THE ARCHITECTS' JOURNAL

standard contents

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

No. 2977] [VOL. 115
THE ARCHITECTURAL PRESS
9, 11 *and* 13, *Queen Anne's Gate, Westminster, S.W.1.* *'Phone: Whitehall* 0611

Price 1s. 0d.

Registered as a Newspaper.

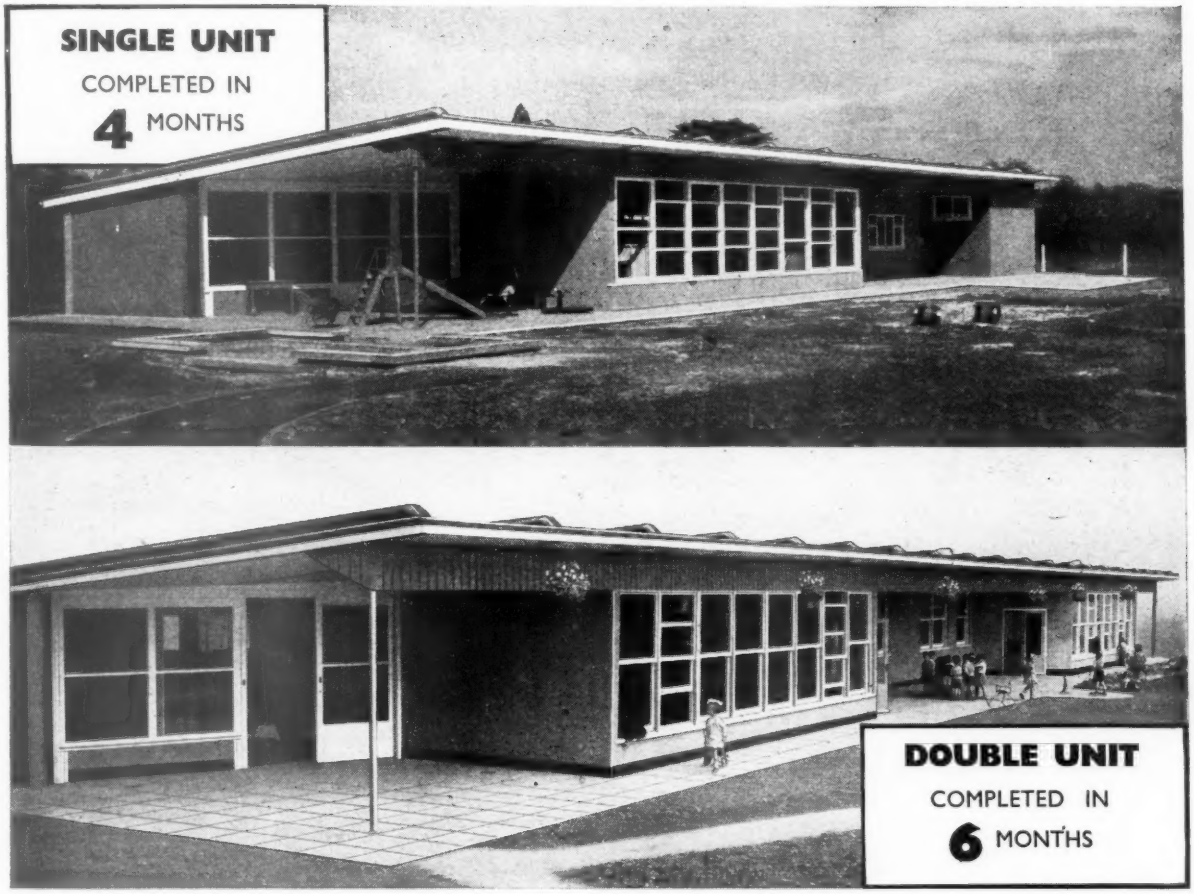
★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ie one week, Ig to Z the next. In all cases where the town is not mentioned the word LONDON is implicit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

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: W. Marlborough Whitehead, "Dyneley," Castle Hill Avenue, Berkhampstead, Herts.	
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Langham 5721
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1.	Victoria 0447-8
ACGB	Arts Council of Great Britain. 4, St. James' Square, S.W.1.	Whitehall 9737
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Mayfair 7501/8
APRR	Association for Planning and Regional Reconstruction. 34, Gordon Square, W.C.1.	Euston 2158-9
ArchSA	Architectural Students' Association. 34/36, Bedford Square, W.C.1.	
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Langham 8738
AScW	Association of Scientific Workers. 15, Half Moon Street, Piccadilly, W.1.	Grosvenor 4761
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Langham 5721
BATC	Building Apprenticeship and Training Council. Lambeth Bridge House, S.E.1.	Reliance 7611, Ext. 1706
BC	Building Centre. 26, Store Street, Tottenham Court Road, W.C.1.	Museum 5400
BCC	British Colour Council. 13, Portman Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 17, Amherst Road, Ealing, W.13.	Perivale 6869
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 10, The Boltons, S.W.10.	Flaxman 7766
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BIAB	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade Millbank, S.W.1.	Whitehall 5140
BRDB	British Rubber Development Board. Market Buildings, Mark Lane, E.C.3.	Mansion House 9383
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333
BTE	Building Trades Exhibition. 4, Vernon Place, W.C.1.	Holborn 8146/7
CABAS	City and Borough Architects Society. C/o Johnson Blackett, F.R.I.B.A., Borough Architect, Town Hall, Newport, Mon.	Newport 3111
CAS	County Architects Society. C/o F. R. Steele, F.R.I.B.A., County Hall, Chichester.	Chichester 3001
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Sloane 5255
CCP	Council for Codes of Practice. Lambeth Bridge House, S.E.1.	Reliance 7611
CDA	Copper Development Association. Kendals Hall, Radlett, Herts.	Radlett 5616
CIAM	Congrès Internationaux d'Architecture Moderne. Doldertal, 7, Zurich, Switzerland.	
COID	Council of Industrial Design. Tilbury House, Petty France, S.W.1.	Whitehall 6322
CPRB	Council for the Preservation of Rural England. 4, Hobart Place, S.W.	Sloane 4280
CUC	Coal Utilization Council. 3, Upper Belgrave Street, S.W.1.	Sloane 9116
CVE	Council for Visual Education. 13, Suffolk Street, Haymarket, S.W.1.	Reading 72255
DGW	Directorate General of Works, Ministry of Works, Lambeth Bridge House, S.E.1.	Reliance 7611
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Whitehall 0540
DOT	Department of Overseas Trade. 35, Old Queen Street, S.W.1.	Victoria 9040
EJMA	English Joinery Manufacturers' Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Regent 4448
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architects and Surveyors. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
FASSC	Federation of Association of Specialists and Sub-Contractors, 5, Arundel Street, Strand.	Temple Bar 6633
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	The Flush Door Manufacturers Association Ltd. Trowell, Nottingham.	Ilkeston 623
FLD	Friends of the Lake District. Pennington House, nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 26, Great Ormond Street, Holborn, W.C.1.	Chancery 7583
FPC	The Federation of Painting Contractors, St. Stephen's House, S.W.1.	Whitehall 3902
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4041
FS (Eng.)	Faculty of Surveyors of England. Buckingham Palace Gdns., S.W.1.	Sloane 2837
GC	Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
GG	Georgian Group. 27, Grosvenor Place, S.W.1.	Sloane 2844
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1.	Sloane 5615
ICA	Institute of Contemporary Arts. 17-18 Dover Street, Piccadilly, W.1.	Grosvenor 6186
ICE	Institution of Civil Engineers. Great George Street, S,W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers. Savoy Place, W.C.2.	Temple Bar 7676
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1.	Abbey 5215

the ASCOS nursery school

or day nursery

saves erection time



Not only in speed of erection, but in constructional simplicity and in rational use of space and materials, the ASCOS school represents a new conception in the economical provision for the care of the very young. Yet the substantial savings in time and money are achieved without detriment to the amenities essential today for the children and staff. Designed in units, each unit accommodating 40 children and providing 1000 sq. ft. of playroom space, it can be erected as a single, double or triple unit, with kitchen. Single units £8,000 approx., including all services and fittings within the building. Multiple units in proportion.

You *know* from the start when we will complete

An illustrated booklet on construction, features, finish and services will be sent you on request.

ANGLO-SCOTTISH

CONSTRUCTION COMPANY LTD.

No. 1 THE RIDGWAY, LONDON, S.W.19. Telephone : WIMbledon 5277/8/9

T.A.437 1

door frames and metal trim

FOR THE BUILDING INDUSTRY

Door frames — skirting — corner beading — picture railing — window lining sub frames. Sankey make them all, to British Standard specification, and have had years of experience in this type of work.

A comprehensive range of stock sections is carried and we are anxious to co-operate in every way with architects and builders.

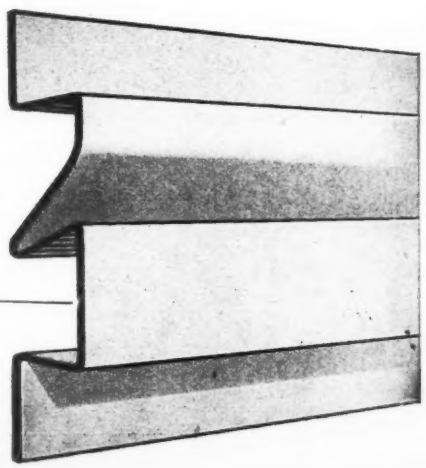
Full details and prices on application.

ASK **Sankey** OF WELLINGTON

JOSEPH SANKEY & SONS LIMITED

HADLEY CASTLE WORKS, WELLINGTON, SHROPSHIRE.

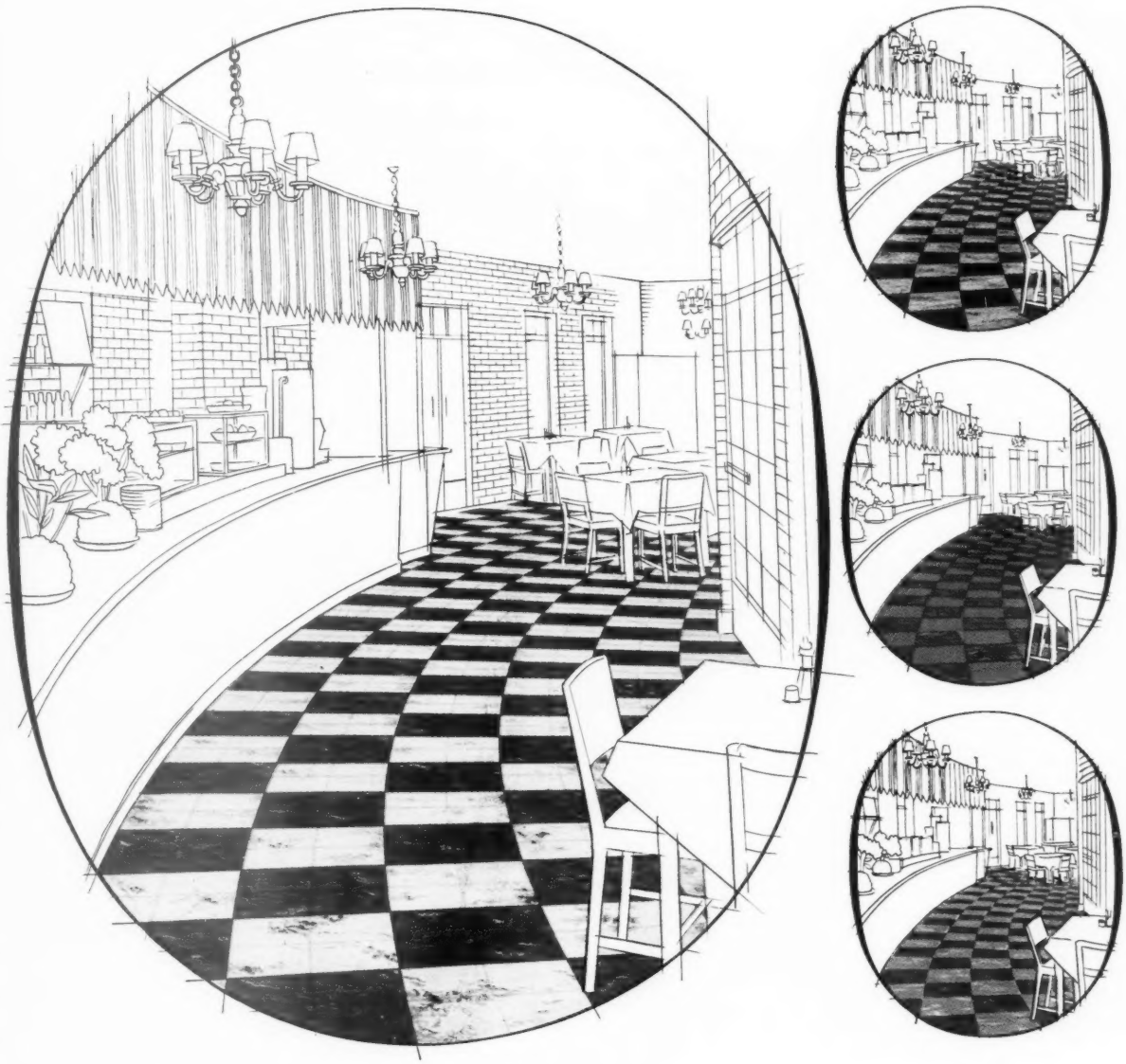
Phone: 500 WELLINGTON. Telegrams: SANKEY, WELLINGTON.



LONDON OFFICE:

ULSTER CHAMBERS, 168 REGENT STREET, W.1.

Phone: REGENT 3261. Telegrams: PERMEABLE PHONE LONDON.



THIS IMPRESSION OF A TEA BAR has been drawn in black and white, with only the floor coloured, to show how effectively Semastic Decorative Tiles may be treated as the foundation of the interior colour scheme. The smaller sketches suggest three more ways in which the wide and well-balanced colour range may be used. But the decorative aspect is only one of the features of Semastic Decorative Tiles which have established their reputation as "thermoplastic tiles at their best". The manufacturers invite your consideration of these tiles against any comparable floor finishes from the point of view of comfort under foot, wearing qualities, or any other test.

SEMASTIC DECORATIVE TILES

A PRODUCT OF A DUNLOP COMPANY

SERVICE THROUGH SKILL

It cannot be sufficiently emphasised that tiles alone do not make a floor, and that even the best material can fail in performance unless it is handled by skilled craftsmen. For this reason the installation of Semastic Decorative Tiles is restricted to the following Approved Contractors who offer a countrywide service of the highest standard available in the industry.

ALBA FLOORING CO. LTD. · J. A. HEWETSON & CO. LTD. · HOLLIS BROS. LTD. · HORSLEY SMITH & CO. (HAYES) LTD.
PILKINGTON'S ASPHALTE CO. LTD. · THE PENMAENMAWR & TRINIDAD LAKE ASPHALT CO. LTD.
THE LIMMER & TRINIDAD LAKE ASPHALT CO. LTD. · SEMTEX LTD. · THE WESTERN TRINIDAD LAKE ASPHALT CO. LTD.

2SE/51

We ensure first class grading of tiles in qualities, colours and shades by only employing men with many years' experience.

11×7 *plus*

Our tile making experience is second to none and our works at Keele, built in 1938, are the last word in modern tile manufacture.

Dignus 11″ × 7″ Sandstorm roofing tiles save timber in a big way and every tile has a 50 years' guarantee. May we send you a copy of the Dignus brochure ?

The Aberystwyth Corporation Housing Scheme illustrated above is roofed with Dignus Sandstorm Tiles.

GUARANTEED FOR FIFTY YEARS

DIGNUS SANDSTORM *Tiles*

DIGNUS LIMITED, KEELE, NEWCASTLE, STAFFS

dm DG 4

HOUSING ESTATE IN BEAUTIFUL SOUTH DEVON

Many of the floors on this Estate were surfaced with Martyn Bituminous Domestic Flooring

FLOORS FOR TOMORROW

by Bruce Martyn . . .

One of the most important features of Martyn Bituminous Flooring is its resiliency, a quality which enables it to stand up to the heaviest traffic conditions, in fact the floor actually improves with wear becoming more compact. It is damp-proof, dust-proof, ductile, warm and noiseless to the feet. It is laid cold, is resistant to fire and changes of temperature and is completely odourless at all stages. The floor can be laid directly on to a clean concrete base thus eliminating the necessity and cost of a cement and sand screed, whilst it is available in an attractive range of colours.

Martyn Bituminous Flooring is also available in Holland, Belgium, Italy, French Morocco and Tangier, and all enquiries for these territories should be made to the following licensed Contractors or to our Head Office :—

Holland and Belgium: Messrs. N. V. Vloerenbedrijf, H. de Vries & Zn. Stadhoudersweg 79, Rotterdam, Holland.

French Morocco & Tangier: Messrs. Henri Martin, 72, Rue de la Marne, Rabat, French Morocco.

Italy: Compagnia Finanziaria Industriale & Mercattile S. a R. L., 11, Corso Sempione, Milan, Italy.

Our Technical Staff are always ready to advise on your problems

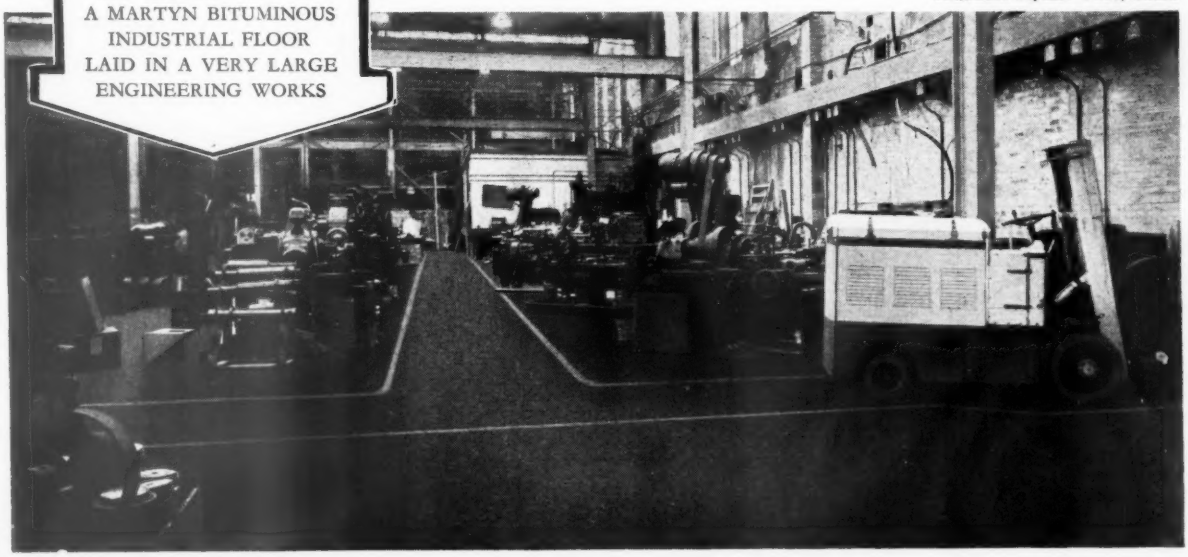
BRUCE MARTYN LIMITED

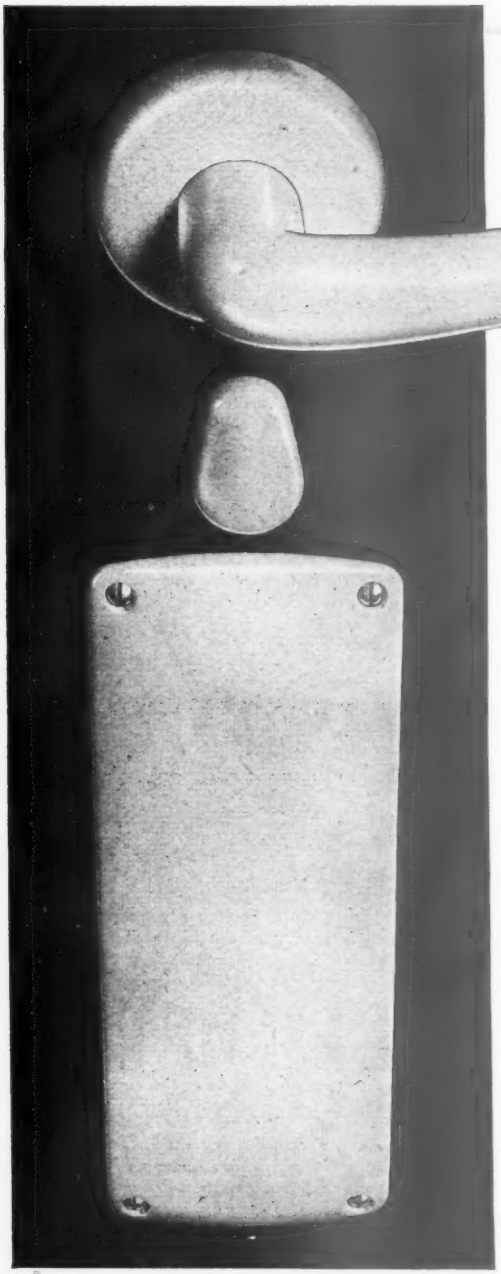
SPECIALISTS IN INDUSTRIAL AND DOMESTIC FLOORING

PICCADILLY HOUSE, REGENT ST., S.W.1. Phone: REGENT 6296-7

Telegrams: Supaflor Piccy, London

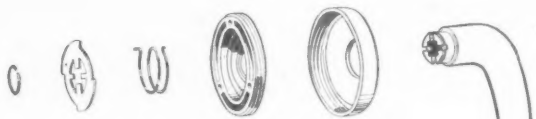
AN ILLUSTRATION OF A MARTYN BITUMINOUS INDUSTRIAL FLOOR LAID IN A VERY LARGE ENGINEERING WORKS





Function and beauty

Lacrinoid door furniture is made primarily to do it's job. At the same time it is pleasant to the hand and a delight to the eye. Shapes are simple and the beauty of the restrained curves is enhanced by reflected light.



An exploded view of the model illustrated on the left. It is a lever mortice, concealed fitting and the Lacrinoid "floating spindle" principle is used, thus dispensing with grub screws (No. 280).

The back view of the finger plate illustrated on the left showing the reinforcement. Being mass produced these plates are cheap as well as sound. Supplied in two sizes (No. 1064/3).

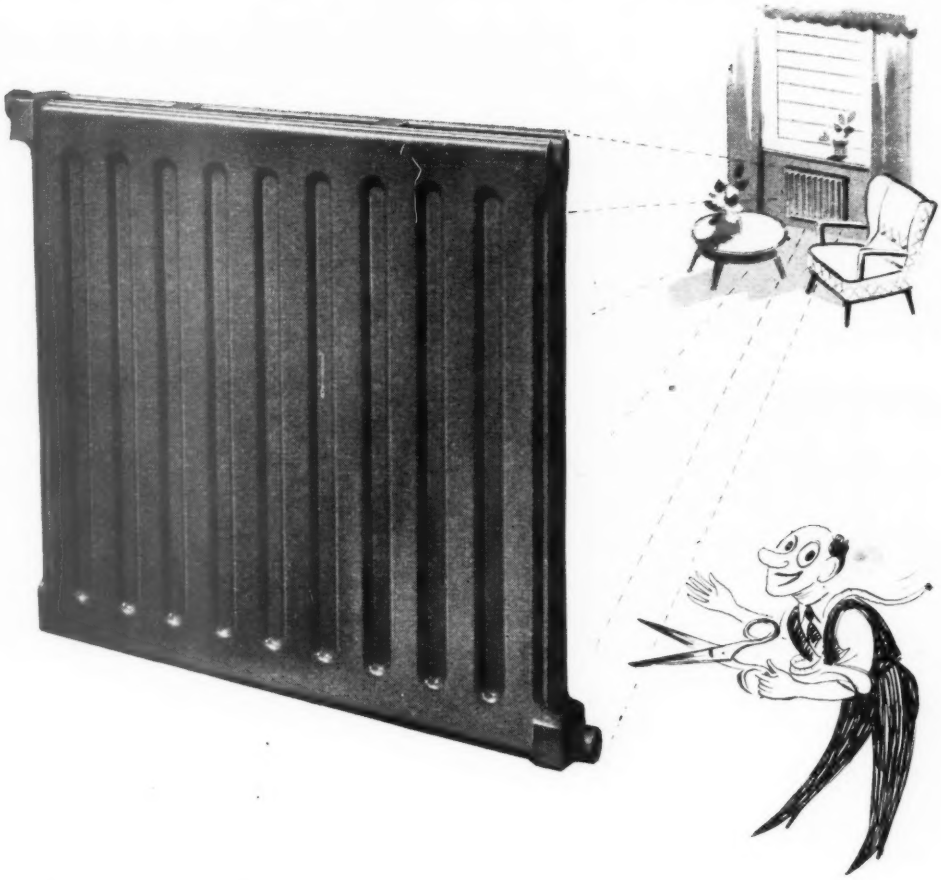
Colours
BLACK · BROWN
IVORY

LACRINOID

TRADE MARK

A selection of Lacrinoid door furniture is now on display at the Building Centre, 21 Store St., W.C.1

LACRINOID PRODUCTS LTD · GIDEA PARK · ESSEX · *Hornchurch 2981*



FITTING WARMTH

Decide how much heat you want, and the space you have to spare—" tailored " heating does the rest. Gulf pressed steel radiators are supplied in column and panel types, in many sizes, and in *any* length you require. A heating installation can therefore be planned that is *exactly suited* to the job in hand.

