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contents

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

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Prices

The Industry

PHYSICAL PLANNING SUPPLEMENT

CURRENTBUILDINGS

STATISTICS *HOUSING*

Architectural Appointments Wanted Vacant and

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

mentioned	the word LONDON is implicit in the address.
AA AAI	Architectural Association, 34/6, Bedford Square, W.C.1. Museum 0974 Association of Art Institutions. Secy.: W. Marlborough Whitehead, "Dyneley," Castle Hill Avenue, Berkhampstead, Herts.
ABS ABT ACGB	Architects' Benevolent Society. 66, Portland Place, W.1 Association of Building Technicians. 5, Ashley Place, S.W.1. Arts Council of Great Britain. 4, St. James' Square, S.W.1. Whitehal 9737
ADA ArchSA ARCUK	Aluminium Development Association. 33, Grosvenor Street, W.1. Maytair 7501/8 Architectural Students' Association. 34/36, Bedford Square, W.C.1. Architects' Registration Council. 68, Portland Place, W.1 Langham 8738
BAE BATC	Architects' Registration Council. 68, Portland Place, W.1 Langham 8738 Board of Architectural Education. 66, Portland Place, W.1. Langham 5721 Building Apprenticeship and Training Council. Lambeth Bridge House, S.E.1.
вс	Reliance 7611, Ext. 1706 Building Centre. 26, Store Street, Tottenham Court Road, W.C.1. Museum 5400
BCC BCCF	British Colour Council. 13, Portman Square, W.1. Welbeck 4185 British Cast Concrete Federation. 105, Uxbridge Road, Ealing, W.5. Ealing 9621
BCIRA BDA BEDA	British Door Association. 10, The Boltons, S.W.10. Fremantle 8494 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 Building Industries Distributors. 52 High Holborn, W.C.1. Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1. Langham 2785 Board of Trade. Whitehall Gardens, Horseguards Avenue, Whitehall, S.W.1.
BRDB	Trafalgar 8855 British Rubber Development Board. Market Buildings, Mark Lane, E.C.3.
BRS	Building Research Station. Bucknalls Lane, Watford. Mansion House 9383 Garston 2246
BSA BSI	Building Societies Association. 14, Park Street, W.1. Mayfair 0515 British Standards Institution. British Standards House, 2, Park St., W.1. Mayfair 9000
BTE CABAS	Building Trades Exhibition. 4, Vernon Place, W.C.1. Holborn 8146/7 City and Borough Architects Society. C/o Johnson Blackett. F.R.I.B.A.
CAS	Civic Centre, Newport, Mon. Newport 5491 County Architects' Society. C/o F. R. Steele, F.R.I.B.A., County Hall, Chichester. Chichester 3001
CCA CCP	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1. Sloane 5255 Council for Codes of Practice. Lambeth Bridge House, S.E.1. Sleane 7611
CDA CIAM	Copper Development Association. Kendals Hall, Radlett, Herts. Radlett 5616
COID	Congrès Internationaux d'Architecture Moderne. Doldertal, 7, Zurich, Switzerland. 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 Coal Utilization Council. 3, Upper Belgrave Street, S.W.1. Sloane 9116
CVE DGW	Council for Visual Education. 13, Suffolk Street, Haymarket, S.W.1. Reading 72255 Directorate General of Works, Ministry of Works, Lambeth Bridge House, S.E.1.
DIA DPT	Design and Industries Association. 13, Suffolk Street, S.W.1. Reliance 7611 Department of Overseas Trade, Horseguards Avenue, Whitehall, S.W.1.
ЕЈМА	Trafalgar 8855 English Joinery Manufacturers' Association (Incorporated), Sackville House,
EPNS	40, Piccadilly, W.1. Regent 4448
FAS FASS	English Place-Name Society. 7, Selwyn Gardens, Cambridge. Faculty of Architects and Surveyors. 67, Oxford Street, W.1. Federation of Association of Specialists and Sub-Contractors, Gerrard 0021
FBBDO	Artillery House, Artillery Row, S.W.1. Abbey 7232 Fibre Building Board Development Organisation, Ltd., Meibourne House,
FBI	Federation of British Industries. 21, Tothill Street, S.W.1. Temple Bar 4561 Whitehall 6711
FC FCMI	Forestry Commission. 25, Savile Row, W.1. Federation of Coated Macadam Industries. 37, Chester Square, S.W.1. Sloane 1002 The Flush Door Manufacturers Association Ltd. Trowell, Nottingham. Ilkeston 623
FDMA FLD	Friends of the Lake District. Pennington House, nr. Ulverston, Lancs.
FMB	Federation of Master Builders. 26, Great Ormond Street, Holborn, W.C. Chancery 7583
FPC FRHB	The Federation of Painting Contractors, St. Stephen's House, S.W.1. Whitehall 3902 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 GG	Gas Council. 1, Grosvenor Place, S.W.1. Sloane 4554 Georgian Group. 27, Grosvenor Place, S.W.1. Sloane 2844 Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1. Whitehall 2881
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1. Whitehall 2881

Faculty of Surveyors of England. 67, Oxford Street, W.1.

Gas Council. 1, Grosvenor Place, S.W.1.

Georgian Group. 27, Grosvenor Place, S.W.1.

Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.

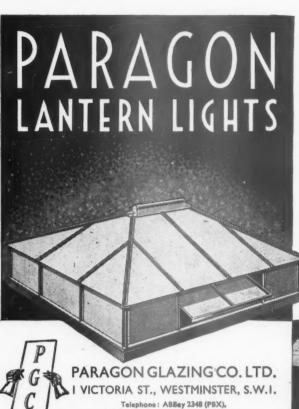
Incorporated Association of Architects and Surveyors.

75, Eaton Place, S.W.1.

Sloane 5615

Institute of Contemporary Arts. 17-18, Dover Street, Piccadilly, W.1. Grosvenor 6186
Institution of Civil Engineers. Great George Street, S.W.1.
Institution of Electrical Engineers. Savoy Place, W.C.2.
Illuminating Engineering Society. 32, Victoria Street, S.W.1.

Abbey 5215



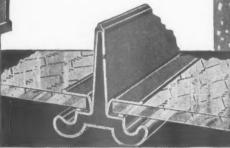
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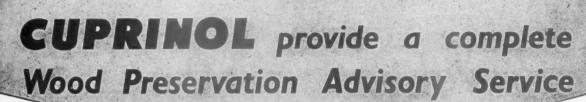
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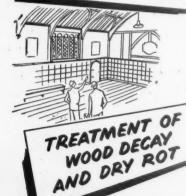
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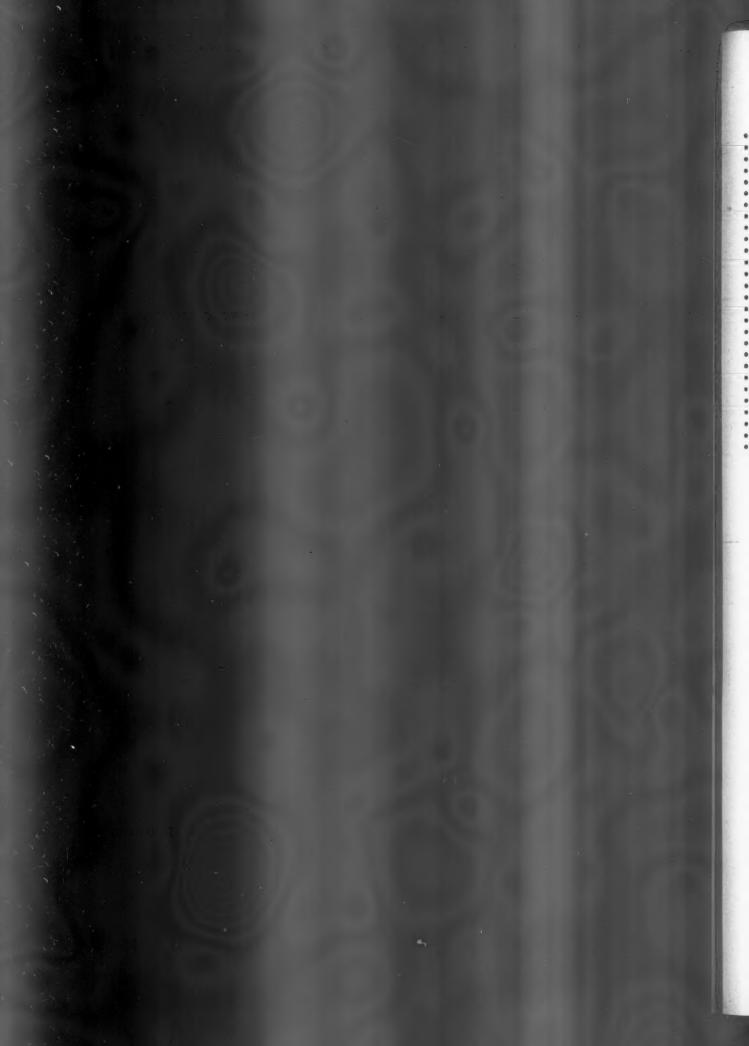
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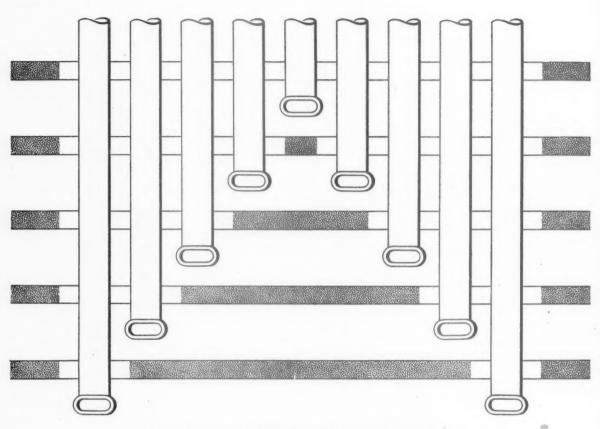
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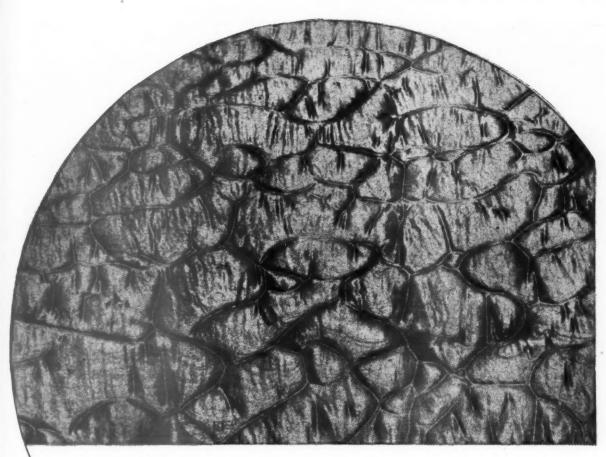
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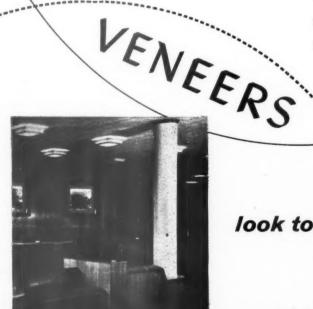
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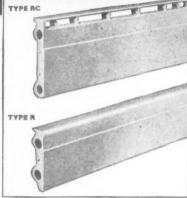
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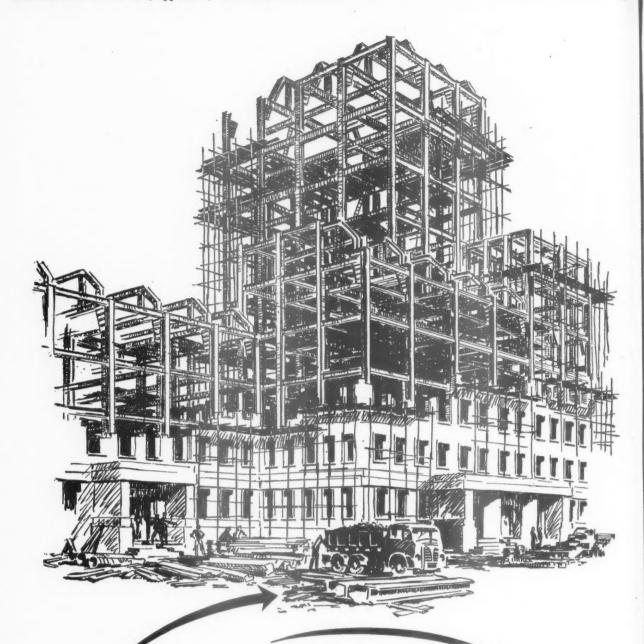
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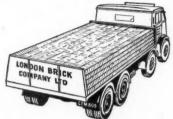
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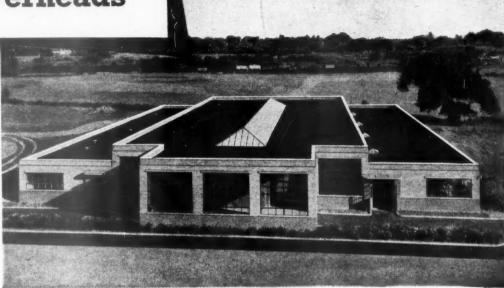


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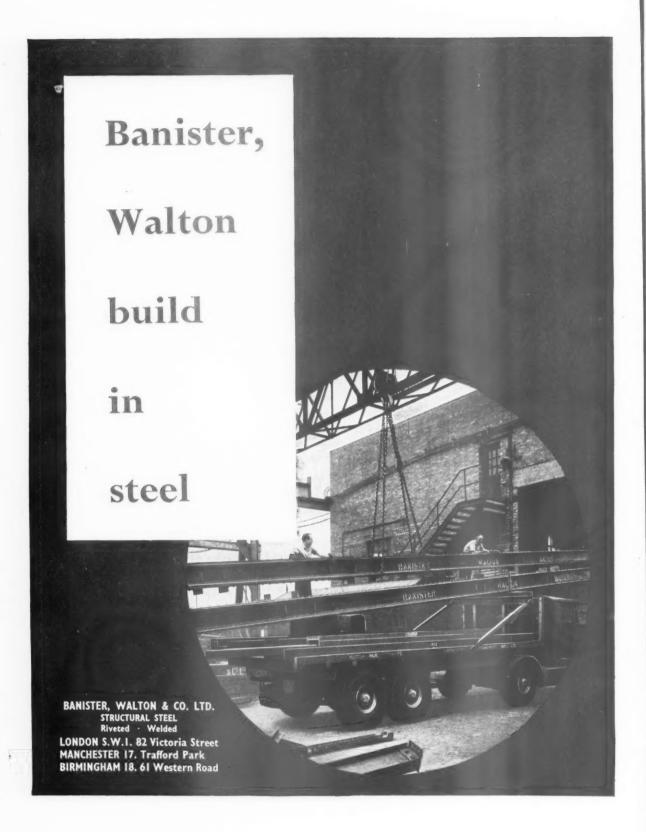
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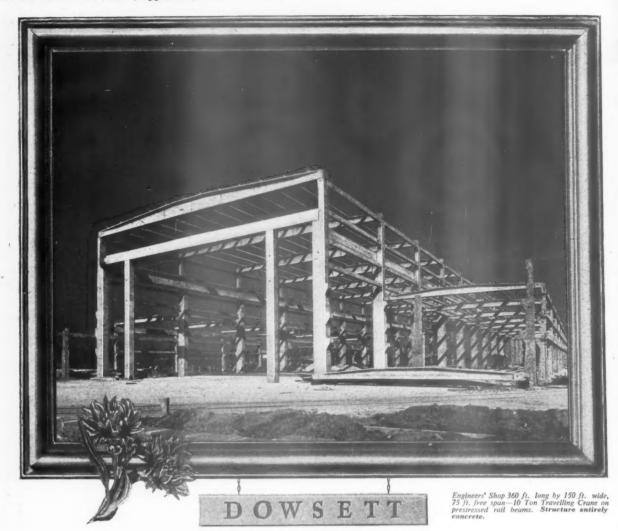
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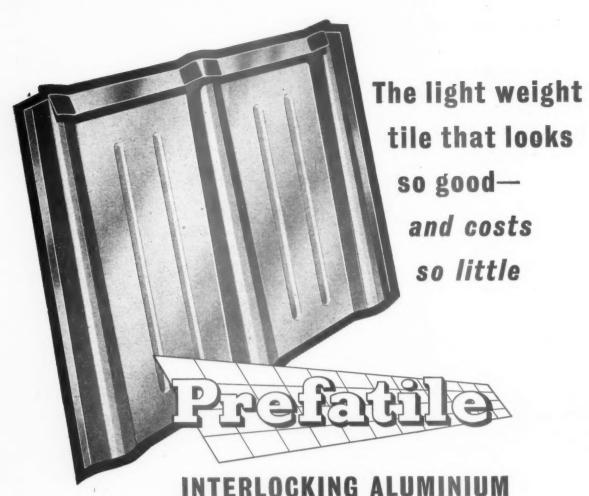
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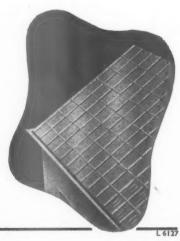
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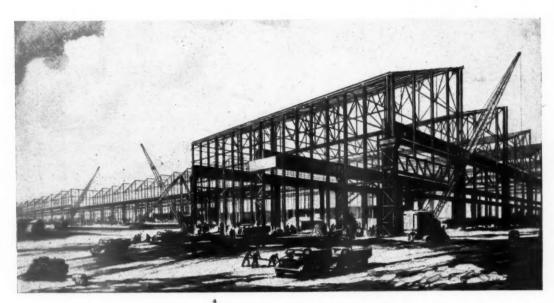
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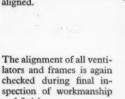
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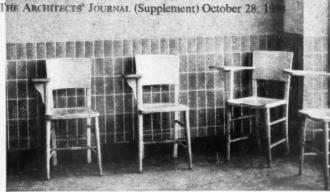
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Architect: J. W. Spink, F.R.I.B.A.

9. LINCOLN GAR ENS JUNIOR SCHOOL, SCUNTHORPE.
Architect: A. Ronald Clark, A.R.I.B.A.
County Architect, Lincoln.
Contractors: Betts & Newburt, Scunthorpe, Lincs.
C.T.2

xxi

The Glass Age Development Committee

Sixteen years ago a Committee of architects, convened by Pilkington Brothers Limited, was invited to suggest solutions to certain problems of town planning. The six illustrated reports issued by that Committee demonstrated what could be done in London and other cities by using all the structural and decorative resources of the glass age, but presenting practical schemes that could actually be built.

Since 1938 and 1939, when those reports were published as advertisements in the architectural journals, great changes have occurred and others are foreshadowed: new ideas about the layout of cities have arisen, new materials and techniques to facilitate their expression have been invented, road traffic has increased to an almost unmanageable volume, and new forms of traffic—the helicopter for example—are posing fresh problems. The cities and countryside of Britain must obviously change greatly before the year 2000—changes for the better could be made now; and in anticipation of such changes and to stimulate thought about them, Pilkington Brothers Limited have again convened a Committee of architects and engineers.

This Glass Age Development Committee consists of:

G. A. Jellicoe, F.R.I.B.A. Edward D. Mills, F.R.I.B.A. Ove Arup & Partners

THE FIRST PROJECT - SOHO

1 Preliminary Survey

The Committee's first project is the Soho area, potentially one of the most economically fruitful areas in London. It is bounded northwards by Oxford Street, eastwards by Charing Cross Road, to the south by Shaftesbury Avenue, with Regent Street on the west.

A preliminary survey of the project occupies these two pages, and the proposals made are for the development of the Soho area as a whole, up to its full economic capacity, with the following reservations:

- a The perimeter shops and theatres are to be retained in their
- b The existing personal character of Soho, in principle if not in detail, is to be preserved.

These are the main development proposals:

- i To create a great weather-protected and air-conditioned shopping and office precinct, free of traffic but accessible for goods, private cars, helicopters, and existing public communications.
- ii To create six 24-storey blocks of good-class residential flats.
- iii To create a spacious open-air entertainment centre, as a supplement to existing indoor entertainment facilities.

All the proposals made for this project are practical possibilities.

The techniques and materials to execute them exist now.

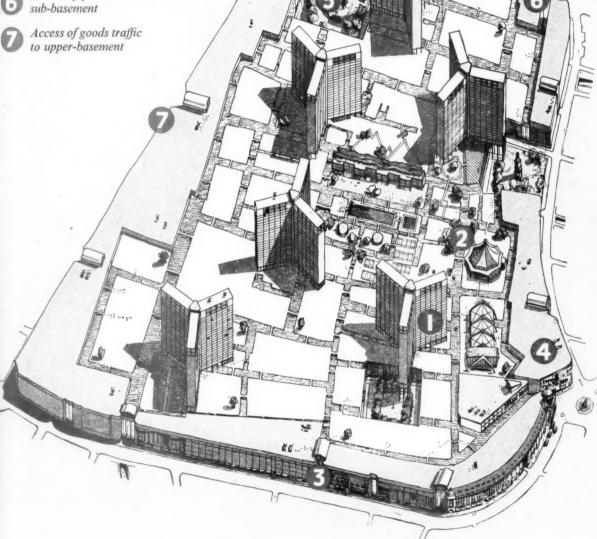
Their detailed application will be published in further reports.





PILKINGTON BROTHERS

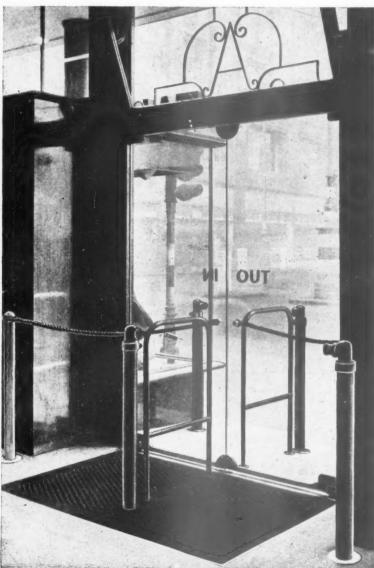
- 24-storey blocks of flats, helicopter garages above, restaurants on Soho Gardens level
- Soho Water Gardens; canals on glass, spanning the streets below
- Entrances to air-conditioned shopping and office precinct
- Helicopter park above existing theatres and shops
- Existing squares retained
- Access of private cars to sub-basement



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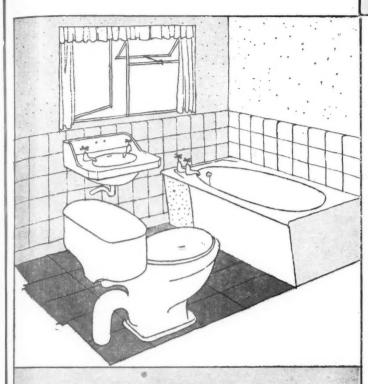
Compressed air provides the smoothest, safest motive power, with cushioned action towards the end of the door movement...but the control mechanism allows for reversion to manual operation whenever desired.

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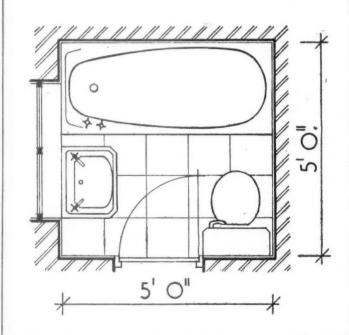
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For further information about the Compac Bath write to the Housing Division of :—

NOTES:

In the ordinary way, a five-foot square is obviously an impossible space for 'a proper bathroom.' Yet here is one that many a family might envy.

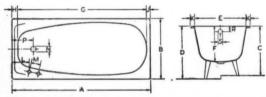
Nothing is skimped. There is no chasing or recessing into the wall.

Notable space-saving features are the recessed w.c. cistern, allowing the pan to be set further back; and the inward slant of the bath panel, giving extra toe-room for the w.c. — another, of course, is the remarkable Compac bath itself.

SPECIFICATION

The "COMPAC" Rectangular Top Bath, porcelain enamelled inside, plain painted outside; $\frac{3}{4}$ " taps; \mathbf{I}_{4}^{1} " overflow; \mathbf{I}_{2}^{1} " waste, plug, chain; and \mathbf{I}_{2}^{1} " glass enamelled cast iron trap, above floor.

The inside contour of the "COMPAC" Bath is specially designed to give maximum bathing comfort with minimum water consumption. The arrangements of taps on the front roll greatly simplifies the plumber's work in making connections, and makes cleaning easier.



