TBR/3), The County Hall, S.E.1. (848) 3487

LONDON COUNTY COUNCIL.

Grade III ENGINEERS (salary up to £892 10s.) and SURVEYING ASSISTANTS (up to £739 10s.) required in District Surveyor's Service. Qualifications: A.R.I.B.A., A.M.I.C.E., or A.R.I.C.S. structural knowledge essential. Particulars and application forms from Architect (AR/EK/DS/2), County Hall, S.E.1. (1025). 3511

MIDDLESEX COUNTY COUNCIL—COUNTY ARCHITECT'S DEPARTMENT.

ASSISTANT ARCHITECTS required, A.P.T. V (£620-£670 p.a. plus London Weighting). Appointments at grade minimum. Established, subject to medical assessment and prescribed conditions. Must be Registered Architects and experience of design of Educational buildings advantage. Application forms (stamped addressed 'Cap env.') from County Architect, 1, Queen Anne's Gate Bldgs., Dartmouth Street, S.W.1, returnable by 27th September (quote P.51 AJ). Canvassing disqualifies. 3982

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 or the employment is excepted from the provisions of the Notification of Vacancies Order, 1952.

REQUIRED for Architects' office, Central London area, young qualified ASSISTANTS interested in design and construction. Write, stating experience and salary required. Box 2325.

A SENIOR ARCHITECTURAL ASSISTANT required, full experience in preparation of Working Drawings, Details, and supervision of office and Industrial Buildings in the London Area. Good knowledge of construction and design essential. Apply in writing giving full particulars of qualifications, age, experience and salary required to Box 9829.

ASSISTANT ARCHITECT.

COURTAULDS LIMITED require two ASSISTANT ARCHITECTS in Coventry to work on own initiative on a wide variety of industrial buildings. Age 25/40. Candidates should write for a detailed form of application to the Director of Personnel, Courtaulds Limited, 16, St. Martin's-le-Grand, London, E.C.1, quoting the reference number, B.18. 3695

YOUNG ASSISTANTS wanted urgently, with architectural interests and good educational background. Experience in Architect's office desirable. Further training encouraged where necessary, but both qualified and younger men are asked to apply. Successful applicants will be given all the responsibility they can undertake, and intelligence, design sense, flexible outlook and interest in modern building techniques and organisation will be well rewarded. Starting salary according to experience and capability. All applications will be answered. Details to the Company Architect, Vic Hallam, Ltd., Valley Works, Langley Mill, near Nottingham. 3847

ARCHITECT'S ASSISTANT (Senior) for West End office. Write stating full particulars and salary required to Box 3546.

SENIOR, INTERMEDIATE & JUNIOR Architectural ASSISTANTS required in West End Office engaged on housing, churches, offices, schools, etc. Write giving age, experience and training with salary required to Box 3799. All applications will be answered.

ASSISTANT required immediately by a firm of Architects in Doncaster. State age, experience, and salary required. Box 4025.

ARCHITECTURAL ASSISTANT, not less than one year's experience, required. Salary according to experience and qualifications. Apply to W. Curtis Green, R.A., Son & Lloyd, 5, Pickering Place, St. James's Street, S.W.1. 4010

JUNIOR ARCHITECTURAL ASSISTANT required. Write, stating full particulars, to Goodair, Foster & Howell, Albemarle House, Osborne Road, Southsea. 4021

FRANGER CEILINGS, LTD., require TWO ARCHITECTURAL DRAUGHTSMEN for estimating and preparation of layout and working details for the installation of specialist suspended ceiling. Reply, giving full particulars and salary required, to 67, Great Russell Street, London, W.C.1. 4023

CECIL HOWITT & PARTNERS, Architects, St. Andrew's House, Mansfield Road, Nottingham, require JUNIOR ARCHITECTURAL ASSISTANTS, preferably Inter. R.I.B.A. standard. Please apply in writing, giving full details and salary required. 4025

SUITABLY qualified person required immediately as SENIOR CLERK OF WORKS, to supervise the erection of a large heavy engineering factory in Northern Ireland, the construction of which is expected to last approximately three years. Applicants must have experience of handling large building contracts, and particularly progressing of work. Salary offered is £800 per annum, subject to qualifications and experience. Applications, with full details of experience, present and previous appointments, and when available, should be addressed to Box 1332, T & G, 167, High Holborn, London, W.C.1. 3818

SENIOR ARCHITECTURAL ASSISTANT required by a major oil company undergoing rapid expansion, for its London Head Office. Applicants must be capable of supervising and carrying out work on the design and remodelling of service stations. Pension and Life Assurance, generous sickness benefits, luncheon voucher scheme, social club. Write giving full details of age, experience and salary required, quoting reference SAA 258 to Box 3829.