Gulf radiators harmonise with any type of decor, and they are suitable for home, office or factory. For attractive radiators . . .

consult **GULF**

GULF RADIATORS LTD · PENARTH ROAD · CARDIFF. *Telephone: 20591-2*

LONDON OFFICE AND SHOWROOM: 229 REGENT STREET, LONDON, W.1.
TELEPHONE: REGENT 1267/9. MAYFAIR 2494/5.

An Associate Company supplies: Oil-filled Radiators for Electric (off-peak), Gas and Paraffin operation; Domestic Boilers; Electric Unit Heaters; Electric Bed Sheets; Gas and Electric Towel Rails; Room Thermometers and Temperature Controls, and other fuel-saving equipment.

GULF RADIATOR

"Perpetual Daylight"

Interesting Mazda Lighting System for new Brynmawr Rubber factory

AS PART of the development scheme for South Wales, the Board of Trade has sponsored the erection of an important new factory on behalf of Brynmawr Rubber Ltd., a subsidiary of Enfield Cables Ltd.

Daylight streams into this factory through eight circular portlights in each of the 'shell-concrete' domes, and through four glazed vertical segments in each of the nine bays. After dark, the same sort of lighting had to be provided artificially.

The solution devised by BTH Lighting Engineers is very ingenious and extremely simple. Daylight and artificial light both come from the same direction and are of approximately the same intensity. The fall of night is almost imperceptible.

In each of the nine 'shell-concrete' domes are eight artificial portlights, each with its cruciform arrangement of six Mazda 5 ft., 80-watt Instant Start "Daylight" Fluorescent lamps. Maintenance and relamping are done from above by removing the portlight's spun aluminium lid. This lid is painted white on its underside to act as a reflector.

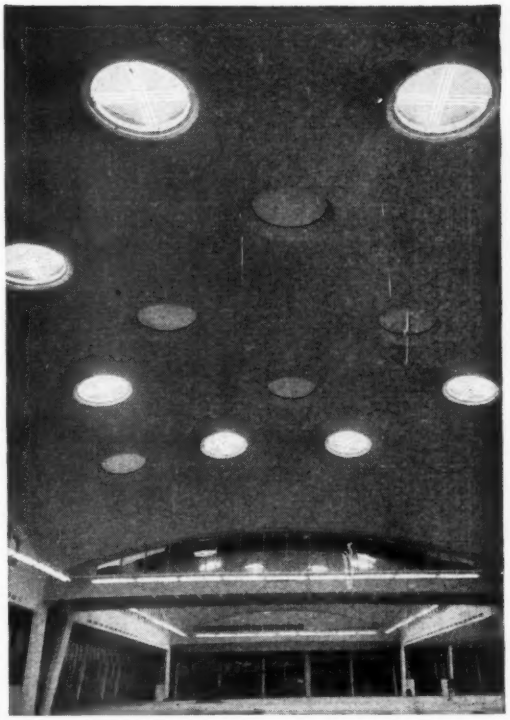
Daylight from the vertical glazing is simulated by continuous fluorescent troughing suspended about 6 ft. in from the periphery of each bay and at a height of 12 ft. This is supplemented by fluorescent lighting under the soffits formed between the roof spans.

The lighting system in this remarkable factory is a typical example of the way in which the BTH Lighting Advisory Service can help the architect to solve difficult problems.

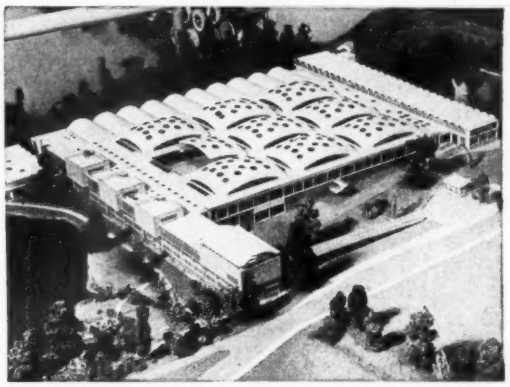
Mazda B T-H

For leadership in lighting

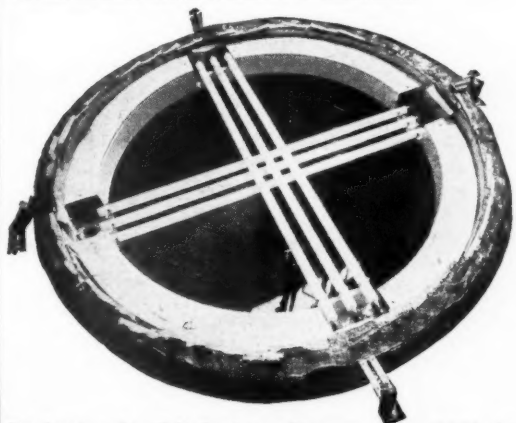
THE BRITISH THOMSON-HOUSTON COMPANY LIMITED
CROWN HOUSE, ALDWYCH, LONDON, W.C.2 M4386
(Member of the A.E.I. Group of Companies)



Interior night view of one of the nine domes showing the general layout of the daylight and fluorescent portlights, and the fluorescent troughing which simulates the daylight from the vertical glazing just above it.



A model of the factory shown at the South Bank Exhibition. Of the 16 portlights in each 'shell-concrete' dome, 8 are normal windows, and 8 provide simulated daylight by means of fluorescent lamps.



Exterior view of portlight showing cruciform arrangement of 6 Mazda 80-watt Instant Start "Daylight" Fluorescent Lamps.

MIDLAND CONVERSION

By courtesy of the Midland Hotel Co., Birmingham

The Midland Hotel Snack Bar

The Midland Hotel Cocktail Bar

The well-known American Bar at the Midland Hotel, Birmingham has been entirely remodelled by Gaskell and Chambers. Although major structural alterations have been avoided, the character of the whole room has been modernised and customer service considerably improved. Features are the cream hide upholstered snack bar and the fascia enclosing the new cocktail bar; both are shown in the above illustrations.

Gaskell Chambers LIMITED

BRITAIN'S BIGGEST BAR FITTERS

Member of the Allied Brewery Traders' Association

- HEAD OFFICE: DALEX WORKS, COLESHILL STREET, BIRMINGHAM, 4
- London Office: 109-115, Blackfriars Road, S.E.1

- BRANCHES: Bristol, Cardiff, Leeds, Portsmouth, Manchester, Liverpool, Preston, Newcastle-on-Tyne, Hanley, Sheffield, Nottingham, Glasgow, Edinburgh

Warm or cool as the day demands

Whatever the weather's like outside, *they* don't have to worry, for this house is warmed by the Radiation system of ducted air. There's friendly health-giving warmth from floor to ceiling in every room and every passage—*warmth that can always be regulated to meet the needs of the day and hour.*

The Radiation system may be installed with either a fully automatic gas unit, or an automatic solid fuel unit, which burns without smoke any solid fuel, including bituminous coal. Architects, housing authorities and others—especially those interested in smoke abatement—should write for literature explaining the system in full, or visit the experimental houses at Stanmore where both solid fuel and gas installations may be seen in action. But please apply first for an appointment to Radiation Group Sales Limited, Lancelot Works, Wembley, Middlesex.
Telephone: Wembley 6221.

Include **Whole-house Warming**
by Radiation ducted air in *your* plan

ISSUED BY RADIATION LIMITED, ASTON, BIRMINGHAM 6, AND 7/8 STRATFORD PLACE, LONDON, W.1

Walls – Old and New

The grey stone *Walls of York*, famous for their four gateways, where at Micklegate in days past the heads of traitors were exposed to the view of the populace, surround the ancient Roman city. They bear testimony, in their massive strength, that in those days York was the military capital of Britain.

The great architects of the past have left enduring monuments to their skilful choice of materials to meet the demands of those days . . . .

Today, the architects who have inherited such great traditions must also specify materials of durability : but with additional qualities such as the flexibility of planning now demanded everywhere. Fortunately, science has given them the best of both worlds—old and new—in Holoplast Movable Walls, which are now to be found in up-to-date buildings all over the world.

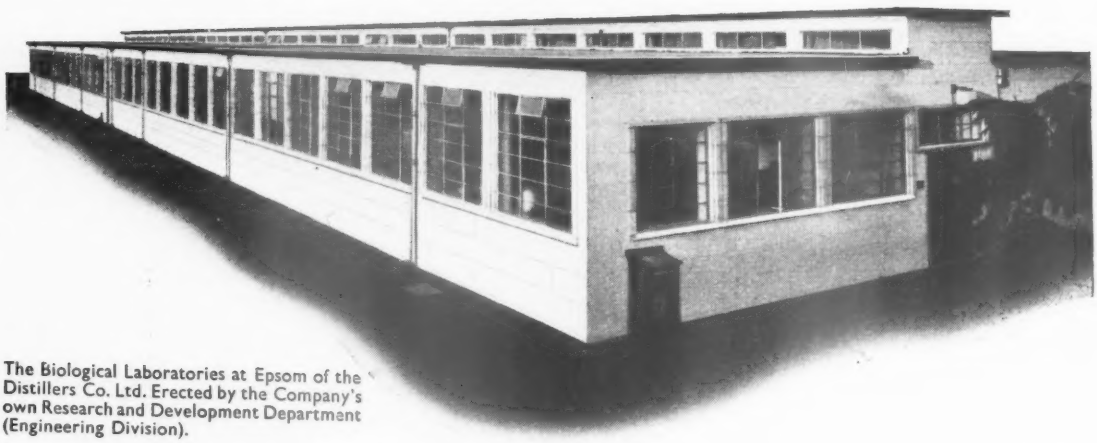
HOLOPLAST

Manufactured by :

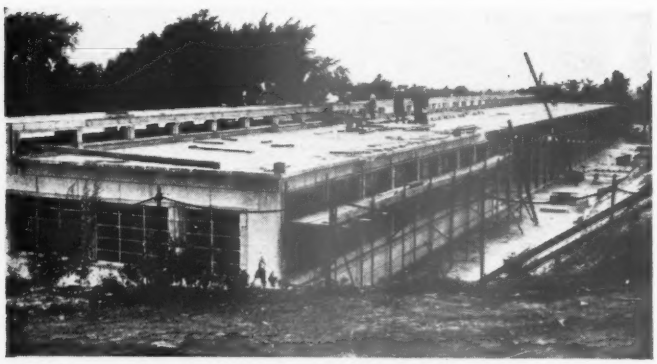
HOLOPLAST LTD. Sales Office : 116 Victoria Street, London, S.W.1

Telephone : VICtoria 9354/7 & 9981. Head Office and Works : New Hythe, Near Maidstoné, Kent.

The Distillers' Company chose this method of construction



The Biological Laboratories at Epsom of the Distillers Co. Ltd. Erected by the Company's own Research and Development Department (Engineering Division).



Work in progress. Above: Exterior. Below: Interior

THE ORLIT "GENERAL PURPOSES" scheme is a building method of great versatility. Because of the variety of spans and the innumerable combinations of spans and heights provided, this scheme can be used for practically any type of structure and any plan shape.

The new biological laboratories of the Distillers' Company is a fair example of this speedy and economical building method.

Full information concerning Orlit principles of construction can be obtained from any of the addresses below.

ORLIT

CONSTRUCTION

PRE-CAST CONCRETE
PRE-STRESSED CONCRETE

★

A NATION WIDE SERVICE

ORLIT LTD. 18, Buckingham Gate, London, S.W.1
Tel : Victoria 6701
ORLIT (Lancashire) Ltd. 3, Brown Street, Manchester, 2
Tel : Blackfriars 0718
TARSLAG LTD. Economac House, Wolverhampton
Tel : 23881
TARSLAG LTD. Tees Bridge, Stockton-on-Tees
Tel : 6355
THE SCOTTISH ORLIT CO. LTD. Sighthill Industrial Estate Edinburgh 11
Tel : Craiglockhart 2287
ORLIT (N. Ireland) LTD. Benson St., Lisburn, Co. Antrim
Tel : Lisburn 2051

The Auditorium, COLSTON HALL, BRISTOL.

Working hours were greatly reduced on this ceiling by the use of

"PARISTONE" PLASTERS

and the

"GYPROC" PARISTONE MIXER

Architect: J. Nelson Meredith, F.R.I.B.A., Bristol City Architect. General Contractors: William Cowlin & Son Ltd. Plastering Contractors: A. C. V. Telling (Bristol) Ltd.

"PARISTONE" Metal Lathing Plaster was used in conjunction with **"PARISTONE"** Wall Finishing Plaster on the 13,000 sq. ft. ceiling of this auditorium. **"PARISTONE"** Plasters are retarded hemihydrate gypsum plasters and conform to the requirements of B.S. 1191, Class B. They may be applied rapidly with little delay between each coat and consequently have a time-saving advantage over lime or Portland cement base plasters. On this particular job 30 tons of **"GYPROC" PLASTERS** were used and the plastering time was reduced to 20 hours.

Makers of PARISTONE *Browning Plaster (Haired, Unhaired and Metal Lathing Grades),* PARISTONE *Wall Finishing Plaster,* CRETESTONE *Concrete Bonding Plaster,* GYPSTONE *Board Finishing Plaster,* ZONAPLAX *Vermiculite Insulating Plaster (Undercoat and Finishing Grades).*

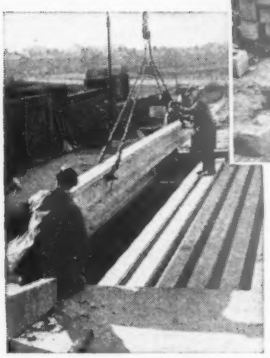
GYPROC PRODUCTS LIMITED

Head Office: Westfield, Upper Singlewell Road, Gravesend, Kent. *Telephone:* Gravesend 4251-4. *Telegrams:* Gyproc, Gravesend. Glasgow Office: Gyproc Wharf, Shieldhall, Glasgow, S.W.1. *Telephone:* Govan 2141-3. *Telegrams:* Gyproc, Glasgow. Midland District Sales Office: East Leake, near Loughborough. *Telephone:* East Leake 231. London Office: Morris House, 1-5 Jermyn Street, London, S.W.1. *Telephone:* Whitehall 8073-4.

CP4

Prestressed Concrete
IN BRIDGE CONSTRUCTION

Positioning Dow-Mac Prestressed Beams at Exton Park Road Bridge, near Cottesmore, Rutland, built by the United Steel Companies, Ltd. (Ore Mining Branch). Photograph by courtesy of the United Steel Companies, Ltd.

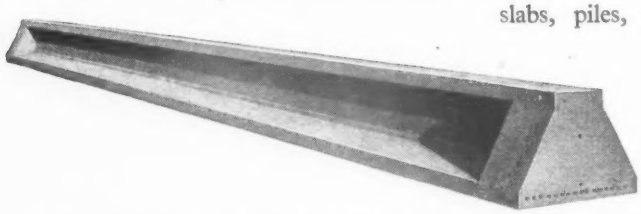


Loushers Lane Bridge, near Warrington. Lowering Dow-Mac Prestressed Beams into position. Photograph by courtesy of J. Y. Hughes, M.I.C.E., Borough Engineer and Surveyor, Warrington County Borough.

Dow-Mac Prestressed Beams are incorporated in this footbridge at Cockbeck, near Leeds, built for the Division of Opencast Coal Production, Ministry of Fuel and Power by William Pepper & Co. Ltd., 19 Park Row, Leeds, 1.

Dow-Mac prestressed bridge beams of standard section and lengths are now available. Research thus combines all the advantages of the Dow-Mac Prestressed system (saving in labour, steel, timber, reduced weight, high flexibility and resilience) with the convenience and economy of the pre-cast unit.

If you have a bridge problem consult the Dow-Mac Organisation. Dow-Mac Prestressed Concrete Units include bridge beams, decking slabs, piles, walings and railway sleepers.



DOW-MAC (PRODUCTS) LIMITED,

TALLINGTON · STAMFORD · LINCOLNSHIRE

Telephone : FETERBOROUGH 4501 (8 LINES)

DOWSETT GROUP — DOW-MAC

FERODO Stairtreads combine three essentials: SAFETY, smart appearance and long life.

Gleaming aluminium nosing clearly outlines each step and the inlaid Ferodo fabric affords a firm reassuring non-slip grip, even to wet leather or rubber soles—two vital factors in SAFETY. Further, Ferodo Stairtreads absorb endless wear over a period of many years without deterioration in efficiency or appearance.

They feature largely in Architects' specifications and are being installed in both new and existing public buildings, including Stores, Offices, Cinemas, Theatres, Hotels, Blocks of Flats, etc.

A Striking Conversion . . . plus SAFETY

Ferodo Stairtreads are of two types—single and double channel. If preferred, in place of Ferodo fabric, the inlaid strips may be of Ferodo Composition—equally non-slip—in red, white, grey, azure blue or green to harmonise with colour schemes. There is also a plain steel-backed Industrial type. All are described and illustrated in our Catalogue No. 732 of which a copy will gladly be sent on request.

The illustrations are of a recent conversion at Abbey House, Victoria, London, S.W.1. Architects: Boreham Son & Wallace, London, W.C.1. Contractors: Lewis Bros. (Kings Cross) Ltd. London, N.W.1.

FERODO

STAIRTREADS

FERODO LIMITED, CHAPEL-EN-LE-FRITH

A Member of the Turner & Newall Organisation

AJ

THE ARCHITECTS' JOURNAL

9, 11 & 13 Queen Anne's Gate, Westminster, London, S.W.1 Whitehall 0611

No. 2977 MARCH 20, 1952 VOL 115

Subscription rates: by post in the U.K. or abroad, £2 10s. 0d. per annum. Single copies, 1s.; post free, 1s. 3d. Special numbers are included in Subscriptions; single copies, 2s.; post free, 2s. 3d. Back numbers more than 12 months old (when available), double price. Half-yearly volumes can be bound complete with index in cloth cases for 25s. 0d.; carriage, 1s. extra.

HAM PRODUCTION

The time: Thursday evening; the place: Battersea's Riverside Theatre, its winter ghosts laid by AA students throwing a Cocteau party. Their offering? Very small beer: vintage—if you'll pardon my mixing of metaphors and drinks—1934. The name on the label: *The Infernal Machine*, a translation from the French of an adaptation from the Greek of the legend about the psychologist's best friend—Oedipus' Mother.

*

As a cold March wind embraced the theatre and neglected ice-cream tubs huddled in despondent groups at the back of the stalls, the silence was broken only by the roar of passing trains, punctuated by uninspired dialogue and the occasional slamming of a forestage door by an Oedipus now sanguine, *sans sang-froid* and, of course, *sans* Freud. It would be invidious to pick out any names for special mention, so I shall do so. The names are Pat Bullivant, Michael Cain and Joyce Lowrie. These three "scored heavily, did well and also did well" (not respectively, but in any order you please), if I may borrow the style of my local newspaper's drama critic. There was very little Ham acting (Alas, poor Roderick!) but, as chorus and producer, "what he did," to quote again, "he did well."

*

The supporting cast was not insupportable, there were some wizard Prangnell sets and the infernal thunder machine justified Jocasta's suspicion that there was "a storm about." If ASTRAGAL'S soul was not purged by the cleansing power of tragedy it was the fault of M. Cocteau. If he was not bored—and he was not—it was the fault both of the students and of the incongruous, but charming, Victorian pastiche of the theatre in which they brought us perspiration (Miss Bullivant's French accent made it a drawing-room word), tears and some most engagingly gouging gore.

THE MORNING AFTER

Writing on the morning after Mr. Butler's budget, it's a little difficult to know what to say, for the financial bloodhounds have not yet started to tell us what we ought to think. To a simpleton like ASTRAGAL it seems that a little more money has been left in one pocket in order that more shall be taken out of the other. Just for once the non-smoking teetotallers haven't come off best, and overdrafts (five per cent. or one per cent. above bank rate, whichever is the greater) stay the same, thank you very much.

*

And the housing subsidies, and building society repayments? Presumably the local authorities will have to pay more for their loans, with no means of getting it back save by increased rents, and it is difficult to see how building societies can avoid doing much the same thing.

*

The prize comment on the morning after was in the *News Chronicle*: "If the extra cost of food is offset by income tax relief and what we save in petrol by not having a car pays the extra on the house, what shall we do with the money we were going to save by not smoking?"

RIVER WALL

Good luck to the Chelsea Society in its efforts to stop the destruction of one of London's last remaining stretches of unspoilt water-front. They have just sent an objection to the Ministry against the scheme (initiated by Chelsea Borough Council and subsequently adopted by the LCC) for driving a new embankment, to carry a wide motor road, across the bay above Battersea Bridge.

*

This scheme would mean the end of the small-boat anchorages, of the house-boats, of the boat-repair yard—in fact of everything that gives the people of this end of Chelsea a sense of real contact with the river. It would

BRIDGEND
PAPER
MILLS,
S. WALES

'PACKING ROOM DETAIL'

Henry Budgen & Company Chartered Architects

HOPE'S

HOT-DIP GALVANIZED WINDOWS

HENRY HOPE & SONS LTD., BIRMINGHAM & 17 BERNERS ST., LONDON, W.1

also mean the end of a view—of Whistler's House in its picturesque surroundings—that people come miles to see. Instead there would be another embankment and a lot of traffic and a strip of garden—just like the dreary embankments we already know.

*

The Chelsea Society have had the initiative not merely to criticize the plan but to put forward an alternative. They commissioned James Ellis, a London architect who lives overlooking the river, to draw out a scheme which shows very convincingly that if,

Sketch by James Ellis, showing proposed raised river wall. Further illustrations will be published next week.

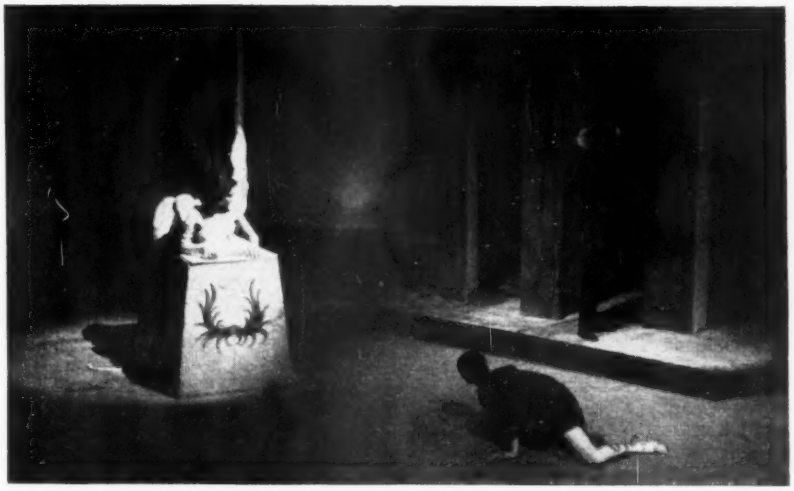
as seems to be the case, the present river wall must be rebuilt, by rebuilding it only a few feet river-wards from its present line (that is, following the curve of the bay) enough road-widening for traffic purposes could be achieved and the amenities preserved. This scheme is not only a desirable, but obviously a far more economical, alternative.