A	В	C*	D	E	F		
5′ 0″ 1524 m.m.	2′ 2″ 660 m.m.	1′9½″ 546 m.m.	1′ 11″ 584 m.m.	1′ 10½″ 572 m.m.	1′ 3½″ 394 m.m.		
G	Н	1	K	L	M		
4′ 8″ 1422 m.m.	2½" 64 m.m.	1½" 38 m.m.	1 3 " 45 m.m.	7¼" 184 m.m.	4" 102 m.m.		
N	P	R	S				
21″ 57 m.m.	9¼″ 235 m.m.	23″ 60 m.m.	1 7 ″ 48 m.m.	* Standard Height unless No. 3A Foot is specified .			

The internal length is only 3'' shorter than the standard "Magna" bath, and the depth of water is the same. The bath itself is $1\frac{1}{2}''$ lower than standard, which makes it easier of access for the old or infirm and more convenient for bathing children.

Notable plumbing features are:

- Far shorter fixing time because tap connections are easier.
- The bath is designed to take the well-known "Cobra" combined waste-overflow fitting, which again reduces fixing time.
- Far easier access to connections. (Drawing shows separate detachable panel for this.)
- The underside of the roll of the bath is arranged to take a vertical panel (note that drawing does not show this) without the usual wooden framing. This panel is fitted with small steel brackets which can be quickly screwed to the floor

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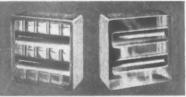
.41, Middle Abbey St., Dublin, C.4.
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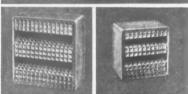
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After the disastrous fire in 1212 KING JOHN issued an ordinance in which the following appeared—

"All shops on the Thames be whitewashed and plastered within and without. All houses which can be plastered let them be plastered within eight days . . . those that will not be plastered in that term be demolished."

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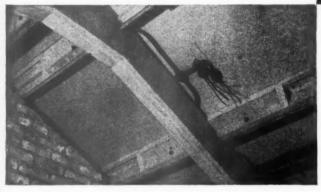
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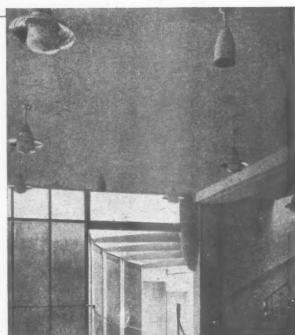
by ASBESTOLUX

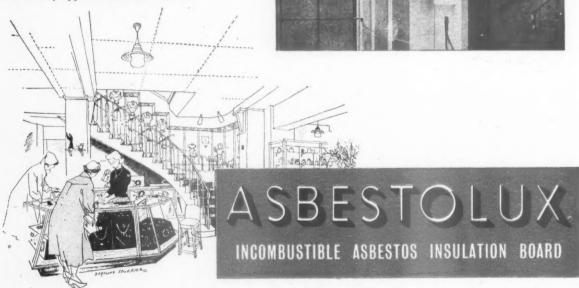
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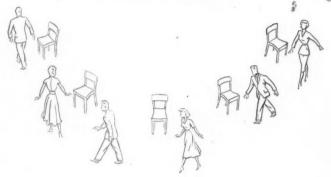




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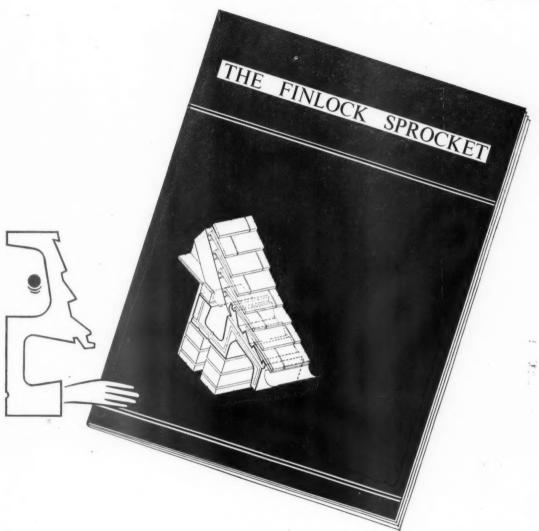


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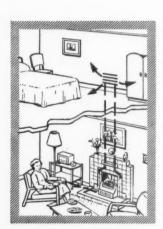
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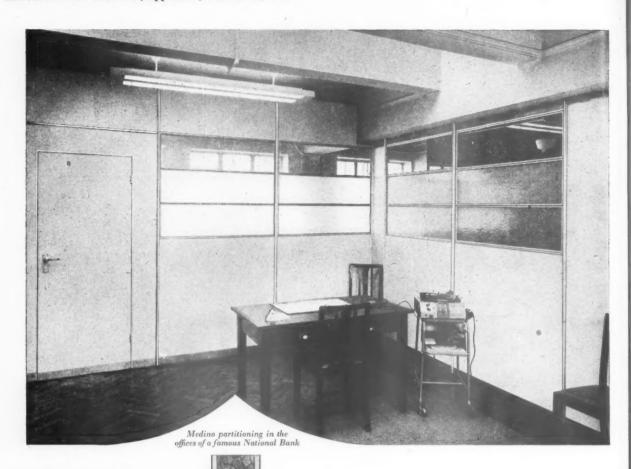
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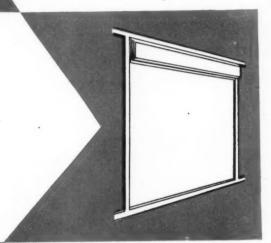
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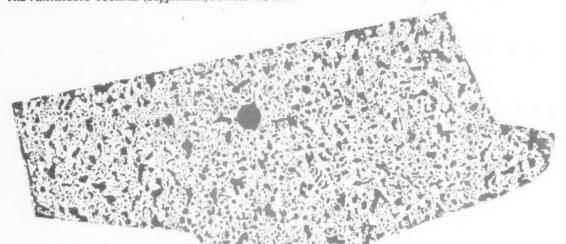
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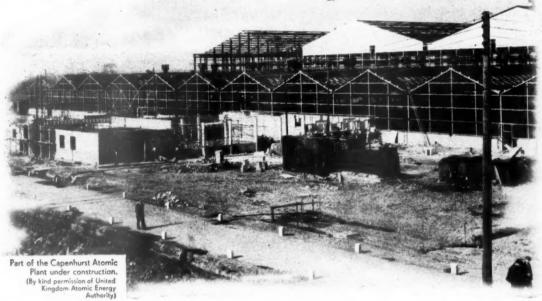
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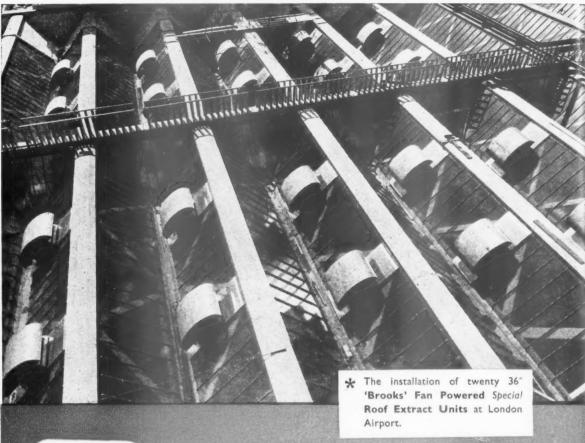
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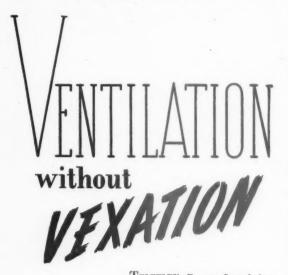
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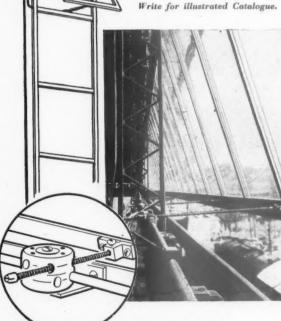
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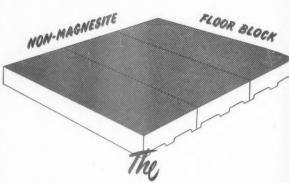
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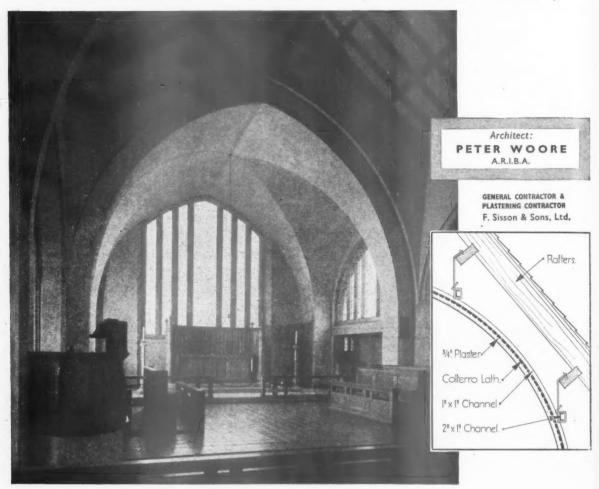
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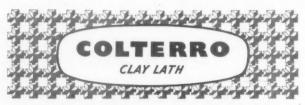
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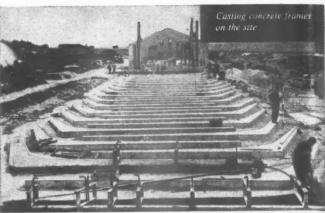
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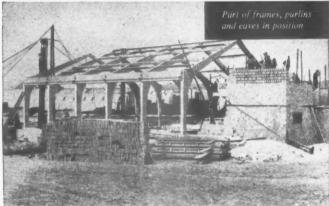
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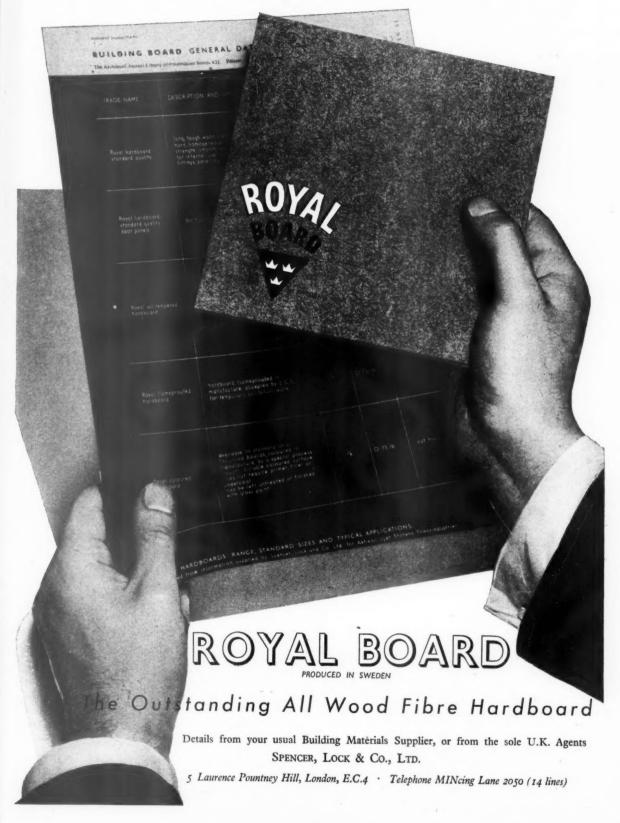


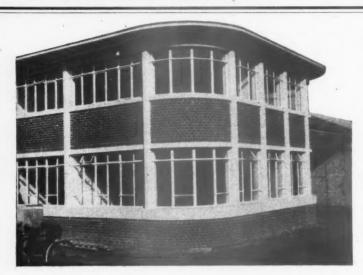




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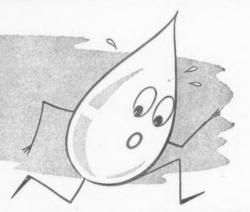
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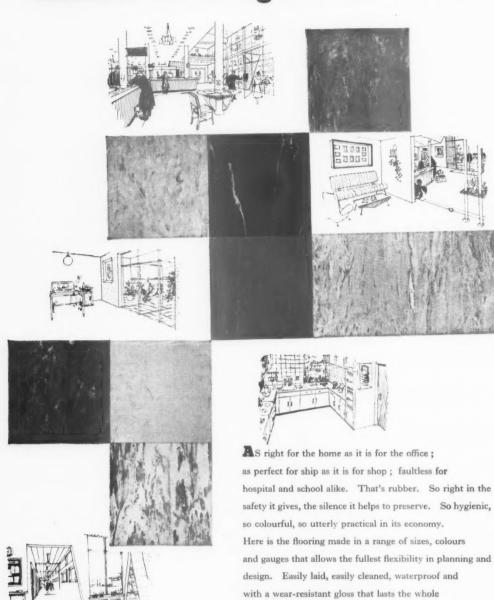
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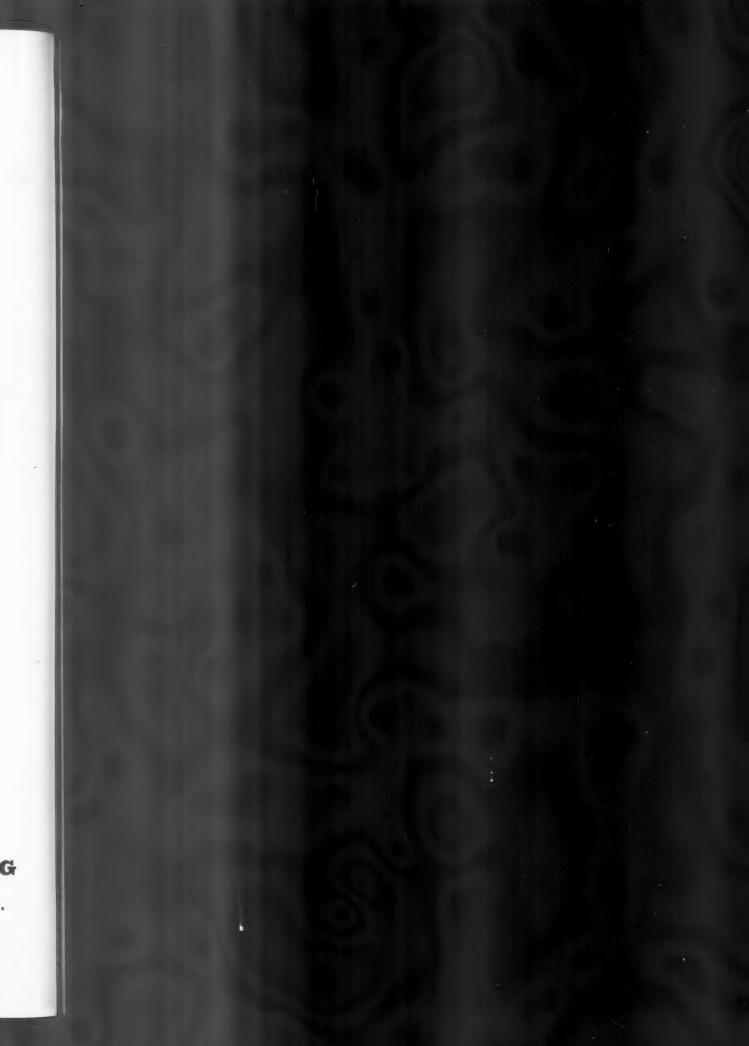


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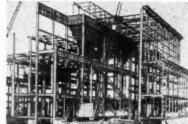








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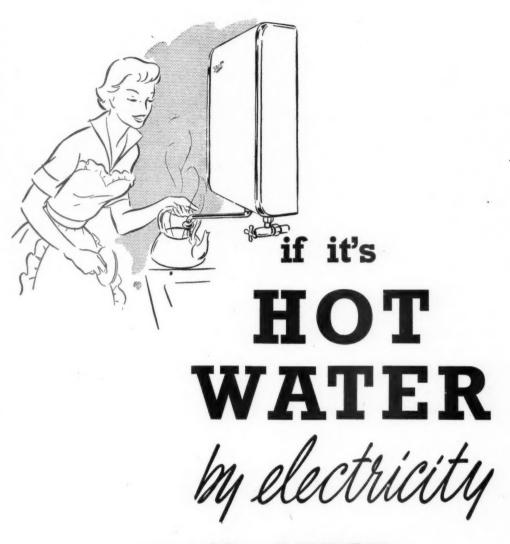
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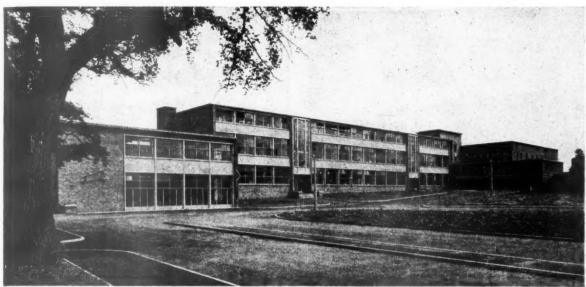
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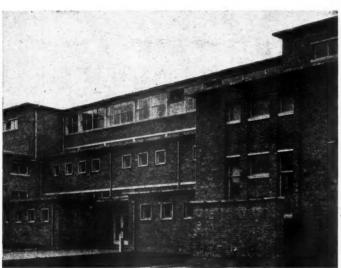
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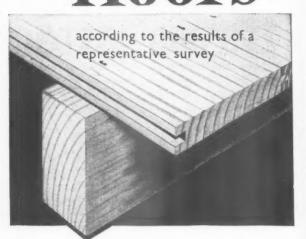
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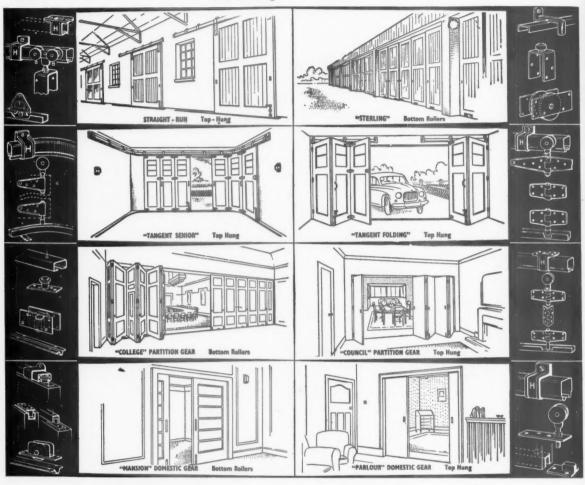
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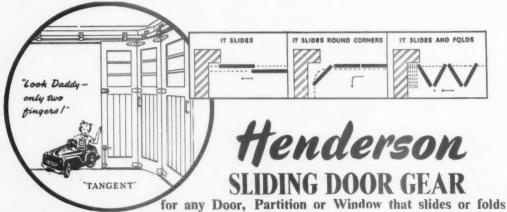
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SENT FROM COVENTRY

Donald Gibson has left Coventry. It is to be hoped that the Coventry Council will behave more reasonably with his successor. Gibson leaves behind him a very good official-architect team indeed. No doubt the City authorities realize that such teams take some forming and will try and tread gently, for at least a few months. Nottinghamshire is fortunate indeed in acquiring an architect of such stature Here is yet one more as Gibson. county to attract enterprising assistants and from which high standards of design will now be the rule.

I referred last week to a visit to Coventry by the delegates of the EPA Conference on modular co-ordination. One of the delegates was Friedrich Stein, a German reputed to have flown on over a hundred air raids over Britain and to have been in the first raid on Coventry. He was duly introduced to Donald Gibson who is reported to have gravely observed "I believe I am somewhat indebted to you."

BUILDING IN CONCRETE

The BBC's Critics made one of their ventures into architecture last Sunday with comments on the exhibition "Building in Concrete" now on view in Portland Place. No one disagreed when Basil Wright said that the exhibition was well arranged, but that it looked as though all the photographs had been taken when the buildings were new. Someone else observed that after a time concrete flakes and gets leprosy. A third critic was obviously impressed by shell concrete and wondered, rather crushingly, what a Brunelleschi could have done with it. That was all apart from Harold Hobson's delighted discovery that Coventry Cathedral showed no violent break with tradition, and Basil Wright's innocent final question "What is concrete?" which left J. M. Richards momentarily at a loss for words. But not so lost as ASTRAGAL is to describe this exhibition.

It is a very good exhibition. That is to say, it has most of the right buildings in it, with only a few minor errors in the captions. But it has no theme, no story which it is trying to get across (save, perhaps, "concrete is good for you") and no clear idea what kind of public it is intended for. It seems a

pity to carp, but so much hard work has obviously been put into this exhibition by the selection committee (and the unnecessarily anonymous worthies who put it up) that it is unfortunate that no real message got through to ASTRAGAL'S eagerly receptive brain. Concrete is an exciting material, probably the most exciting of the lot. The delightful baseball stadium at Cartagena, Colombia, gets this caption: "This stadium has a cantilevered canopy of seven concrete shells 13 in. thick. Reinforced concrete ribs carry the structure of tiers and roof." Would this arouse enthusiasm in a spectator? What schoolboy, who knows backwards the performance of Jaguars, would feel impressed by this bald statement?

What the exhibition needs is less illustrations and more demonstrations, by models and vivid description, of the qualities of these exciting structures in terms of *performance*, and put in a lively, graphic way.

SPEC. BUILDING

"A discussion on 'Is Private Enterprise producing the Best Results' will be opened by Mr. Clifford Culpin . ." So said the invitation, which also showed a sketch of the worst kind of spec builder's houses. A colleague, realizing that this was a subject dear to the JOURNAL's editors, duly went to Hertford, where he was the guest of the Herts. Chapter for dinner one night last week.

Clifford Culpin first re-read the paper he gave earlier this year at the Housing Centre and then showed some slides. His examples of spec. building were, I learn, splendidly appalling, but, un-

HOT-DIP GALVANIZED WINDOWS



THIS WINDOW

WASHED BY THE SEA FOR 12 MONTHS SHOWED NO TRACE OF RUST

(SEE LIST NO. 294: "THE DOVER HARBOUR EXPERIMENTS")

OF LASTING QUALITY

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The six commended designs in the TUC sculpture competition. Top: left to right, two designs by Peter L. Peri (the first for a courtyard memorial group, the second for a main entrance group); and designs by Bernard Meadows and Fred J. Kormis (both main entrance groups). Right, designs by Heinz Henghes and (extreme right) Sieg fried Charoux (both courtyard memorial groups). See note below and announcement on page 517.

fortunately, as no one had provided any builders—or building society officials—in the audience no discussion materialized, which was a pity.

TUC COMPETITION

Most people who visited the exhibition of the designs sent in for the TUC sculpture competition at the Imperial Institute this week will have agreed with the assessors' decision not to make an award. It is a sad result and ASTRAGAL hopes it will not discourage the TUC from their most praiseworthy intention of becoming patrons of art by adorning their new building with works of sculpture. would have been even sadder if the assessors, in their anxiety to award a prize, had saddled the TUC-and London-with second-rate sculpture, of which London has too much already.

The number of entries (71 for the group beside the main entrance; 52 for the war memorial group in the court-

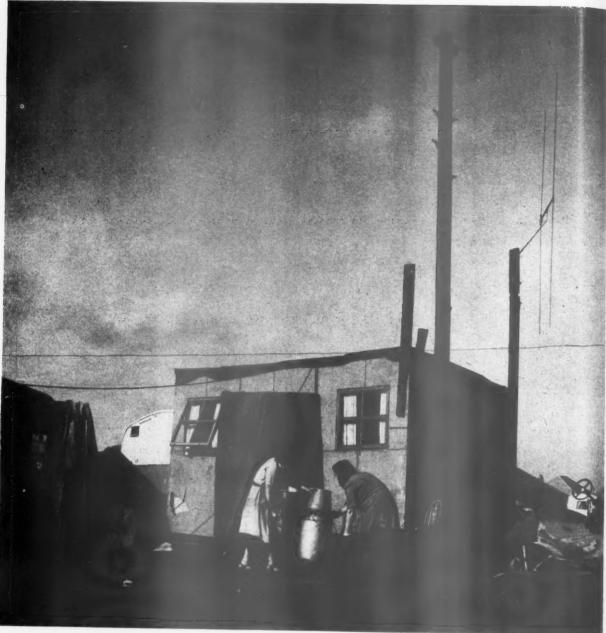
yard) was not bad. Why did these not produce one work that could be recommended for execution? Partly, no doubt, because leading sculptors will not go in for open competitions, being either too busy or too afraid of losing prestige if they don't win; partly, perhaps, because British sculptors have had so little practice at designing in relation to a modern building, and the more advanced sulptors have had so little practice at designing to symbolize a theme. The abstraction that so many of our most promising young sculptors practice is all very well as an exercise but it will not bring opportunities to perform in public, and sculpture is essentially a public art.

In spite of its failure to produce results, the TUC competition was worth holding, but ASTRAGAL hopes sculptors will learn the lessons it teaches. It will be a long time before they can legitimately complain again that they are not being given the chance to adorn modern buildings.