JUNIOR ARCHITECTURAL DRAUGHTSMAN required with at least two years office experience. Contributory pension scheme, canteen, five-day week. Write stating experience, age and salary required to Personnel Manager, Schweppes, Ltd., 1/4, Connaught Place, W.2. 3917

ARCHITECTURAL ASSISTANTS, SENIOR and JUNIOR required in busy Office for varied and interesting work. Please write stating details of experience and salary required. Martin & Martin & W. H. Ward, 106, Colmore Row, Birmingham, 3. 3907

SENIOR ASSISTANT required with knowledge of Office Building in London. Salary by arrangement. C. H. Elsom, A.R.I.B.A., 44, Catherine Place, S.W.1. Victoria 4304. 3994

ARCHITECT requires SENIOR ASSISTANT for Leicester branch, permanent position, general practice. Apply in writing to: C. Edmund Wilford, A.R.I.B.A., 2, Hastings Street, Leicester. 3900

QUALIFIED ARCHITECTS and ARCHITECTURAL ASSISTANTS required in North-West London Office engaged in domestic and industrial schemes. Excellent experience and good scope. Apply stating age, qualifications, experience, and salary required, to Sydney Greenwood, A.R.I.B.A., 33, Bunn's Lane, Mill Hill, N.W.7. 3969

SITE REPRESENTATIVE required to supervise construction of work in Lagos, Nigeria. Experience in reinforced concrete desirable. Salary from £1,000 per annum. Write, giving full details, to P. A. Cranswick, A.R.I.B.A., A.M.T.P.I., 21, Suffolk Street, Pall Mall East, London, S.W.1. 3875

JUNIOR ASSISTANT required, up to Intermediate standard. East central office, London. State age, previous experience, and salary required. Box 3942.

ARTICLED PUPIL or JUNIOR required by Quantity Surveyors; no premium. Age 15-18, with G.C.E. or equivalent for R.I.C.S. Must be keen, accurate at figures; excellent prospects to learn the profession. Reply in writing, stating age, education, etc. George Lewis & Son, 49, Sheepcote Road, Harrow, Middlesex. 3941

JUNIOR and **SENIOR ARCHITECTURAL ASSISTANTS** and **DRAUGHTSMEN** for large and varied practice in Home Counties. Salary required and details of experience to Box 3512.

SENIOR ARCHITECTURAL ASSISTANT required, with minimum qualification of Intermediate R.I.B.A. Preference will be given to applicants having several years of office experience in the design of industrial buildings and housing. Write, stating age and details of experience and qualifications, to: Staff Officer, Handley Page, Ltd., Cricklewood, London, N.W.2. 3881

QUANTITY SURVEYOR required, North Midlands. Approaching Final standard or good Intermediate. Salary: £550-£650. Living accommodation available. Apply Box 3879.

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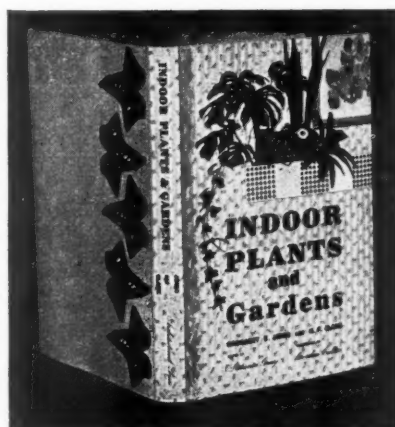
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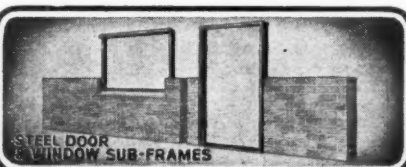
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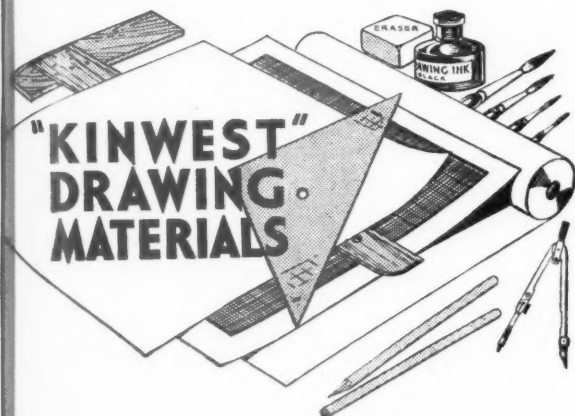
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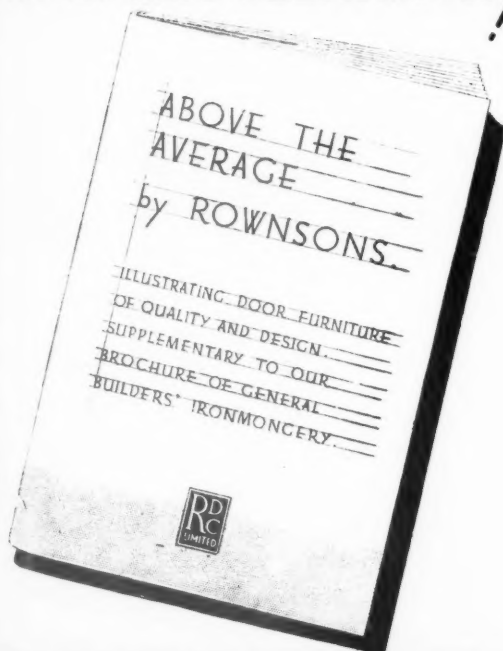


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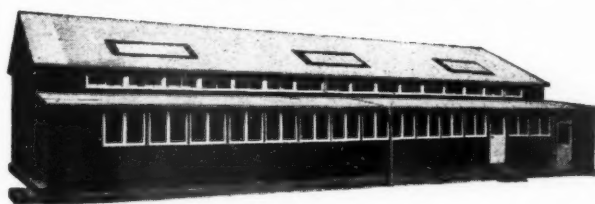
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