ARCHITECTURE ON THE MAP

Many years ago the RIBA's public relations committee used to discuss at great length, and without much effect, all the possible and impossible ways of getting architecture on the map. Now it *is* on the map, almost with a vengeance. Of course this was bound to happen, not because of any committee but simply because modern architecture—once it got into its stride—had more reality than the old stylistic nonsense could ever have.

*

Architecture is now brought to the public eye and ear nearly every day. Hard on the heels of the *Observer*'s vertical city controversy comes *The Times*' illustration of the Golden Lane housing scheme, a feature article in the *News Chronicle* dealing with the "Chick House" (consulting architects: Powell and Moya) and at least



Joyce Lowrie (The Sphinx), Michael Cain (Oedipus) and Neave Brown (Anubis) in the AA students' production of Cocteau's "The Infernal Machine". See Astragal's comments on page 351.

two broadcasts—all in one week. Good.

One of the broadcasts was the TV exposition of the Royal Festival Hall. The dissected models were, as one would expect, admirable. And the various experts did their best, but one felt that the TV authorities—in their usual panic about being "popular" at all costs—had positively prevented them from giving us information. Why? The whole point of bringing experts to the public is to get them to talk "shop" and—if their language is reasonably simple—they are never so fascinating as when doing so.

*

Incidentally, both this Festival Hall programme and the Brynmawr one a fortnight before it have proved that TV is technically unable to present the finer points of the visual arts. I saw the Festival Hall programme on Highgate Hill, where conditions for reception are excellent, but all the pictures lacked texture, detail and depth. The Festival Hall foyer might have been any large room with white columns—it was almost unrecognizable.

*

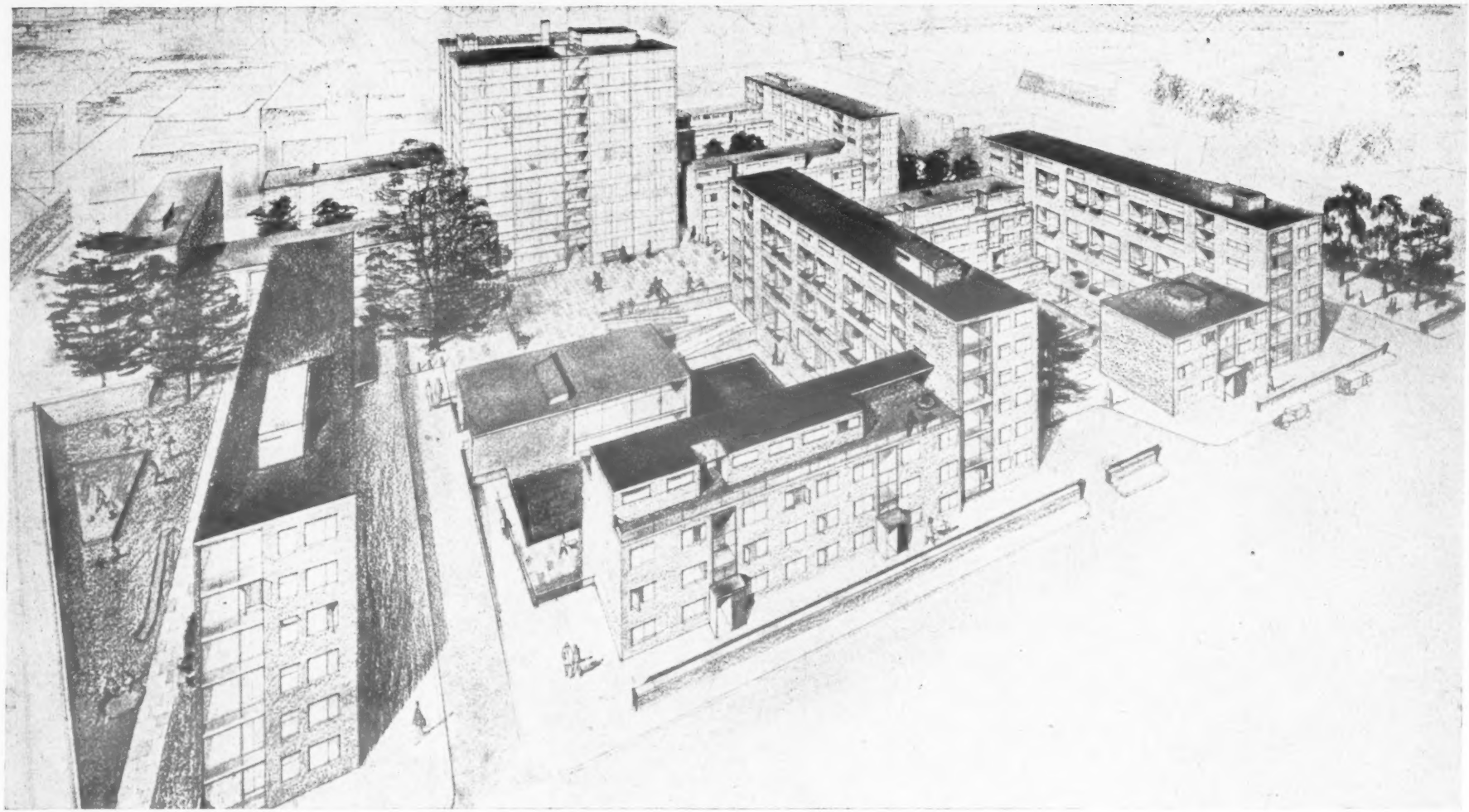
The other broadcast was in a very different category—a Third Programme talk by Fello Atkinson on commercial architecture in the United States during the last hundred years. Beautifully phrased and highly informative, it really put across both the vitality and the vulgarity of pioneer and modern building from Chicago to the Pacific coast. With thirty or forty good old-fashioned lantern slides whisked across the screen—panorama fashion—what an excellent popular programme for TV this would make. But would Alexandra Palace consider it? Not likely.

THE COMPLETE MAN

The crowds are flocking to the Leonardo da Vinci exhibition at Burlington House; and no wonder. Never was his astonishing versatility better displayed. It is primarily an exhibition of drawings, and of his many rôles that of architect is least fully illustrated. But architects will be fascinated by his designs for bridges, machines and gadgets of all kinds, some of which have been interpreted by the Science Museum in the form of models, which add greatly to the liveliness of the show. Has any other artist in history pursued knowledge quite so indefatigably, or any man of intellect achieved such skill and feeling as an artist? This is an exhibition not to be missed.

STACKS OF TIMBER

There seems to be plenty of timber about nowadays. Indeed, for some time the timber merchants have been saying that there is more softwood in the country than there has been since 1938, and can't they be allowed to sell some of it. But what worries me is the amount of timber which seems to be stacked out in the open without any protection at all. Quite often, in the home counties at any rate, one comes across half an acre or so of stacked timber which may or may not be part of the strategic reserve, but which will probably be fit for nothing



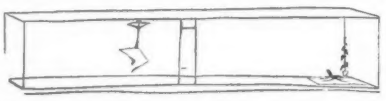
Density : 200 to the Acre

Plans, elevations and sections can never give, even to the architect whose media they are, as vivid an impression of a design as a perspective. This sketch by Ian Baker of Geoffrey Powell's winning design in the City Corporation's competition for a housing scheme at Golden Lane, Finsbury (see the JOURNAL for March 6) shows only too clearly how heavily built-over is a small site developed at a density of two hundred persons to the acre. Particularly is this so when the architect attempts to provide a variety of high and low blocks. It is interesting to see in this winning design the effects which this high density planning has caused : the noisy children's playground (extreme left) sited close in front of a block of flats ; blocks planned at right-angles to each other, with consequent loss of privacy to flat dwellers at the inner corners, and the arrangement of blocks in partially closed courts : a technique which was once anathema to planners, but which is now once more receiving sympathetic consideration. A selection of the unsuccessful designs by competitors who went to further extremes in providing high and low development appear on pages 358-362.

at all when the weather has had a little more of its way. Timber Control maintains that storage conditions are rigidly specified, but from what one can see, the conditions either aren't stiff enough or else aren't always kept. In any event, there's nothing much for the architect to do about it. Merchants don't like selling poor quality timber, but it's like coal—you take what you're given and say thank you, or you don't get any more next time.

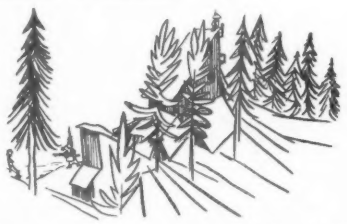
HOLIDAY SNAP

Borrow, if you can, the November number of *Harper's Magazine*—not the glossy ditto *Bazaar*, but the more or less literary monthly paper of the kind we can't now manage to keep up over here. Borrow it and have a good giggle at Peter Blake's "How to Tell a Modern House," which pokes a lot of agreeable



Pristine Houses: "... Its wall are either pure glass or pure brick. Its floor is pure chromium. Its roof is flat and also pure chromium. It has a Japanese locust tree inside and one very expensive chair made of pure chromium. It also has a single, thin, and tall propeller blade of pure chromium designed by Brancusi and it has a single, thin, and tall man designed by Giacometti looking at the propeller blade. Sometimes there is a second ... but that's crowding it ..."

and knowledgeable fun at current techniques. The author is an architect himself and also one of the editors of *Architectural Forum*, so you can guess some of it, but above is one of the Robert Osborn drawings and a brief Blake commentary, and here, for good measure, is another ...



Lean-To's: "... just like Nature Houses, tend to get awfully integrated up with undergrowth, and they are always photographed through a thick bush, or some brambles. Another camera angle is to have a bevy of small, naked children in the foreground to jazz things up ..."

*

That's all for this week.

ASTRAGAL

POINTS FROM THIS ISSUE

The Editors

EDUCATION PROBLEMS: INVESTIGATION BEGUN BY RIBA COMMITTEE

OVERLEAF are printed three letters on the problems of architectural education. One of them contains very good news indeed, which will be welcomed by all. Under the chairmanship of Donald McMorran a joint sub-committee of the Schools and Examinations Committees of the Board of Architectural Education has been arranged "with the widest possible terms of reference to receive evidence" ... etc., and conduct an "investigation into the problems of education and qualification." Now, how wide should those terms of reference be? The other two letters over the page, from teacher and taught, typify two contrasting viewpoints of the educational reformer: on the one hand the policy of steady adjustment to existing curricula until more satisfactory and immediate educational results are obtained; the other, the student's cry for extensive investigation into the whole state of the profession.

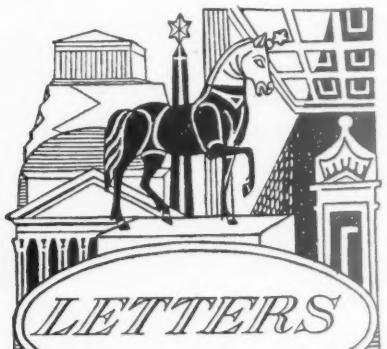
It may well be argued that when a race has been won, when the fruits of victory have been enjoyed for a decent lapse of time, it well behoves everyone to look carefully about him and ensure that another race has not begun, or is about to begin, and that the late winner, well-favoured, complacent and short of wind, is not left standing at the gate.

If the profession has never been stronger, yet its real strength has also never been tested. Perhaps now, when the profession has gained a little eminence, is a moment to institute that research into the architect's position not only as regards his relation with his clients, be they local authority or private, but also with his office staff and with the other professionals concerned with building. The problem of basic research, post-graduate training and refresher courses—in other words, the training of the architect *after* he has qualified is as equally important as the training he has received before. And now is the time to look into it.

For too long the romantic illusion has been fostered that five years in an architectural school with, in addition, a little office experience, creates a finished product. It is implicit in the lecture course, in the design programme and in the examination system. The Jeremiahs whispering their woes are

perhaps those waking up to the fact that the ability to perform the task of designing a neighbourhood unit on paper is no whit more useful, or salutary, to the newly qualified than the ability to wheel around a barrow load of concrete. Both tend towards a romantic escapism from the architect's true responsibilities.

Mr. McMorran's investigating committee is very welcome. However, cannot another be instituted to investigate into the problem of the breadth and scope and techniques of the architect's rôle in the future? We know where the architect stands today, but where is he going?



John Carter, A.R.I.B.A.
Teacher at the Royal West of England Academy School of Architecture

Donald McMorran, F.R.I.B.A.
Member of RIBA Board of Architectural Education

Stephen Rosenberg
Chairman of AA Students' Committee

Architectural Education: The Need For Reform ....

SIR,—Mr. Moore has put a student's point of view on the above (AJ March 6); may I put a teacher's view?

The average student, so far as there is such a person, has oddly varied capabilities. He can give you an "alive" and imaginative sketch scheme for:—a theatre, a coffee table, an arts centre, or an exhibition stand; but someone else would have to do the half inches (even of the coffee table). He can produce a vivid poster or choose an appropriate wallpaper, but regards disability glare as something in a text book. He is eloquently convinced that structure and design are twin aspects of the same thing but will blithely specify a 15 foot long pre-cast lintel in his ideal house.

I suggest that there are three main reasons for this state of affairs.

(1) Constructional design is regarded (and taught) very largely as a craft technique of typical details, with rational, that is to say scientific, aspects of design (structural mechanics, moisture movement, thermal insulation, and so on) tacked on awkwardly as something else to be applied. There is not yet a satisfactory integration of the traditional and the new approaches. Both the rule of thumb and the calculated have their proper place but it is not the present one. The answer would probably involve more pure science training in the early years, and more textbooks on the lines of Fitzmaurice's. The need for a change becomes more necessary as the building industry itself becomes (as it must) more science-minded. The two, after all, are inseparable.

(2) The greatest value of a school training is, I think, in the early stages, when the secondary school attitude of "doing work for the master" is replaced by individualism —"doing work for oneself." When the boundaries of imagination are extended and exploration of the æsthetic world set going. Once started it (in general) provides its own stimulation; ambitious design programmes dealt with in a summary manner are no longer necessary. But in most curricula they continue to the point at which the 5th year are equipped to design buildings which only one in five hundred of them will ever put up. And this at the expense of thoroughness. By thoroughness I mean idealism,—thrashing out your design until it approximates as nearly as you know how, to that dream architecture which every architect carries but only geniuses can bring out. I mean also constructional idealism—adjusting and maturing the structure and every detail until it is the simplest, the most economical, the most appropriate, and the easiest to put together on the site.

(3) The RIBA's policy of expanding and unifying the profession is a worthy aim. But it involves low standards for intending students.

The general certificate of education and a flair for drawing are not enough. Too high a proportion of students are allowed to enter, and pass from year to year producing indifferent work which satisfies neither themselves nor the staff; and having two, three or even four shots at the examinations. "Born" architects are few and there are always the "late developers," but I think that 1st and perhaps 2nd years should be probationary for all students.

If these are the reasons which determine the average student's haphazard capabilities, making him neither competent assistant nor reliable architect, my concrete suggestions are these:—

School design programmes from 2nd year onwards to be reduced in scope, scale and number. The time saved to be spent partly on greater thoroughness in working out each subject (working drawings, spec., etc.) and partly on 1 year's office experience *during* the course. This might imply making the course 5½ years.

The subject of constructional design to start with pure science, and to include—theory of structures, thermal and sound insulation and the "properties and uses of building materials." Less study of typical details and more of principles and executed buildings. Less calculation of plate girders and more study of framing systems (including economics). Much more study of site organization—how a building is put together. Construction lectures should be reduced (they are of limited value) and personal research by the student increased.

Design theory lectures should include subjects which properly belong to it such as natural and artificial illumination. (The RIBA quixotically catalogues these with the drains) Lecture courses on the planning of different building types are of dubious value, they try to impart knowledge which I think is better learned on the drawing board, and in the "real" building.

Establishment of an entrance examination on the lines of the AA test, and careful assessment of students' innate possibilities at the end of the first year. (I am well aware of the difficulties in this one.) More group working.

I would be interested to hear readers ideas on this programme of reform. Its aim would be to produce architects who are capable of dealing with the jobs they are likely to tackle in private or public offices with imagination, discrimination and competence; who are prepared for the growing industrialization of the building industry; who in winning respect for their technical competence will command more respect for their æsthetic aims.

JOHN CARTER.

Bristol.

..... Has Already Been Officially Recognized .....

SIR,—The leading article on "Research into Education" and the letter from Mr. T. Moore on "Theory and Practice in Education" in your issue of March 6 prompt me to write this letter to say that the Board of Architectural Education have already appreciated the need for a further investigation into the problems of education and qualification.

They have arranged for a joint sub-committee of the Schools and Examinations Committees of the Board, under my chairmanship, with the widest possible terms of reference, to receive evidence and to consider the report upon this important question.

DONALD H. MCMORRAN.

London.

....But Reform In Practice Is Also Needed

SIR,—The second leader in your issue of March 6 and a letter from Tony Moore, also in that issue, will be warmly welcomed by students.

At present, every school of architecture in the country has, as its aim, to a greater or lesser degree of self-assurance, the provision of assistants to the profession. The Institute of the profession is worried by the quality of these assistants, and has inserted a new ruling to try and raise the standard of entry to the profession. And there is not a sufficient number of jobs for the assistants who will qualify next year. It is no wonder that students are worried by their education and alarmed at their prospects.

It seems also that any reorganization of our education is useless without a thorough investigation into the state of the profession. At present the architect is attended by many other men, who help him in his work, and who build for him. No longer must professional status stand between them and him, and between him and his fellow architects. He must become one of the group, together with many other architects. There are no compensations necessary for this, like saying that he will become the co-ordinator for that group, which is a conceited idea. He is just a member of the group, for it is only in an atmosphere of unprofessional etiquette that we can achieve building today. It is for the schools to recognize this, whether the profession continues playing chiefs and assistants, or not.

STEPHEN ROSENBERG.

London.

COMPETITION

Petrol Filling and Service Stations

Irish Shell Ltd. invite architects to submit designs for petrol filling and service stations.

The competition is in two sections: (i) a country service station; (ii) a suburban service station. The premiums in each section are: First, £200; second, £100.

The assessors will be Gerald McNicholl, B.ARCH., F.R.I.A./I., A.M.T.P.I.; Michael O'Brien, B.E., M.T.P.I., A.M.I.C.E.I.; and Michael Scott, F.R.I.A./I.

The last day for submitting designs is April 30.

Conditions may be obtained on payment of a deposit of £1 1s. on application to Irish Shell Ltd., Irish Shell House, 13/16, Fleet Street, Dublin, C.4. (Applications should be marked " Architectural Competition," on top left-hand corner of the envelope.)

RIBA

Postponement of Gold Medal Presentation

The presentation of the Royal Gold Medal to G. Grey Wornum which was to have taken place at the RIBA, 66, Portland Place, W.1, on April 1 has been postponed until Monday, June 16, as Mr. Wornum is ill.

The general meeting arranged for April 1 at the Institute will not be held.

Golfing Society

The RIBA Golfing Society has elected its officers for 1952. They include Sir Giles Gilbert Scott, president; A. H. Watkins, captain; and Eric H. Firmin, of 10, Manchester Square, W.1, honorary secretary.

The fixture list is as follows:—*Meetings*: May 13, Spring Meeting, Denham Golf Club; July 5 and 6, Summer Week-end Meeting, Royal Cinque Ports GC, Deal, Kent; September 25, Autumn Meeting, Berkshire GC, Ascot (Annual General Meeting). *Matches*: April 1, Match *v.* The Building Alliance GS, at Royal Wimbledon GC; May 22, Match *v.* Institute of Civil Engineers GS, RAC, Woodcote Park, Epsom; June 10, Match *v.* The LMBA GS, at West Hill GC, Brookwood, Surrey; July 16, Match *v.* The RICS GS, at New Zealand, West Byfleet, Surrey.

The Society's committee feels that more members and students of the RIBA should support the society. (Present membership is between 40 and 50.) The secretary would be glad to receive applications from architect-golfers in the London area. (The subscription is 10s.) He would also be glad to hear from any provincial architects who could raise a team to play a match against the London members, possibly over a week-end.

MOHLG

Minister Asks For More Non-traditional Housing

Greater use of non-traditional methods of house building would relieve the hardships of those in need of houses, said Harold Macmillan, Minister of Housing and Local Government, in a circular recently sent to local authorities.

Houses built by these methods, said Mr. Macmillan, took as much as 50 per cent. fewer man hours on the site than the more familiar types of brick-built houses, and an even lower proportion of skilled labour in some trades. On an average, they were completed in four-fifths of the time needed for traditional houses, they could be built at fully competitive prices, and less coal was used in making the main building materials.

The Minister has informed authorities that he will feel justified in offering increased programme instalments of houses if they will have more houses built by the new methods. Housing authorities will be able to allot private enterprise licences up to half of any approved increase in their programme.

Still No Architects on Housing Boards

On March 6 the JOURNAL'S editors pointed out that the first of the Regional Housing Production Boards that are being set up " to bring all those concerned in house building . . . into closer co-operation " did not include an architect, surveyor, town planner or engineer. At the time of going to Press six more Boards have been set up and the same criticism holds good for them all.

The Boards established so far are at Bristol, Manchester, Birmingham, Cardiff, Cambridge, Newcastle and Reading.

PARIS

UN Building's Preliminary Plans

The French architect, E. Beaudouin, is preparing sketch plans for a " first stage examination " of the possibility of building a United Nations building in Paris. Howard Robertson and Eero Saarinen have been appointed as consultants on the preparation of plans for this building—a headquarters for the UN Educational, Scientific and Cultural Organization—which, it is proposed, will adjoin the Ecole Militaire and will stand on the axis of the Palais de Chaillot and the Eiffel Tower.