THE MOTOR SHOW

Last week ASTRAGAL made his pilgrimage to the annual feast of British covetousness and frustrated desire-the Motor Show. This year, that covetousness was taking a different turn, and with the big bodywork manufacturers putting more emphasis on their contribution to the mass-production market, and less on specialist work, there seemed fewer groups of popeyed citizens staring at gold-plated steering wheels and leopard-skin upholstery. Instead, the citizens were on their hands and knees around such ultrasporting devices as the D-type Jaguar, low, green, snug and-even to ASTRA-GAL'S inexpert eye-a real hustler, and a beautiful piece of machinery.

More than ever this year it seems, as far as body styling is concerned, everyone is out of step except the British. From the overseas producers, whether your fancy is the super-sports Mercedes, proved against the toughest competition in the world, or the





Housing, 1954

The occupants of the "dwelling" on the left, and the more fortunate tele-viewers and -phoners above, are permitted to live under their present conditions (paying 8d. a day rent) while the local and county authorities concerned try to sort out a long-standing mess of planning regulations, hardship pleas, High Court ruling and sheer obstinacy. The urban district council of Chislehurst and Sidcup, Kent, has had this caravan-and-shack site (at St. Mary's Cray) on its hands for twenty years. If the combined efforts of the urban district council, the LCC and Kent county council cannot prevent people from moving on to this site (both these "dwellings" are newly-occupied)—let alone remove the established residents—we can hardly be surprised that the landscape of this country is suffering from a shabby excess of caravanning. The St. Mary's Cray site does—let us be fair—present an unusually difficult problem. Most local authorities have powers to tidy up residential or holiday caravan sites—but many are simply neglecting to do so. Next week the JOURNAL editors will collaborate with contributors who have had some experience of the caravan problem in producing a guide to local authorities and architects on all aspects of the problem.

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pseudo-sports Ford Thunderbird, whose toughest competition comes from the lovelies who appear in every photograph of it, we are getting substantially the same smudged-over slabsided profile, the same amount of chromium and in about the same places, and there is no doubt that there is a real International Style at the moment, to which everyone subscribes, from Tokio to Barcelona. those in Coventry, Birmingham, Surbiton, and places of that sort where nostalgia for the good old days before the horseless carriage still seems to be rife, and reminiscences of the woodbuilt stage-coach seem to be de rigueur.

The very scrappy design of the detailing of some quite expensive English cars seems to be part of the same business. Supporters of International Borax usually find some way of blending their rear-lights and such into a neat unit which grows naturally out of the mudguard pressing, but many English manufacturers use a standard catalogue part and stick it on the first piece of flat that comes handy-the sort of thing that would set old masters of the nicely-calculated detail, like Lutyens or Perret, reaching for the safety-catches of their revolvers.

HOW'S YOUR PERSONALITY?

Never having had to answer the awkward personal questions upon which some employers nowadays base their promotion schemes, ASTRAGAL is delighted with an article in the current issue of Fortune, which blows the gaffe on the whole thing. In America, it seems, innumerable personnel consultants have questionnaires of their own, all of which seem designed to spot the run-of-the-mill pedestrian types who would presumably go as far as departmental managerships and then stop for good. Hints given in the article for getting good marks include a creed with such admirable sentiments as: "I was a happy American boy and everyone liked me." "I like things pretty much as they are." "I love my family but I don't let them get in the way of the firm's work." "I don't like books or music much." There are signs, I'm glad to see, that some employees are revolting, and maintain that their private life is their own business and nobody else's. Good luck to them.

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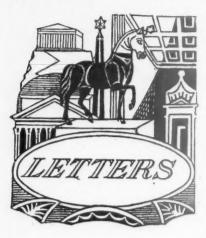
TUC Sculpture competition results pages 513 and 517 Winning designs in MOW Screen-painting competition .. page 518 New Delhi Hospital competition: winners' design ...

The Editors

HOLDING THE PURSE STRINGS

The subject for next year's guest editors will be costs. We are announcing the subject well before the end of 1954 because it is such a difficult one that much preliminary work will have to be done in advance, by our chosen team of guest editors, in organizing a programme of articles so that both readers and editors will be able to get off to a flying start in January, 1955. Why costs—a subject which is so often synonymous in architects minds with boredom and frustration? Because this, we believe, is the Achilles heel of the profession. The man who controls costs controls the design of buildings, and that, surely, is the rôle of the architect. But costs form little, if any, part of the architect's training. This is unfortunate, because most good architects have an "artistic streak" which, it is commonly believed, is rarely, if ever, accompanied by a flair for figures. So, with a prejudice against the subject and no proper training in it, the architect is at some disadvantage when, on leaving school, he takes his place as would-be leader of the building team. The architect, in fact, gets his training in the cost of building only through practical experience, and often at his client's expense. Which is, perhaps, one reason why every architect's office contains so many cancelled projects. With our guest editor articles we hope to show that the subject is neither so difficult nor so unsuited to the artistic mind as quantity surveyors, builders and others, would have one believe.

Why costs now? For a variety of reasons. Because building costs are still going up and the only solution the architect has to offer at the moment is that of reducing standards. Because within a matter of months the control of building through licensing will be lifted. Because the peak of local authority building programmes has now been reached, and private housing may not be the only type of building offered to the spec. builder. In building operations someone has to look after the client's interests, to help him hold the purse strings. It may be the architect, or the Q.S., or the engineer, or a new type of business advisor altogether (see the account of the newly-formed building group, CAS Industrial Developments, Ltd., on page 531). Whoever it is will inevitably be in control of the appearance—the design—of the buildings. We believe that the architect should be in that position. But he will only stay there, in a free economy, if he can show that he can protect his client. He can only do this if he can control costs. If he cannot control costs he will be superseded by someone who can, and the architect will again be the man called in on "prestige" building to do the decoration.



June S. Coombe, A.R.I.B.A.

Philip S. Cocker, A.R.I.B.A.

George Williams, Secretary, COID
Street Furniture Committee

J. F. Quin, A.R.I.B.A.

Ernest T. Stocker, Paint Manufacturers Representative

The New Brutalism: "Suitable for St. Trinians"

SIR,—I was interested to read in John Voelcker's letter in the JOURNAL for October 14 that he finds the new secondary school at Hunstanton "intensely human," for some reason or other connected with its "sense of location in space and time to those who use it." Humanism surely is a quality in which this building is sadly lacking.

it." Humanism surely is a quality in which this building is sadly lacking.

"The New Brutalism" seems to me to be admirably suitable for rebuilding a ruined tower of St. Trinian's as a reformatory for the most delinquent members of the school. One can imagine the headmistress strung up from a tatty piece of exposed piping on the ceiling, while a bonfire blazes away on the concrete tile floor beneath—the new girl being "grilled" by the prefects in the lavatory, under the intense glare of an industrial light fitting—the fair-faced brickwork dormitories with their beds of nails (photographed by the NSPCC without the architect's permission), the absence of bedclothes being due to the curious fact that "the subtleties of 'soft materials,' etc., are, for the present moment, unintelligible and therefore impossible to use positively."

If this is a human approach to "architecture"—I've had it.

JUNE S. COOMBE

Harrow.

Local Authorities Could Defeat Bad Spec. Building

SIR,—One definite line of attack on this problem of ill-conceived builders' housing would be to demonstrate to the general public just what can be built, by encouraging more local authorities to build houses specifically designed for sale.

These houses could be built in selected areas at low densities, complete with roads and paving. I envisage a few basic types of detached houses, semis and even perhaps terraces, all built to a slightly better spec. and finish than the local council houses.

Built in contracts of 15 or more the prices could compare favourably with those of the spec. builder, especially if coupled with low interest local authority loans. Land, roads and sewers could be an annual charge.

There are several advantages of such a policy.

It should be popular with a government keen on building houses for sale. (Private enterprise would build the houses anyway.) There would be less trouble with planning authorities and building societies.

Low prices for contemporary houses would be possible.

The design and supervision of housing would be done by architects.

PHILIP S. COCKER.

Yorks.

Tidying-up the "Iron Jungles" of the Streets

SIR.—ASTRAGAL's three simple questions (AJ, September 30) have, unfortunately, neither simple nor "official" answers. There is no one body at present, unless it be the Ministry of Transport, who could co-ordinate the main items of street furniture which form the "iron jungles." Perhaps the LTE has done more than any other authority towards tidying up the street scene by combining a number of services on one unit: for instance, the bus stop sign, with its route map, timetables, and information panels, and now a well-designed litter bin whose shape and proportions make it part of the whole, and not merely an appendage.

However well-designed individual units may be, effort, material and space will always be wasted until the various "things" can be combined. The problem is not insuperable, and should be tackled quickly, if only in the interests of accident prevention, by allowing the motorist to keep his eyes more on the road instead of searching all over the place for the signs and restrictions which are supposed to help him and the pedestrian.

So far as lighting is concerned, the Ministry of Transport's Departmental Committee on Street Lighting has probably done the best it can in determining mounting heights for the light source, and the spacing of the poles with the lanterns that are available today. If and when more efficient methods of lighting are possible, the Committee will no doubt think again. So once again it is up to the scientists.

More closely spaced and shorter lamp posts would only aggravate the problem by both day and night, since it would increase the number of items, and also the unevenness of the illumination. A properly designed lantern needs height from which to spread its light efficiently, but there are other technical problems involved, not the least of which is glare.

Wall-mounted lanterns as an alternative to lamp posts, which invariably appear out-of-scale in old towns, are only possible where the buildings allow for both uniform and correct mounting heights for the light source; but a combination of these essentials would be rare in towns such as Oxford, Marlborough, Cheltenham, and Lewes. It is known, however, that authorities in some of the old towns have this possible solution well in mind.

GEORGE WILLIAMS.

London.

Private Practice at Public Expense

SIR,—It is only to be expected that M_I. Howitt would attempt to defend his particular brand of the profession. But an his answers are so phrased to exonerate any public architects engaging in private work it must be admitted that unfortunately they bear little relationship to the questions put in your leader for September 30.

His interpretation of the professsional code of practice sections 4 and 5 is specious, to say the least. There is another clause—No. 1—which I think should be the main guide to public architects in this matter. A public architect's first duty must be to his employers—i.e., the local authority—he therefore cannot, in conscience, take on any work which directly or indirectly conflicts with or interferes with that duty. It is hard to see how he can give attention fully to his daily round after sitting up after midnight working on private practice.

working on private practice.

As to the other practice rife in public offices—producing drawings for approval—this is a practice that responsible public officials like Mr. Howitt should be only too keen to see stamped out. How many of the layouts for speculative building today were produced by public officials privately, if not in public time?

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I agree with Mr. Howitt that the salary conditions would do nothing to mitigate these practices. It is the easy-money attitude

which induces the desire.

The main point that previous correspondents and your leader brought out was that public officials were engaging in private practice either within or without public time, and subsidised by public money, probably some of it subscribed by private architects. The galling thing to most of us engaged in or associated with private practice is, that with the colossal expenditure on public offices and the relatively poor output and efficiency of many, many of the employees find time to carry out private work either in the evenings or in their working day. If they can find the time then the public money is being disbursed inefficiently and the sooner an O & M reorganization takes place the better.

J. F. QUIN.

Wigan.

What's Wrong with Mancunian Architects?

SIR,—My job as a technical representative for a paint manufacturer brings me into contact with architects throughout Lancashire, Cheshire, North Wales and Ulster, and after three years in this area I am at a loss to understand why the architectural profession in Manchester is so "hang-dog" in comparison with the other two principal cities which I work, i.e., Belfast and Liverpool.

Undoubtedly, Belfast is by far the leader in architectural life, with Liverpool running second, but Manchester drags a long way behind. There seems to be little interest in development and our job is maderather difficult as a result and I wonder quite frankly whether the fault lies with the architect or with the Manchester public, or can it be that the younger man is not given a chance?

I would recommend Manchester architects to visit Belfast and notice the refreshing design of tea-bars and restaurants which Manchester sadly lacks. I appreciate that I, and fellows like me, can be a nuisance but it is worth pointing out that my job is much pleasanter in places where the standard of design and colour is high, whereas more often than not in Manchester one's card is returned. It seems that the "reason why" lies in this attitude.

ERNEST T. STOCKER.

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F. QUIN.

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SCULPTURE

Disappointing Results of Competition

No award will be made in the competition for design of sculptural groups for the TUC Memorial Building. But six designers have been commended; and each has been awarded a prize of £50.

The assessors have reported as follows:-

"We have given careful consideration to the 123 designs submitted in the above competition (52 in class A—the courtyard memorial group; and 71 in class B—the main entrance group).

"We were disappointed in the quality of the entries and have reluctantly come to the conclusion that there is no design in either class that we can possibly recommend to the Memorial Building Committee for execution. Neither is there any design which reaches the standard envisaged for the second and third prizes.

"We therefore recommend, in accordance with the provisions of the competition conditions, that no award be made or premiums given."

The entrants whom the assessors have commended are:—Class A—Courtyard Memorial Group: Siegfried Charoux, Peter L. Peri, and Heinz Henghes. Class B—Main Entrance Group: Peter L. Peri, Fred J. Kormis, and Bernard Meadows. (See page 513.)

The assessors were Sir Herbert Read, J. M. Richards, Arthur Deakin, Jack Tanner and David du R. Aberdeen.

MOH

Minister of Health Opens Health Conference

The Ministry of Health hopes that it will soon be in a position to circulate bulletins on various aspects of Health Service building design and construction, which "will reflect what is best in modern practice, both in this country and abroad, and serve as guides to what can be officially approved." This was announced last week by Iain Macleod, the Minister of Health, when he opened the Design of Health Buildings conference at the RIBA headquarters.

On this occasion Mr. Macleod made it clear to the architects present that he was apparently not aware of what he meant by "best in modern practice." "No doubt," he said, "the architect would like to have the opportunity to spread himself in much more ... monumental constructions." And he seemed pleased that the architect had no chance of spreading himself monumentally. "This very limitation," he said, "is a challenge to the architect to exercise ingenuity in the adaptation and extension of existing buildings, so as to provide maximum resources for the functioning of the hospital with minimum of expenditure.

Mr. Macleod said that by the end of the present financial year over £60 million worth of capital works would have been carried out in National Health Service buildings since 1948. Capital expenditure was now running at £11 million a year. Large as this total sum seemed, it was nevertheless small in relation to the vast amount of work that needed to be done.

"This discrepancy between the demand and the means of meeting it," said the Minister, "is so great that it has been necessary to concentrate on comparatively modest works so as to ensure that the sum available is as widely—and wisely—distributed as possible and that the most rapid return on the expenditure is obtained.

"The advance of medical science," said Mr. Macleod, "is rapidly making the ordinary general hospital less and less a place for lying in bed and more and more a place for concentration within a very limited period of the various skills and techniques that can now be brought to bear. This means a fundamental change in the conception of the hospital building itself. Ideally such a change calls for an entirely new set of hospitals, but obviously such an objective is unrealistic and we must aim at adapting many of the hospitals we have so as to fit them into this new conception.

"Here is ample scope for the display of the architect's talents. That architects are capable of seizing these opportunities is being amply demonstrated in the capital development that has already taken place in the hospital service. At least a quarter of this has gone on new special departments at existing hospitals, the main purpose of which has been to make it possible to treat patients with less delay and with the greater effectiveness that more precise diagnosis permits."

All this did not mean that there was no scope for major capital works. The new Dental Hospital in Sheffield was already in use, and the Minister mentioned that earlier this year he had laid the foundation stone of a new mental deficiency hospital near Liverpool which would provide accommodation for nearly 1,000 patients when completed. Any regional hospital board architect could tell of big new hospital projects of the future, many of which were already far advanced in planning.

Pointing out that the running-costs of a building were, if anything, even more important than the capital cost, Mr. Macleod added:—"With the cost of running the Health Service rising and rising, it has become more than ever necessary to look for economies, and architects can help enormously by keeping this at the forefront of their minds when they prepare their designs."

Mr. Macleod said that he hoped the Ministry would soon be in a position to circulate bulletins on various aspects of Health Service building design and construction which would reflect what was best in modern practice, both in this country and abroad, and serve as guides to what could be officially approved. "Hitherto," he added, "central responsibility for the scrutiny of building plans has been exer-

cised almost entirely by add hoc study of each project of any size as it has been submitted, and this will continue. But we believe—and the RIBA are with us in this—that there would be advantage in the publication of bulletins of this kind so as to provide a ready means of disseminating information to architects and to the professions with which they work in hospital planning. At the same time much discussion on plans at a later stage may be saved. Naturally in the preparation of the bulletins there will be the fullest consultation with people outside the Ministry, doctors and others, as well as architects, to ensure that the best opinion is canvassed on all points. There is, however, no intention of cramping the architect's initiative by rigid prescription of details of planning. But there are a number of matters on which it is believed the profession would welcome authoritative guidance—space standards to mention only one—and it is felt that it is the Ministry's duty to supply this in consultation with outside experts in this field."

IOB

President speaks on Building Education

Leslie Wallis, the new President of the Institute of Builders, speaking last week at an LMBA Council meeting, said that the Institute's main work today was education. In its early days the Institute was concerned with the creation of sound building laws, efficient building technique, uniform conditions of tender, fair terms of contract and rational conditions for the management of building production. Those matters were now dealt with largely by such bodies as the LMBA and the NFBTE.

About 70 years ago, said Mr. Wallis, the Institute became an Incorporated Society, thus declaring its professional intent. The Institute had always remained in the tradition of the general builder, by whom it is controlled, but it expected these men to be well qualified. "We cannot assert a status or demand its recognition," said Mr. Wallis, "unless and until we and our key men possess the qualifications of competence we claim and our status has public recognition.

"Like all bodies which insist on maintaining their standard our growth has been slow. We are a small body, but have achieved a percentage of examined membership never matched even by the RIBA before compulsory registration. A fully examined membership is our aim, and I am very keen to see 'special case' membership come to an end.

"The Institute did not invent general building courses, but we have played a very important part in developing them. Hundreds of schools and thousands of students have benefited by the influence of the Institute. We, of course, recognize the specialist, but we know we are on firm ground in insisting on a good general education before specialization starts; in other words the true development of the boy is a primary consideration. It was undoubtedly due in some measure to our policy of good general education that the Institute final examination and membership was accorded graduate status, which is no mean achievement. Now we wish to have a still closer link with schools by means of our registration and exemption scheme. This is based on a system of recognized courses and on good standards of general education, from which youths may register

with the Institute as students and then prowith the institute as students and then pro-bationers. We shall succeed in this pro-vided we are backed by the senior member-ship of the Institute, that there is local understanding of our aims and support for

understanding of our aims and support for them in the schools, by advisory committees, and by ourselves giving guidance to our sons and junior employees.

"I have deliberately placed general education before technical education for this reason: once a candidate has been accepted to sit for the licentiate diploma examination, his election as a licentiate is almost automatic if he passes the examination. If the Institute is to maintain its high standards, which I know we all wish it to do, it must exercise care in granting permission to sit for the examination, the passing of

which is essential to membership at the first level. The Institute has always avoided the pitfall of becoming a body of men who, whilst good technicians, are lacking in general knowledge. This is a point which is certainly not appreciated by a great number of builders, who seem to think that technical knowledge and ability are all that is necessary.

that is necessary."

After outlining in detail the Institute's methods of handling its examinations and the different classes of candidates for which it caters, Mr. Wallis said:—"It has been said that we builders are trying to establish that building is a profession. I have never had that idea, for, strictly speaking, there are only three professions. But the knowledge and type of knowledge required by a

modern Master Builder or builders' manager is quite as professional in character as that required by an architect or a surveyor. I believe that building is one of the finest if not the finest, trade there is, a combination of many trades, and one in which I am very proud to work. And I say this, that a builder who is an FIOB is the equal of the architect who is an FRIBA, and should the architect who is an FKIDA, and should be regarded as such, and so on down the scale. And this applies also to the surveyors. We are partners in this great industry, but equal partners, provided we have similar qualifications, but fecognition of this fact is dependent on our insistence upon a broad and sound general education followed by co-ordinated courses in general building at the technical college."

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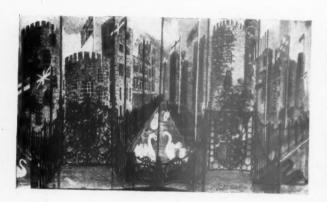
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WINNING DESIGNS IN SCREEN-PAINTING MOW COMPETITION











Earlier this year the then Minister of Works, Sir David Eccles, invited artists to submit designs (in competition) for sixfold screens to be used in British Embassies abroad. The designs selected for use are illustrated here. They each win an award of £75, which comes from the Minister's "Special Fund for Works of Art." Left: top to bottom, designs by Humphrey Spender, E. M. Dinkel and Mary Adshead. Above: designs by (top) G. Oakes and (bottom) Maddy Benard.

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"Builders keep promise" says President

"During the many years that the Building Industry was suffering from controls we repeatedly pressed for experiments in freedom and promised that the more extensive those experiments were the better would be the results. We have kept our promise. Last year we built more houses than in Last year we built more houses than in any post-war year and, contrary to what Mr. Aneurin Bevan has said, we also built more schools, factories, etc." G. W. Grosvenor, President of the NFBTE, said this at the annual dinner of the Birmingham Association of Building Trades Emulyares late week. ployers last week.

"This year," he added, "we hope to create an all-time record for housing and, still further, to increase the output of other buildings of all types. Our success has very largely been due, not only to the liftof controls, but to the successful efforts of the manufacturers of building materials. They, too, have been breaking records and seem likely to go on doing so. We wish them well and if, as we expect, all controls are shortly abolished, can promise with confidence to keep pace with them."

The Rebuilding of the City. Forum organized by the Students' Committee. Speakers include Sergei Kadleigh, J. M. Richards and Arthur Korn. At the AA, 34, Bedford Square, W.C.1. 7.30 p.m. OCTOBER 28

Foundations, Underpinning and Structural Problems at the Daily News Building in the City of London. By Frederick W. Slatter, and Arthur Brown. At the ISE, 11, Upper Belgrave Street, S.W.1. 5.55 p.m.

OCTOBER 28

Building in Concrete. *Exhibition at the RIBA, 66, Portland Place, W.1. Weekdays, 10 a.m. to 7 p.m.; Saturdays, 10 a.m. to 5 p.m. UNTIL OCTOBER 30

Modular Society's Visit to Basingstoke. Houses to be inspected to test view that brickwork is "dimensionally fluid." Members and friends are welcome. Details from Modular Society Ltd., 22, Buckingham Street W. C. COOPER 30. OCTOBER 30

Presidents' Inaugural Address, Presentation of London Architecture Bronze Medal and Unveiling of Portrait of Sir Howard Robertson, Past President, RIBA. At the RIBA, 66, Portland Place, W.1. 6 p.m. NOVEMBER 2

The Yorkshire Point of View. Film at the BC, 26, Store Street, W.C.1. 12.45 p.m. November 3

Reconstruction in London. Illustrated talk by Percy Johnson-Marshall. At the AA, 34, Bedford Square, W.C.1. 6.15 p.m. NOVEMBER 3

Rococo Art from Bavaria. Two lectures at the Lecture Theatre, Victoria and Albert Museum, Exhibition Road, S.W.7. 6.15 p.m.

NOVEMBER 3 AND 10

Three Polish Cities—Warsaw, Cracow and Gdansk. Illustrated talk by D. M. Gregory Jones. At the AA, 34, Bedford Square, W.C.1. 6.15 p.m. November 10 NOVEMBER 10

Annual Exhibition of members' sketches. At the AA, 34, Bedford Square, W.C.1. Monday to Friday, 10 a.m. to 6 p.m. Saturday, 10 a.m. to 2 p.m. UNTIL NOVEMBER 19

BUILDINGS IN THE NEWS



Church in New Zealand

The church of St. James, Lower Hutt, New Zealand, was designed by the Structon Group Architects, of Wellington. (The Group includes: W. E. Lavelle, R. C. Muston, C. J. Whitmore and K. R. C. Rowe.) The church is of reinforced concrete on bulb pile foundations, plastered externally off-white and internally in grey sponge finished plaster, painted warm off-white. A large porte cochere links the church proper to a bell tower.