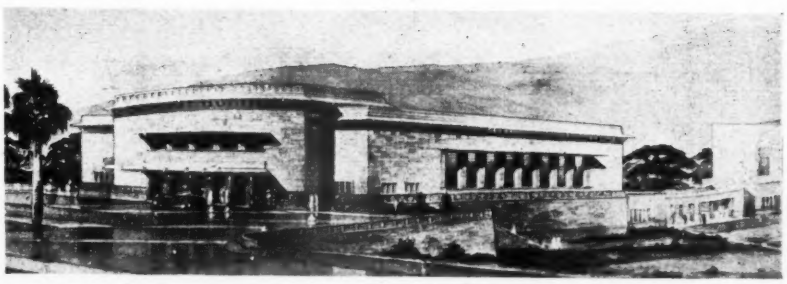
DIARY

London: The Next Twenty Years. Exhibition explaining the 1951 County of London Plan. At County Hall, Westminster. (Sponsor: LCC.) 10 a.m. to 8 p.m. (except Sundays). Saturdays: 10 a.m. to 6 p.m.
UNTIL MARCH 28

Modern Swedish Architecture. At the Building Centre, Store Street, Tottenham Court Road. (Sponsors: Swedish Society of Architects and the Swedish Institute.) 9.30 a.m. to 5 p.m. Saturdays: 9.30 a.m. to 1 p.m.
UNTIL MARCH 29

Ideal Home Exhibition. At Olympia. Monday to Saturday. 9.30 a.m. to 9.30 p.m.
UNTIL MARCH 29

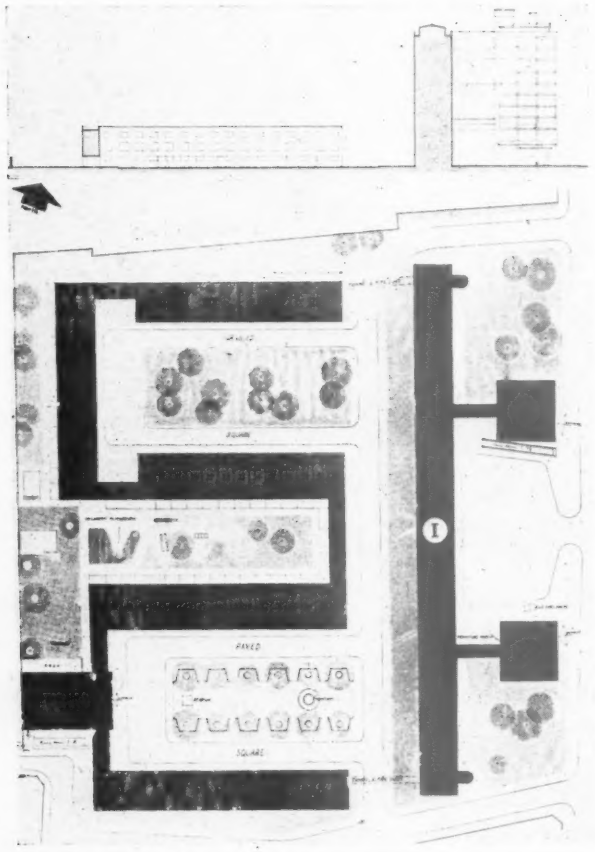
Exhibition of Italian Contemporary Architecture. At 66, Portland Place, W.1. (Sponsor RIBA.) Closed from April 11 to 15 inclusive. Mondays to Fridays: 10 a.m. to 7 p.m. Saturdays: 10 a.m. to 5 p.m.
MARCH 24 TO APRIL 30



Two buildings which form part of the University of Ceylon, now being erected at Peradeniya, are a physics department (top) and an arts thea re (above). Work is being carried out under the direction of a local architect, Shirley d'Alwis, who was a pupil of Sir Patrick Abercrombie (site planner, in collaboration with Clifford Holliday) at Liverpool. The architecture is " based on that developed by the Sinhalese at Anuradhapura, Polonnaruwa and Kandy."

GOLDEN LANE COMPETITION : A SELECTION OF THE

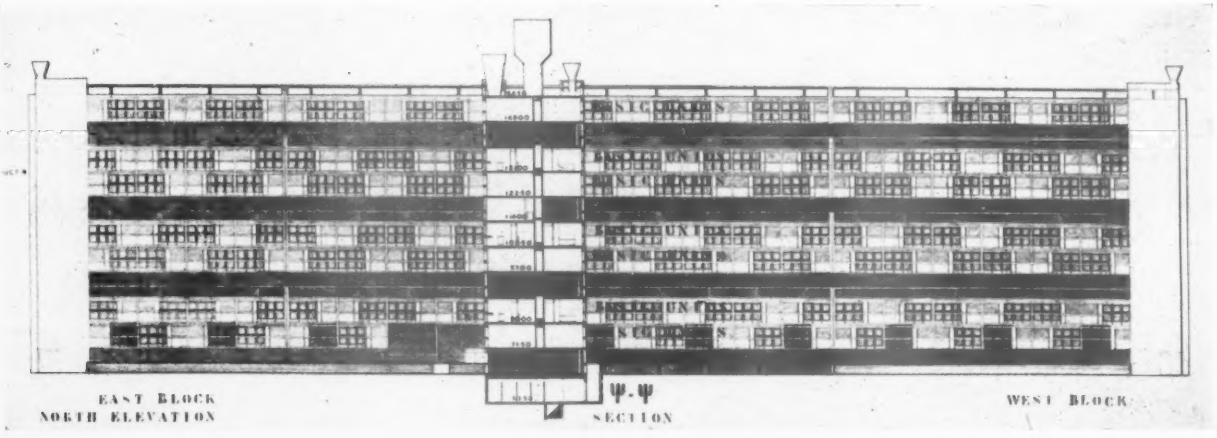
The five schemes submitted in the Golden Lane Competition, which are illustrated, in part, on this and the following pages, have been selected as typical of attempts by a few competitors at entirely fresh solutions to the most difficult problem the architect has to tackle today : the housing of families in reasonable conditions at a high density. The prize-winning designs illustrated in the JOURNAL *for March 6 were, with possibly one exception, typical of, though better than, the approach of the majority of the competitors to the problem. The following designs can be described as the products of extremists—in the sense that Corbusier is an extremist in his design for the well-known flats at Marseilles.*



Before referring to these schemes it is worth considering, briefly, the problem which the architects were set : to redevelop four acres at a density of 200 persons to the acre. It can be argued that such a density is too high by present-day standards of amenity. It is quite certain that the smaller the site which has to be developed at that density the more difficult it is for the architect to provide a reasonable solution. The housing development at Pimlico of a similar density appears more open than the proposals for Golden Lane, largely because the architects were given a site which was over seven times as large. It is a matter of great regret that in undertaking the excellent practice of holding a competition the City Corporation were not able to provide a larger site. As a study of the LCC's development plan now on view at the County Hall shows, this Golden Lane site is a part of an area known as Bunhill Fields which is scheduled for comprehensive development. Much of the surrounding property is war damaged or obsolete and it is, perhaps, a reflection on our co-operative planning ability that the local property owners did not come to some mutual agreement whereby a competition for the development of a larger and, therefore, more easily handled site could be arranged.

Left, the site layout and sectional elevations of a design by Peatfield Mayo and Bodgener, of London. This design was commended by the assessor because of the interesting use of three-storey terrace houses in the design—a unique feature. All the remaining flats are contained in a tall slab-block to the east of the site which has linked to it two tower blocks.

Below, section and elevation, and opposite page, right, site plan, typical block plans (bottom) and detail plans (top, right) of a design by Alison and Peter Smithson. This is in marked contrast to the design above in that the architects have attempted to provide all the accommodation in a single long block with



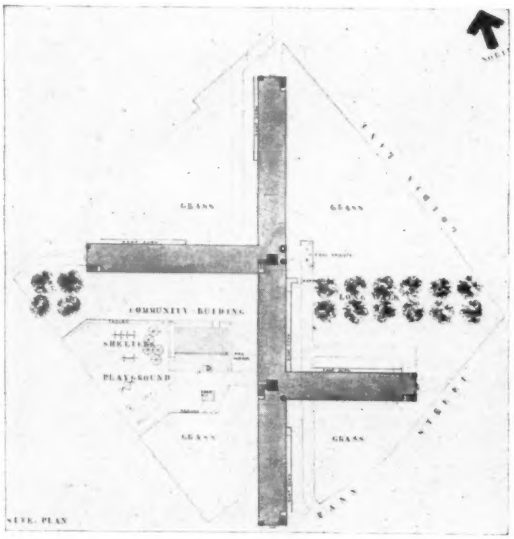
EAST BLOCK
NORTH ELEVATION

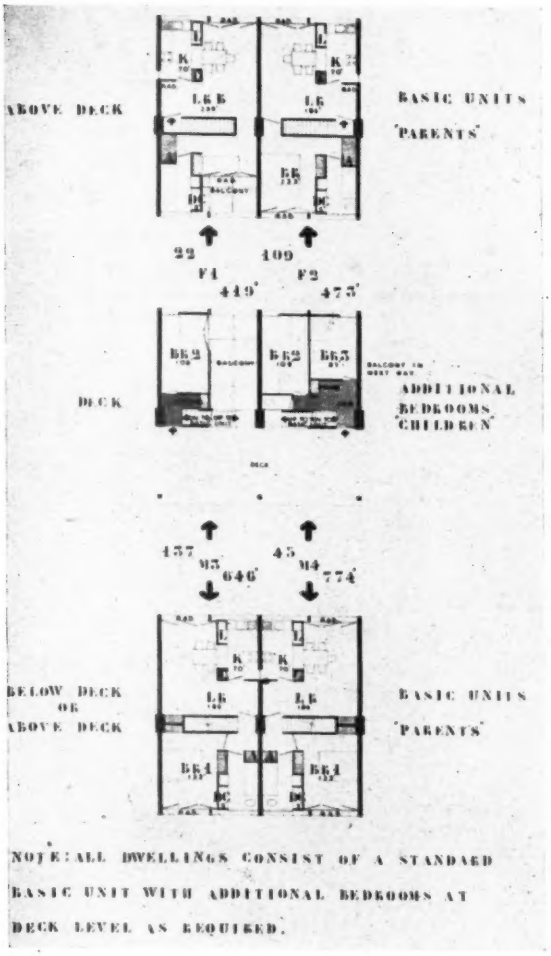
Ψ.Ψ
SECTION

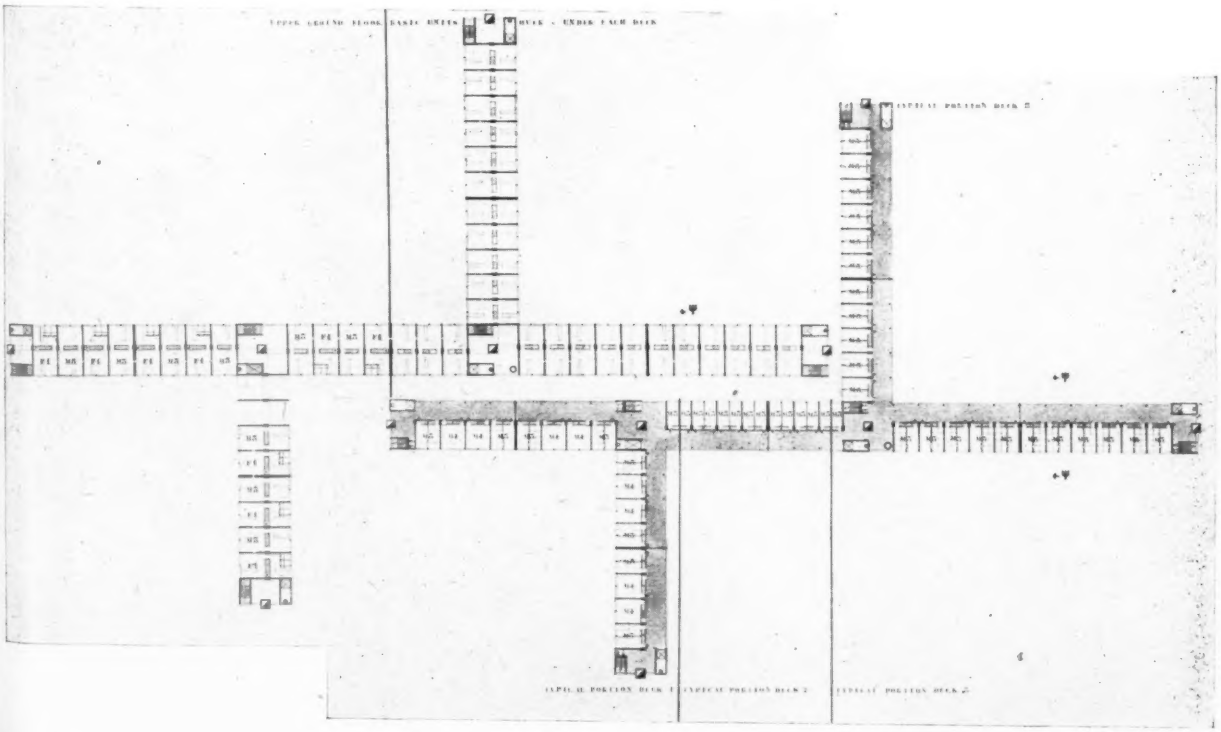
WEST BLOCK

THE UNSUCCESSFUL ENTRIES

two projecting wings, dividing the site roughly into four triangles. Balcony access is provided, but of an unusual kind, the balconies being twelve feet wide and each serving three floors. All the dwellings consist of standard basic units, the minimum size, to which additional bedrooms can be added, as required, by incorporating in the dwellings space on the floor above or below the basic unit.

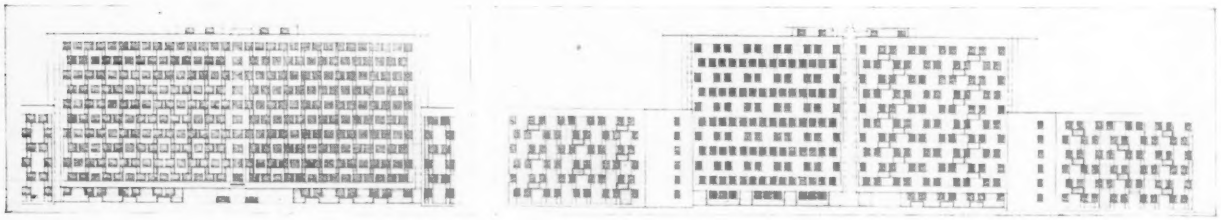


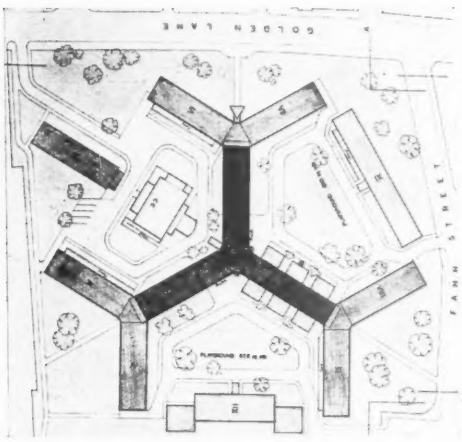




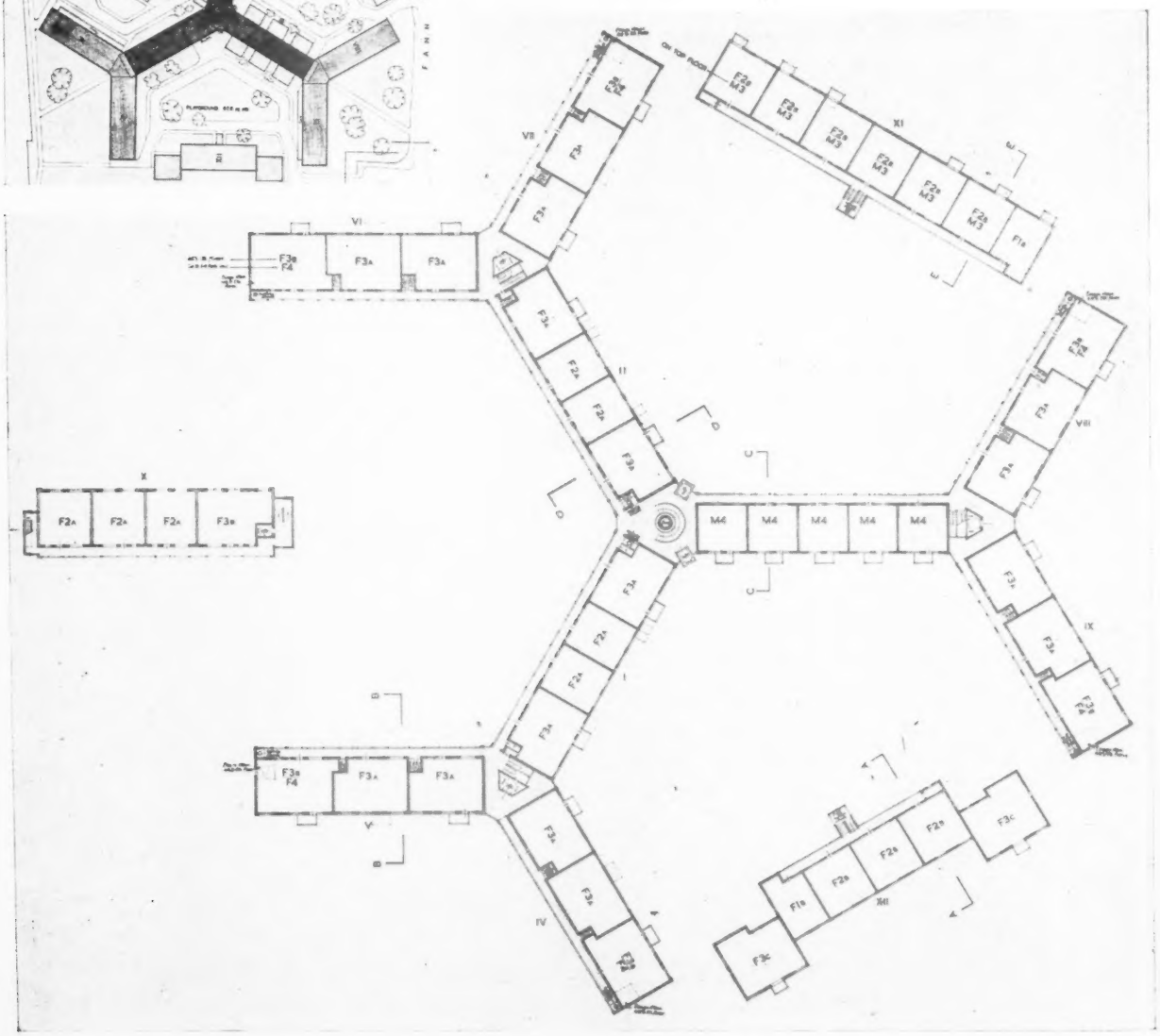
D

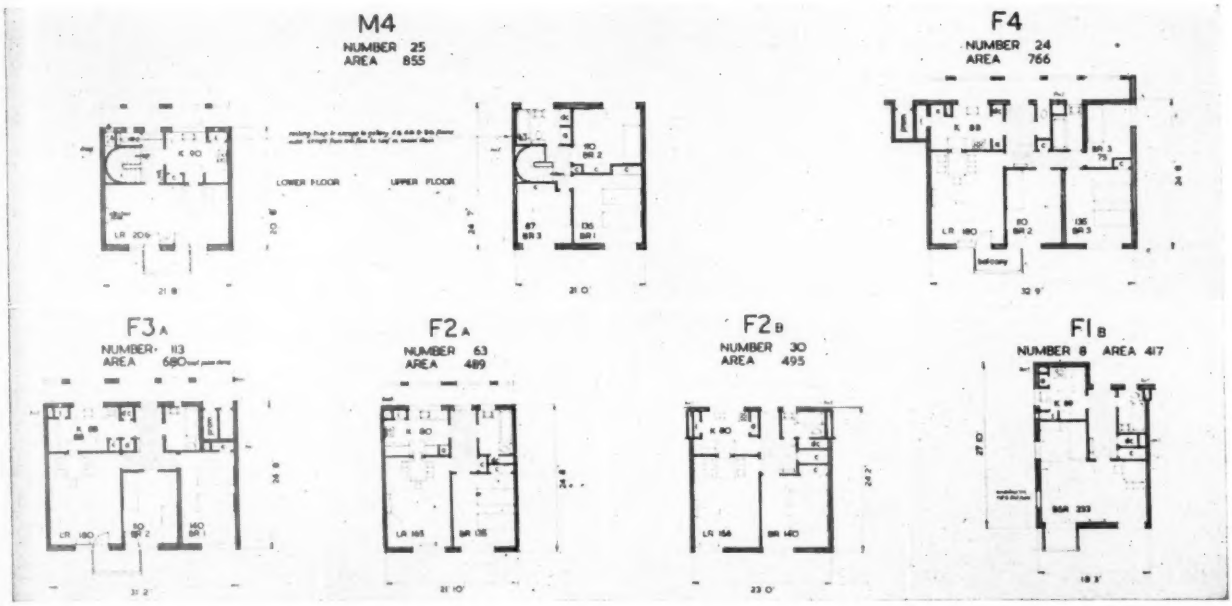
GOLDEN LANE COMPETITION: A SELECTION OF THE UNSUCCESSFUL ENTRIES





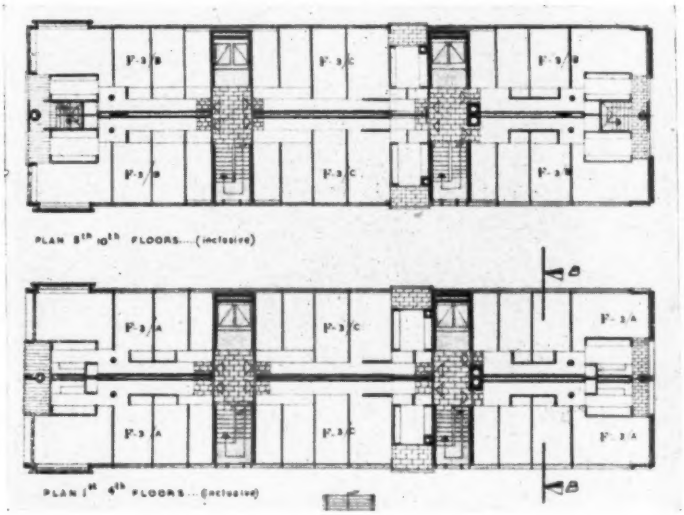
This design by Skinner, Bailey and Lubetkin, in association with A. Green, is another extreme example of the use of the, in this instance, normal access balcony in a large single building. The layout and massing of the blocks is markedly axial, as can be seen from a study of the site plan, left, and of the right-hand elevation, above. The site has been divided into a series of partially enclosed courts. The formal patterning of the elevations has been further developed

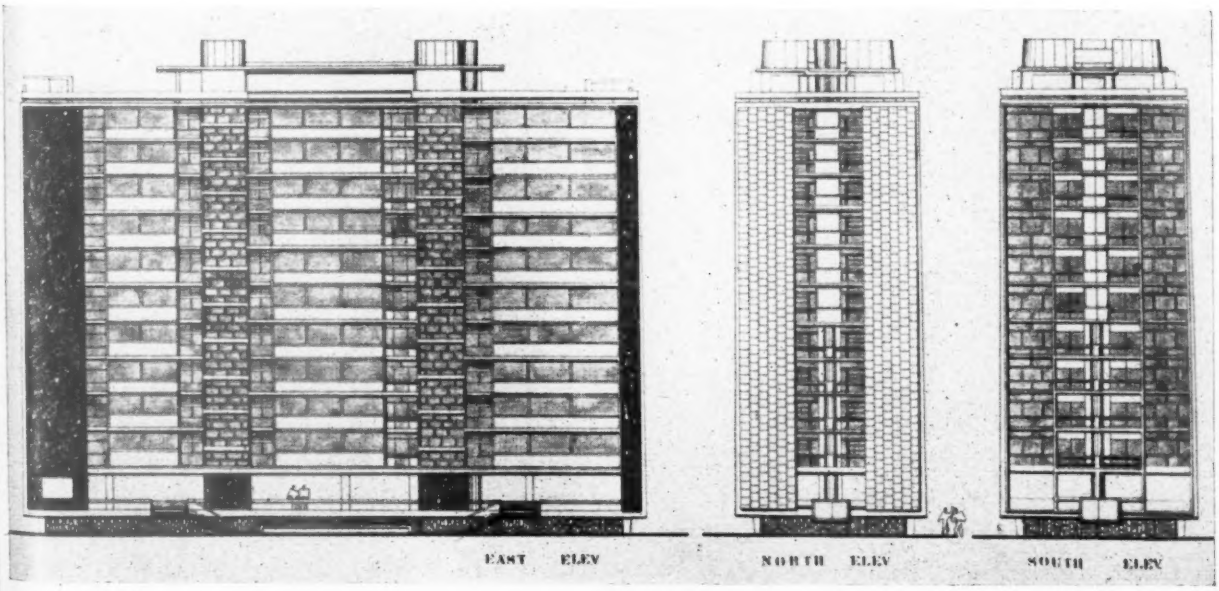


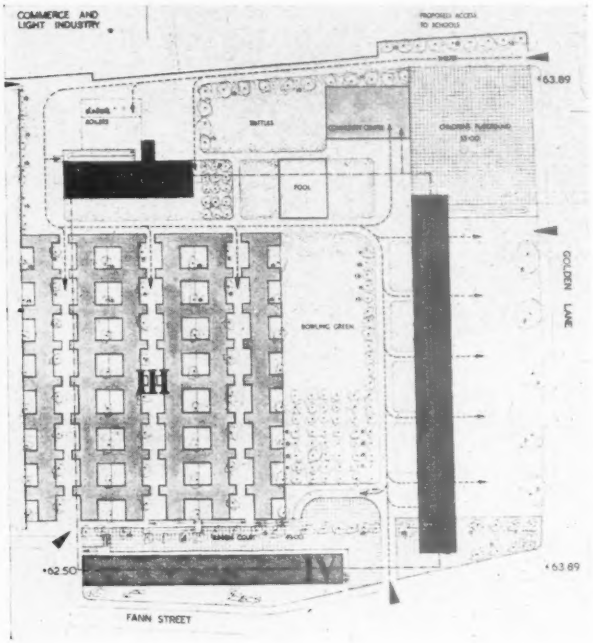


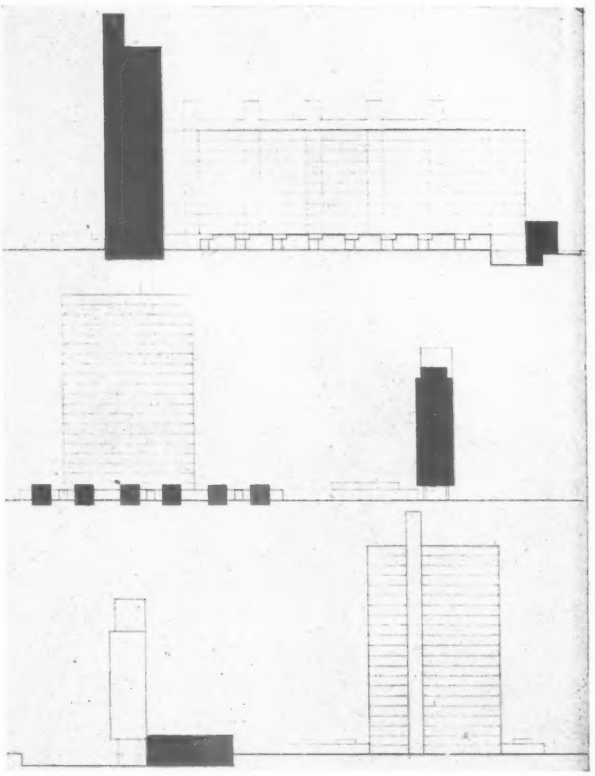
along the lines previously explored by these architects. They have avoided having any bedrooms or living rooms lit from the access balcony by keeping the large flats to the ends of the blocks or by having superimposed maisonettes.

Right and below, plans and elevations of one of three similar (but not identical) blocks of double-banked flats designed by George Subiotto. By this means the site is less occupied by buildings than any other design submitted. The obvious disadvantages are : lack of cross ventilation, long internal corridors, and rather awkwardly-shaped bedrooms.



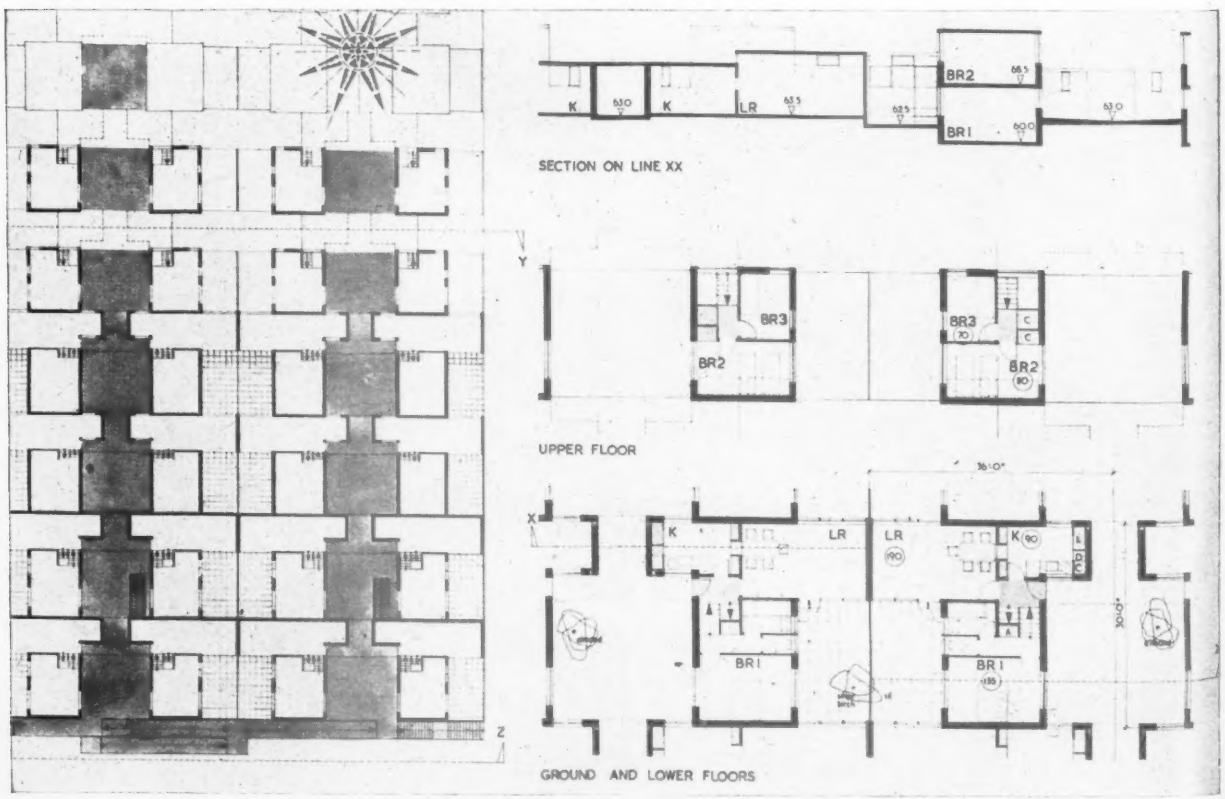






GOLDEN LANE COMPETITION

Above, left, site layout, and right, sections and elevations of a design by P. H. G. Chamberlin. The competitor has concentrated all his small flats into a nineteen-storey tower. This frees the site to allow for another example of concentrated housing—in this instance, two-storeyed. The detailed planning of this is shown below. While achieving an interesting variety of room levels and heights the distance between bathroom and kitchen could not lead to economical plumbing and the small enclosed, or partially enclosed, courts do not appear to have been sufficiently carefully considered with regard to privacy.



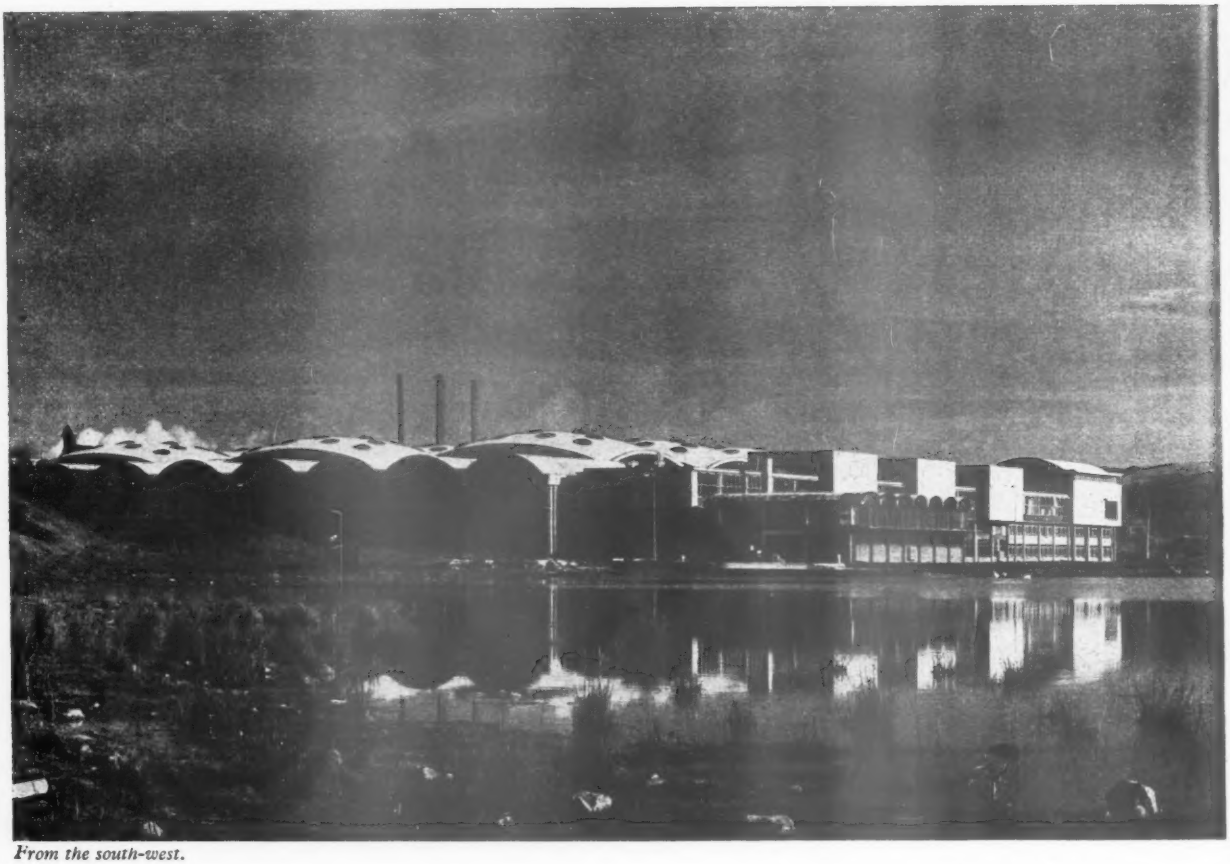
FACTORY

at BRYNMAWR, SOUTH WALES

designed by the ARCHITECTS' CO-OPERATIVE PARTNERSHIP consulting engineers: OVE N. ARUP & PARTNERS; heating consultants: J. VARMING and PARTNERS; Electrical consultants: COUZENS and BROWN; drainage consultants: A. P. I. COTTERELL and SONS; quantity surveyors: DAVIS, BELFIELD and EVEREST; landscape architect: G. P. YOUNGMAN; colour and lighting consultants: BRS

Brynmawr Rubber Limited are the tenants of the largest factory in the Government's trading estate in the South Wales Development Area. It was specially designed for its purpose: the manufacture of rubber products. The architects started research work in the summer of 1945. Sketch plans were ready by January, 1946. The boiler house, foundations and basement columns were built during 1947-48. The remainder of the building was begun in July, 1948, and the factory was partly occupied by July, 1951.

Air view from the south-east.

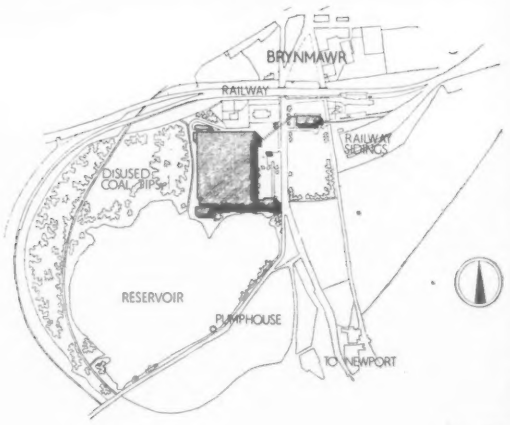


From the south-west.

FACTORY

at BRYNMAWR, SOUTH WALES

designed by the ARCHITECTS' CO-OPERATIVE PARTNERSHIP



site plan

GENERAL.—The decision to use reinforced concrete construction was influenced by the following factors. The building was designed in 1945-46, when steel was difficult to obtain. The site is 1,100 ft. above sea level and has a bad climate with exceptional rain and snow. The manufacture of rubber from the raw material to its semi-processed state creates a tremendous amount of dust and dirt. The finishing from the semi-processed state to the completed product demands conditions of extreme cleanliness. It has been calculated that a steel structure giving similar conditions would have used 65 per cent. more steel than a reinforced concrete one.

SITE.—The existing 18-acre disused reservoir was a deciding factor in the choice of the site as the water could be used for cooling the heavy plant. The water is returned to the lake after going through the machines. A fall in the ground from north to south of 20 ft. is exploited to the full for the changes of level required in the process flow of rubber manufacture. The poor soil has influenced the planting of the site. Mountain elms, yew, ash and Norway maple have been chosen as foils for colour and form to the factory. To the east of the site level areas are grassed and slopes covered with low foliage needing little maintenance and abhorrent to

sheep: ivy, hypericum, periwinkle, juniper and berberis. A swamp area on the north-west of the reservoir is to be filled with swamp plants: alder, willow, wild iris, etc.

PLAN.—Dust from manufacturing processes dictated the division of the building into five main parts: 1. Drug room. 2. Mill room. (Both these house the first stages of manufacture.) 3. Main production area (this houses all finishing processes.) 4. Entrance, cloakrooms, lavatories, canteen and offices. 5. Storage basement and ventilating mezzanines. There are, in addition:

The Carbon Black Store, designed to enable the delivery of carbon black—the dirtiest of all the many dirty materials used—to be quite separate from the main delivery area. It is fed direct through an enclosed conveyor into the heavy mixing machine.

The Spreading Shop: This is south of the Mill Room and is isolated because of its heavy fire risk.

The Boilerhouse is sited to enable the feeding of coal to be direct from the railway trucks to the hoppers, which gravity feed the coal to the boilers placed 25 ft. below rail level. The steam supplies are taken to the main factory through an underground duct which is wide enough to be used as a truck way. Joining the boilerhouse is an incinerator room for waste material. *The Pumphouse*, a small circular stone building with a 24-in. supply pipe fed round the perimeter of the lake to the south-east corner of the main building.

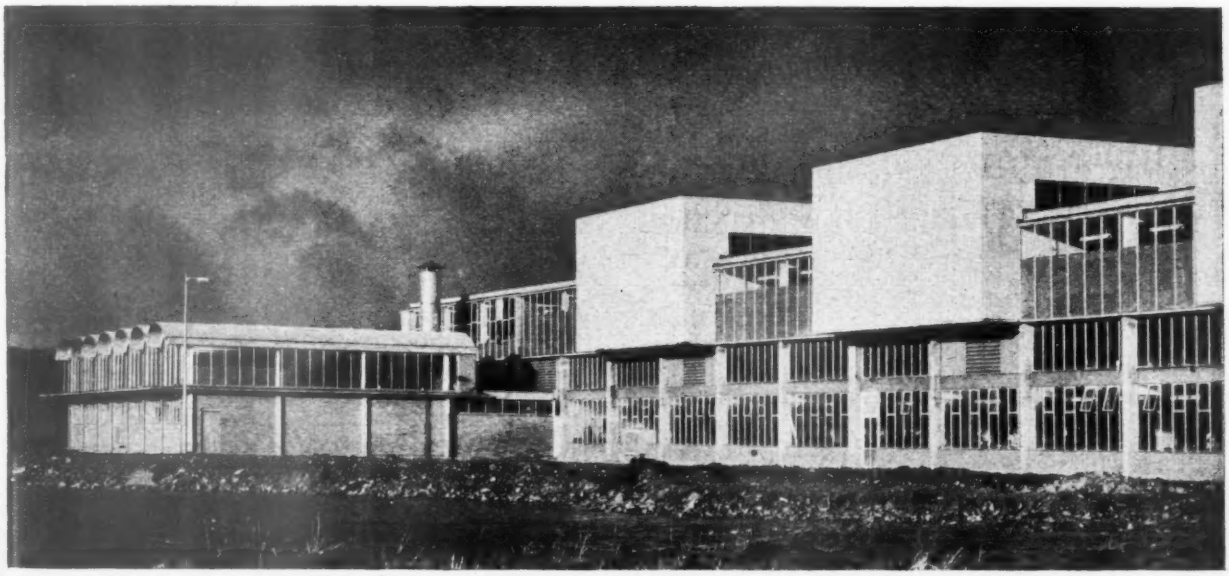
CONSTRUCTION.—

Foundations: A 50-year-old mined area of about an acre on the north-west corner of the site was filled with about 500 tons of cement grout. The remainder of the site: 6 in. to 1 ft. of top soil, 3 ft. to 4 ft. of tipped ashes, and boulder clay lying on top of a sandstone base, the depth of which varied over the site from about 10 ft. to 20 ft. The piles, bearing mainly on the sandstone, are bored, cast-in-situ piles, of 15 in. and 19 in. diameter. The working load on each 15-in. pile is 40 tons, and on each 19-in. pile 60 tons. The main production floor is on about 150 18-in. circular columns on single piles. Heavily loaded columns and supports are on groups of piles. The main production floor is a $7\frac{1}{2}$-in. slab with dropped panels giving a total thickness of 11 in. at the column supports. It is designed for a superimposed load of 300 lb. per sq. ft.

Drug Room: The roof comprises twenty-six 3-centred-arch, thin-slab vaults each 12 ft. 9 in. wide and 53 ft. long. The actual span is 45 ft. with a 4-ft. cantilever on either side. The curved slabs are $2\frac{1}{2}$ in. thick, getting thicker near the springing. The slab is generally reinforced with two layers of $\frac{3}{8}$-in. bars at 6-in. centres in one direction and 12 in. in the other. The valley beams are supported on 8-in. diameter columns which on the north side are 12 in. × 8 in., oval shaped, in order to deal with wind pressure. Expansion is dealt with at the crown of the 9th and 18th vaults by concrete hinged joints.

Mill Room: The roof comprises ten 3-centred arch, thin-slab vaults each 30 ft. wide and 68 ft. 6 in. long, cantilevered (on west side only) by 4 ft. 6 in. The curved slabs are $2\frac{3}{8}$ in. thick and contain four layers of reinforced $\frac{3}{8}$ in. mild steel bars. In the

From the south-east: the print and spread shop left; and cloaks, right, above the production area vent room and the engineers' stores.



From the north-east, with right, foreground, the weighbridge office and left, the ramp to the entrance hall.

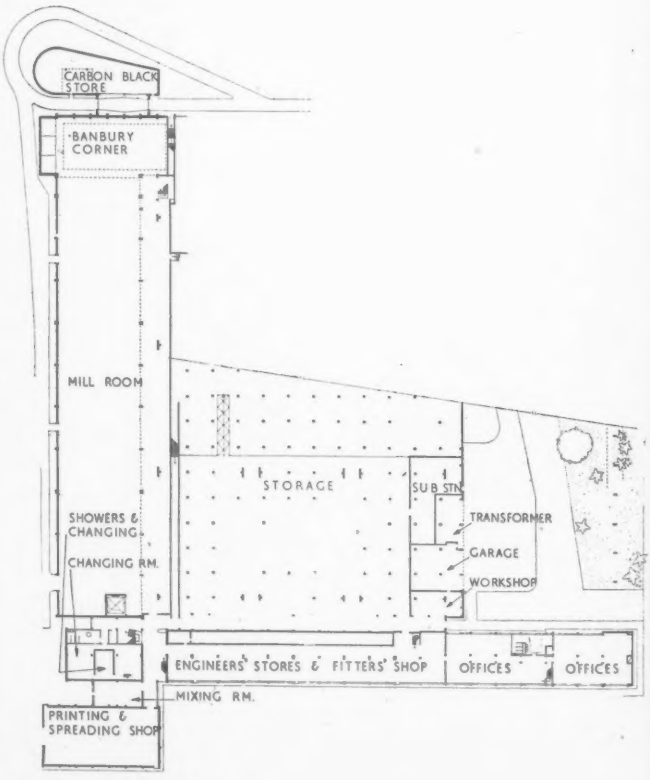
FACTORY

at BRYNMAWR, SOUTH WALES

designed by the ARCHITECTS' CO-OPERATIVE PARTNERSHIP

drug room and mill room there are no gable walls but only arch ribs which run on the lines of the supporting columns. In the mill room the expansion joints are provided between vaults 3 and 4 and 7 and 8 at the valley beams. Where the roof over the drug room joins that over the mill room there is a reinforced concrete Warren girder spanning 64 ft., 13 ft. deep and 2 ft. wide. This beam takes the loads from the drug room roof; half the load of a 5-ton gantry crane and has cantilevered off it a parabolic slab forming a connection between the drug room and mill room.

Main Production Area : The nine domes covering this area were, when built, the largest of their kind in the world. Each is rectangular on plan, the spans being 85 ft. × 62 ft. The crown is about 8 ft. above the springing, and the curved surface is formed to two radii, of 108 ft. and of 82 ft. 9 in. Superimposed load: 15 lb. per sq. ft. The thickness of the concrete is 3 in. with a slight thickening towards the corners. The stresses in the slab are entirely compressive except near the corners where tensile stresses occur. The reinforcement comprises two layers of hard drawn steel wire fabric of

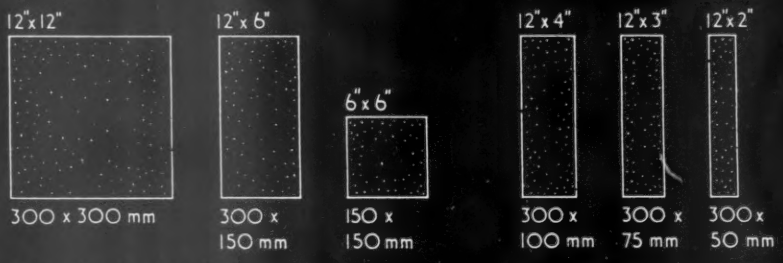


Lower ground floor plan

FLOOR TILES | CORK

The Architects' Journal Library of Information Sheets 355. Editor: Cotterell Butler, A.R.I.B.A.

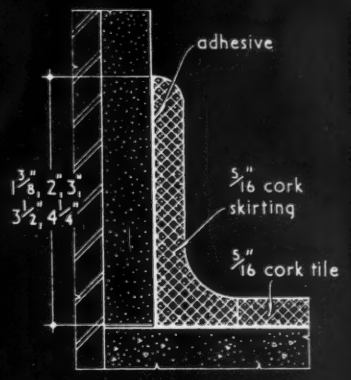
note: inch dimensions are approximate



tongued and grooved on all sides

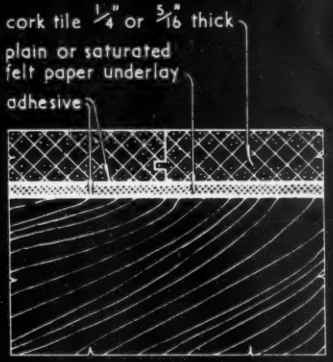
tongued and grooved on long sides

SIZES OF STANDARD TILES.



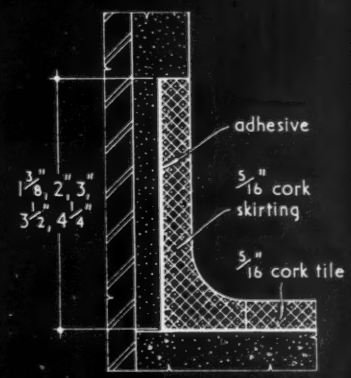
CORK SKIRTING: APPLIED TO PLASTER FACE.
scale ½ full size

TO CONCRETE.

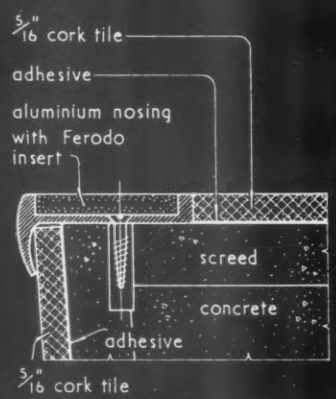


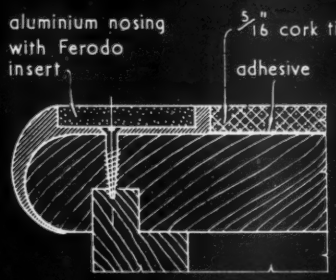
TO TIMBER.