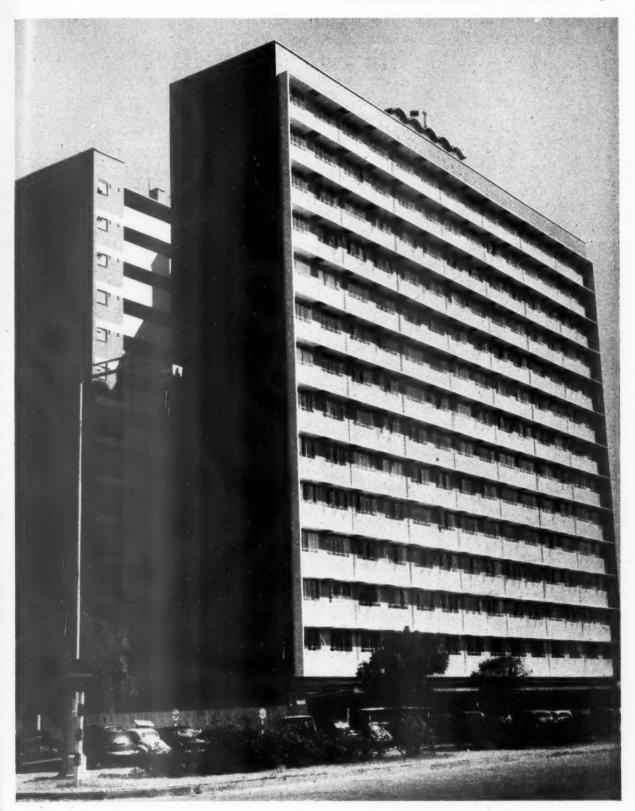
BUIL'DINGS IN THE NEWS (continued)



Bus Garages for London Transport

Above: the parking area of a bus garage at Shepherd's Bush. Below: the offices and canteen of a bus garage at Brixton. Both were designed by Adie, Button and Partners, in association with Thomas Bilbow, architect to London Transport (consulting structural engineer, A. E. Beer). The Brixton building will be fully described and illustrated in a later issue of the JOURNAL.





Flats in Salisbury, Rhodesia

s garage architect be fully

Rhodesia's tallest building, Trafalgar Court, which has been under construction in Salisbury for two years, has just been completed. This building, designed by Ross, McKenzie, van Heerden and Hartford, contains 144 flats: 81 have single rooms and 63 have two rooms. There is a restaurant in the basement.





Top, a model of the Institute seen from the north. Bottom, a view from the north-west.

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WINNING COMPETITION DESIGN FOR THE

ALL-INDIA INSTITUTE OF MEDICAL SCIENCES: NEW DELHI

The Government of India, through the All-India Medical Institute Committee, recently promoted a competition for an All-India Institute of Medical Sciences at New Delhi, and appointed Walter George, F.R.I.B.A., of New Delhi, and P. Jeanneret, of Chandigarh, as assessors. The winners, who were first announced in the Journal for September 2, were Messrs. H. J. Brown, A.R.I.B.A., and L. C. Moulin, A.R.I.B.A., of London and Madras, in association with A. H. Antrum, A.R.I.B.A., Kavinde and Rai, A./A.R.I.B.A., of New Delhi, were placed second, Messrs. Parelkar Gore and Parpia, A./A.R.I.B.A., of Bombay, third, and honourable mentions were given to R. R. Sarma, A.R.I.B.A., of Madras, Prynne, Abbott and Davis, of Madras, and Gregson, Batley and King, A./A.R.I.B.A.,

of Bombay. There were 43 designs submitted. The winning designs, together with a résumé of the winners' report and the assessors' report, are shown on the following pages. Mention of this Institute was made in the second annual report of the Consultative Committee on the Colombo Plan for Co-operative Economic Development in South and South-East Asia. It was proposed that the Institute should make a special study of social and preventive medicine and offer facilities for undergraduate and post-graduate medical students and research workers, who would be drawn from the whole of India. The Government of India is to meet the major share of the cost, which is estimated at three million pounds, as well as recurring costs, while a grant of one million pounds has been voted by the New Zealand Government towards the project.

WINNERS' REPORT.-A fundamental requirement of the scheme was that it should not be thought of as a teaching institution (or teaching institutions) with a hospital attached, but conceived as an integrated whole, allowing for flexibility of arrangement or expansion in any department. The Institute, which is to be erected on the outskirts of New Delhi on a site of approximately 124 acres, is to be composed of the following major elements; (a) hospital accommodation of 650 beds, with facilities for extending to an optimum of 800 beds, (b) out-patients' department, (c) teaching departments, including museums, libraries, and assembly hall, (d) dental college, (e) ancillary buildings, such as workshops, animal house, etc., (f) residential. SITING and LAYOUT.-The main institute buildings have been sited in the northwest area of the site, allowing for residential development to the south and an area to the

west for the future provision of additional colleges. Entrances to the site have been confined to a minimum and lead directly from the main Qutab Road flanking the western portion of the site, along which have been placed the hospital and residential entrances. The main service entrance to the hospital is to be from the North Ring road. The principal aim in the planning has been to provide a simple and direct means of circulation as between ward beds, teaching and out-patients' departments, whilst retaining cohesion and concentration of each principal division. Of great importance was the consideration given to the orientation of the main building, which is planned to have an east-west orientation for the principal blocks, vertical and horizontal brise-soleil will be provided as appropriate to

PLAN.-Of the 600 beds provided in the hospital wards the sub-division is as follows: medical, 175; surgical, 170; paediatrics, 40; obstetrics and gynaecology, 80; ophthalmic, 35; E.N.T., 25; clinical research, 20: social medicine, 10; making a total of 555 in general wards. In isolation there will be medical, 15: paediatrics, 10; and skin and V.D., 10. There will be 10 beds for sick nurses and students. Within the medical department there will be the following divisions, general medicine, cardiology, neurology, endocrinology, psychiatry, metabolic and nutrional disorders. The surgical department will be divided into general surgery, orthopaedic and rehabilitation, thoracic, neuro-surgery, genito-urinology and plastic surgery. In addition to the 600 beds mentioned, provision has been made for 50 paying patients housed in an adjoining block. Of this number, six beds will be located as part of the obstretics wards for maternity cases and the remaining beds planned as single bed wards. On the eighth floor of the

The Institute from the south-east. On the right are garages, workshops, and an animal house.



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I. Main hospital block.

2. Garages. 3. Workshops

Animal house.

5. House Surgeon's 6. Post Graduates'

7. Undergrad, Hostel.

8. Nurses' Home.

9. College of Nursing

10. Undergrad. Hostel.

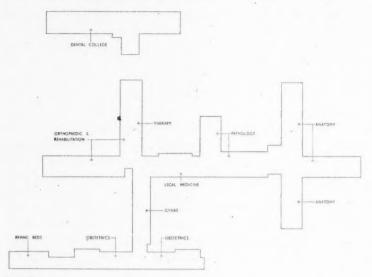
11. Postgrad. Hostel.

12. Social services.

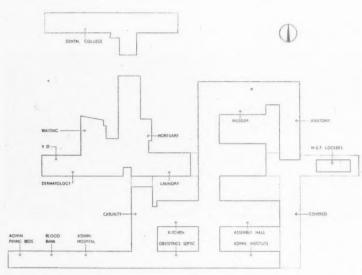
13. Students' accommo dation.

14. Dental College.

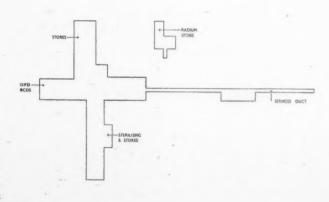
playing fields



First floor



Ground floor



Basement

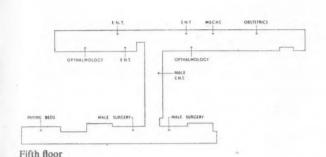
ward block there will be six operating theatres, two allocated to general surgery and one each to orthopaedic, thoracic, neuro-surgical ophthalmology and E.N.T. Each theatre will have an observation gallery and substerilising and scrub rooms will be provided serving two theatres each. The following ancillary rooms are planned in a closed unit accessible from a wide corridor into which no one except patients may enter without passing through changing rooms and making the necessary change of clothing, endoscopy, plaster, anaesthetic, offices, changing, developing, scrub, sub-sterilising and recovery. All this accommodation will be entirely air conditioned. The out-patients' department is also in a multi-storey block, allowing for future expansion vertically, and horizontally over isolation wards. There will be a number of different departments and also a general waiting hall seating about 700 patients at ground floor level. There is an anticipated daily attendance of 1,000 to 1,200 patients. Additional waiting spaces are attached to the different departments. In the teaching departments accommodation is provided for a total of approximately 300 male and female undergraduates, with an annual intake of 50. The total number of post-graduate students will be 100, with an annual intake of 35 to 40. The teaching is divided into 17 departments, each providing its own administrative section, laboratories and research rooms. A group of three lecture theatres, each seating 120 students, is planned vertically and is centrally placed to serve all departments. The building programme is planned in phases with the anatomy block, with vertical circulation to sixth floor and including lecture theatres, planned as phase one. Pathological and bacteriology has been planned in phase two, complementary to the provision of wards and out-patients' departments as required. Administrative offices for hospital and teaching are at ground floor level and are closely related to each other. The assembly hall is designed to seat 500 and provide a 26-ft. deep stage with retiring rooms, cloakrooms and robing rooms, arranged in an open plan form round paved promenading spaces and lawns. A centrally placed, singlestorey kitchen will provide service to hospital and cafeteria for staff and students. Food will be conveyed to ward pantries in electrically

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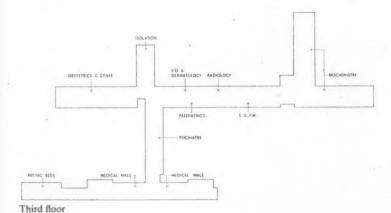
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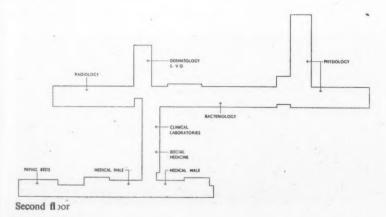
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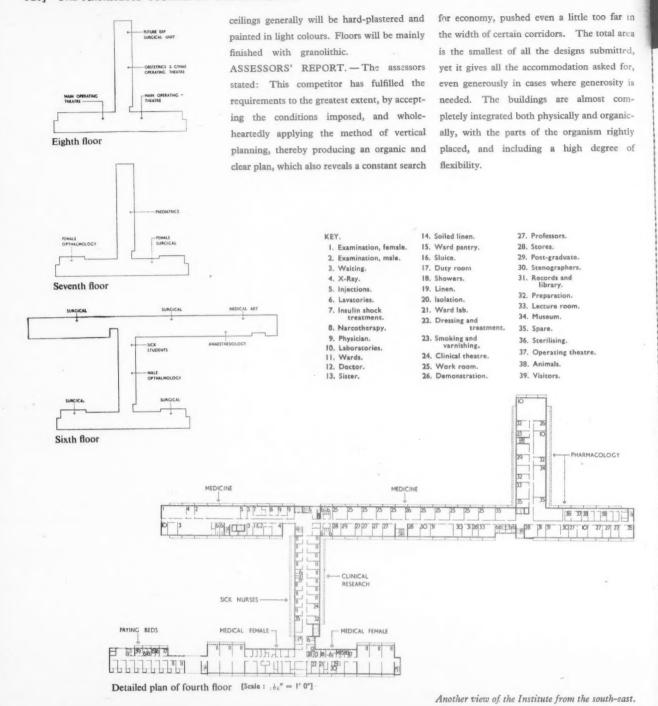
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heated trolleys. There will be a laundry at ground floor, level over the boiler house and central stores at basement level served from a loading bay of the service yard. A dental college embracing the constructional principles of the main building, has been designed as a two-storey block, providing for a segregation of treatment of teaching and administrations. General individual waiting spaces have been provided to the separate treatment departments, the conservation hall and exodentia sections being placed on the first and ground floors respectively. Lateral or vertical expansion is possible and the building would be provided with air-conditioning.

CONSTRUCTION.-The building generally will be of reinforced concrete, based upon an 18 ft. 6 in. grid with non-load bearing partitions allowing for flexibility, particularly in relation to wall cladding and fenestration. A rich mix with minimum reinforcement, requiring careful checking of grading, batching and placing will be recommended. Twin columns will be introduced at lengths not exceeding 60 ft. to allow for expansion joints and to counteract wind and sway movement. All roof levels existing at lower than maximum height will be designed for floor loading to allow for future vertical expansion. Floors generally will be of hollow tile construction, cantilevered on the outer face to form horizontal sun breaks with precast vertical concrete fins fixed to them. External wall cladding will be in two thicknesses and in panels contained in precast concrete frames of special section, allowing for interchangeable fenestration where necessary. North elevations, to avoid undue monotony, will be faced with brick and precast concrete slabs with exposed aggregate in various colours, grouped and arranged in an abstract pattern. Inner skins of external walls will be constructed of lightweight breeze slabs set flush with the inner face of stanchions and beams. Staircases generally will be of r.c. in situ construction, having 11-in. treads finished with non-slip rendered cement surface. Roofs will be insulated with a layer of glass silk over the structural slabs, with a waterproof membrane between this and the foamed concrete laid below the top course of cement tiles. The tiles are jointed in and set on bitumastic solution and the exposed surface is whitened for solar radiation. Internally walls and



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PAINTS NATURAL RUBBER

The Architects' Journal Library of Information Sheets 491. Editor: Cotterell Butler, X.B.S.B.S.

RUBBER-BASED PAINTS

Туре	Composition	Properties and Characteristics	For undercoatings and flat wall paints. Not recommended for external finishing coats.		
Oxidised rubber paints (1) Solution B	Modified rubber solution (Solution B) mixed with oil, white spirit and pigments, ground and thinned to brushing consistency with more white spirit.	Free-flowing, does not leave brush marks; non- settling. Matt finish in wide range of colours.			
(2) Rubbone	Rubbone (oxidised rubber) is compatible with most drying oils. For highest chemical resistance, no oil is used. It is used with many resins and plasticisers. Any pigments can be incorporated. Iron oxide is used for high chemical resistance and aluminium for red-heat resistance. Films may be air-dried but stoving is essential to develop greatest resistance to chemical action.	Resistant to heat, acids, alkalis, solvents, water and corrosive atmospheres. Gives matt to gloss finish. Air-dried films: wide range of colours. Stoved films: good range of colours, but inclined to be a little dull owing to stoving.	Air-dried films act as a good base for anti-corrosive systems and can be used on most materials. For metal surfaces subject to heat or corrosion its use is limited to: (a) articles that can be conveniently stoved. (b) objects that are automatically stoved in use, e.g., flues, retorts, radiators.		
Cyclised rubber paints	Cyclised (or isomerised) rubber is compatible with certain oils, oleoresinous vehicles and alkyd resins, which are added solid at high temperatures, or mixed cold in solution. Pigments can be readily ground in, including lead and zinc.	Resistant to acids, alkalis, oils, solvents, water and corrosive atmospheres. (This resistance develops only after oxidisation of the film, which takes several weeks.) Gloss finish in wide range of colours.	For internal decorative finishes, especially where condensation is present, e.g., kitchens, bathrooms. For anti-corrosive, heat and chemical resistant finishes. For plaster priming and floor finishes on linoleum, wood, stone, concrete, etc.		
Chlorinated rubber paints	Chlorinated rubber is dissolved in solvent and plasticisers, and pigments are added.	Resistant to acids, alkalis and corrosion. Fire-retardant. (Temperature limitations of chlorinated rubber make it necessary to consult the manufacturer where very high temperatures are expected in wet or dry conditions.) Gives eggshell finish in a wide range of light to dark colours.	For protecting steel structures and plant in corrosive and humid atmospheres. For any underwater services (fresh or salt water). For alkaline surfaces such as concrete, cement, mortars, plaster, asbestoscement, etc. For protecting timber from chemical attack, but not suitable for external wood work. For protecting or decorating building boards, rubber, glass, etc.		

38.E1 RUBBER PAINTS

This Sheet deals with paints incorporating natural rubber. There are several types for different uses and the general characteristics of each type are summarised in the table on the face of the Sheet. The following notes give details of the methods of application and the types of surface for which the paints are suitable.

General

Natural rubber derivatives, e.g. oxidised, cyclised and chlorinated rubber, have proved extremely useful in paint manufacture because they dissolve with ease in various solvents and are compatible with a very wide range of oils, resins, plasticisers and pigments.

Preparation and Application

Oxidised rubber paints (1) Solution B (for undercoats

and internal finishes):

These paints are applied in a similar way to flat oil paints. They may be thinned with white spirit and applied with brush, spray or roller. Soon after application they are sufficiently dry to resist the adhesion of dust. Most hard gloss finishes may be applied to the undercoat after one day. In undercoatings, the absence of brush marks, characteristic of these paints, avoids the necessity for rubbing down before application of a finishing coat, thus effecting considerable saving in labour.

Oxidised rubber paints (2) Rubbone (stoving paints):
The preparation of surfaces to receive these paints is very important; all metals should be clean and free from grease. The paint may be diluted for brushing, dipping or spraying by the addition of white spirit. The flexibility of the paint depends on the stoving temperature, but for exceptional flexibility special ingredients are used in its manufacture. Stoving for one hour at 220° C. is normal (the paints do not develop full resistance to chemicals under 170° C.) and the method employed may be by oven, infra-red radiation or naked flames from blow lamps.

Cyclised rubber paints (for undercoats and internal

finishes):

Paints based on cyclised rubber may be applied satisfactorily by brushing, spraying, dipping or any other method. When suitably diluted with white spirit, brushed-on applications show no brushmarks and give an excellent gloss finish. For spraying, the paints may be thinned with more rapidly-evaporating aromatic solvents. The films cease to be tacky soon after application and are hard-dry in a short time. The finished film may be left to dry at normal temperatures or stoved for greater resistance to solvents, oils, etc. Two-coat work is recommended for maximum resistance to chemical action.

Chlorinated rubber paints (for undercoats and finishing

These paints must not be thinned with white spirit,

but special thinners are obtainable from the manufacturers. This may also be used for cleaning brushes and spraying-equipment. The paints are "touch dry" within 15 minutes but 24 hours should be allowed before a second coat is applied.

Metal surfaces must be clean and free from grease or moisture. All rust or mill-scale must be completely cleaned off by chipping, wire-brushing or shot-blasting, special attention being paid to extensively-pitted areas. The paint may be applied over most other types of paint (except bituminous) but care must be taken to see that the old paint does not conceal areas of rust or mill-scale. A very small area should be tested to ensure that the chlorinated rubber paint does not lift the old coating.

Alkaline surfaces such as new concrete, cement, mortars, plasters, asbestos-cement and brickwork require no special priming or sealing before the application of chlorinated rubber paints. The surfacemust be free from grease and loose matter and perfectly dry. On new building work a drying-out period of 14 days before application of the paint is normally sufficient for concrete etc. but this time varies with site conditions. There is no danger of saponification with these paints. On existing work, all distemper or defective paintwork (e.g. owing to alkaline attack) must be completely removed and the surface washed clean. The priming coat is best applied with a flat brush, not too soft, but all coats may be sprayed if required, in which case a spraying grade must be specified to the manufacturer.

Wood surfaces are very effectively protected from chemical attack by the use of chlorinated rubber paints. They are not, however, recommended for external woodwork as the impervious nature of the coating might result in moisture becoming trapped in the timber.

Miscellaneous surfaces such as building board, rubber, glass, etc., may be protected or decorated with chlorinated rubber paint. The paint manufacturer should be consulted in special cases.

Further Information

A booklet entitled *Paints Incorporating Natural'* Rubber is issued by the British Rubber Development Board. The Board also maintains a Technical Information Bureau which is available to answer questions and advise on technical problems dealing with this subject generally.

Compiled from information supplied by:

The British Rubber Development Board.

Address: Market Buildings, Mark Lane, London, E.C.3.
Telephone: Mansion House 9383/4.

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Editor: Cotterell Butler, A.R.I.B.A.





note see reverse of Sheet for notes on use of table.

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diagram showing how Castella beam is cut from standard section

OF TYPICAL BEAM.

SECTION AND ELEVATION

Castella	safe distributed loads in tons for spans in feet
	16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82
36 × 7/2	47.4 45.6 44042.3 409 39.1 37.0 35.0 32.6 305 28.8 27.1 25.7 24.2 23.0 21.7 20.7 18.8
33 x 7	350 34-1 32-7 31-5 30-4 28-9 2 6-8 25-0 23-3 22-0 20-6 19-2 18-0 17-0 16-1 15-2 14-5 13-5 13-0 12-3
30 x 71/2	61-1 580 54-0 51-0 48-5 45-7 43-6 41-3 39-3 37-7 36-0 33-6 31-0 29-0 26-8 25-0 23-3 22-0 20-6 19-2 18-0 17-0 16-1 15-2 14-5 13-6 13-0 12-3
30 × 6½	29.2 29.0 27.5 26.3 24.4 22.7 21.2 19.5 18.1 17.0 16.2 15.0 14.0 13.2 12.5 11.7 11.1 10.6 10.0 9.5 9.1
27 × 8	42.5 41.3 39037-1 35-2 33-0 30-1 27-8 25-6 23-8 22-1 20-4 19-0 17-7 16-7 14-7 14-0 13-2 12-5 11-8 11-2 10-6 10-1 9-5
27 x 7	52.7 509 47 0 43 8 41 0 38 9 37 0 34 8 33 1 31 -5 29 3 27 0 25 0 23 0 21 4 19 8 18 -3 17 0 16 0 15 0 14 0 13 2 12 -5 11 -7 11 0 10 -4 9 -9 9 -4 9 0 8 -5
27 x 6	25.5 24.2 23.0 21.4 19.5 17.9 16.5 15.1 140 13.0 12.0 11.3 10.7 10.0 9.2 8.9 8.5 8.0 7.6 7.2 6.8 6.5 6.2
24 x 8	40.7398 37.2 35.2 33.5 30.5 27.6 250 230 21.3 19-6 18.0 16.8 15.5 14.4 13.6 12.8 12.0 11.4 10.9 10.0 9.4 8.9 8.5 8.0 7.6 7.2
24 x 6H	490470 42.2 390 362 33.6 31 4 29.4 27.7 260 24 8 22 6 20 4 18 5 170 15.8 14.5 13.5 12.6 11.6 10.7 10.0 9.2 8.8 8.4 8.0 7.4 7.0 6.5 6.2 5.8 5.6 5.3
24 × 6L	24.6 23.2 220210 19.1 17.2 15.9 14.6 13.3 12.3 11.5 106 9.8 9.0 8.4 8.0 7.4 7.0 6.7 6.3 5.9 5.6 5.3 5.0 4.8 4.5
22/x 6H	45043639636333631129127225624021-419517816215013712511510798908.4807.4706764605655514947
22½x 6 L	22 5 21.2 19 6 18 8 16 8 15 2 13 8 12 5 11 0 10 4 9 5 8 8 8 2 7 5 7 0 6 6 6 6 2 6 0 5 6
22½x S	28.7 270 24.8 230 21.2 19.6 18.4 17.2 16.2 14.6 13.2 12.0 11.0 10.0 9.0 8.3 7.7 7.1 6.6 6.2 5.9 5.5 5.0
21 x 8	392 372 350 327 304 27-6 248 22.2 204 18-5 170 15-5 14-2 13-2 11-5 10-8 10-1 9-5 9-0 8-4 8-0 7-2
21 x 6 H 4:	45:1 43:539:0 35:5 32:5300 280 26:5 25:0 23:0 20:5 18:5 16:7 15:0 13:7 11:7 10:7 10:0 9:2 8:7 8:0 7:4 7:0 6:7 6:2 6:0 5:5
21 x 6 L	27-1 24-5 230 21-5 200 190 170 15-0 13-7 12-3 11-3 10-4 9-4 8-7 8-0 7-5 7-0 6-5 6-0 5-7 5-3 5-2 4-9 4-7
21 x 51/2	22.3 212 196 183 17.3 160 14 4 130 11 8 106 9.7 8.7 8.2 7.5 7.0 6.5 6.0 5.4 5.1 4.8
19/2 s	20018-4 170 160 150 13-7 12-2 11-0 10-0 88 8-0 7-2 6-5 6-0 5-5 5-2 5-0

SAFE DISTRIBUTED LOADS. OF TABLE

Manufacturer : United Steel Structural Company Limited.

·CASTELLA· BEAMS (Patent No. 498281) : 1.

20.C3 · CASTELLA· BEAMS (Patent No. 498281): 1

Size		Wt.	Area of web (sq. in.)		Thickness (in.)		Moments of Inertia (in.4)		Moduli of Section (in.3)		rxx
Original Section	Castella Beam	(lb.)	Gross	Nett	Web	Flange	Axis x-x	Axis y-y	Axis x-x	Axis y-y	ryy
24 × 7½ 22 × 7 20 × 7½ 20 × 6½ 18 × 7 18 × 6 16 × 6 H 16 × 6 L 15 × 6 L 15 × 6 L 14 × 8 14 × 6 H 14 × 6 L 14 × 5½ 13 × 5	36 × 7½ 33 × 7 30 × 7½ 30 × 6½ 27 × 8 27 × 7 27 × 6 24 × 8 24 × 6 22½ × 6 22½ × 6 22½ × 6 21 × 6 21 × 6 21 × 6 21 × 5½ 19½ × 5	95 75 89 65 80 75 55 75 62 50 59 45 42 70 46 40 35	34·78 27·56 32·19 23·62 28·03 27·04 19·96 25·90 22·61 17·91 21·10 16·09 15·51 20·28 16·39 14·36 12·575	21·10 16·56 20·19 14·62 19·03 17·14 12·40 18·22 13·81 11·51 13·60 10·39 9·21 17·37 13·28 10·79 9·18 8·025	0·57 0·50 0·60 0·45 0·55 0·42 0·45 0·55 0·40 0·55 0·40 0·50 0·40 0·37 0·40 0·37 0·40 0·37 0·40 0·37 0·40 0·37 0·38 0·30 0·30 0·30 0·30 0·30 0·30 0·30	1·011 0·834 1·010 0·820 0·950 0·928 0·757 0·938 0·847 0·726 0·880 0·655 0·647 0·920 0·873 0·698 0·627 0·604	5917 · 7 3910 · 6 3909 · 5 2863 · 1 3035 · 1 2699 · 0 1959 · 1 2300 · 5 1700 · 3 1441 · 6 1476 · 1 1143 · 2 1000 · 1 1664 · 8 1252 · 7 1027 · 9 882 · 5 662 · 3	62·35 40·95 62·36 32·48 69·34 46·43 23·58 68·23 27·03 22·43 28·14 19·83 11·76 66·61 27·87 21·41 14·76	328 · 8 237 · 0 260 · 6 190 · 9 224 · 8 199 · 9 145 · 1 191 · 7 120 · 1 131 · 3 101 · 6 88 · 9 158 · 6 119 · 3 97 · 9 84 · 0 67 · 9	16·6 11·7 16·6 9·9 17·3 13·2 7·8 17·0 9·0 7·5 9·4 6·6 4·7 16·6 9·3 7·1 5·3 4·3	10·2 10·3 8·3 9·8 6·9 8·0 9·6 6·0 8·3 8·4 7·6 9·7 5·2 7·0 8·3

This Sheet is the first of two dealing with Castella beams. The drawings on the face illustrate how the beams are made and the table gives the safe distributed loads for the larger range of beam sizes. Those for the smaller range are given on the face of Sheet 20.C4. The tables on the reverse of the two Sheets give other dimensions and properties of the beams.

Principle and Construction

A beam may normally be used to span a distance of at least twenty times its depth. Therefore, by increasing the depth of a beam of given weight, the effective span is increased in proportion. The construction of Castella beams is based on this principle. A standard rolled steel joist is flame-cut as shown in the drawing and the two pieces rejoined by welding together the tops of the castellations. The dimensions of the castellations are standard for each depth of original joist.

A Castella beam is designed to give an additional depth of 50% over the depth of the standard joist from which it is cut, which results in a corresponding increase in the geometrical properties. The moment of inertia is approximately 135% greater than that of the basic section, a fact of importance where deflection calculations are to be undertaken. In addition, the section modulus is increased by 56%, which considerably increases the load-carrying capacity on large spans. The main structural advantage of these beams is apparent when comparatively light loads are to be carried on long spans, where stiffness is the determining factor and not extreme fibre stress or shear. The holes in the beams are useful for the accommodation of pipes, conduits and ducts.

Use of Table of Safe Distributed Loads

The loads given in the table on the face of the

Sheet are calculated in accordance with the requirements of BS. 449:1948, The Use of Structural Steel in Buildings, and are based on the assumption that the compression flanges are adequately supported over the span; consequently the permissible extreme fibre bending stress is 10 ton per sq. in. The oper the hall.

facil

The maximum uniformly distributed load on a Castella beam with compression flanges supported is controlled by the value of the web in buckling and is referred to the web at each castellation on the neutral axis of the beam. This maximum safe load refers to open castellations and is shown in the tables by the figures between the dotted lines. This buckling value may be increased by filling the end castellations and the maximum uniformly distributed load in this condition corresponds to the extreme left hand figure in the tables. Bearing lengths for these values are:-

1 in. for all beams over $13\frac{1}{2}$ in. \times 4 in.

in. for smaller sections.

Web crushing has been taken into account. All loads to the right of the heavy full line have been reduced so that deflection is not greater than 1/325 of the span.

Compiled from information supplied by:

United Steel Structural Company Limited.

Address: Frodingham Works, Scunthorpe, Lincolnshire.

Telephone: Scunthorpe 3411.

London Office: 40, Grosvenor Gardens, London, S.W.1. Telephone: Sloane 7171.

OUT-PATIENTS' DEPARTMENT

at the HOSPITAL for SICK CHILDREN, GREAT ORMOND STREET, LONDON, W.C.I

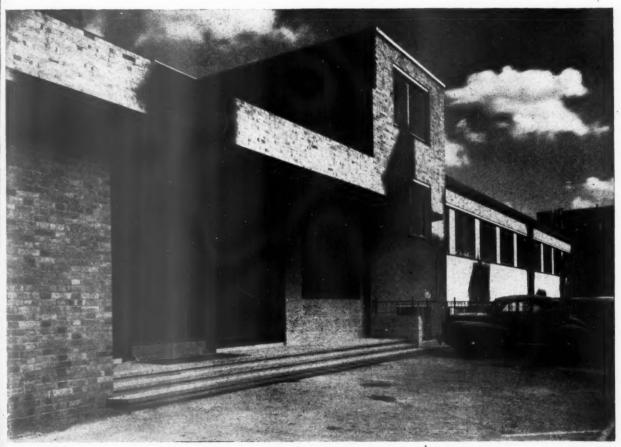
designed by EASTON and ROBERTSON

consulting engineers, L. G. MOUCHEL and PARTNERS

quantity surveyors, DEACON, KNIGHT and GRANGER

The first stage of the new out-patients' department at the Great Ormond Street Hospital was recently opened. The old department was demolished just before the war. Work on the foundations of the new building had begun when war broke out. The old department, with its large central waiting hall, was planned in the tradition common at the beginning of this century. The lack of nursing facilities, privacy and quietness made it an object lesson for the architects of the new department.

The west facade, showing the main exit.



OUT-PATIENTS' DEPARTMENT

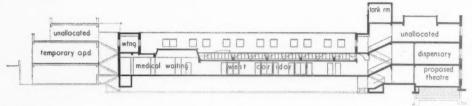
in GREAT ORMOND STREET, LONDON, W.C.I designed by EASTON and ROBERTSON



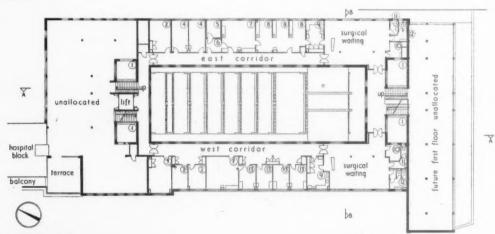
Section B-B



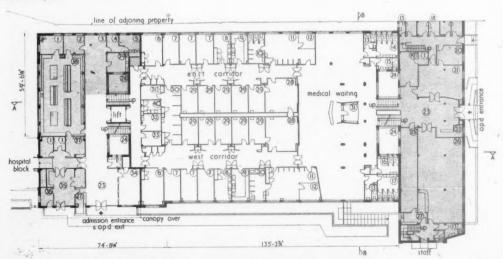
The central part of the new building, show-ing the roof lighting to a section of the ground floor. The roof light-ing will be illustrated as a Working Detail in a later issue of the JOURNAL.



Section A-A



First floor plan



Ground floor plan [Scale: 41" - 1'0] (The shaded areas denote stage 2 of the development, now under construction.)

KEY.

- First Floor.

- First Ploor.

 1. Area.
 2. Almoner's clerk.
 4. Orthoptic.
 5. Audiometry.
 6. Observation,
 7. Teaching.
 8. Cubicle.
 9. Preparation and treatment.

 10. Sister.
- 10. Sister.
 11. Men's lavs.
 12. Women's lavs.
 13. Registrar.

- Ground Floor.

- J. Stores.

 2. Office.
 3. Waiting room.
 4. Fitter's clerk.
 5. Surgical appliance fitter.
 6. Almoner's clerk.
 7. Almoner.
 8. Sterilizing.
 9. Urine testing.
 10. Specimen.

- 5.

 6. Almon.
 7. Almoner.
 8. Sterilizing.
 9. Urine testing.
 10. Specimen.
 11. Preparation and
 weighing.
 12. Infant weighing.
 13. Staff's lavs.
 14. Mothers' lavs.
 15. Male parents' lavs.
 16. Doctors' lavs.
 17. Nurses' lavs.
 Nurses.
 New patients.
 Valing poor 20. 21. 22. 23. 24. 25. 26. 27. 28.

 - Nurse.
 New patients.
 Consulting room.
 Registration room.
 Perser.
 Porter.
 Entrance hall.
 Area.
 Pram store.
 Canteen.
 Tea bar.
 Teaching and consulting room.
 Registrar.
 Mothercraft.
 Sister.
 Pathological lab.
 Dark room.
 Appointments office.
 Ambulance entrance.
 Isolation.
 Staff dispensary.
 Dispensary waiting.
 Staff tea bar.
 Kitchen.

PLAN in 193 and th for se concer and, i rooms or tre tinuit and th disper and to

fied st

PLAN.-The plans prepared for the new building in 1939 bore little resemblance to the old department and the delay due to the war gave the opportunity for second thoughts. It was decided to avoid the concentration of patients in one large waiting hall and, instead, to have a number of smaller waiting rooms and spaces adjacent to the actual consultation or treatment rooms. The plan allows for a continuity of circulation from reception to preparation and then consultation, the social services and finally dispensary, with easy access to any of the diagnostic and treatment departments. There had to be specified standards of hygiene, light, ventilation and spaciousness, consistent with economy, and also "reasonable" standards of comfort, quietness and teaching facilities for the medical, nursing, technical and demonstration staffs. The cost of cleaning and maintenance had to be reduced to a minimum. When new out-patients arrive they are directed into a small department for registration and then join the regular out-patients' queue in the consultative departments. The "medical" patients descend a halfflight of stairs into the two consulting suites, while the "surgical" ascend a half-flight of stairs to the surgical suites. In the case of the medical patients all weighing, measuring, taking of specimens, etc., is

Below left, the urine-testing room on the ground floor. Below, one of the teaching and consulting rooms in the centre part of the ground floor. Bottom left, floor cleaning in progress. Floors are flooded by pressure nozzles at skirting level; then water is swept by squeegees into channels. Bot-tom right, sister's office in the ground floor medical waiting space.









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ance fitter. irk. nd lighing. lg.

lavs.

office.





OUT-PATIENTS' DEPARTMENT in great ormond street, London, w.c. I designed by Easton and Robertson

Top, the main waiting space at the south end of the ground floor. Above, the specimen taking room.

carried out in a suite of rooms specially designed for the purpose. The circulation then provides for a subsidiary waiting space adjacent to each consulting room and, after consultation, waiting space for the almoner, appointments room, diagnostic and mothercraft suites. The patients then go to the dispensary at normal ground floor level and leave the building at the north-west corner. Out-patients' theatres, clinical teaching theatres, records department and special clinics, reception department and dispensary are included in the next stage of building, which is now being carried out.

CONSTRUCTION.—The building is a reinforced concrete-framed structure. In the centre of the plan, at lower ground floor level, there are north-light, post-tensioned, r.c. barrel vault roofs without any intermediate columns: these have a clear span of 35 ft. to allow for flexibility in planning. The remainder of the building consists of r.c. beams and columns and hollow pot floor and roof slabs. The cladding is of cavity brickwork and internal partitions are of 4½-in. brick or 3-in. concrete blocks.

FINISHES.-All roofs have an insulating screed, the flat roofs being finished with asphalt and the curved surfaces of the barrel vaults being covered with roofing felt finished with an aluminium bitumastic paint to increase light and heat reflection. Slate sills are used throughout. Timber, doubleglazed, centre-pivoted windows are used in all main rooms to give a high standard of lighting. Floors are terrazzo throughout and are laid to slight falls to floor channels and gullies to facilitate cleaning, which is carried out by pressure spray nozzles at skirting level. A waterproof membrane is included as a precautionary measure beneath all floor screeds. To attain reasonable quietness and compensate for the hard and glossy floor and wall finishes, the ceilings consist of special slotted fibrous plaster panels backed by resin-bonded glass silk. These ceilings were chosen after consultation with Hope Bagenal. The audiometry room on the first floor is a sound-proof room used for testing hearing. The viewing panel, window and door in this room were illustrated as Working Details in the JOURNAL for October 21.

SERVICES.—The mechanical services are an extension of those in the main hospital block. The space heating is by a system of embedded floor panels served from a calorifier in the basement of the new building. The calorifier is fed with steam from the hospital boiler house. The heating is supplemented by mechanical ventilation.

The general contractors were Marshall Andrew & Co. Ltd. For sub-contractors, see page 540.

TECHNICAL SECTION

Last week saw the public manifestation of a new type of "umbrella" which results in the bringing together of the different partners in building. CAS (Industrial Developments Ltd.) and CAS (Contractors Ltd.) are two companies which respectively finance and carry out the building of factories. former company negotiates direct with a firm wanting new factory accommodation, finds a site, prepares and agrees a design and contracts to lease the completed factory at an agreed rent as from an agreed date. CAS (Industrial Developments Ltd.) has its own team of professional consultants (though these remain in private practice) and the virtual assimilation of building owner and building contractor makes it possible to consult together from the beginning. It is wise to remember that the point of departure of this experiment is the undertaking to relieve the factory user from the anxieties of building for himself and not the rationalization of building; and that therefore this venture could be entirely successful in its main object without adding very much to our knowledge of building productivity. The most that can be said at this stage, therefore, is that here is a background for factory building which could lead to "development work" in its accepted sense.

This week's special feature

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8 ESTIMATING materials' prices

Current prices for measured work will appear on November 11.

Prices of materials and measured work last appeared in the JOURNAL on August 19 and September 2, 1954, respectively.

Current rates of wages and market prices of materials prepared by Davis, Belfield and Everest, Chartered Quantity Surveyors. Rates for measured work will be published in the JOURNAL for November 11.

Rates of	Wages last ros	e on	May	24,	1954 and	are no	ow as i	ollows:		
LONDO	N DISTRICT						Craft	smen.	Labo	urers.
	Within 12 m	niles	radiu	s	0 0		3s.	10½d.	3s.	5d.
	From 12-15	,,	,,				3s.	10d.	3s.	4½d.
LIVERP	OOL and DIS	STRI	CT				3s.	$10\frac{1}{2}d$.	3s.	5d.
GRADE	CLASSIFICA	TIO	NS	A		A^1		A ²		A^3
	Craftsmen		3s.	9d.	38	s. 8½d.		3s. 8d.	3s.	7½d.
	Labourers		3s.	31d.	38	. 3d.		3s. 2½d.	3s.	2d.

Prices vary according to quality and the quantity ordered.

Those given below are average market prices and include delivery in the London area, except where otherwise stated, but do not include overhead charges and profit for the General Contractor.

CONCRETOR

Cements

Portland to B.S. 12, 6 tons and over	per ton	96/6
Rapid hardening to B.S. 12, 6 tons and over	99	104/6
Aquacrete water repellant, 6 tons and over	99	129/-
Aluminous to B.S. 915, 1 ton lots	22	299/6
Sulphate resisting cement, 6 tons and over	. ,,	129/-
Snowcrete, I ton lots	99	257/-

Above prices include for delivery to Charing Cross in non-returnable paper bags or cotton sacks.

Aggregate and Sands, etc. (Full Loads)

3" (Down) Wash	ed, cru	she	d and gra	ded sh	ingle			
to B.S. 882	, Table	2				per yard cube	19/	3
11" Ditto	****			****	****	17	18/	4
A" Sharp wash		to	B.S. 882,	Table	3		22/	4
Vermiculite, #"	down		***			per ton	640/	
Brick hardcore	****	****	****	****	****	per yard cube	9/	6
Ashes			***			99	8/	6

(For Sands for Bricklaying and Plastering, see respective trades)

Floor Blocks

		4"	6"	7"
Floor blocks, $12'' \times 12''$	 per 1,000	698/-	936/-	1,138/-

Reinforcement

Home trade maximum basis price for rods to B.S. 785, § diameter and u	pward	ls, ex		000	0	0
mills delivered to station or siding	š	****	per ton	£33	0	0
Extras for :—						
Under §" to 7 diameter		****	22	£1	7	0
Ditto 7 and over 3" diameter	****	****	99	£1	14	6
and over 12 diameter	****	****	19	£2	2	0

Ditto 7 and over 3" diame	eter	****	****	99	£1	14	6
and over 11 diameter	****	****	****	19	£2	2	0
11 and over 10 diameter 10 and over 11 diameter 12 and over 12 diameter 13 diameter 14 diameter 14 diameter		****	****	99	£2	9	6
and over a diameter		****	****	9.9	£2	17	0
and over 1" diameter		****	****	22	£3	4	6
diameter	****	****	****	99	£3	12	0
Under 1" to 4" diameter		****		22	£5	2	0

Fabric Reinforcement		F	a	br	ic	1	R	ei	nj	01	°C6	177	le	n	į
----------------------	--	---	---	----	----	---	---	----	----	----	-----	-----	----	---	---

	16.35 lb.	9.32 lb.	4.71 lb.	1.83 lb.
Steel wire mesh fabric to B.S.				
1221 Part A, per yd. super	8/43	4/10%	2/51	1/47

BRICKLAYER 3

			Com	mon Br	ricks			
Third stocks	****	****	****	****	****		per 1,000	130/4
Rough stocks		****	****	****	****	****	9.9	169/4
Mild stocks Sand limes	4119	****	****	****	****	0 = 0.0	9.9	210/10
	1 7	71	****	***	4.4.4	****	99	110/6
Phorpres pres	sed 1	lettons	***			****	9.9	113/-

Facing Bricks

Hand-selected sand limes	****	****	****		per	1,000	145/9
Phorpres rustic Flettons	****	****	****			22	138/-
Stocks, first hard	****	****				22	261/4
Stocks, second hard	****	***	****	****		22	245/4
Southwater pressed sandfa			****			9.9	301/6
Dorking pressed sandfaced	multi	coloured	facir	ıgs		29	244/-

Engineering Bricks

Lingfield engineering wirecu Southwater engineering No			per 1,000	225/-
pressed) Blue pressed bricks to B.S.	****	 ****	11	289/-
Drue pressed bricks to D.S.	1301			514/6

Glazed Bricks

White, Ivory	or E	rown,	9" × 2	" × 41"	delive	red		250	200 Y	ucus i	wy.	
London	station	as.							£	8.	d.	
Headers	****	****	***	****	9999		per	1,000	67	14	6	
Stretchers	****	****	****	****	****	****		21	68		0	
Seconds qu	ality	above	prices	less 109	600							

BRICKLAYER (continued)

Limes and Sands

				1 ton lots
Lime, greystone, to B.S. 890	****	****	per ton	114/6
Lime, chalk, ditto	****		22	114/6
*Lime, hydrated, ditto	****	****	99	127/-
Washed pit sand to B.S. 1200	****		per yard cube	22/4
* Including paper bags.				

 \dagger Hire of jute sacks charged at 1/6 and credited at 1/6. If left, charged at 1/9.

Sundries

10 s.w. gauge galvanized butterfly type wall ties to B.S. 1243

to s.w. gauge garvanized butterny	TA DO MEN	n nes to		
B.S. 1243			per 1,00	0 76/-
Wall ties, galvanized, 8" × 1" × 1	", to B.S.	1243	per cwt.	85/-
D			ported V	
Size 14" × 9"	ре	r 100	43/-	78/3
" 14" × 4½"	****	22	21/-	34/9
Hessian base bitumen damp course	to B.S.			
743	****	per yard	d super	5/1
		9" × 3"	9" × 6"	9" × 9"
Terra-cotta airbricks	each	1/3	2/6	6/-
Galvanized cast-iron airbricks	99	3/2	5/4	8/-
Galvanized cast-iron hit-and-mis	8	,		,
ventilators	99	3/2	6/2	8/-
Wall reinforcement supplied in sta	ndand nol	lle contoi	ning 95 m	anda linea

Wall reinforcement supplied in standard in the standard in the

Partitions, etc.

2 0700000	009 0000				
CN: 1	2"	$2\frac{1}{3}''$	3"	4"	
Clinker concrete, solid to B.S. 492 per yard su	per 3/7	4/2	5/-	6/2	
Hollow clay to B.S. 1190 (keyed) ,,	4/3	4/6	5/2	_	
Moler (keyed) ,,	13/-	13/9	14/6	17/6	18/-
Leca blocks Solid ,,	6/-	7/-	8/-	10/-	
Hollow ,, Building blocks (keyed) :—	7/6	8/6	9/6	_	4"
6 cavity		per y	ard su	per	6/7
Normal quality woodwool slabs Minimum delivery, square yards,	1	11/2"	2"	2½" 275	3" 250
per yd. super	5			9/2	10/3

PAVIOR

2" coarse gravel for paths		****	****		per yard cube	22/3
" fine ditto					99	23/9
Clean granite chippings			Table	4		
(in 5-ton loads)		****	****		per ton	42/9
Red quarry tiles 6" × 6"	X	7", to B.S.	1286		per yard super	13/9
Ditto 6" × 6"	X	#", to B.S.	1286	****		11/9
Buff quarry tiles, $6'' \times 6''$	X	?". to B.S.	1286			16/11
Ditto 6" × 6"	X	1", to B.S.	1286			14/4
Hard red paving bricks, 2	2"		****	****	per 1,000	467/3
Ditto	14"	****	****	****	22	441/6

DRAINLAYER

Clay Land Drain Pipes to B.S. 1196

				3"	4"
Pipes in 12" lengths	0.000	****	per 1,000	213/6	282/-

Salt Glazed Stoneware Pipes and Fittings

The following percentages to be added to the Standard List prices.

Orders under Orders under

,	2 tons and over	2 tons 100 pieces upwards	2 tons less than 100 pieces
Best Quality	671%	971%	107½% less 15% 107½%
British Standard Quality	$67\frac{1}{2}\% + 10\%$	971% + 10%	1071% + 10%
Tested Quality British Standard Tested	$67\frac{4}{3}\% + 37\frac{4}{3}\%$	971% + 371%	1071% + 371%

Cast Iron Drain Pipes and Fittings

So			spigot p per 9 ft.		9 fts.	6 fts.	4 fts.	3 fts.	2 fts.
	1	1	17	4"	63/9	47/2	36/1	27/8	22/1
	2	0	1	0"	94/6	72/6	56/10	45/3	33/11
	3	3	21	9"	174/-	144/4	120/8	92/9	,

DRAINL

Tonna 0

*Bends (sh Single ju Intercept Extra for Grease gr • These

Standard ware pipe

Orders

C.I. coate and fra C.I. coa frame, Grade

Coated I B.S. 49 Galvanis Coated r B.S. 4 Galvanis

Blocks a Add for

MASO

Templa to 4 f Templa Price f. per to

Monk's St. Ald Deliver

Whitbe Deliver Doulti

> 41" × 9" × 3
> 2" ×

thro 3" × 1 5" × 1 6" × 1

SLAT

16" × 20" ×

Tonnage Allowances :-

ta

charged

76/-85/-

lsh

8/3 4/9

5/1 " × 9" 6/-8/-

8/-ls lineal 3/4½ 4/2½ 3 of £7.

2

6 18/-

4" 6/7 3" 250

22/3 23/9 42/9 13/9 11/9

16/11 14/4 467/3 441/6

der 0 15%

10% 7½% 7½%

20" × 10" Ditto

Orders	1170	to	2	tons	nett.

		4"	6"	9"
Bends (short radius) as Fig. No. 4	each	6/3	13/-	40/-
Single junctions as Fig. No. 18	99	11/-	22/6	69/-
Intercepting traps as Fig. No. 33	99	30/-	50/-	123/-
*Gullies ordinary trapped "P"	99	14/6		
Extra for 4" vertical back inlet	22	4/3		
Grease gully trap	12	121/-		

[•] These prices are subject to 1271% plusage.

Channels in Brown Glazed Ware.

Standard list + same discounts as "Best" quality salt-glazed Stoneware pipes.

White Glazed Channels

Orders under £30, makers list value. Standard list + 25%.