FIXINGS TO SUB-FLOORS. scale full size



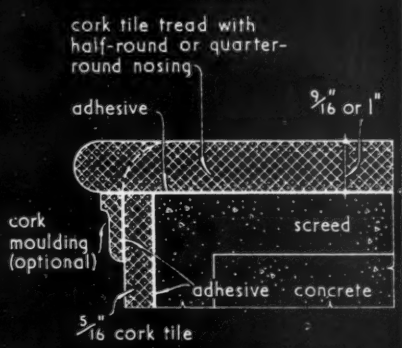
CORK SKIRTING: FLUSH WITH PLASTER FACE.
scale ½ full size





ALUMINIUM AND FERODO NOSINGS TO CONCRETE AND TIMBER STAIRS.

STAIR TREATMENT. scale ½ full size



CORK NOSING AND TREAD.

·GESCO· LARGE GRAIN CORK PARQUETRY FLOOR TILES.

Supplier: G. Stephenson and Co. Ltd.

18.F2 'GESCO' LARGE GRAIN CORK PARQUETRY FLOOR TILES

This Sheet deals with cork floor tiles and skirtings and illustrates their application to concrete and timber floors.

The tiles are made from carefully selected large cork granules heavily compressed under heat and bound together by the natural resin which is freed during the heating and compressing process.

Sizes

The standard tile sizes available are given on the face of this Sheet. Other sizes can be made provided they can be cut without waste from a piece 600 mm. by 600 mm. (approx. 24 in. square). Border and inset strips are also available in suitable widths. The standard tile thickness is $\frac{5}{16}$ in. which is recommended for all purposes other than stair treads without special protective nosings. A $\frac{1}{4}$ in. thick small grain tile is also available but this is only recommended for domestic use. All tiles are supplied with tongued and grooved edges.

Colours

The $\frac{5}{16}$-in. tile is available in a wide range of brown shades varying from light to dark. The $\frac{1}{4}$-in. tile is available in light, medium, medium dark and dark shades of brown only.

Patterns

In addition to the numerous patterns which can be built up from standard tiles a prefabricated star motif is available in two sizes, 1,200 mm. by 1,200 mm. (approx. 48 in. square) and 600 mm. by 600 mm. (approx. 24 in. square).

Applications

Sub-floors should be structurally sound, even and, as far as possible, smooth and clean. The tiles are fixed to sub-floors with a mastic cement which is used cold and drawn out on the floor in ribbons a little wider than the width of the tile, with a steel float or trowel. The tiles are additionally secured with headless steel pins.

Concrete sub-floors: All new concrete sub-floors should be screeded with a 3 : 1 clean sharp sand and Portland cement mix, finished smooth and even to a minimum thickness of $\frac{3}{4}$ in. The screed should be perfectly dry before the cork tiles are laid. If direct to earth the concrete sub-floors must be damp-proofed. On old concrete sub-floors the surface should be cut away where necessary and re-screeded.

Timber sub-floors: These should be sound and even. Loose boards should be nailed and badly worn boards replaced. Lipping boards should be planed level and very uneven floors should be levelled by sanding. For all wood sub-floors an underlay of plain or saturated felt paper is provided to counteract the seasonal movement which might otherwise disturb the tiles.

Magnesite and other non-absorbent sub-floors: These should be clean, level and damp-proof.

Stair treatment: Three methods of applying cork tiles to stair treads and risers are illustrated on the face of this Sheet. Alternatively, rubber or other types of nosing may be used.

Skirtings

Two types of skirting treatment are illustrated on the face of this Sheet. Both types are fixed direct to the plaster or rendering with mastic cement. Internal and external angles are formed on the site.

Finish

The normal method of finishing is to use Gesco wax polish rubbed well in, left for at least half an hour and then buffed up with a brush, coarse cloth or polishing machine. A high gloss is obtainable by further applications, a number of light ones being preferable to a few heavy ones. A cork tile floor is non-slip even when highly polished.

Maintenance

This is carried out by sweeping, mopping and occasional polishing. Only the minimum amount of wax should be used. Scrubbing with harsh soap or powerful alkaline cleaning agents is injurious. The supplier's booklet on maintenance should be consulted.

Sealing

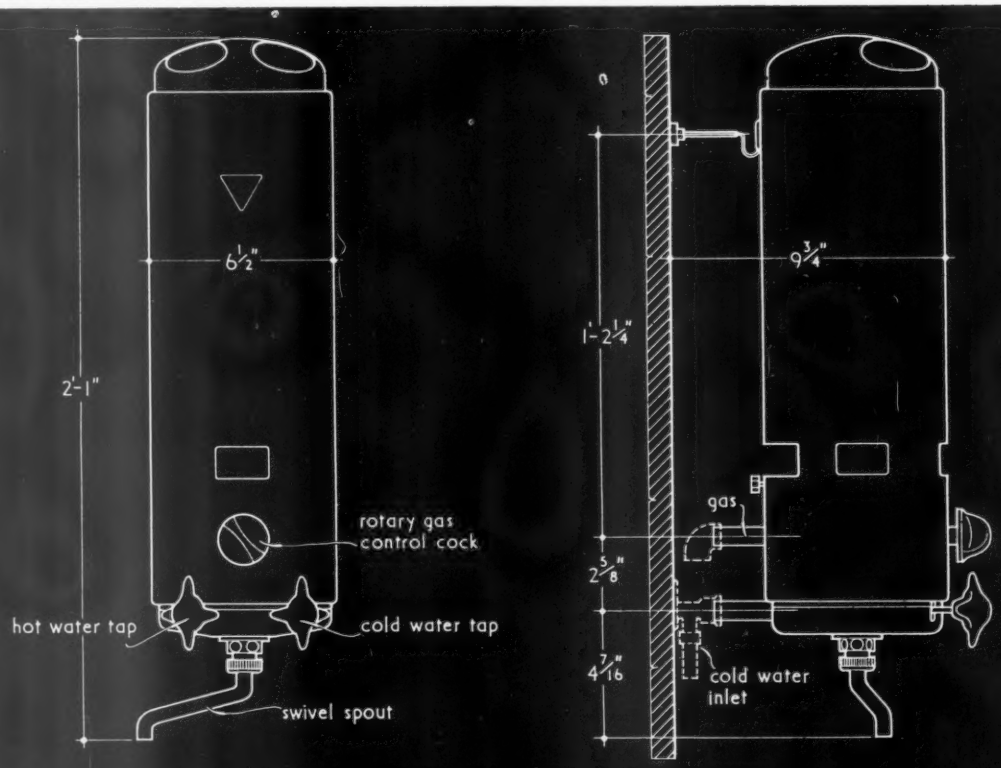
When a cork tile floor is laid in areas likely to receive heavy traffic, it is recommended that it should be sealed with Gesco Floor Seal to facilitate maintenance. This finish lasts for a considerable time and can be renewed without difficulty. Cork tile floors that are sealed may be lightly washed ; otherwise they are maintained in the same way as those not sealed, except that Gesco liquid cleaning wax is used instead of Gesco wax polish. A similar treatment using a plastic finish is also available: full particulars may be obtained from the suppliers.

Compiled from information supplied by :

G. Stephenson & Co., Ltd.
Address : 13, Victoria Street, London, S.W.1.
Telephone : Abbey 1604/5.
Telegrams : Usinacier, 'Phone, London.

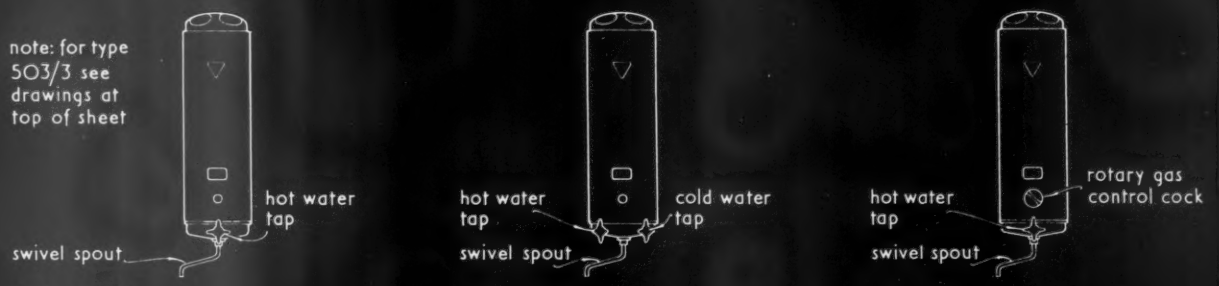
WATER HEATING | UNITS | GAS

The Architects' Journal Library of Information Sheets 356 Editor: Cottereli Butler, A.R.I.B.A.

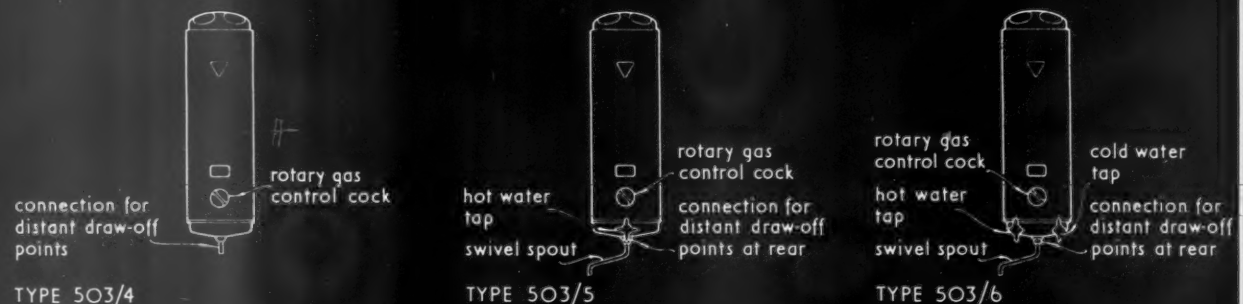


TYPE 503/3: SINGLE POINT providing hot water service to kitchen sink or wash-basin.

FRONT AND SIDE ELEVATIONS OF TYPICAL HEATER.



SINGLE POINT HEATERS each providing hot water services to kitchen sink or wash-basin.



MULTI-POINT HEATERS each providing limited hot water service to two sinks (or basins) and shower.

·ASCOT· INSTANTANEOUS GAS WATER HEATERS. Manufacturer: Ascot Gas Water Heaters Ltd.

32.C24 ASCOT INSTANTANEOUS GAS WATER HEATERS

This Sheet is one of a series describing Ascot instantaneous gas water heaters. Four small single point and three small multi-point heaters are dealt with, the seven types comprising the Ascot 503 range. All the heaters are the same size but differ, as shown in the drawings, to meet the varying requirements of users and approving authorities.
It should be noted that the single point heaters replace heater R.12/4 referred to in other Sheets in the series; these Sheets should be altered accordingly.

Types of Heater

Single point : Types 503/0, 503/1, 503/2 and 503/3 are designed to provide a hot water service to the kitchen sink for household purposes or for toilet use at a wash-hand basin. Hot water up to a temperature of approximately 150° F. is delivered through a swivel spout which may be used to serve two adjacent fittings.
Note : The above heaters are inlet controlled and must on no account be connected to any restriction in the form of taps, valves, piping or fittings.
Multi-point : Types 503/4, 503/5 and 503/6 are designed to provide a limited hot water service to two sinks or basins and a shower. Types 503/5 and 503/6 are also fitted with swivel spouts in addition to the draw-off connection.

Characteristics

Output : 0·8 gal./min raised through 60° F., or
0·6 gal./min. raised through 80° F., or
0·5 gal./min. raised through 100° F.
Input : 625 B.Th.U./minute, or
1·25 cu. ft./min. of 500 C.V. gas.

Components

Automatic valve : Prevents gas passing to the burner unless a predetermined minimum flow of water is passing through the heater.
Heating body—Types 503/0, 503/1, 503/2, 503/3 : Cylindrical combustion chamber and two-stage finned type heat exchanger.
Burner : Luminous pinhole type incorporating pilot safety device.
Gas controls : Types 503/0 and 503/1.—The function of the normal main gas and pilot cocks and the main gas stop cock is performed by a single gas control cock which must be fitted as close as possible to the gas inlet of the heater. Special gas control cocks are available for fitting direct to the inlet of the heater; alternative types may be obtained for chased-in or external pipes.
Types 503/2, 503/3, 503/4, 503/5, 503/6.—These heaters incorporate a built-in rotary gas control with a positive interlocking stage between "pilot" and main burner "on" positions.
Outlet spout : Chromium plated swivel spout ; standard 6 in,, non-standard, at extra cost, 10 in., 14 in. and 18 in.

Finish

White or cream vitreous enamelled outer shell. Chromium plated top and bottom covers.

Installation

Position : The heaters are free-standing, the weight being taken by the pipework, but a top wall-fixing clip (obtainable from the manufacturer) should be used to steady the heater at the top rear of the outer shell. Where the pipework cannot be secured to a wall or where specific installations require a high-class finish, a chromium plated support pillar, which houses both gas and water piping, is available.

Gas

Connection : Straight union and lining threaded ½ in. B.S.P. male thread.
Supply pipe : Up to 15 ft. from the meter—½ in. int. dia.
15 to 30 ft. from the meter—¾ in. int. dia.
Over 30 ft. from the meter—1 in. int. dia.
Meter : Rated capacity to be not less than 80 cu. ft. per hour in addition to requirements for all other gas appliances.
Stop cock : Must be fitted in the supply line close to the heater to facilitate maintenance.

Water

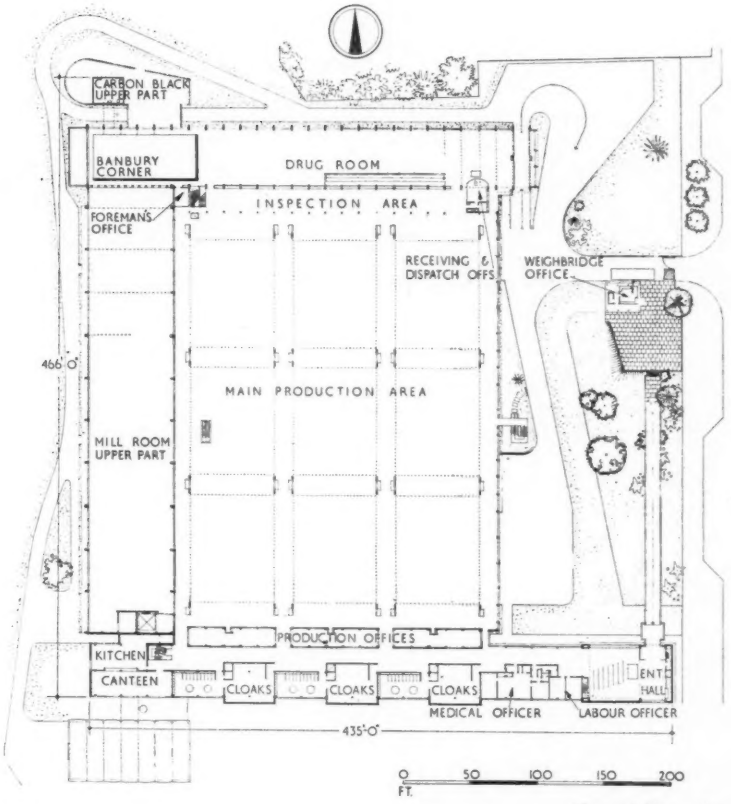
Preferably from mains supply. Permission must be obtained from the Water Authority before connection. If a tank supply is used a minimum head of 15/20 ft. measured vertically from the level of water in the tank to the level of the heater tap or taps is required for types 503/0, 503/1, 503/2 and 503/3. For types 503/4 503/5 and 503/6 the minimum head required is 18/20 ft. measured vertically from the level of water in the tank to the level of the heater tap or taps, or to the level of the highest draw-off point, whichever is the shorter distance.
Connection : Straight union lining threaded ½ in. B.S.P. male thread. Elbow union with wall plate and lining suitable for ½ in. pipe available as an extra. Types 503/4, 503/5 and 503/6 are fitted with a ⅜ in. connection for hot water draw-off.
Supply pipe : ½ in. to ¾ in. depending on length of pipe run and available pressure. A stop cock (of pattern approved by Water Authority) must be fitted in the cold water supply close to the heater.

Flue

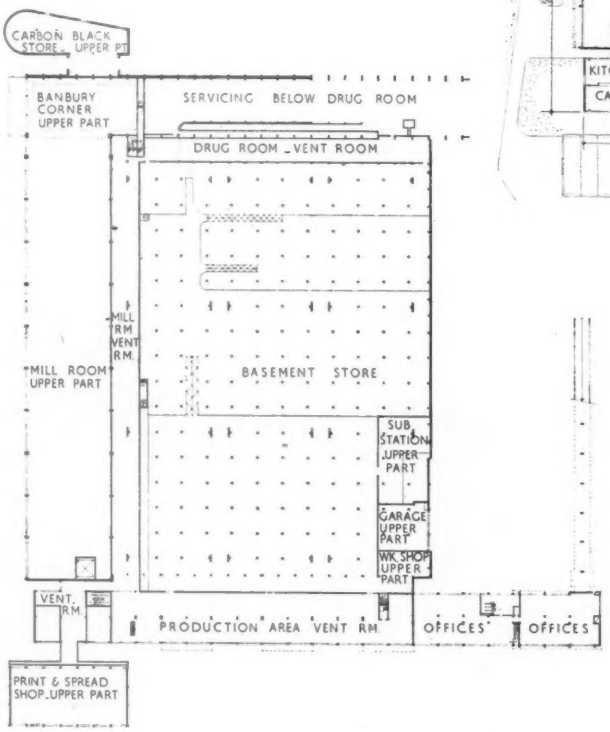
Types 503/0, 503/1, 503/2 *and* 503/3 *:* Normally for intermittent operation no flue is necessary but where ventilation of the room is inadequate or when the duration of a single operation is likely to exceed 10 minutes a flue should be fitted. A draught diverter for 3 in. internal diameter asbestos cement pipe or 3½ in. internal diameter enamelled iron pipe is available as an extra from the manufacturer.
Types 503/4, 503/5 *and* 503/6 *:* The above is applicable but certain authorities require a 3-in. internal diameter flue to be fitted to these heaters. The flue must be terminated in a favourable position with a suitable terminal.

Compiled from information supplied by :
Ascot Gas Water Heaters, Ltd.
Head Office : 43, Park Street, London, W.1.
Telephone : Grosvenor 4491.
Works : Ascot Works, Neasden, London, N.W.10.
Telephone : Willesden 5121.
Telegrams : Gascot, Phone, London.
Branch Offices and Service Depots : Belfast, Birmingham, Bournemouth and Glasgow.
Service Depots : Bristol, Cambridge, Manchester, Oxford, Southampton and Stoke.

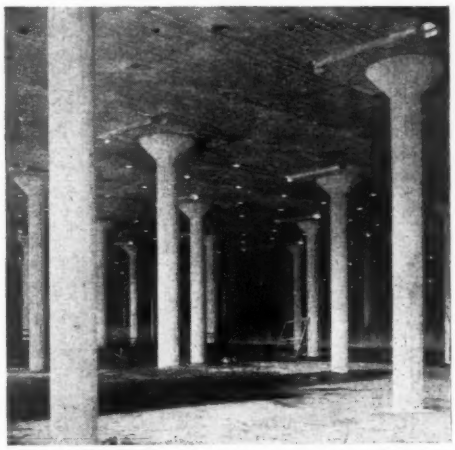
The mill room.



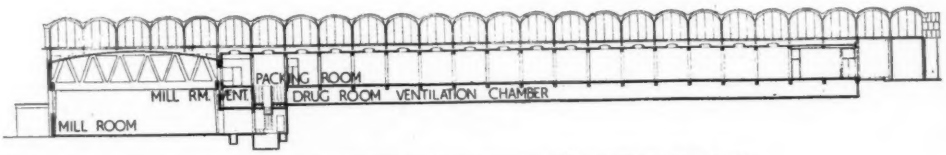
Ground floor plan



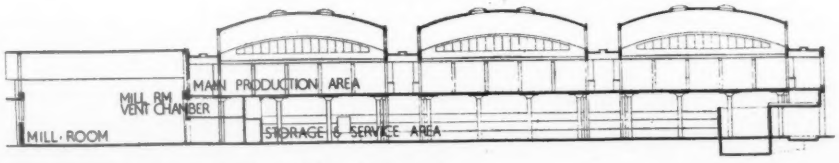
Mezzanine floor plan



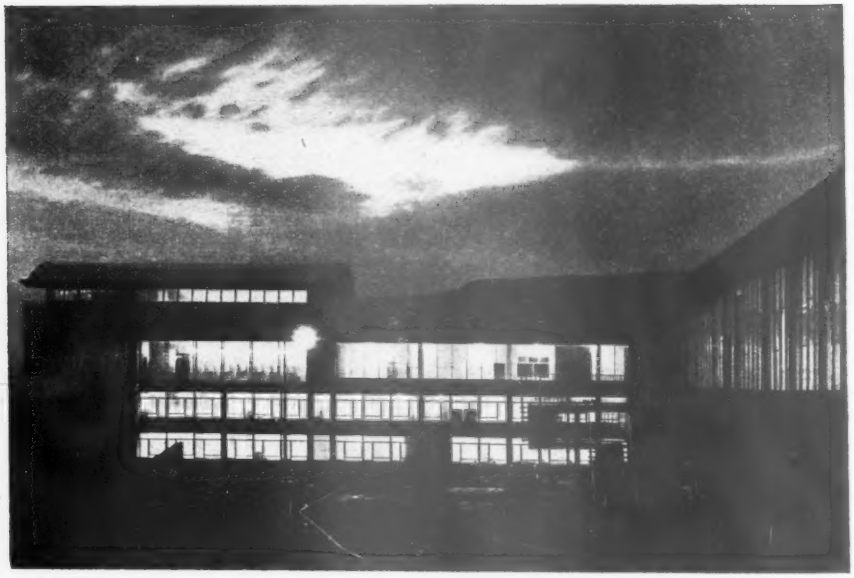
Progress photograph of the basement store shown on plan, left. The points of light are the openings for services to the main production area.



Section through drug room and mill room looking north. [Scale : double that of plans]



Section through main production block looking north



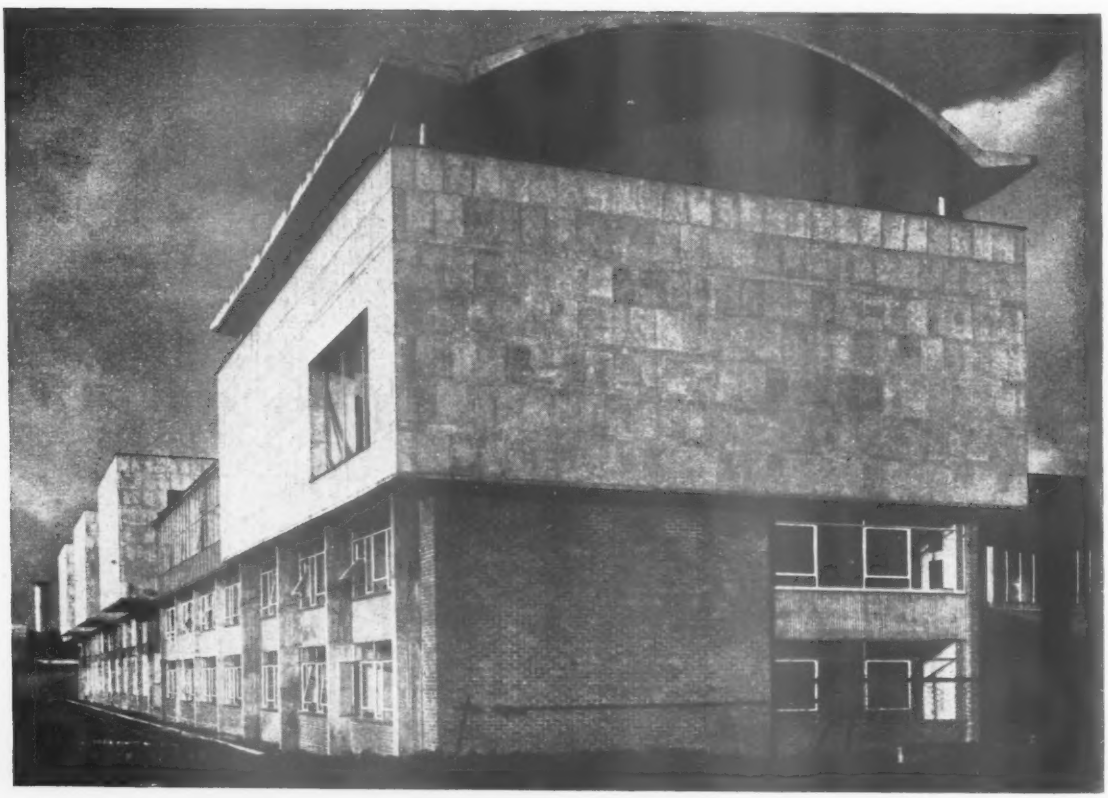
Left, looking south, at night, towards the entrance hall and office block. Below, the south and east facades of the entrance hall block with the projecting cloakrooms beyond. Opposite page : a detail of the south facade of the entrance hall block.