Manhole covers and frames

	Size of load	Unit price
ZI. coated double triangular manhole cove and frame, 22" dia. clear opening to B.S. 497, Grade A eacl ZI. coated circular manhole cover an frame, 22" dia. clear opening to B.S. 49" Grade B eac	S. h 35 tons d	183/- 97/6
Size	of Single seal	Double seal Flat type
	ton 33/5	47/8
Ralvanised ditto, $24'' \times 18''$ each 1	ton 60/-	84/4
	ton 51/-	76/2
Palvanised ditto, $24'' \times 24''$ each 1	ton 93/-	132/-

MASON

Yorkstone	
Building quality Robin Hood and Woodkirk Blue St	one.
Blocks scrappled, random sizes per foot cube	11/4
Add for blocks to dimension sizes ,,	1/4 (each dimension)
Templates with sawn beds, edges rough (up to 4 ft. super and not over 2' 6" long) ,,	12/8
Templates with sawn beds, sawn one edge, ,,	14/8
Price f.o.r. Yorkshire, railway rate to London Station per ton. (Minimum 4-ton loads)	62/11
Bath stone in random blocks	
Monk's Park per foot cube	7/10
8t. Aldhelm Box Ground ,,	8/10
Delivered on rail at South Lambeth station.	
Portland stone in random blocks, average 20 feet cub	e
Whitbed per foot cube Delivered on rail at Nine Elms Station.	8/11
Somerset stone in random blocks	
Doulting per foot cube	8/7
Artificial Stone to B.S. 1217	
44" × 4" Sill, sunk, weathered, throated and	
grooved per foot run	3/2
$9^{\circ} \times 3^{\circ}$ Ditto , , , , , , ,	4/9
throated ,,	4/2
	6/4
3" × 12" Ditto ,,	
3" × 12" Ditto ,, 5" × 12" Saddleback coping, twice throated ,, 6" × 12" Ditto ,,	9/5 10/6

Slates $16''\times10''$ Best Bangor Slates to B.S. 680 per 1,000 actual 51 9 0

85 14 0

SLATER, TILER AND ROOFER (continued)

Tiles

Hand-made sandfaced $10\frac{1}{4}'' \times 6\frac{1}{4}''$ red roofing tiles	
per 1,000	329/-
Machine-made sandfaced best red tiles	
with continuous nibs, $10\frac{1}{2}'' \times 6\frac{1}{2}''$	291/-
Bridgwater hand made red sandfaced	
pantiles, in 6 ton loads ,,	848/-
Bridgwater hand made red sandfaced	
Double Roman tiles, in 6 ton loads	1,156/6
Concrete plain tiles, $10\frac{1}{2}'' \times 6\frac{1}{2}''$,,	159/-
Ditto interlocking tiles, 15" × 9" ,,	457/-
Ditto Double Roman Tiles "	800/-

Asbestos-cement

*6" corrugated	sheets, grey	****	****	per	yard	super	5/9	9
*Prices are trade discount	for minimum	two-ton	loads,	and	are	subject	to	5%

Felt

	per yard sup.	1/6
Roofing felt (1-ply bitumen) to B.S. 74	7, Part I "	1/6
Bituminous hair felt to B.S. 747, Part		2/9

CARPENTER AND JOINER

Wall	boards

1" Imported Fibre board	****	5,000 to 15,000 sq.ft.
(per 100 sq. ft.)		42/-
1" Imported Hardboard (per 100 sq. ft.)		44/6
A" Imported Hardboard (per 100 sq. ft.)		67/6
is Imported Hardboard (per 100 sq. ft.)	flat	
building sheets, grey, size 8' × 4'		per yard super 3/1
* ½" Ditto	****	,, 4/1
*Drives are for orders of 9 tons and	OWOT	Subject to 50/ trade

Prices are for orders of 2 tons and over. Subject to 5% trade discount.

Sundries

"Sisalkraft" standard grade	****	0 = 0	ре	er yard sup.	-/10±
"Sisalkraft" subsoil grade			****	99	$-6\frac{1}{2}$
"Sisalation" single sided		****	****		1/101
"Sisalation" double sided	****	****	****	**	2/10
* Fibre glass Bitumen-bonded	d	***	****	**	1/111

^{*} Price is for orders value £5 and over.

Timber

S	oftwoo	d for C	arpenti	ry (aver	age p	rice)		per s	td.	£95	
S	oftwoo	d for J	oinery	(ditto)	****	****	99			£105	
7	ongued	and G	rooved	Softwoo	od Fle	poring	(ditto)	91		£105	
*	First Q	uality	Europe	an Oak			per ft.	cube	25/- to	40/-	
*	Teak			****	****	****	99		40/- to	80/-	

^{*} Prices vary considerably depending on specification.

Standard Panelled and Glazed Wood Doors to B.S. 459, Pt. 1

Type 4	size 2' 6"	\times 6' 6'	$\times 1\frac{1}{2}$ "	****	each	34/3
Type $2 \times G$	size 2' 6"	× 6' 6'	' imes 2''	****	,,	41/6
Type $4 \times G$	size 2' 6"	× 6′ 6″	\times 2"	****	**** ***	47/6

In lots of from 1 to 11 inclusive.

					W ood	w indows				
N	26	V .	size	1' 5\frac{1}" ×	2' 61"	****			each	21/-
2	26	\mathbf{V}	size	4' 0\\ X	2'61"	****			99	42/-
N	40	V	size	1' 5\\ '' ×	4' 01"	****	***	****	9.9	23/11
3	40	V	size	5' 11\frac{1}{4}" ×	4'04		****	****	99	74/4
4	40	\mathbf{V}	size	7' 101" ×	4' 01'				94	93/5
	In	lote o	f from 1	to 20 inc	lugiva					

Kitchen Units

No. 1	size 3' 6" × 2' 8" × 1' 7"		****	each	161/5
No. 2	size 3' $6'' \times 2' 8'' \times 1' 7''$	****	****	99	112/-
No. 4	size $2'8'' \times 1'9'' \times 1'7''$	****	****	99	99/-
No. 5	size 3' $10'' \times 1'$ $9'' \times 1'$ $7''$	****	****	21	86/-
No. 7	size 6′ 6″ \times 1′ 9″ \times 1′ 7″	****	****	99	129/6

Prices include for tops and plinths.

In lots of from 1 to 15 inclusive.

534] TECHNICAL SECTIO	N	the Archite	cts' Jo	ournal
STEEL AND IRONWORKER				
Basis price for rolled steel joist sections,				. d.
in 10 ft. to 50 ft. lengths	3 ex mil	ls per ton	30	5 6
9" × 7"	Add p	er ton	4	5 0
14" × 8", 16" × 8", 18" × 6", 18" × 18" × 6", 20" × 6½", 20" × 7½"			10	0 0
10" × 41", 12" × 5"	99	99	1	
$4'' \times 2\frac{1}{2}''$, $5'' \times 3''$. $22'' \times 7''$, $4\frac{1}{2}'' \times 1$	41" ,,	22	1	
3" × 3", 3½" × 3½", 4" × 3", 5" × 2½" 4" × 4", 6" × 3"	99	22	1, 1	
3" × 3", 34" × 34", 4" × 3", 5" × 24" 4" × 4", 6" × 3" 4½" × 1½", 24" × 7½" 4" × 1½"	99	99		0 0
4" × 1½"	22	22	3 1	0 0
Rasis price for angles	ex mi	ls per ton	30	4 6
,, ,, tees	22	33	30	1 6
All delivered Stati		ıg.	32 .	2 0
Rustproof type Standard Metal	Windows			
Type ND2F, 4' 0" × 3' 3\frac{1}{4}" "", ZND2F, 4' 0" × 4' 0" Prices vary with size of order, those give	en are max	each 43 ,, 46 imum and	3/- to 5/3 to minim	57/4 61/8 num.
PLASTERER				
Plaster and Ce	ement			
			ton 19	cwt
Thistle (browning) to B.S.1191, Class B p	er ton	152/6	load 135/-	
Gypstone to B.S.1191, Class B		152/6	135/-	-
Paristone (haired) to B.S.1191, Class B Ditto (unhaired)	2.7	155/- 152/6	137/	b
Cretestone bonding plaster		162/6	145/	
Sirapite (coarse) to B.S.1191, Class C		149/-	133/-	
Ditto (fine) to B.S.1191, Class C Keene's Pink to B.S.1191, Class D		157/- 198/6	141/-	•
Keene's White to B.S.1191, Class D		204/-		
Cullamix (Tyrolean Finish), 1-ton lots and upwards per to	on from	184/3 to	217/9	
Sundries				
61 1 - 1 1 4 - D C 1100	****	ner verd o	mha 9	9./4
C TI-:-		per owt	9	7/6
Expanded metal lathing, 9' 0" × 2' mesh × 24 gauge	0" × 1"			
25 to 149	150-299	per yd. suj 300–599	Over	600
Plasterboard (base board) yards	yards	yards	yar	ds
per yard super 2/9 *Insulating wallboard,	2/5	2/4	2,	2
per yard super Galvanized lath nails 14 G	3/7		3	
Hessian Scrim cloth in 100-yard rolls,	****	per cwt.	118	/-
		per roll	7	/9
Wall Tiles				
The following prices are subject to 25 per	cent. add	ition :-		
Standard quality white glazed 6" × 6" × Cream glazed 6" × 6" × \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	d" per y	ard super	18/	6
Cream glazed $6'' \times 6'' \times \frac{3}{8}'' \dots$ Eggshell or glossy glazed $6'' \times 6'' \times \frac{3}{8}''$	****		20/ 26/	6
and a second surround of the second s		9.5	20/	
PLUMBER				
Lead and Cop				
3½ lb. and upwards milled sheet lead in of 5 cwts. to under 1 ton in sheets to B.		per cv	vt. 1	47/-
Hot rolled copper sheeting in 1-ton lots (4' × 2' sheets), to B.S.899 23	wire gauge	, per ton	£ 8	. d.
Zinc sheeting in 1-ton lots 24	wire gauge		362 (112 1	0 0
		"		
Cast Iron Go Percentage Adjustment on List		R 1/5/59		
Rainwater Goods (painted or unpainted)			10%	
Soil goods (coated or uncoated)	****		10%	
Mild Steel Rainwa	ter Goods	24-	ndard	Lick
Gutters (under 100 lengths) Pipes and Fittings (,, ,,)		Le	ss 259	6
Asbestos-Cement Rain			/	0
The following prices are subject to 12½ Orders over £30 are subject to 17½% to	rade discou	int.		
Rainwater Pines				

Rainwater Pipes.

PLUMBER (continued)

Gutters.						
Half round gutters	3"	4"	41"	5"	6"	8"
6ft. lengths each	5/-	5/11	6/1	7/2	10/-	12/4

INTERNAL PLUMBER

INTERNAL PLONE	DEK						
Lead pipe (basis, weight	s) in	coils 5	ewts.	to unde	r 1 ton	,	
up to 4" bore to B.S.6	802					per cwt.	148/3
Light lead pipe ditto				****			
Lead pipe to B.S. 1085						per cwt.	159/3
Polythene tubing, nor	mal	gauge	in				
quantities of 500ft.	to 999	9 ft.		1"	3"	1''	11/
per 100 ft		000		62/6	123/-	158/6	250/6
Ditto, heavy gauge ditt				100/	100/	000/0	
per 100 ft				133/-	183/-	233/0	-
Drawn lead traps with	orass	screw	eye,	11/ 011	111	r 013	O.C. MID
to B.S.504				11"-6lb.			2"-7lb.
S. trap 11 seal		е	ach	6/91			13/94
" 3" deep seal				8/1		9/7	15/9
Drawn copper traps	to I	3.S. 1	184	11"		11"	2"
S. trap 11" seal		ea	ch	22/10		5/3	-
" 3" deep seal	0 + 0	9	9	24/7	2	7/3	43/7
Screened and Socketed	Stool	Tuhes	and	Fittings	for G	se Water	and

Steam, etc. Fittings and tubes ordered in long random lengths are subject to the following trade discounts:—

Tubes:	1" to 4"	Fittings:			
Class B	163%	Lightweight	****	plus	6%
" C		Heavyweight	****	plus	6% 131%
Galvanized Class	B plus 21%	Galvanized:			
22 22	C plus 183%	Lightweight		plus	181%
Galvanized mallea		Heavyweight	****	plus	251%
	37½% less 6½%				
Copper tubing to	B.S. 659 and 138	6. Basic price per lb			2/104

GLAZIER

Sheet	Glass,	cut	to size	(ordi	nary	glazing	quality), to	B.S	.952,	Section A
18 oz.	****		****	****		****	****	per	foot	super	
24 oz.	****		****	****		****	****		99		-/71
32 oz.	****			****							1/-

Polished Plate Glass, ordinary substance, approximately ‡", to B.S.952, Section A.

In plates not e	exceedin	g:		Glazing	Selected glazing	Silvering
2 ft. super		ре	r foot supe	r 3/7	4/3	5/1
5 ft. super	****		92	4/5	5/2	6/2
*45 ft. super	****		92	5/1	5/9	6/11
*100 ft. super	****		99	5/6	6/9	8/10

* Extra sizes, i.e., plates exceeding 100 ft. super or 160 in. one way,

or so in., both ways at higher prices.		
If figured rolled and cathedral, to B.S.952, Section B—standard patterns, white	per foot super	-/9.
" or 1" rolled plate, patterns, white	99	1/-
1 Georgian wired cast, patterns, white	99	1/-
Section D	99	1/21
4" Georgian wired polished plate, Section D	99	4/10
‡" wired cast	33	1/2

Attention is drawn to reductions in certain glass prices offered by manufacturers for acceptance of specified minimum quantities of one size and substance delivered to one address at one time.

PAINTER

6"
25/9 each
43/-

White ceiling di	stempe	Г	****	****	****	per	ewt.	29/-
Washable dister	nper	****	****	****	****	per	cwt. from	112/-
Primer, general	purpos	Θ		****	****	per	gallon	33/6
Ready mixed w	hite lea	d paint	b	****			29	57/6
Flat oil paint	****		****	****	****		22	39/-
Emulsion paint	****		****		0000		99	44/-
Hard gloss pain	5 :							,
Undercoat	****	***	0000	****	2000		27	42/-
Finishing				****	****		92	44/-
White Portland	cemen	t paint	****	****	****	per	cwt.	71/-

F.R.I.C.S., F.I.Arb.

8* 12/4

t. 148/3 t. 149/9 t. 159/3

 $\frac{1\frac{1}{2}''}{250/6}$

2"-7lb. 13/91 15/9 2" 43/7

abject to

as 6%
as 13½%
as 18½%
as 25½%
.... 2/10½

Section A

-/51 -/71 1/-

1", to

Silvering quality
5/1
6/2
6/11
8/10
one way,

1/-1/-1/-1/24 4/10 1/2 ffered by

29/-112/-33/6 57/6 39/-44/-42/-44/-71/-

rb.





It is scarcely possible to conceive a situation in which Marleyflex *vinyl asbestos* Floor Tiles would be caught unprepared. They have everything. They are colourful, warm, hardwearing, resilient, rotproof, greaseproof, easy to fix and easy to clean.



MARLEYFLEX

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The Marley Tile Company Ltd., Riverhead, Sevenoaks, Kent. Sevenoaks 2251

London Showrooms at Alfred Goslett & Co. Ltd., 127-131 Chaving Cross Rd., W.C.2. Telephone: Gerrard 7890

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Our Architects' Department is solely concerned with giving assistance to architects on any paint or painting problem. The service, which is provided free of charge, saves architects many hours of tedious work and ensures the most satisfactory results. It embraces:—

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- 2 The provision on the site of competent technical advice.
- 3 Colour advisory service providing colour schemes and advice, if required.

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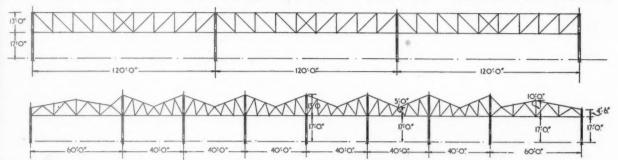
WORLD'S SHIPS



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AN ALL-WELDED TUBULAR-STEEL FRAME CONSTRUCTION



The Tubewright Factory at Kirkby near Liverpool is an all-welded tubular-steel frame construction, the second largest of its type and the first to be wholly fabricated on the site. The factory is to turn out tubular steel structures for a wide variety of purposes both at home and abroad. Materials arrive by road and rail and pass by overhead conveyor to the preparation site in the annexe before being passed through the factory. Welding sets are mounted overhead with power lines passing along the trusses and thus clear of the floor space. An allowance equivalent to 20 lb. per sq. ft. was made to cater for the conveyors and plant and it will be appreciated that in a single-storey light-roofed structure this amounts to doubling the design load.

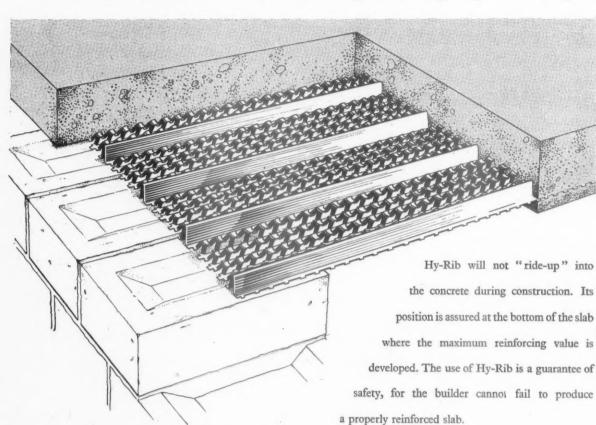
Above is a section showing the trusses and below is a general view of the factory floor. The main shop is 360 ft. long by 360 ft. wide and 17 ft. to eaves and consists of six intermediate bays 40 ft. span and two outside bays of 60 ft. span, one of which is extended to form the receiving bay. The 40-ft. span roof trusses are of the butterfly type, glazed on both slopes, while the two 60-ft. span outer bays have flat pitched trusses with glazing at the apex. The roof trusses are carried by latticed girders 120 ft. span with columns at 120 ft. by 60 ft. or 40 ft. centres according to the bay widths. The roof is



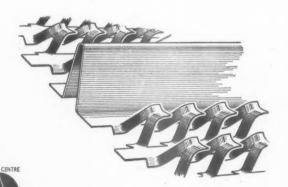


FOR FLOORS AND FLAT ROOFS IN DOMESTIC DWELLINGS

Essential for the economic construction of concrete floors and roof slabs spanning up to 15 ft.



One great advantage of using Hy-Rib is the elimination of close-boarded shuttering. Only temporary supports placed at intervals are necessary. The mesh of the sheets is so designed that it retains the concrete and also leaves a good plastering key beneath. The mesh also grips into the concrete and obtains a sound anchorage that distributes the stresses in a slab throughout the Hy-Rib, so ensuring a very reliable floor or roof.



See our Exhibit at 26

well or write for a copy of the HY-RIB HANDBOOK

THE TRUSSED CONCRETE STEEL CO. LTD. TRUSCON HOUSE, LOWER MARSH, LONDON, S.E.1. Tel: WATerloo 6922

Q4.862

AN A FRAM

covered layers of sheeting. struction sections. used bed individu lengths of welding This ty view of standard tion and

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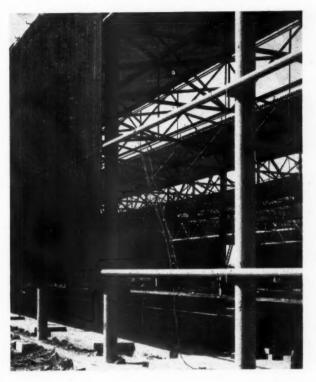
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AN ALL-WELDED TUBULAR-STEEL FRAME CONSTRUCTION (continued)

covered by aluminium decking with insulation board and two layers of felt and the side cladding is asbestos protected metal sheeting. The superstructure is entirely welded tubular construction except for the glazing purlins which are rolled angle sections. Every joint in the structure is welded, the only bolts used being the holding-down bolts in the foundations. The individual tubes were delivered to the site in approximate lengths and the whole of the fabrication including shaping and welding of the tubes was carried out on the site.

This type of construction should result in a saving in cost in view of: the reduction in steel weight of up to 40% compared with standard riveted or bolted sections, the ease of handling during erection and the reduced weight carried by the foundations. This particular structure works out at $6\frac{1}{2}$ lb. per sq. ft. of floor area, which is very good when the extra load for services is considered. In addition, there is the long-term aspect of ease of maintenance. In practice, site-welded jobs have an embarrassing habit of





costing just as much as the riveted job despite the reduced weight of steel, but this is a position which we trust is a temporary one until welding operations and technique become finally established. It should also be appreciated that tubes are not particularly easy to obtain. While a typical "Properties of Tubes" table quotes about 120 sizes of tubes, only one-half of these are standard thickness tubes and the non-standard are not easily obtainable, therefore heavier tubes might have to be substituted. Again, the thicknesses are not always those best suited to structural designs and might result in a much larger diameter tube being used to provide the area of steel required. This is particularly noticeable in the case of tension members where there is no stability problem.

INFORMATION CENTRE

8.39 surveying and specification SURVEYING AND SPECIFICATION

Specification 1954. Edited by F. R. S. Yorke and Penelope Whiting, F./A.R.I.B.A. (Architectural Press, 30s.)

Specification is so much an institution in architectural publishing that there has long ceased to be any need to outline the nature of the service it gives. The only question which must arise each year is whether it has been sufficiently responsive to the year's crop of technical changes. Amendments to

Specification take one of two forms: the re-writing of the editorial introduction and the specification clauses (or the adding of new sections) and amendment of the list of manufactured products. The second kind of amendment goes on all the time, but the first is a less frequent occurrence, and, as it aims at correcting a larger scale inadequacy of the service, is of greater general interest.

This year sees among other changes a new section on Structural Aluminium Alloys compiled by Joseph Singer, A.R.I.B.A. This is a useful addition though rather chaotic in its trade section due to the wide variety of services performed by those who deal in this commodity. Mr. Singer discusses the vital question of when aluminium structure is likely to be competitive and instances very long spans where the aluminium structure would weigh not more than one-fifth or one-sixth that of the equivalent in steel and very short spans where the steelwork require-

ments of rivets and bolts demand structurally uneconomic steel thicknesses.

Another change is in the concretor section, where Dr. Parker has re-written the subsection on lightweight concrete and J. G. Wilson, A.R.I.B.A., has added some very useful paragraphs on precast facing units. In the course of the latter Mr. Wilson makes the most pertinent remark that the choice of an aggregate at £5 a ton in preference to local shingle at 18s. per cubic yard only adds a cost of a few pence per yard super to your walling.

Other additions include more information on emulsion paint, mastics and sanitary fittings. Omissions are not easy to find: serious omissions that is, for it is not hard to think of the odd product which seems to call for mention. One which may strike the reader is the absence still of alkathene and polythene pipes from the Plumbers' section. But this is a very small matter when seen against the massive usefulness of the volume as a whole.

Lloyd roof insulation

saves £100 per week

Cuts capital spending, too



Since 1946 the roof of the Betterwear Products factory at Romford has been lined with ½" Lloyd Insulation Board fixed by the Lloyd Talon System. During these years, building extensions have almost doubled the floor area, yet the factory is still heated by the same plant using the same amount of coal as was needed before the expansion. Lloyd Insulation has saved heavy capital expenditure of more than £2,500 on extra heating plant and is regularly saving about £100 a week in winter fuel bills.

Increased comfort helps to increase output

Before insulation, this corrugated northlight building was very difficult to heat to 60°F in winter, while the summer temperature often rose to 92°. Now, extremes are ironed out and a comfortable working temperature is easily maintained throughout the year.

Yet another advantage of Lloyd Insulation is that dust, which formerly entered freely through eaves and ridge, is now trapped by the roof lining. It no longer falls on the operatives below or spoils their sometimes delicate work.

Full information about Lloyd Insulation and its applications are freely available from

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13.120 materials: timber LONGHORN BEETLE

Infestation by the House Longhorn Beetle. H. P. Tame and L. E. Snelling. (The Surveyor, Aug. 28, 1954).

There have been numerous recent references to this comparative newcomer to the range of wood destroying beetles. The present article describes in considerable detail the attack, and treatment thereof, in a group of sixty houses in the Woking district. Twenty-seven houses were affected and cost of the first stages of control was £750. Fortunately, the attacks of the Longhorn have so far been confined mainly to an area of north-west Surrey, but isolated cases have been found elsewhere and it is important that all should be on alert to spot any signs of attack. Unfortunately, as the article so well describes, it is not easy to spot the damage until it has been under way for some time.

14.70 materials: concrete VACUUM DRYING

The Vacuum Concrete Process. Geoffrey K. Twibill. (RIBA Journal, Sept., 1954.)