FACTORY

at BRYNMAWR, SOUTH WALES

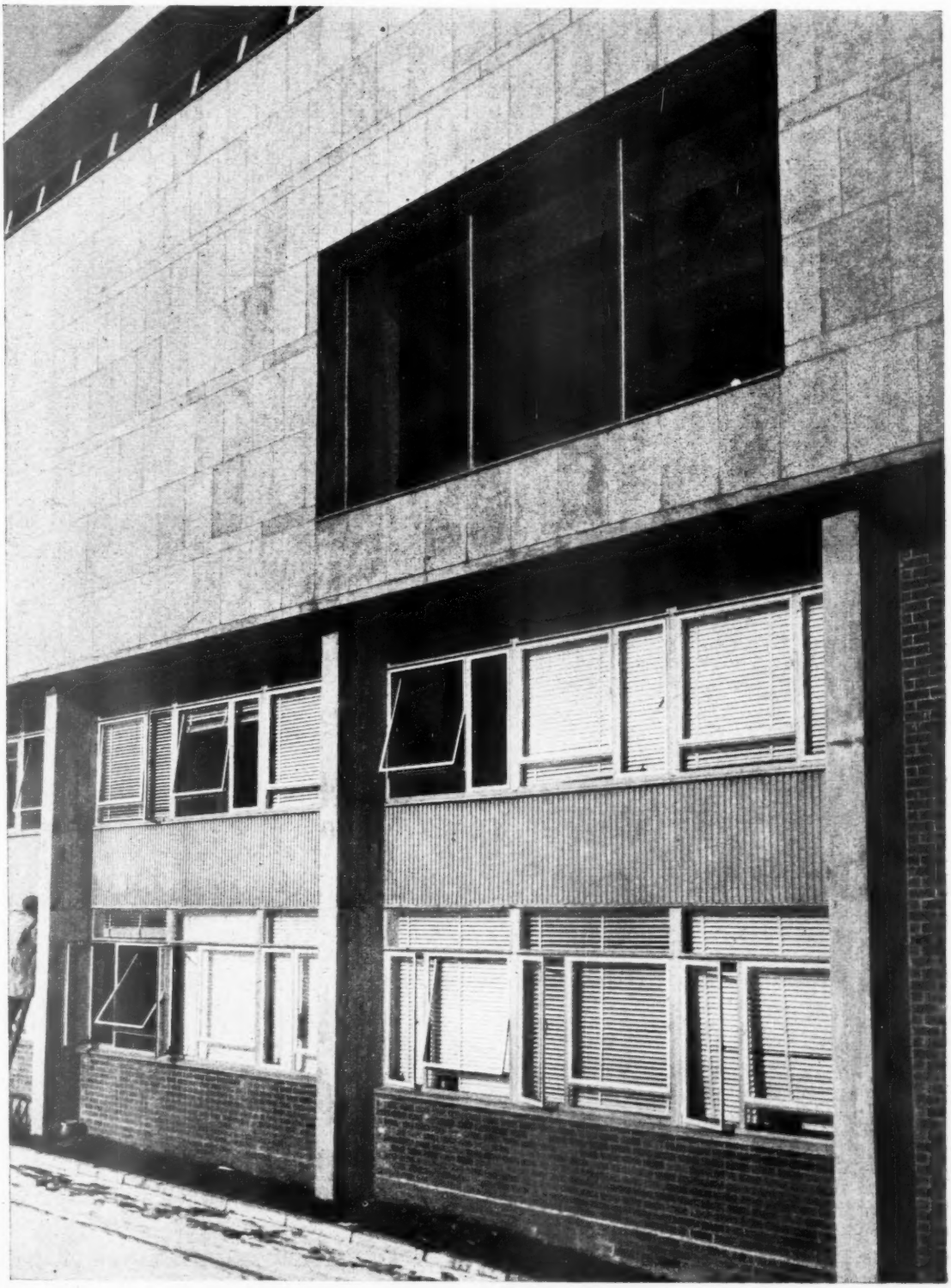
designed by the ARCHITECTS' CO-OPERATIVE PARTNERSHIP

6 in. square mesh. Across the corners ½-in. mild steel bars are used. There are sixteen 6-ft. diameter circular roof lights in each dome, eight being used for daylight (and essential to give a 5 per cent. daylight factor) and eight for artificial light. The tops of the slabs are covered with roofing felt finished with a white marble chipping. The undersides are sprayed with a ⅛-in. thick asbestos spray with a white colour-spray finish. Each of the domes is supported at its edge by reinforced concrete bow spring girders. Nominal width of booms : 9 in.



The bottom boom is connected to the top boom by 4 in. × 2 in. precast concrete hangers each containing two ⅝-in. mild steel bars. These hangers are in tension and the bars are cranked top and bottom to fit into the booms. In the valleys between the domes 12-ft. wide walkways are provided. To prevent restriction of movement where four domes meet, the intervening slab has sliding bearings. To the top of the supporting beams at this bearing a phosphor bronze plate is fixed and on the underside of the slab there is a graphitized metal plate (see large scale section). The shuttering for these domes was made with 2-ft. square standard steel shuttering pans placed on bent tubular scaffolding, bent to the

The south façade of the entrance hall block.



FACTORY

at BRYNMAWR, SOUTH WALES
designed by the ARCHITECTS' CO-OPERATIVE PARTNERSHIP

radii of the domes and supported on steel jack shores.

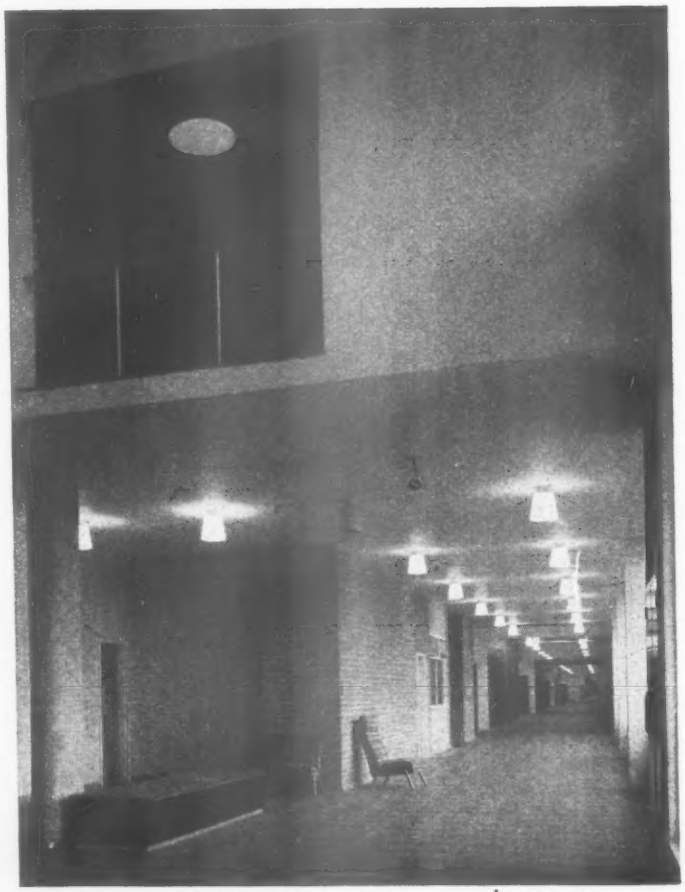
South Block : Reinforced concrete frame structure with the exception of the entrance hall and three cloakroom blocks, which are monolithic. The walls of the latter are 6-in. reinforced concrete with permanent ouside shuttering of 1½-in. thick pre-cast concrete slabs with an exposed aggregate finish, and inside shuttering of 2-in. wood wool slabs finished with plaster. This form of construction demands an exceptionally high standard of concrete placing which was not achieved and a certain amount of trouble has been caused as a result.

EXTERNAL MATERIALS.—Walls, (non-structural) are 11-in. cavity brick or 9-in. stone with a 2-in. cavity, lined with 4½-in. brick on the inside. Where concrete has been used as a facing material, other than on columns and beams, an attempt has been made to dominate the surface with a pattern, usually formed by about 1½-in. wide battens nailed to plywood shuttering with a gap between, giving a ribbed concrete finish.

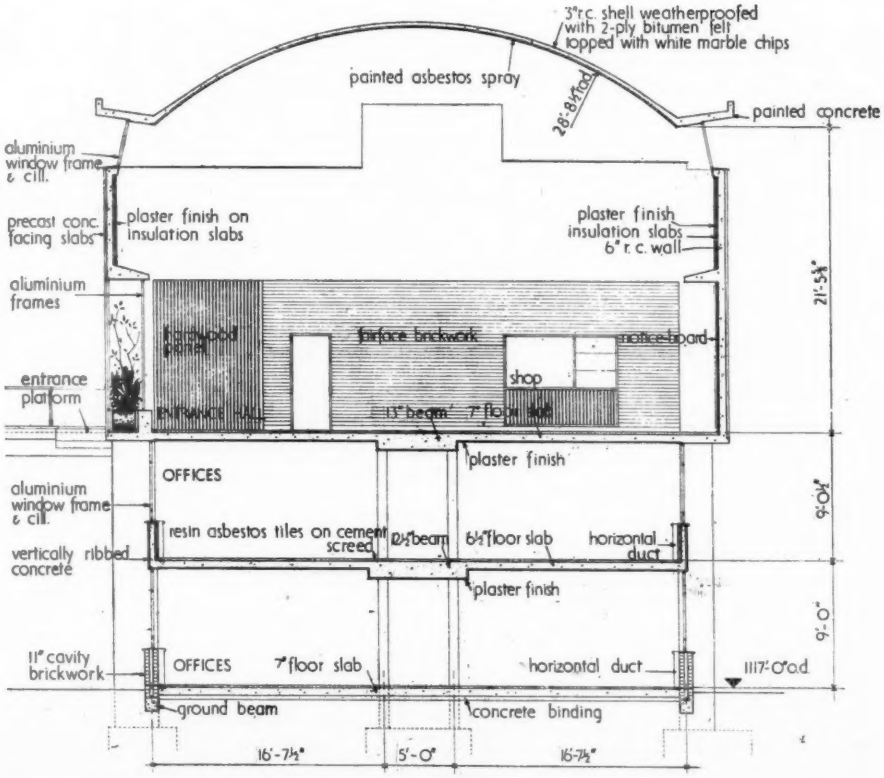
Windows : The majority of the glazing to the factory is in aluminium patent glazing. Some of this has been made with opening units but in most cases where windows open they are aluminium sashes of standard section.

INTERNAL MATERIALS.—Walls are mostly concrete or fair-faced brickwork, painted. The walls in offices, entrance hall, cloakrooms and lavatories are plastered and painted. Floors to the production areas are 1½-in. grano ; the floors to the entrance hall, cloakrooms, main corridor and offices are in thermo-plastic tiles.

COLOUR.—The BRS have advised both on colour in the building and the colour of plant (canary yellow, light and dark grey). So far as is possible, colour has been used to express the structure while avoiding glare. The majority of the structure is painted white, pale grey, or mixed fawn. Bright or strong colours (yellow, dark red, scarlet) have been confined to various wall areas. The entrance hall ceiling has been decorated by a group of Architectural Association students to a scheme prepared by them with the Bath Academy of Art.



Opposite page : top, the entrance hall ; bottom, the main corridor, leading from the entrance hall to cloakrooms and the production area. Above ; left, the painted ceiling of the entrance hall, the work of the AA and the Bath Academy of Art. Right, detail of staircase shown on opposite page.

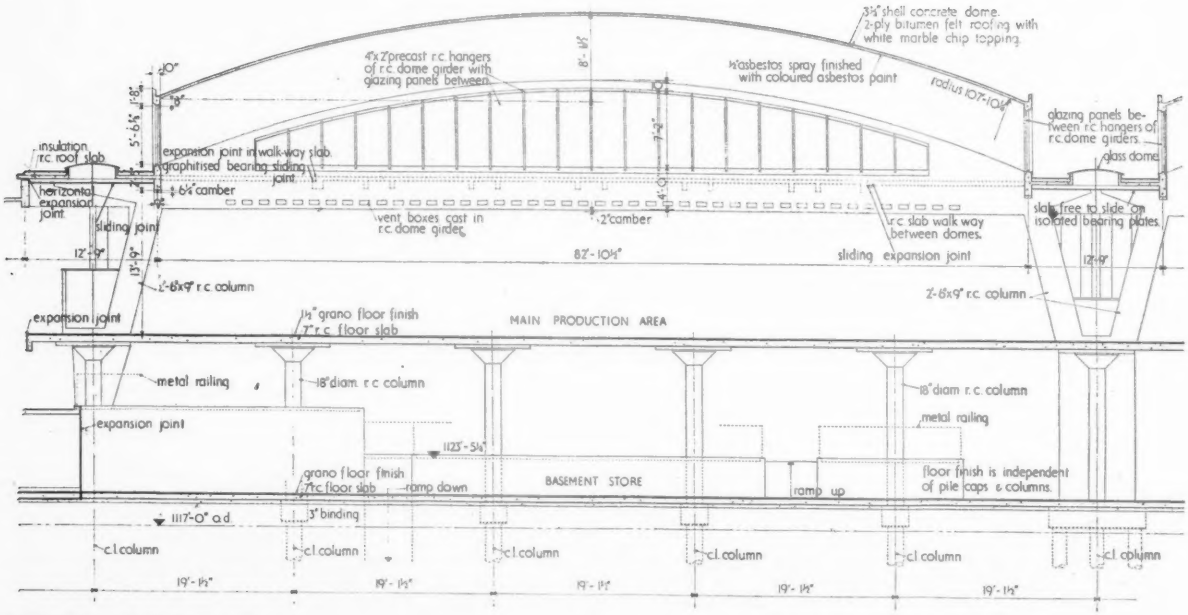


Cross-section through entrance hall [Scale : $\frac{1}{16}$" = 1' 0"]

FACTORY

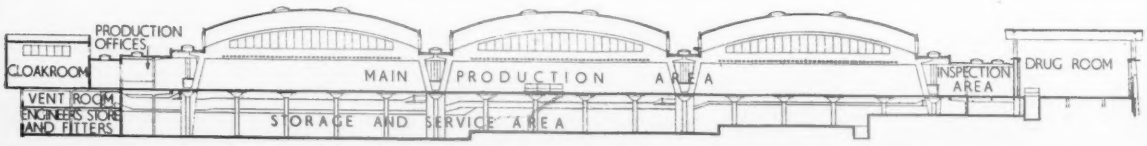
at BRYNMAWR, SOUTH WALES

designed by the ARCHITECTS' CO-OPERATIVE PARTNERSHIP

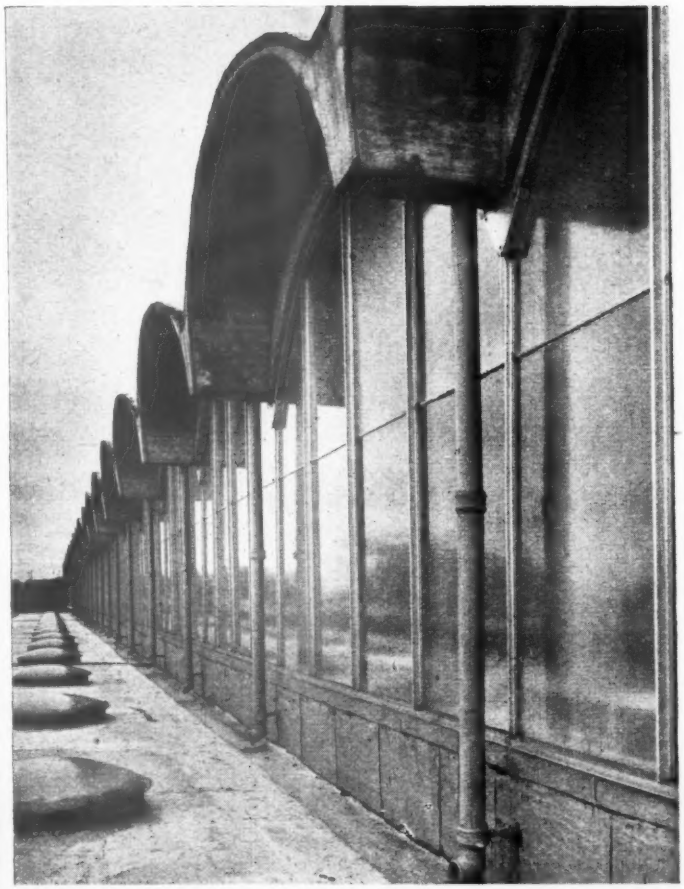


Section through shell concrete vault

One of the nine shell concrete vaults over the main production area.



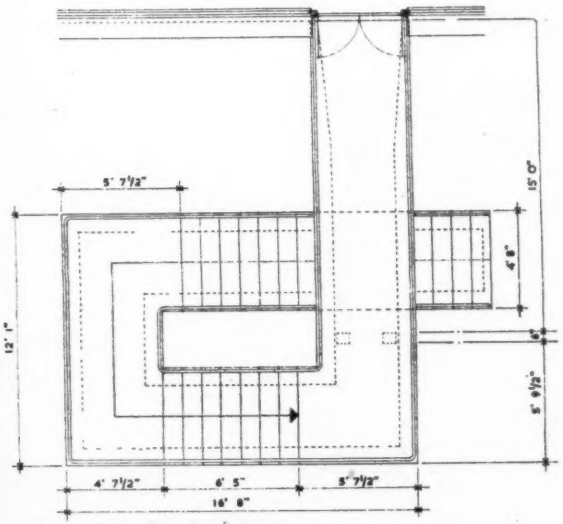
The north-south section, looking west, showing the advantage taken in the planning of the fall in the ground



Clerestory lighting to the drug room, on right, and left, roof lights to inspection area.

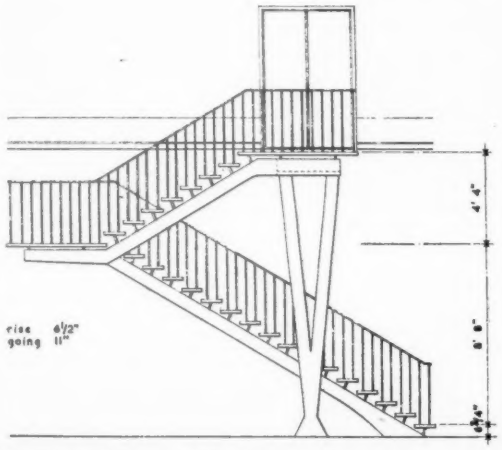
HEATING AND VENTILATION.—All production rooms are heated by warm air and are mechanically ventilated. The mezzanine storage area provides space for ventilation chambers on three sides. Fresh air is drawn in through automatic louvres in the south wall, warmed, circulated through four ducts in the storage space, and then rises through vertical ducts (incorporated in the domes' structural supports, and travels along horizontal ducts in the valleys between the domes, discharging through slots in the side of the dome girders. It is extracted at the foot of the structural supports for recirculation or discharge.

COSTS.—Exclusive of land, landscape work, professional fees and some extras for clinic and kitchen which are the tenants' liability: Main factory:



Plan of the stair shown below

External stair to main production area.



Elevation of stair [Scale: ½" = 1' 0"]

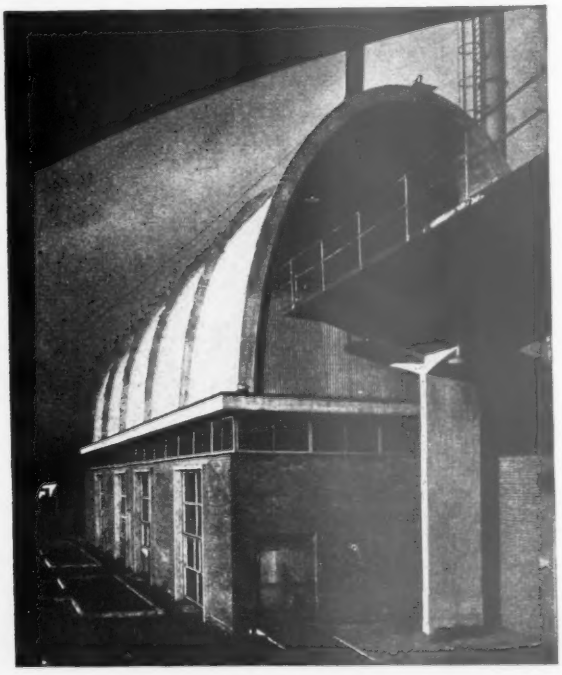
£630,000 at £2 8s. 1d. per ft. super.; boiler house: £50,000 at £3 16s. 11d. per ft. super. Total: £680,000 at £2 9s. 5½d. per ft. super. For comparison, the ordinary Board of Trade factory in the Development area is costing about £2 per ft. super.

The contractors for boiler house, subway, and the first stage of the main factory were Messrs. Holland & Hannen & Cubitts, Ltd. For the remainder, Messrs. Gee, Walker & Slater, Ltd. For sub-contractors see page 380.

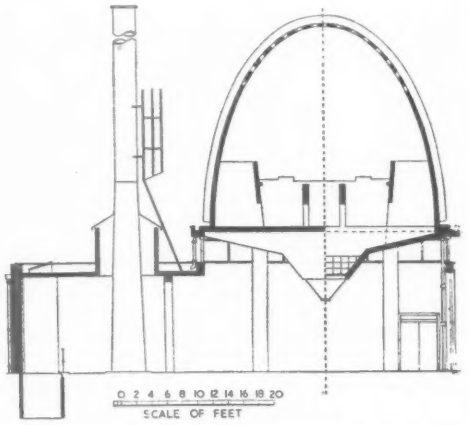
FACTORY

at BRYNMAWR, SOUTH WALES

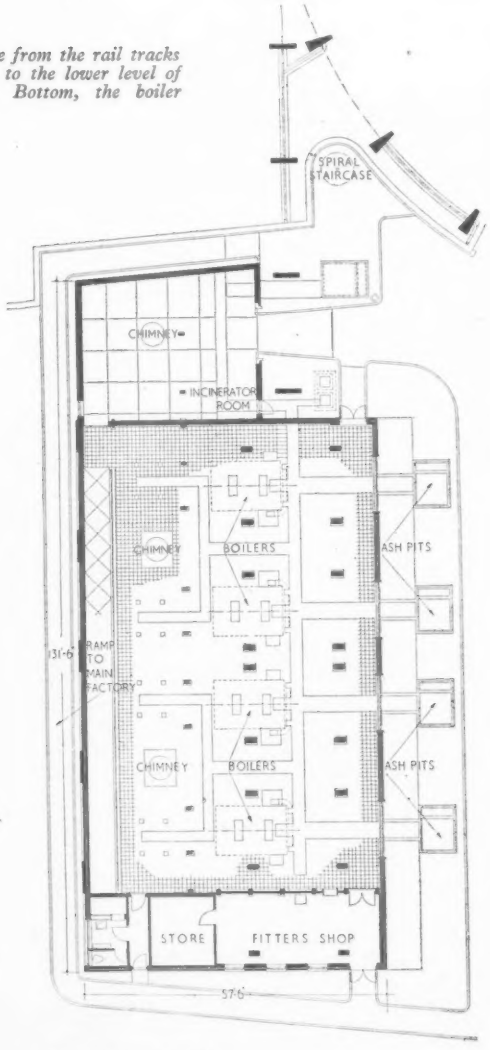
designed by the ARCHITECTS' CO-OPERATIVE PARTNERSHIP



The spiral staircase from the rail tracks at the upper level to the lower level of the boiler house. Bottom, the boiler house.