The vacuum concrete process is not new, but has been much more widely used in the USA and Europe than in this country. Essentially, the method is to place "vacuum mats" in contact with the concrete, usually on top in the case of floor and roof slabs, and to suck excess water out of the concrete immediately after pouring. Advantages claimed are that concrete gains strength very rapidly and shuttering can thereby be re-used more quickly, shrinkage takes place during the process and therefore subsequent shrinkage is reduced, strength is higher than with normal methods and water content of initial concrete can be high so that placing of the concrete is easy. Also applied to precast concrete work.

The article describes the process in some detail and gives data on strengths. Illustrated. It would have been interesting to have had illustrations of jobs by name, especially of any in this country.

15.121 materials: applied finishes, treatments **PLASTERING**

Avoiding Defects in Internal Plastering. BRS Digest, No. 69 (HMSO, Aug., 1954: 3d.).

Nothing very new or more than is in the Codes of Practice, but a very good brief summary of important practical points. One table gives characteristics of plaster mixes and other information on plaster in relation to various backing materials.

If all concerned with building read and then followed the advice in this Digest, a very large proportion of cracks in buildings would be avoided.

15.122 materials: applied finishes, treatments RUBBERIZED BITUMEN IN PARINGS

Industrial and Other Uses of Rubberized Bitumen. A. R. Smee. (Rubber Developments, Vol. 7, No. 3. Autumn, 1954.)

Brief notes and illustrations of various uses of rubberized bitumen for roads and parings. Examples at South Bank, goods yards, playgrounds, etc.

17.103 construction: general BRS ANNUAL REPORT

Building Research 1953. Department of Scientific & Industrial Research (HMSO, 1954: 3s. 6d.).

Anyone who is bold enough to think himself reasonably up to date on his technical information should read this report. As usual it covers such an enormous range of subjects that it cannot be summarised. Looking back at reports over a number of years one can see, however, a gradual change in emphasis. There is still a good deal of information on individual materials, but more and more the emphasis appears to be swinging towards buildings—both the way in which they function and the way in which they are built.

It is astonishing that the mass of accumulated knowledge at BRS was used by architects only to the extent of 1,700 times in the year by written enquiry and perhaps as much again by telephone.

22.72 sound: insulation-acoustics

ABSORBENTS

Sound Absorbent Treatments. BRS Digest, No. 36 (Revised). (HMSO, Sept., 1954: 3d.)

Simple description of the way sound absorption occurs and how, in some rather limited instances, it can also aid sound insulation. The nature of absorbents and the three main types: (a) porous materials, (b) resonant panels, and (c) cavity resonators, are described. The method of calculating reverberation time is explained. Tables included are on absorption coefficients of common materials and one dealing with special items such as seats, audience, air (per cu. ft.) and various types of panel.

23.200 heating and ventilation ELECTRIC FIRES

Electric Fires. (Electrical Review, Sept. 10, 1954)

Very brief notes on present types but detailed tabulated data on types now available. Listed under manufacturers and giving name of appliance, its type, power-rating, finish and cost. A number of models are illustrated.

26.111 services and equipment: miscellaneous FUEL STORES

Fuel Stores for Houses and Flats. (Coa Utilisation Council, 1954: 2s. 6d.)

A useful booklet of 40 pages. Excellent illustrations both of house and flat plans to show good location of stores and, most useful, of the stores themselves with sensible arrangements for delivery and withdrawal of fuel. There are illustrations of external stores constructed in various materials.

Should save draughtsmen a good deal of time and improve convenience to householders.

26.112 services equipment: miscellaneous ELECTRIC COOKERS

Electric Cookers. (Electrical Review, Aug. 20, 1954).

Brief notes on recent changes. Very full tables of types available with details of overall sizes, controls, oven sizes, and prices. A useful office reference.

THE INDUSTRY

From the Industry this week, Brian Grant reports on a new lavatory basin for schools, silicones, new furniture, a new type of ceiling lighting, three catalogues on light fittings, precast wall sprockets and a new paint showcard.

SANITARY FITTINGS FOR SCHOOLS

A new range of standard sanitary fittings for schools has just been announced by Ideal: it includes drinking fountains, water closets and urinals, and the lavatory basin (the Etonian) illustrated below. Dimensions are 18 in, by 15 in. and the price with metal or plastic headed non-concussive taps is £2 12s. 3d. (Ideal Boilers & Radiators Ltd., Ideal Works, Hull.)



The " Etonian" lavatory basin.

BRITISH MADE SILICONES

Ever since the end of the war a good deal has been heard of silicones, which are used in a number of industries, but which are of interest to architects in that they are used as water repellent treatments for masonry, concrete and brickwork, and also in paints, which are particularly resistant to corrosion and also to high temperature. They are also used in electric motors where high temperature resistance is required.

In the past silicones have had to be imported, but a plant is now in operation at Barry. South Wales, set up by Messrs. Albright & Wilson, in co-operation with the American producers, the Dow Corning Corporation. (Midland Silicones Ltd., 19 Upper Brook Street, London, W.1.)

NEW FURNITURE

Ernest Race's new catalogue shows several new designs, chairs, a settee, and unit seating in lengths of 1 ft. 6 in., 3 ft. and 4 ft. 6 in., the longest one being available with one end mitred at 45 degrees so that the units can be used in corners. Mr. Race's designs are well enough known to architects and there is no need to comment on them. Prices are reasonable, though £11 9s. 10d. plus £2 tax seems quite enough for the Orient line folding chair. Presumably the materials are pretty expensive, and one knows that anything which will stand up to maritime atmospheres and maltreatment has to be tough and very well made. The really odd thing is that you can spend £35 or so on an upholstered settee and pay no tax at all, but on the upholstered Orient chair



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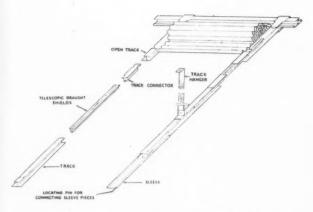
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Above and right: the Lumenated ceiling. Flexible translucent plastic sheets fixed between m.s. H sections a ft. apart.



you pay £3 3s. 9d. You are, it seems, entitled to sit down untaxed inside your house, but the Government seems to think that in the garden you ought to be doing something useful like trenching the celery bed and not sitting down at all. (Ernest Race Ltd., 22 Union Road, Clapham, London, S.W.4.)

CEILING LIGHTING

The photograph above right shows a car showroom in South Kensington with a new type of ceiling lighting. The system has been evolved by Thermotank Ltd., and is known as the Lumenated ceiling. It consists of a framework of lightweight steel channels suspended below fluorescent or tungsten lamps supporting corrugated translucent vinyl sheet which diffuses the light to form a completely luminous ceiling without glare or shadow. In the example shown the ceiling area is 1,600 sq. ft. with a light intensity of 70 lumens per sq. ft. at 2 ft. 6 in above floor level.

The ceiling can be quickly erected and is made up of standardized parts. The framework consists of 22 gauge mild steel H section track suspended from the existing ceiling by hangers. The tracks are held parallel and 3 ft. apart by slotted tubular spacers between the hangers, and the corrugated vinyl sheet, supplied in 25 ft. rolls 3 ft. wide, is pulled along between the lengths of track and is held in position by plastic clips. The sheet is only 0.007 in. thick, weighs less than 1 oz. per sq. ft., and can be cut easily with scissors. The corrugations are \(\frac{1}{2} \) in. deep with a pitch of 1\(\frac{1}{2} \) in. and the sheet is subjected to an anti-static process to retard the collection of dust. The weight of the complete ceiling is about 12 oz. per sq. ft.

per sq. 11.

For use in new buildings the system is particularly economical, as the structural ceiling needs no other finish than white paint, which should also be applied to any trunking or pipework. For existing work the ceiling should be re-whitened, as should the walls above the level of the Lumenated ceiling, but there is no need to repair plaster defects except where dust is liable to fall on the plastic sheeting.

The cost of the ceiling components only, and available in results in the system of the cost of the ceiling components only.

The cost of the ceiling components only, and excluding installation and lights, is about 8s. per sq. ft. Fluorescent lamps are generally the most satisfactory light source, and, except where excessive depths of trunking are met with, the use of separate reflectors behind the lamps is not necessary. (Lumenated Ceilings Ltd., 4 Lloyds Avenue, London, E.C.3.)

LIGHTING FITTINGS

Three new catalogues from Thorn Electrical Industries are devoted to Atlas fluorescent lighting fittings, tungsten ditto and the lamps and tubes themselves. All three are well illustrated and fully documented with sizes and prices. All types of fittings are produced, industrial, flameproof, commercial and domestic. Messrs, Thorn also produce a considerable amount of theatre lighting gear, including dimmer systems for fluorescent lighting. (Thorn Electrical Industries Ltd., 105/109, Judd Street, London, W.C.1.)

The Architects' Journal for October 28, 1954

PRECAST WALL SPROCKETS

The Finlock gutter bracket has been well known for some years, and this design has now been followed by a precast sprocket block which is claimed to save 6½d, per foot run of eaves. The section below gives a clear idea of how it is used and incidentally shows it with a lintol cast in. The standard block is 8½ in. wide, and internal and external angles are also made, as well as gable ends, 5 in. and 6 in. closers and a soil vent block. The projection of the block carries nibs for tile fixing and fixing clips for gutter brackets are also produced; these take any standard

bracket and are slotted so that adjustments can be made for the required fall.

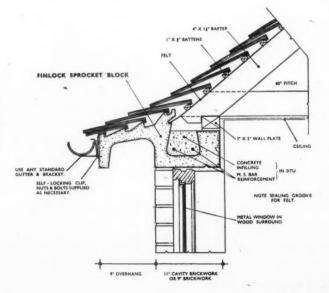
The blocks cost 5s. 6d. per foot run, but against this there is a saving in two courses of brickwork, the rafters are shorter, and no fascia board or soffit is needed. (Finlock Gutters Ltd., Finlock House, Frant Road, Tunbridge Wells, Kent.)

MIXING PAINTS

To illustrate some of the results of mixing colours from the standard range of Pammastic plastic emulsion paints a new showcard has just been produced by Blundell Spence, showing 60 shades obtainable by simple 50-50 mixing of 23 standard colours. Blundells are one of the few firms producing plastic emulsions in comparatively deep shades, and the fact that a very large number of shades can be produced from a comparatively small range of colours makes life very much simpler for the stockist.

Blundells have also just introduced a new Creole metal primer to complete the range which they now have for all types of decorative work. It is available in all sizes from 1 gallon to ½ pint, the trade price being 36s, a gallon. (Blundell, Spence & Co., Ltd., 9 Upper Thames St., London, E.C.4.)





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Please ask manufacturers to send further particulars to:

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28.10.54

Buildings Illustrated

Out Patients' Department, The Hospital for Sick Children, Great Ormond Street, London, W.C.1. (Pages 527-530.) Architects: Easton & Robertson, F/P.P.R.I.B.A. Structural Engineers: L. G. Mouchel & Partners. Quantity Surveyors: Deacon, Knight & Granger. General Contractors: Marshall Andrew & Co. Ltd. Clerk of Works: H. C. Rendell. Sub-contractors: plumbing, drainage and special floor sprays, T. S. Knight & Son (Plumbing) Ltd.; electrical installation, Bective Electrical Co. Ltd.; heating, hot water and ventilation, Benham & Sons Ltd.; terrazzo floors, partitions and facings, Diespeker & Co. Ltd.; asphalte roofing, Val de Travers Asphalte Paving Co. Ltd.; toofing to barrel vaults, The Ruberoid Co. Ltd.; dark blinds and venetian blinds, J. Avery & Co. Ltd.; benches and special furniture, Built-in Fixtures Ltd.; slate sills, Bow Slate & Enamel Co. Ltd.; aluminium sheeting, Frederick Braby & Co. Ltd.; patent glazing, The British Challenge Glazing Co.; metal windows, The Crittall Manufacturing Co. Ltd.; sanitary fittings, Dent & Hellyer Ltd.; glass domelights, James Clark & Eaton Ltd.; handrails and balustrades, Grundy Arnatt Ltd.; fibrous plaster and acoustic ceilings, David Esdaile & Co. Ltd.; Carda windows, Holcon Ltd.; ironmongery, Yannedis & Co. Ltd.; special partitions, Holoplast Ltd.; foundation stone, Malcolm MacLeod & Co. Ltd.; "Televoice" installation, Thomas Edison Ltd.; furniture, Esavian Ltd.; gas installation, North Thames Gas Board.

Announcements

James V. T. Scott, A.R.I.B.A., A.M.T.P.I., will transfer his offices from 22, Lombard Street to 30, College Gardens, Belfast, Northern

Ireland, on November 1. (Tel.: Belfast 31344/5.)

The partnership of Messrs. de Metz and Birks, F/F.R.I.B.A., has been dissolved by mutual agreement. Mr. M. de Metz, F.R.I.B.A., will continue to practise from 2, Ludgate Hill, E.C.4, and Mr. T. H. Birks, F.R.I.B.A., from 38, Portland Place, W.1.

Mr. E. F. Haes, the Managing Director of Messrs. Sealocrete Products Ltd., will be available at his firm's stand at the British Trade Fair, Baghdad, until November 16.

Mr. K. J. R. McDonald has been appointed Sales Manager to the Architectural and Specification department of Messrs. Walter Carson and Sons Ltd.

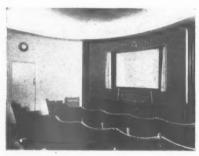


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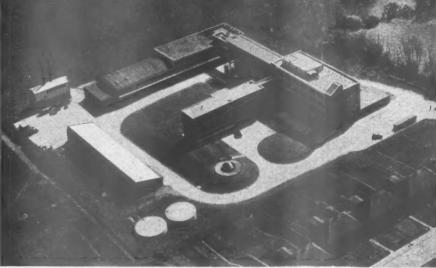
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A fully-equipped cinema in miniature (above), for showing 16 mm. and 35 mm. films, has been built, for the Gas Council, in Gas Industry House, Grosvenor Place, S.W.1. It was designed by the Gas Council's exhibitions department in conjunction with the film department and the contractors, David Esdaile & Co. Ltd.

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Figures for the 12 months ending June show a further substantial rise in brick production. Output for the previous 12-month period was exceeded by 460 millions.

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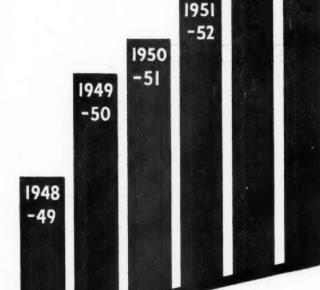
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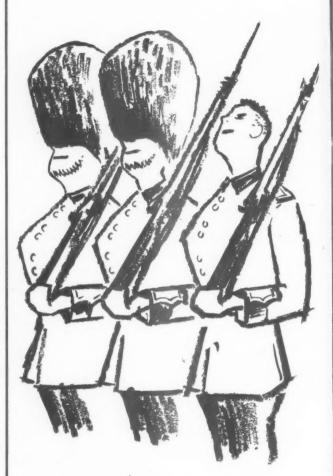


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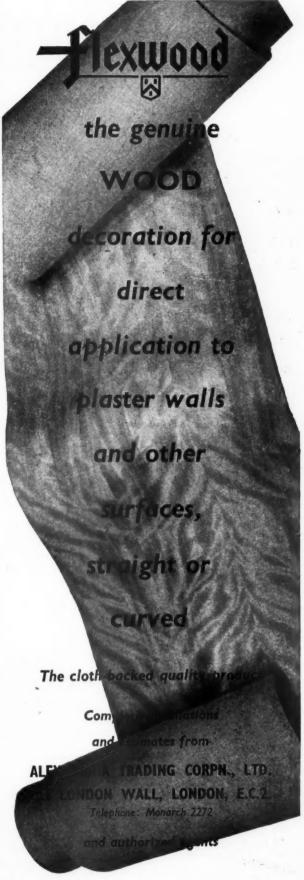
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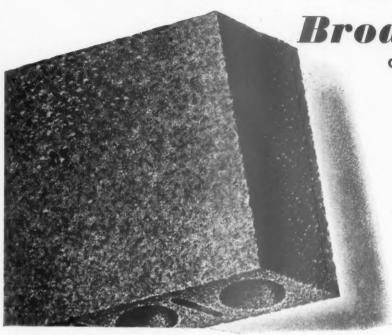
GRAMS: Ryco, Bradford.



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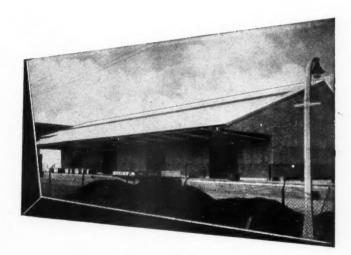
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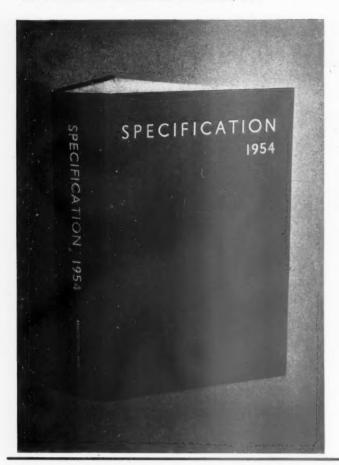
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1954 Editor: F. R. S. YORKE, F.R.I.B.A.

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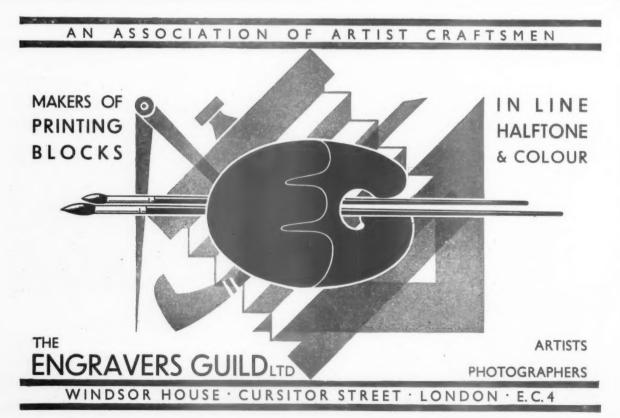
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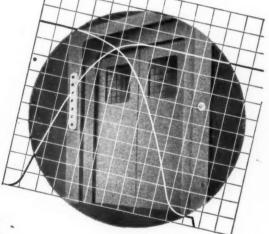
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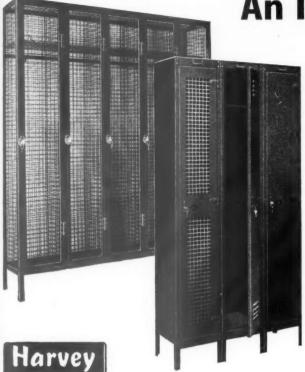


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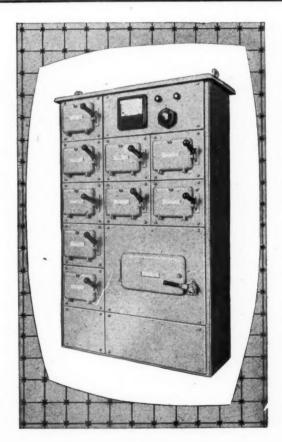
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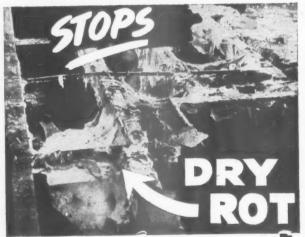
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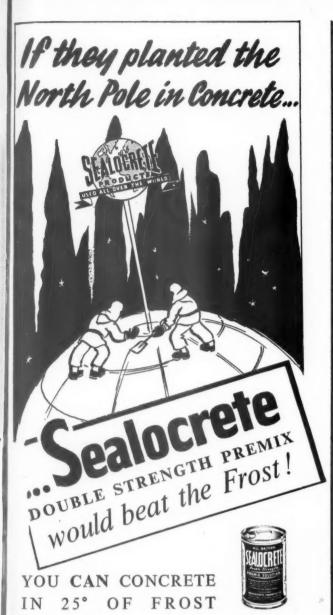
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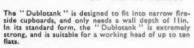


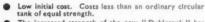
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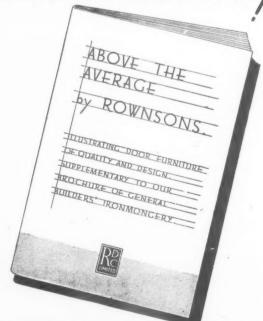
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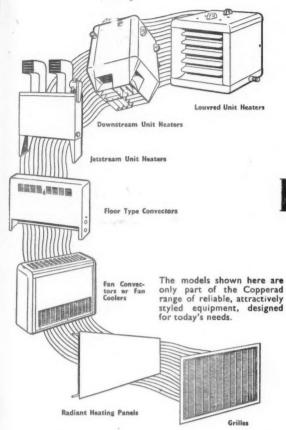


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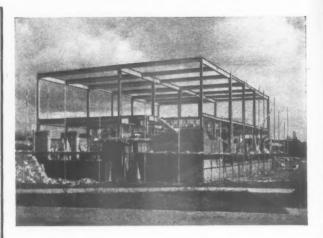
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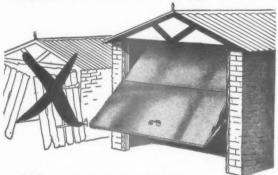
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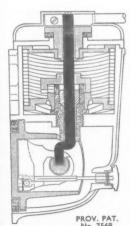
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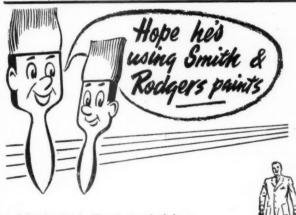
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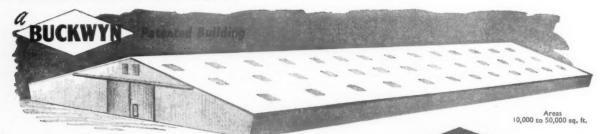
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Application on forms giving further particulars of the appointment are obtainable from F. B. Pooley, County Architect, County Offices, Aylesbury, and returnable by 25th November, 1964.

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County Hall, Aylesbury.

11th October, 1954.

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H. E. R. LAWTON.

H. E. H. LAWTON, Clerk of the Cour Council Offices, Huyton. October, 1954.

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The Council is prepared to offer housing accommodation to the successful applicant, if married. Form of Application and Conditions of Service may be obtained from the Borough Engineer & Surveyor, 33, Chester Street, Wrexham. Applications on the prescribed form, together with copies of two recent testimonials and the names of two referees should be delivered to the undersigned in an envelope endorsd "Architectural Assistant not later than Monday 15th November, 1954.

PHILUP J. WALLTERS,
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Guildhall, Wrexham. 21st October, 1954.

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Government quarters are provided, if available, at a low rental.

Candidates should be between 25 and 35 years of age and must be A.R.I.B.A.

Apply in writing to the Director of Recruitment, Colonial Office, Sanctuary Buildings, Great Smith Street, London, S.W.I. giving briefly age, qualifications and experience and queting reference BCD.62/7/02.

Street, London, fications and experience and quantifications and experience and quantifications and experience and quantifications are invited for the appointment of BOROUGH ARCHITECT. Applications are invited for the appointment of BOROUGH ARCHITECT at a salary of £1,750 per annum, rising by two annual increments of £100 and one of £50 to £2,000 per annum. Conditions of service will be in accordance with the recommendations of the Joint Negotiating Committee for Chief Officers. Particulars of the duties of the appointment, and form of application may be obtained from the undersigned, to whom forms must be returned on or before 13th November, 1954.

PHILIP S. RENNISON, PHILIP S. RENNISON, Town Clerk.

Town Hall, Bolton

Town Hall, Bolton

BRACKNEII, DEVELOPMENT
CORPORATION
Applications are invited for the appointment of an ASSYSTANT ARCHITECT—salary £660×£40—£860. Unless there are exceptional circumstances the commencing salary will be £650 per annum. Applicants should be Corporate Members of the E.I.B.A. and experience in the design and construction of industrial buildings will be an advantage. Superannuation schemes. Medical Examination. Housing available in due course. Apply by 10th November, 1954, giving age education and qualifications, experience and appointments held (with dates and salaries) and two referees. to General Manager (AA). Bracknell Development Corporation, Farley Hall, Binfield, Bracknell, Berkshire. Corporation, Berkshire.

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Applications are invited for the following apponaments which are subject to the Conditions of Service of the National Joint Council for Local Authorities, Administrative, Professional, Technical and Cierical Services; the Local Government Euperannuation Acts, 1937 and 1953; a satisfactory medical examination and one munth's notice on either side for termination.

(a) TWO ASSISTANT ARCHITECTS—Grade A.P.T. II (£830—£625).

(b) TWO ASSISTANT ARCHITECTS—Grade A.P.T. I (£490—£535).

(c) TWO ARCHITECTURAL ASSISTANTS—General Division Grade (M) (£170 at age of 16, rising to £470 at age of 30).

(d) ONE TEMPORARY ASSISTANT ARCHITECT (Grade A.P.T. III) (£550—£595). (For a period of approximately 18 months.)

(e) ONE TEMPORARY ASSISTANT ARCHITECT (Grade A.P.T. II) (£520—£555). (For a period of approximately 18 months.)

It is anticipated that from the 1st January, 1955, the maxima of the grades mentioned above will be as follows:—

Grade IV—£540.

Grade II—£580.

Grade III—£580.

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Preference will be given to candidates who have passed the Intermediate Examination of the R.I.B.A.

Applicants for (a) (b) and (c) must not be over 40 years of age but this condition may be released in the case of a person up to 45 years of age employed by another Local Authority.

Applications on forms obtainable from the undersigned, accompanied by copies of not more than three recent testimonials and/or names of persons to whom reference may be made, should be received at my office not later than the 15th November, 1954.

The Corporation may make Housing Accommodation available to the successful married candidate for items (a) and (b).

H. J. W. STIRLING, A.R.I.B.A., City Architect.

BOROUGH OF WIDNES.

BOROUGH OF WIDNES.

BOROUGH ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of ARCHITECTURAL ASSISTANTS A.P.T. IV—V (£589—£670).

Commencing salary according to qualifications

Applications are invited for the support of the ArcHITECTURAL ASSISTANTS A.P.T. IV—V (£500—£670).

Commencing salary according to qualifications and experiece in accordance with the recommendations of paragraph 21(8)(XI) of the National Scheme of Conditions of Service. Candidates appointed on A.P.T. IV will be promoted to A.P.T. V on becoming registered architects.

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. Monday 15th November, 1954.

Canvassing directly or indirectly will disqualify.

FRANK HOWARTH

Town C.erk.

Town Hall, Widnes. 18th October, 1954.

Town Hall, Widnes.

18th October, 1954.

HERTFORDSHIRE COUNTY COUNCIL.

HATFIELD TECHNICAL COLLEGE.

Principal: Dr. W. A. J. Chapman, M.Sc. (Eng.).

Applications are invited for an ASSISTANT Grade B to teach:—

(a) Building Science or

(b) Building Science or

(b) Building Construction in the St. II. National Certificate standard, with Mathematics through to S. III. And some teaching of associated subjects to Craft students.

Further particulars and application forms may be obtained from the Registrar, Hatfield Technical College, Rose Green, Hatfield.

LONDON COUNTY COUNCIL.

ARCHITECT'S DEPARTMENT.

Vacancy for AREA OFFICER (£892 10s. to £1,071) responsible for maintenance, repair and small improvements of Council buildings.

Experience of adaptation and alteration work and maintenance work on a schedule basis an advantage. A.R.I.B.A. or A.R.I.C.S. desirable.

Particulars and application forms returnable by 13th November, AR/EK/A.O./3, County Hall, \$2.1 (1384).

MIDDLESEX COUNTY COUNCIL.

COUNTY PLANNING DEPARTMENT.
PLANNING ASSISTANT required A.P.T. VI
(£725-£790 p.a., if 25 or over) in Headquarters'
Section. Preference given if full qualifications in
Planning and Architecture. Should be capable of
controlling staff working on Statistical & Territorial Analysis. Established, pensionable, subject
to medical assessment and prescribed conditions.
Application forms from County Planning Officer,
10. Great George Street, S.W.I., returnable by
13th November (quote P.330AJ). Canvassing disqualifies.

APPOINTMENT OF ARCHITECTURAL
ASSISTANT.
Applications are invited for the following appointment in the City Surveyor's Department,

appointment in the City Surveyor's Department, viz.,
ARCHITECTURAL ASSISTANT (Education)
A.P.T. I—III (£490—£595 per annum).
The commencing salary will be according to the qualifications and experience of the candidate.
Candidates should possess the minimum qualifications and experience prescribed by the National Joint Council for Local Authorities' Administrative, Professional, Technical and Ciercial Services for posts in the above mentioned grade.
General Conditions of Appointment may be obtained from the undersigned.
Applications, accompanied by the names and addresses of three referees and endorsed "Architectural Assistant (Education), A.P.T. Grade I.III " must be delivered to the undersigned not later than the 6th November, 1954.
S. TAPPER-JONES,
City Hall, Cardiff.

City Hall, Cardiff.

October, 1954.

STAFFORDSHIRE COUNTY COUNCIL.

Applications are invited from well experienced Clerks of Works for the appointment of a supervisory CLERK OF WORKS to control a number of projects in the Rugeley-Liehfield area with the aid of Trainee Clerks of Works sited on each project.

ald of Traine Clerks of Works and School Project.

Salary £11 lls. per week. The successful applicant will require a car to carry out his duties.

Application forms may be obtained from The County Education Architect, Green Hall, Lichfield Road, Stafford, and should be returned completed within two weeks of this advertisement.

T. H. EVAN Souncil.

Clerk of the County Council.

4472

BOROUGH OF NEWCASTLE-UNDER-LYME.
Applications are invited for the post of
ARCHITECTURAL ASSISTANT Grade A.P.T. IV
(£580-£625).
Application forms and conditions of appointment may be obtained from the Borough Engineer
and Surveyor, Lancaster Building, High Street,
Newcastle, Staffs, and should be returned to him
not later than Monday, the 15th November,
1954.

C. J. MORTON, Town C.erk.

District Bank House,
High Street, Newcastle, Staffs.

CITY AND COUNTY OF
NEWCASTLE-UPON-TYNE.
CITY ARCHITECT'S DEPARTMENT.
Applications are invited for the post of:PRINCIPAL ASSISTANT ARCHITECT (HOUSING). A.P.T. Division, Grade IX (£840-£950).
Applicants should be Associate Members of the
R.I.B.A., and should have received a sound architectural training, preferably at a recognised
School of Architecture. Considerable ability in
contemporary architectural design and a sound
knowledge of Building construction and procedure
are essential requirements, and applicants should
have had oractical experience of the administration of building constracts and the control of staff.
The successful applicant will be responsible
under the direction of the Chief Assistant Architect (Housing) for the detailed organisation of
the work of the normal Housing section including
the progressing of large housing contracts.
The appointment will be subject to the National
Conditions of Service as adorted by the City Council; to the Drovisions of the Local Government
Suberannuation Act, 1937, and to one month's
notice on either side. The successful candidate
will be required to pass a medical examination.
Applications, experience, present and past
appointments together with cooles of two recent
testimonials, or the names and addresses of two
persons to whom reference may be made, should
be addressed to George Kenyon, A.R.I.B.A.
A.M.T.P.I. City Architect, 18. Cloth Market
Newcastle-upon-Tyne, 1.
16th October 1954.

the 8th November. 1954.

Town Hall.
Newcastle-upon-Tyne, 1.

16th October. 1954.

4428

COUNTY BOROTICH OF WOLVERHAMPTON.
ARCHITECTURAL ASSISTANTS.

Annlications are invited from persons having suitable qualifications and/or experience for the following nermanent annointments:—

(a) ASSISTANT ARCHITECT: Salary Grade A.P.T. V 6500—6525.

(b) ARCHITECTURAL ASSISTANT: Salary Grade A.P.T. IV \$500—6525.

(c) ARCHITECTURAL ASSISTANT: Salary Grade A.P.T. III \$550—£595.

Commencing salary according to experience. The maximum salary will be fixed in relation to the N.J.C. revisions now under consideration. N.J.C. conditions of service. Medical examination. Suncerannuable posts.

Housing accommodation for one of the above apposintments will he made available, if necessary.

Applications status age, analification, experience and present position and salary, together with names of three referees, the bowarded to the Borough Engineer Town Hall. Wolverhampton, not later than Monday, 8th November Clerk.

Wolverhampton.

COUNTY BOROUGH OF WEST HAM.
BOROUGH ARCHITECT & PLANNING
OFFICER'S DEPARTMENT.
Applications are invited from men of enthusiasm
and first class ability for the following established
posts:

Applications are invited from men of enthusiasm and first class ability for the following established posts:

(a) PRINCIPAL ASSISTANT ARCHITECT/
PLANNER: £1,100×50-£1,250 p.a.
Must be Chartered Architect and should be A.M.T.P.I. or equivalent. Will be responsible for the co-ordination of the Housing Programme, the preparation of detailed layouts of residential areas at high densities and the supervision of large building contracts. Commencing salary within scale according to experience and qualifications. (b) CHIEF ASSISTANT, PLANNING.
Must be A.M.T.P.I., and additional qualification A.R.I.B.A. or A.R.I.C.S. an advantage. Will be responsible for Planning Administration generally. Experience in the replanning of blitzed or obsolete urban areas required.

(c) CHIEF ASSISTANT ARCHITECT.
Must be A.R.I.B.A. Will be responsible for the Education programme, Public Buildings, and some Housing schemes. Experience in the supervision of large contracts necessary.

The salary for posts (b) and (c) will be APT Grade X—2920-£1,050 plus London Weighting.

May be revised with effect from 1.1.55 to Amended Grade VII—2900-£1,100 plus London Weighting.
Application forms, returnable by 16th November, 1954, from Thomas E. North, O.B.E., F.R.I.B.A., Dist.T.P., Borough Architect and Planning Officer, 70, West Ham Lane, Stratford, E.15.

BRITISH ELECTRITY AUTHORITY.

EAST MIDLANDS DIVISION.

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BRITISH ELECTRITY AUTHORITY.

EAST MIDLANDS DIVISION.

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

SENIOR DRAUGHTSMAN (ELECTRICAL),
CONSTRUCTION DEPARTMENT (Vacancy No. 114/54/AJ).

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

The salary will be in accordance with the National Joint Board Agreement, Grade 4 (£671—£780 per annum) or Grade 5 (£567—£671 per annum) of Schedule D according to experience.

Applications should be submitted within seven days of publication of this advertisement.

This appointment 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

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,
4427 15th October, 1954.

Applications are invited for the post of ARCHITECTURAL ASSISTANT Grade I. Divisional Architect's Department, National Coal Board, Northern (N. & C.) Division, Gosforth, Newcastle-upon-Tyne to work on large scale reconstruction Schemes of considerable interest. Applicants should have passed at least Intermediate R.I.B.A. examinations and should have had experience in the preparation under supervision of working drawings for large scale building schemes. Salary within the scale £525×£25—£650 p.a. according to experience.

the preparation under supervision of working drawings for large scale building schemes. Salary within the scale £525×£25-£650 p.a. according to experience.

Applications giving date of birth and full details of education qualifications and experience to:—Divisional Establishment Officer, National Coal Board. Northern (N. & C.) Division. Elison Buildings, Elison Place. Newcastle-upon-Tyne, 1, not later than 6th November, 1954.

GOUNTY BOROUGH OF WEST BROMWICH.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the following permanent appointments:—

(a) ASSISTANT ARCHITECT. Grade A.P.T. VII (£735-£810). Housing accommodation will be provided.

(b) ARCHITECTURAL ASSISTANT. Grade A.P.T. III or IY (£550-£595 or £580-£625), dependent upon experience.

N.J.C. Conditions of Service.

Applications, naming two referees, to Borough Surveyor. Town Hall, West Bromwich, by 8th November, 1954.

HOUSING AND TOWN PLANNING

DEPARTMENT.

Salary A.P.T. Grade YI (£695-£760) plus London Weighting.

Candidates must be Registered Architects and have at least three years practical office experience in housing work.

The National Scheme of Conditions of Service and the Local Government Superannuation Acts apply and medical examination required.

Applications, stating age and full particulars of qualifications and experience, with the names of two referees, to the Borough Housing and Town Planning Officer. The Avenue, Finchley, N.3, by first post on Friday, the 5th November, 1954.

R. M. FRANKLIN,

Municipal Offices,

Finchley, N.3.

Municipal Offices, Finchley, N.3.

BOROUGH OF TWICKENHAM—Applications are invited for the post of (a) SENIOR ARCHITECTURAL ASSISTANT, satary A.P.T. V/VA/VI/VII (E220—2610), and (b) ARCHITECTURAL ASSISTANT A.P.T. IV—V (2200—2670) plus London Weighting. Applicants for post (a) must have passed the Final and post (b) the Intermediate Examination of the R.I.B.A. and experience with a Local Authority will be an advantage. Applications, stating age, qualifications, present and previous appointments and giving details of experience should be accompanied by copies of two testimonials and delivered to Mr. A. S. Knolles, B.Sc., York House, Twickennam, not later than Saturday, November 6th, 1954. N.J.C. Conditions will apply and superannastion payable. Cauvassing will disqualify and applicans must state whether they are related to any member of the Corporation or Senior Officer.

Municipal Offices,

Municipal Offices.

Twickenham.

Twickenham.
October. 1-54.

CARDIGANSHIRE COUNTY COUNCIL.
APPOINTMENT OF ASSISTANT ARCHITECTS
(1WO).

Applications are invited for the above appointments in accordance with Grade IV, namely, £657-£825 per annum, from 1st January, 1955, in the County Architect's Department, Aberayton. Commeacing salary will be in accordance with the qualifications and experience of successful applicants.

Cants.

Applicants should be members of the R.I.B.A. and must disclose whether to their knewledge they are related to any Member of Senior Officer of the Authority.

Forms of application may be obtained from the County Architect, County Hall, Aberaeron. Applications must be returned to the undersiged by not later than 12.00 noon on 1st November, 1954.

J. E. R. CARSON,

Clerk of the County Council.

Swyddfa'r Sir,

Swyddfa'r Sir, Aberystwyth

Aberystwyth.

BOROUGH OF CHELMSFORD.
BOROUGH ENGINEER, SURVEYOR AND ARCHIFECT'S DEPARTMENT.
CHIEF ASSISTANT ARCHITECT, Grade
A.P.T. VI.
ENGINEERING ASSISTANT, Grade A.P.T.

III.

ENGINEERING ASSISTANT, Grade A.P.T. I.
The Chelmsford Borough Council invite applications for the above appointments, further particulars of which can be obtained from the Borough
Engineer, Surveyor and Architect's department,
Municipal Offices, Chelmsford. Closing date 10th
November, 1954.

R. A. FRANCIS Town Clerk

B. A. FRANCIS, Town Clerk.

B. A. FRANCIS, Town Clerk.

4448

BOROUGH OF ILFORD.

APPOINTMENT OF CHIEF ASSISTANT QUANTITY SURVEYOR—BOROUGH ENGINEER'S

DEPARTMENT.

Candidates should be Associate Members of the
Royal Institute of Chartered Surveyors and competent to undertake preparation of Bills of Quantities and Specifications, measurement of variations
and settlement of Final Accounts for all types of
Municipal work.

Salary, Grade A.P.T. VIII, £785—£360 per annum, plus London Weighting.

Appointment whole time (private practice
prohibited), permanent, superannuable and subject to medical examination.

The Council is willing to provide a 3-bedroom
house, if necessary, in connection with this
appointment.

Forms of application obtainable from Town
Clerk, Town Hall, Ilford, Essex, to be returned
by 3th November.

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 18-9 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.

JUNIOR and SENIOR ARCHITECTURAL ASSISTANTS and DRAUGHTSMEN for large and varied practice in Home Counties. Salary required and details of experience to Box 3612.

EXPERIENCED SENIOR and JUNIOR ARCHITECTURAL ASSISTANTS required, preferably with experience in industrial work. Write or telephone to Hasker & Hall, Architects, 13, Welbeck Street, London, W.1. Welbeck 0051.

SAMUEL MORRISON & PARTNERS require ASSISTANTS for varying grades for contemporary work on industrial design and housing, schools and shops being erected in various parts of the country. Group working in pleasant offices situated in own grounds. Particulars and salary required to 103, Belper Road, Derby.

BUILDING SURVEYING ASSISTANT (about B.1.C.S. Final Standard) with at least two years' practical experience required by City firm of Chartered Surveyors & Architects. 3925

RCHITECTURAL DRAUGHTSMAN required by large Manufacturers of Glazed Tiles. Must be capable of surveying and preparing plans for industrial buildings and plant atterations and/or extensions. Knowledge of tile draughtsmanship an advantage. Salary in region of £705, according to experience, etc. Apply by letter, in first instance, to: H. & R. Jonnson, Ltd., Higggate Tile Works, Tunstall, Staffs. 4276

ASSISTANT about R.I.B.A. Intermediate standard with office experience. Write, giving details and salary required, to Clifford Culpin & Partner, S. Soutaa.apton Place, W.C.1. 4476

MORRISON, ROSE & PARTNERS required several ARCHITECTURAL ASSISTANTS of Senior and Intermediate standard for busy West End office. Please 'phone for appointment: GROsvenor 7522. 4477

ARCHITECTURAL ASSISTANT (Inter. standard for the control of the control of

End office. Please 'phone for appointment:
GROSvenor 7522.

A RCHTFECTURAL ASSISTANT (Inter. standard) required for private practice near Derby, engaged on Housing, Churches and Industrial work. Fullest particulars to Box 4479.

CAPABLE ARCHITECTURAL ASSISTANT required for General Practice in Central London, Office experience essential. Reply with full particulars and salary required to Box 4480.

JUNIOR ARCHITECTURAL ASSISTANT required in Hertfordshire. Preferably with some office experience. Apply stating experience and salary required. Box 4484.

RCHITECT'S ASSISTANT (intermediate standard) required by London Architects for work on modern industrial buildings. Wide responsibility given to assistants in medium sized office. Salary from 2500 p.a. according to experience. Applicants should be good draughtsmen and have good practical experience. With giving full particulars of experience and salary required to W. H. Watkins, Gray, FF.R.I.B.A. and Partners, 1 Clare Street, Bristol, 1.

RCHITECTS' Department of large engineer-

Partners, 1, Clare Street, Bristol, 1.

ARCHITECTS' Department of large engineer—
ing organisation requires ASSISTANT.
Excellent opportunity for architect of Intermediate Standard seeking factory experience.
Five-day week, bonus, non-contributory pension scheme, canteen and welfare facilities. Temporary living accommodation can be arranged.
Send full particulars and salary requirements to the Personal Manager, George Ellison Ltd.,
Perry Barr. Birmingham 22B.

AND ACCOUNTEMENT AND ASSISTANT.

Perry Barr. Birmingham 22B.

AN ARCHITECTURAL ASSISTANT aged
25 35 is required in the Architects Department of a large Industrial concern in the Manchester area. Apolicants must be capable of carrying out the complete job from sketch plans to working drawings and a knowledge of Quantifies and Final Accounts would be an advantage. The position offers good prospects and interesting work to a keen and capable assistant. Experience of industrial building is desirable but not essential. Applications should give full details of training, experience and qualifications. Box 4418.

A SMALL general office on border North Widdlesex Worthrodshire, requires ARCHITECTURAL ASSISTANT about intermediate stage, Good salary offered for good draughtsmanship and experience in private practice on domestic work including flats, and industrial work. ADUly with brief details to Box 4417.

SENIOR ARCHITECTURAL ASSISTANT. ASSISTANT. For the same of the condon and redevelopment projects in the London area. Permanent post of varied interest and resonability. Salary £700—£800 per annum. Box 4416.

RCHITECTURAL ASSISTANT required by

A RCHITECTURAL ASSISTANT required by busy ceneral practitioner near centre of London Must have good knowledge of construction and he quick and accurate. Reply stating salary and experience to Box 4415.

TAFF Architect. Maidstone, Kent. requires to Architect Maidstone, Kent. requires Architectural Architectura

SENIOR ARCHITECTURAL ASSISTANT regained for Contemporary Works. Starting salary 9850 n.a. Harvey & Scott. 2. Lynedoch Place, Glasgow. Telephone Douglas 8388.

A RCHITECTURAL ASSISTANTS qualified, recuired for Contemporary work, Starfing salary 9600 n.a. Harvey & Scott, 2 Lynedoch Place, Glasgow, Telephone Douglas 3388. 4412

Place. Glascow. Telephone Douglas 3388. 4412

R PERIENCE D ARCHITECTURAL
DRAIGHTSMAN required, canable of preparing working drawines from sketch designs.
Write in first instance, steting age, omalifications
and salary required to Woolaway Constructions
Ltd., 11. Canao Sireet, Taunton, Somerset.

ARCHITECTURAL ASSISTANT, man or
woman, not below Intermediate Standard,
required by private Architects in London with
varied practice. Raphy with particulars and
salary required to Box 4302.

A RCHITECTURAL ASSISTANT required for work in connection with a system of pretable read to the construction for Schools Development and actual bunding. Should have passed K.i.B.A. Intermediate. Considerable scope for right man. Write Box No. 320, W.B.G., 39, Cheapside, London, E.C.2.

FOUR permanent ARCHITECTURAL ASSIST-ANTS required, intermediate standard. Some experience in design of industrial bunding advantageous. Apply brian L. Sutcliffe & Partners, 5, Mancaester square, London, W.1—Weibeck 9237.

ARCHITECTURAL ASSISTANTS (Male or Female) Intermediate standard, required for preparang working drawings and details from architects' sketches. Good working conditions, canteen and sports facilities. Apply in writing to Personnel Officer, Albert E. Reed & Co., Ltd., Aylessord Paper Mill, Larkfield, Nr. Maidstone, Kent.

Kent. 4453

ENIOR ARCHITECT required by North London Bunding Contractors. Applicants must have considerable experience and be capable of taking a project through from enquiry to contract stage, including building surveys, sketch plans, working drawings and obtaining all permissions and approvais. Contracts mainly industrial from 21,000-2100,000 in value with some low-cost housing and site layouts. Permanent position with excellent prospects. Please apply giving details of training, qualifications, experience and saary required to Box 4455.

**INFFICIENT SECRETARY required by Archivers.

red to Box 4455.

FFICIENT SECRETARY required by Architect practising N.W.3 district. No Saturdays. 4456.

Box 4456.

ESTIMATOR, experienced in Architectural Metalwork. Good working conditions including superannuation scheme-apply stating age, experience and salary, etc., to Foundry Manager, H. H. Martyn & Co., Ltd., Sunningend Works, Cheltenbain.

H. H. Martyn & Co., Ltd., Sunningend Works, Cheltenhan.

A857

ARCHITECTS required with initiative and imagination for research and development of prefabricated structures destined for world markets. Apply A. M. Gear, A.R.I.B.A., at 12, Manchester Square, London, W.L.

UNIOR ASSISTANT wanted immediately for busy private Practice in Kent. Salary £300-£350 0s. 0d. p.a. according to experience and ability. Apply stating usual details to George R. Clay & Partners, A.A.B.L.B.A., 198, Parrock Street, Gravesend, Kent.

UNIOR ASSISTANTS required for small contemporary office. Salary by arrangement. C. H. Elsom, A.R.I.B.A., 44, Catherine Place, S.W.I. Victoria 4304.

ARCHITECTURAL ASSISTANTS required

C. H. Elsom, A.R.I.B.A., 44, Catherine Place, S.W.I. Victoria 4304.

ARCHITECTURAL ASSISTANTS required.

A RCHITECTURAL ASSISTANTS required.

One qualified with some experience, and one Intermediate standard, for varied work in small branch office, S.W.I. area. Reply, full particulars and salary required. Box 4462.

CO-OPERATIVE WHOLESALE SOCIETY LIMITED.

ARCHITECT'S DEPARTMENT, MANCHESTER.

APPLICATIONS are invited from suitably qualified nersons for positions as ASSISTANT ARCHITECTS—and SENIOR ASSISTANT ARCHITECTS—within a salary range of 2475 to 2915 per annum—for work on large and interesting commercial and industrial projects.

Candidates for the senior positions must have had considerable experience in design, construction and contract administration whilst those for the position of Assistant Architects should be capable of preparing working drawings and details from preliminary sketches and have sound practical experience.

The appointments are permanent and pensionable with prospects of promotion.

Applications stating age, experience, qualifications and salary required to be addressed to G. S. Hay, A.R.I.B.A., Chief Architect, Co-operative Wholesale Society Ltd., 1, Balloon Street, Manchester.

Wholesale Society Ltd., 1, Balloon Street, Manchester.

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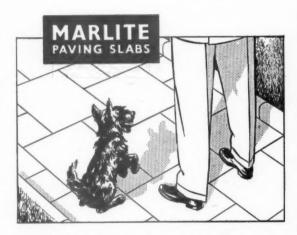
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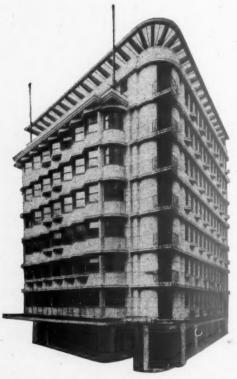
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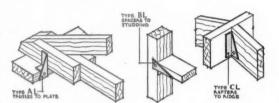
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