Cross-section of boiler house

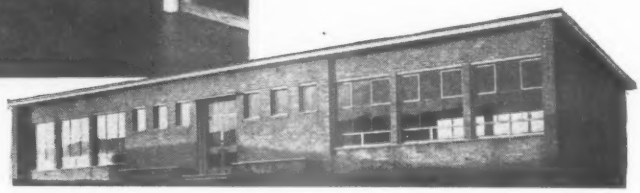


Plan of boiler house

County Architect beats Shortages

THE HENGIST SCHEME

for providing additional school accommodation in the West Riding has involved a rush building programme; all materials used had to be readily available. Accotile, specified by Mr. Hubert Bennett, F.R.I.B.A., West Riding County Architect, for flooring the sixty buildings in the scheme, was chosen primarily because it was readily available, and because for special reasons (see below) the cost of installation was remarkably low — but it has proved more successful than old-fashioned alternatives. Picture shows the Hengist annex at Mansel Crescent Infants' School, Parson's Cross, Sheffield.



VERSATILE NEW MATERIAL SOLVES FLOORING PROBLEM

One of the most urgent tasks confronting public authorities in the post-war years has been the provision of new school accommodation. In the West Riding of Yorkshire, population rise has so far outstripped the regular building programme that an emergency scheme has been put into operation for enlarging the present schools. Sixty annexes of standard design (see illustration) are being built in the grounds of existing schools, mostly comprising two classrooms, cloakroom and sanitary accommodation, in order to meet the emergency.

Owing to the urgency of the work, only readily available materials could be specified. At the same time, the budget would not permit luxuries.

Choosing a floor

One problem of great importance has been flooring. A floor had to be found that was at once durable, readily available, and not too expensive.

The material chosen by Mr. Hubert Bennett, F.R.I.B.A., the county architect, was "Accotile," the asphalt tile flooring made by the Armstrong Cork Company — firstly, because it is readily obtainable, and secondly, because Accotile, with its damp-resisting qualities, can be laid direct on to screeded concrete without the necessity of a damp-course — hence the installation is much lower in cost than for most floors.

Accotile provides the flooring for the classrooms and vestibules of every building in the Hengist Scheme.

Qualities of Accotile

Accotile is a composition of inert, asbestos fibres and ground rock fillers, fadeless mineral pigment and asphalt or resin-binders. It provides an extremely durable floor (floors laid in this country in 1938 and 1939 are still giving excellent service) that has a strong resistance to alkaline moisture. Accotile remains non-slip under all conditions, which makes it particularly suitable for schools and institutions.

There are almost unlimited possibilities of design for Accotile, and it can be laid to harmonize with existing decorations. Inconvenience is cut down to a minimum, since Accotile can be used as soon as it is laid.

Standard Accotile is cleaned by washing with water, and can be polished when desired. It is resistant to stains and dilute acids. Where conditions make it advisable, a special Grease Resisting Accotile is recommended.

Accotile is available in two sizes of tile (12" x 12" and 9" x 9"); in two thicknesses ($\frac{1}{8}$" x $\frac{3}{16}$"); and in 19 different colours. In addition, Accotile Coved Skirting, supplied in 36" lengths, obviates the need for timber; and, as there are no corners for dust to collect in, it provides a hygienic, as well as decorative, finish to the room.

ACCOTILE*

"The low-cost floor with the luxury look"

** British Registered Trade Mark 663698. Armstrong Cork Company Ltd., Registered Users.*

FOR FURTHER INFORMATION

about Accotile, architects and builders are invited to write or telephone to

ARMSTRONG CORK COMPANY LIMITED

London Office: Flooring Department, Bush House, Aldwych, W.C.2. *Tel.: Chancery 6281.*

Birmingham Office: Westminster Chambers, 93a Corporation Street. *Tel.: Central 1271.*

Glasgow Office: 5 Oswald Street, C.1. *Tel.: Central 5703.*

Dublin Office: 54 Middle Abbey Street. *Tel.: Dublin 54901.*

In addition to Armstrong's own service, forty-two approved contractors with branches all over the country handle Accotile.

TECHNICAL SECTION

Last week, on this page, the necessity for the conventional method of obtaining competitive tenders was questioned. Since the war, quantity surveyors have been very overworked and some architects and some public bodies have dispensed with bills of quantities for purposes of tender, rather than delay their jobs until the quantity surveyor has prepared the bill.

Several alternative types of contract have been developed ; of these, the " fixed-fee " contract has several advantages, and, as a result, readers will have seen it mentioned in connection with a number of buildings illustrated in the JOURNAL during 1951.

Briefly, under a fixed-fee contract, the contractor's profit is decided right at the start, being an agreed percentage of an approximate estimate of the cost of construction. A careful check is then kept of all materials and man-hours consumed on the building and the contractor is paid the net cost of these plus the agreed profit. Hence, unlike " cost-plus " or any similar arrangement, the incentive for the contractor to complete the job quickly and efficiently is retained, for the lower the final cost of the building the higher his *rate* of profit.

R. FITZMAURICE

This week's special feature

20 CONSTRUCTION: COMPLETE STRUCTURES
demountable buildings

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

It is symbolic of our time that the traditional "big top" of the circus should be abandoned for a prefabricated steel "tent." But if it must be done, then it seems that the demountable building described below, designed by the Bridge and Structural Engineering Department of the Esslingen machine-tool factory is a most ingenious solution. Buildings of this type have many other, more appropriate, uses.*

Two demountable, weatherproof structures have been designed and constructed for a German circus company by the Bridge and Structural Engineering Department of the Esslingen machine-tool factory. They are very similar, each consisting of a spherical dome surrounded by a sloping roof, but the first was provided with a stage, and the second, with an extension to serve as an entrance hall.

* This is a summary of an article by Hermann Hacker published in Der Stahlbau (Germany) for October 1951, from which the illustrations are reproduced.

REQUIREMENTS

The company required a building which could be erected and dismantled by unskilled labour, without scaffolding or cranes; and loaded, once dismantled, on road transport vehicles. Other requirements were that the components should, as far as possible, be inter-

changeable; that foundations should be avoided; and that normal regulations as to exits, etc., should be complied with.

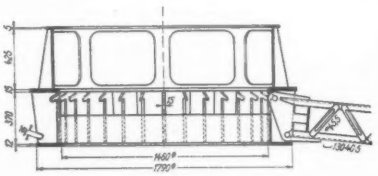
The main dimensions of the building are: diameter, 40 m.; clear span of dome, 27·8 m.; diameter of arena, 14 m.; height of dome at vertex, 14·5 m. It seats 2,100 people (2,400 when there is no stage) and the weight of steel used is 115 ton, including seating.

CONSTRUCTION

The spherical dome consists of 32 polygonal, welded ribs with bolted joints in the middle. Each half rib is built up of three 2·5-m. sections, rigidly connected by butt-welded joints. The ribs are held together at the vertex of the dome by a compression ring (Fig. 4) with an upper and a lower ring, connected by 32 vertical stays, to which are bolted the tops of the half ribs. Two intermediate rings are passed through the ribs to give them additional resistance to buckling. A section taken through the centre of the dome (Fig. 1) shows the compression ring and the ribs as a four-hinged arch, but the feet of the ribs are held rigidly by a tension ring, and, as a result of the vertical load, negative moments occur in the vertex of the dome. Statically, the result is a two-hinged arch and the positive moments in the ribs are, thereby, much reduced. In addition to dead loads, wind and snow, a uniformly distributed load of 5 ton over the whole surface of the dome was assumed to allow for loading due to trapeze acts.

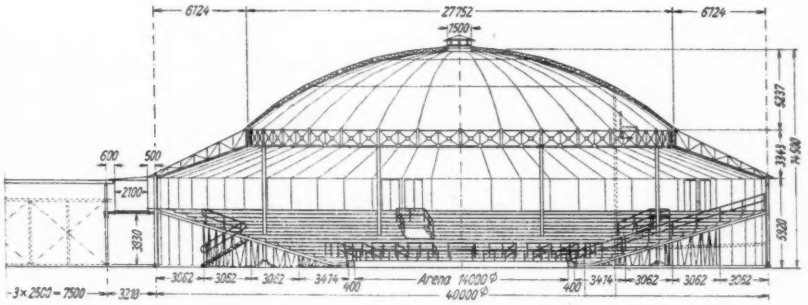
The tension ring girder, to which the feet of the ribs are attached, is 27·8 m. in diameter. It is supported by eight tubular stanchions.

The girders carrying the stands are fixed half way up the 6-m. outer stanchions, which support the lateral ribs. These girders, together with tubular bracing, form a cylindrical carcase capable of carrying the horizontal wind load.

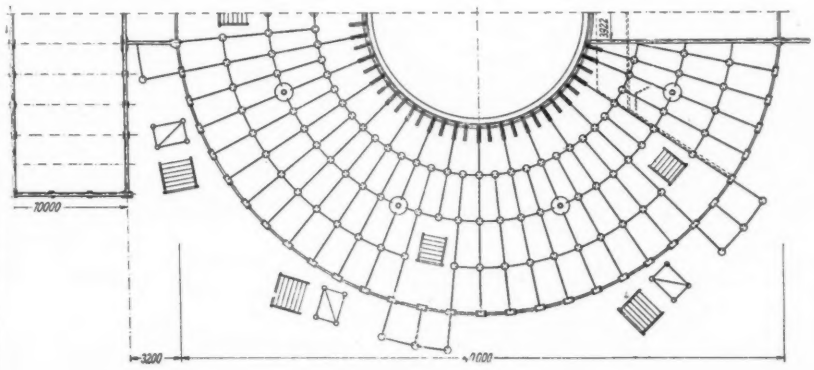


The same elements were used for all members—channels, flats and tubes. Only 23 different structural members were needed for the entire external framework, the heaviest being the compression ring (540 kg.).

The base plates for the main stanchions, the eight tubular supports and the stanchions supporting the stands are arranged in concentric circles round the arena and are connected by radial and concentric tubular stiffeners. They are large enough to enable them to be set



Above, Fig. 1, *longitudinal section through centre of dome. Below, Fig.* 2, *half plan at ground level. (Dimensions in millimetres.)*



Right, Fig. 3, *dome after lateral ribs have been connected to the tension ring.*

Left, Fig. 4, *section through compression ring (Dimensions in millimetres.)*

Right, Fig. 5, *view of roof construction from below, after dome has been lifted.*

directly on the ground; foundation blocks being used only for the main columns, which support a load of 24 ton.

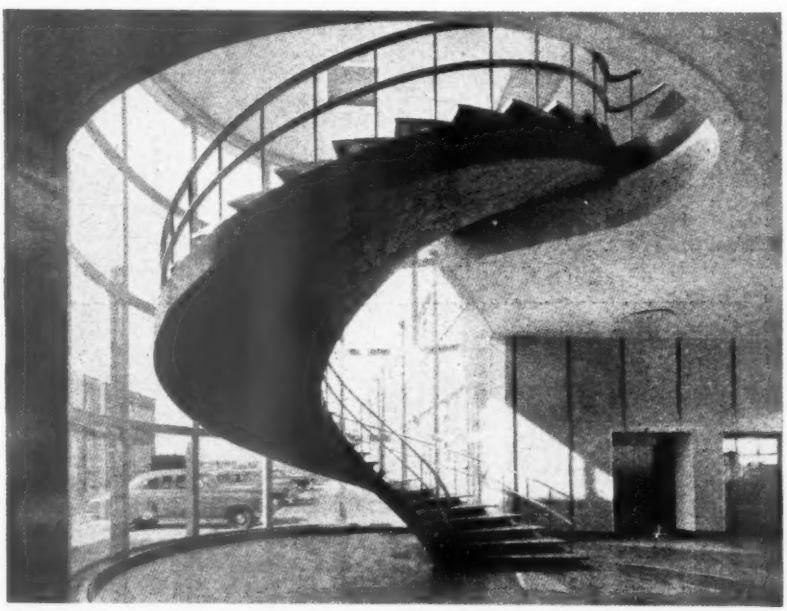
The seating is graded at 1 : 3·3 and has a passageway under it large enough to be used by elephants and riders. There are nine emergency exits.

ERECTION

No lifting tackle is required to erect the building, except a temporary mast and two winches. The compression ring is placed on the ground and the mast erected in the centre; the main ribs are fitted and the ring is raised slightly, bringing the ribs into position. The tension ring is then assembled on the ground and the feet of the main ribs, the lateral ribs and the main columns connected to it. Further hoisting enables the outer ring and roof bracing to be fitted. The main columns are then set on their base plates and the interior "spider's web" of tubular stiffeners is fixed. Once the external pillars and bracing are connected, the building is self-supporting and the mast is disconnected. Installation of the stands, etc., follows. Roof and wall coverings are of prefabricated wood panels. Assembly can, with practise, be completed in 8-10 days. Dismantling follows a reverse sequence.

PRESTRESSED CONCRETE HELICAL STAIRCASE

This helical staircase rises 17 ft. 2 in. from General Motors' luxurious showroom at Antwerp to the offices above. Treads are of stainless steel; handrails, of bronze, supported by stainless steel, aerodynamically-shaped verticals. The inner ring of the spiral is 3 ft. 3½ in. in diameter; the stairs are 7 ft. 2¾ in. wide and the slab is 11½ in. thick, normal to it. The spiral turns through an angle of 316½ deg. The staircase was post-tensioned by means of 6 cables, each consisting of sixteen 5-mm. wires. Two wires were jacked at a time from both ends in order to reduce friction losses and a stress of 145,000 lb./sq. in. was induced in the wire. The loss of stress due to the friction of the cables against the helical channels cast in the slab was 45 per cent. of the jacking force. The dead load was taken at 176 lb./sq. ft.; and the live load, at 104 lb./sq. ft. In order to determine torsional stresses, Prof. Magnel, the consulting engineer, considered it necessary to test a full-scale model. A uniform live load was applied to the model and deflections wre recorded. The first crack appeared at a live load of 245 lb./sq. ft. which, with the dead load, amounted to 1·51 times the working load. Architects were Messrs. Cole and De Roeck of Antwerp; consulting architects, Messrs. Smith, Hinchman and Grylls, of Detroit and New York; general contractor, S. A. Blaton-Aubert of Brussels. (*For further information see* Civil Engineering [USA], *September*, 1951, *pp.* 25-27.)



The JOURNAL'S *Specialist Editor No. 13 (Structural Engineering) comments on the lively discussion held recently at the ICE. (A brief report appeared in the* JOURNAL *for March 6, page 297.)*

PRESTRESSED CONCRETE v THE REST

The BEA hangars at London Airport, with their reinforced concrete foundations and walls, prestressed concrete beams and floor joists, aluminium roof decking and steel crane girders, provide an excellent reminder that each material has its advantages when used in the correct place. At the recent ICE discussion, speakers were loath to draw general comparisons between prestressed concrete and other materials. However, aluminium and timber were "discarded," on account of their limited use and the shortage of the former, and the battle was fought out on the basis of steel *versus* concrete (whether ordinary reinforced or prestressed).

It is evident that for building, with spans of between 24 ft. and 40 ft., cased steel beams are now costing more than twice as much as reinforced or prestressed concrete. (These two latter methods of construction cost about the same.) Moreover, for normal spans, prestressed composite floors are as cheap as those of reinforced concrete and require only two-thirds as much steel. It was admitted by contractors that there are discrepancies in the pricing of prestressed work, but this, it was said, is mainly due to the fact that the technique is still rather new and each job has to receive special attention.

Taking the definition of economy to include, not only first cost but also maintenance, life, ease of erection, availability of material and fire risk, it would appear that, for most types of building work, the choice lies between reinforced concrete and prestressed concrete, and the cheapest type of building is probably one with a reinforced concrete frame and prestressed composite flooring. This solution makes a more definite contribution to the rigidity of the building than a mass of simply-supported prestressed units, particularly if the building is ever subjected to bomb blast.

INFORMATION CENTRE

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

5.44 planning: public utilities
ACCIDENT RATE

The Individual Accident Rate. W. A. Rusch (Planning Outlook, Vol. II. No. 2, 1951, pp. 5-15.)

Description of an analysis made at Iowa State College comparing the incidence of accidents on roads where ribbon development by roadside business and advertising had taken place with that on the lengths of roads immediately beyond. Interesting.

5.45 planning: public utilities
CAR PARKING

Traffic and Parking in the USA. Some City Problems. A. R. Lee (Journal of the Inst. of Municipal Engineers, Dec. 4, 1951, pp. 436-440.)

Short notes on American practice, with particular reference to new constructions, including a four-storey underground car park. Illustrated.

13.83 materials: timber
RESEARCH

Forest Products Research 1949. FPRL Annual Report by DSIR. (HMSO. 1951. 2s. 6d.)

Report of year's work—rather too overdue. Chiefly dealing with fundamental matters which though important to architects are not of very direct practical interest.

This report covers a wide field. Although many other industries besides building are involved in the work of FPRL, much fundamental work of importance to building was carried out in 1949. The direct value of the work to architects and builders is much less evident than in the work done at BRS; perhaps this is because there is no architectural staff at FPRL who could guide the work into channels more useful to the architect and interpret the results in a way which would help him most.

1 Sociology. 2 Planning: General. 3 Planning: Regional and National. 4 Planning: Urban and Rural. 5 Planning: Public Utilities. 6 Planning: Social and Recreational. 7 Practice. 8 Surveying, Specification. 9 Design: General. 10 Design: Building Types. 11 Materials: General. 12 Materials: Metal. 13 Materials: Timber. 14 Materials: Concrete. 15 Materials: Applied Finishes, Treatments. 16 Materials: Miscellaneous. 17 Construction: General. 18 Construction: Theory. 19 Construction: Details. 20 Construction: Complete Structures. 21 Construction: Miscellaneous. 22 Sound Insulation-Acoustics. 23 Heating, Ventilation. 24 Lighting. 25 Water Supply, Sanitation. 26 Services Equipment: Miscellaneous. 27 Furniture, Fittings, 28 Miscellaneous.

13.84 materials: timber
PRESERVATION

Record of the First Annual Convention of the British Wood Preserving Association. (British Wood Preserving Association, London, 1951.)

Papers and discussion. 193 pp. Several papers of interest to building industry.

The British Wood Preserving Association was founded in 1930 and reorganized in 1949 after a wartime lull in its activities. It is not sufficiently recognized how important its work is to architects and builders. Preservation relates not only to protection against attack by beetles and fungi but also to protection against fire hazard. Two factors seem to make preservation treatment more important now than in the past. Firstly, the greatly increased value of timber; secondly, the change in character of some types of timber which makes it more susceptible to attack.

The report of this convention covers some fourteen papers. One by E. H. B. Boulton on Identification and Treatments of Defects in Timber is especially useful and another on the Status of the Common Furniture Beetle in Great Britain is also important. The author of this latter paper attempted to estimate the amount of damage done by different kinds of beetle and claims that the furniture beetle—which, of course, also attacks construction timbers—is responsible for 70-80 per cent. of the total damage.

17.85 construction: general
BRS DIGESTS

Index to Building Research Station Digests Nos. 1-36. (BRS Digest No. 37.) (HMSO. 1951. 3d.)

Useful index to a most informative series of papers.

By now the BRS monthly Digests should be familiar to most architects and builders. The standard of presentation and of the usefulness of the contents has been maintained at a high level throughout the 36 issues. This index should be useful to those who regularly file the Digests. To those who have not filed the monthly issues, the Index should be even more valuable; firstly, as a reminder of the wide field covered; secondly, as a reference from which copies of the Digest can be re-ordered when required.

19.146 construction: details
DAMP-PROOF COURSES

Damp-Proof Courses. MOW Advisory Leaflet No. 23. (HMSO. 1951. 3d.)

Simple and clear description of essential points. Rather elementary and intended more for the craftsman than the architect, who ought to know it all already.

20.210 construction: complete structures
STEEL HOUSES

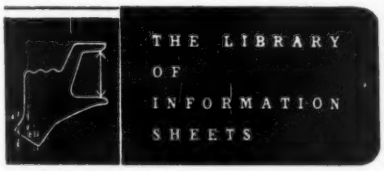
The Corrosion of Steel in Steel Houses. National Building Studies Special Report No. 16. (HMSO. 1951. 1s. 9d.)

Valuable specialist report, based on survey of considerable number of houses built about 20 years ago.

Although the report is a specialist document, based on a careful survey of existing houses, it has an interest wider than its immediate subject of steel houses. The survey shows that in the case of steel exposed in cavity walls, ordinary paint protection was effective when construction details were sound and that the more elaborate protection of metallic coating and painting, as suggested in the British Standards Institution's publication PD420, should not usually be necessary.

Examples are given of corrosion of steel in other places than wall cavities. Bad design seems to be the cause of most trouble but information is given on other causes as well.

A useful document of wider value than its title suggests.



32.B1 *REFERENCE BACK*

Readers are asked to note the following revisions and to amend their copy of the Information Sheet in question: Face of Sheet—In the table of dimensions the flow and return pipe sizes for models 30M and 41M (Bower Barffed boilers) are now 1¼ in.

Reverse of Sheet—The ratings of models 55M, 65M and 80M are now 51,000, 60,000 and 70,000 B.Th.U./hr. respectively. The other output figures for these models are modified accordingly.

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

ENQUIRY FORM

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

.....

.....

.....

.....

Please ask manufacturers to send further particulars to:—

NAME .....

PROFESSION or TRADE

.....

ADDRESS .....

.....

.....

AJ. 20.3.52

Buildings Illustrated

Factory at Brynmawr, South Wales. Pages 363-374. Architects: Architects' Co-operative Partnership. Consulting engineers, Ove N. Arup. Heating consultants, J. Varming & Partners. Electrical consultants, A. P. I. Cotterell & Sons. Quantity surveyors, Davis, Belfield & Everest. Landscape architect, G. P. Youngman. Colour and lighting, Building Research Station. General contractors: Holland & Hannen & Cubitts Ltd.; Gee, Walker & Slater Ltd. Sub-contractors and suppliers for the boiler house: Piling, The Cementation Co.; rolling shutters, Haskins Rolling Shutters Ltd.; railings, balustrades, access galleries, cat ladders, duct covers, etc., Fisher & Ludlow Ltd.; spiral staircase, Advance Welding Company; steel windows, Henry Hope & Sons; roof lights and glazing to west end of roof, Williams & Williams Ltd.; railway lines, capstan and fairlead, Thos. W. Ward Ltd.; sanitary fittings, Shanks & Company; flushing valve, B. Finch & Co.; electric wiring, Troughton & Young Ltd.; light fittings, The Benjamin Electric Co.; tiling, J. C. Edwards (Ruabon) Ltd.; ironmongery, J. D. Beardmore & Co.; coal screens, Clarke, Hunt & Co.; boilers and accessories, Davey, Paxman & Co.; incinerator, The Incinerator Co.; chimneys, Musgrave & Co.; pipe fitting, Matthew Hall & Co. Sub-contractors and suppliers for the Brynmawr factory: piling, The Cementation Co; asphalte tanking and damp courses, Excel Asphalte Co.; gravel, stone, aggregate and sand, Hereford Washed Sand & Gravel Ltd., Monmouthshire Associated Quarries Ltd., Newport Sand & Gravel Co.; facing bricks, The Cattybrook Brick Co., Dunbrik Ltd.; common bricks, Richard Thomas & Baldwins Ltd.; cement ("Amerthaw") partition blocks, stoneware, H. R. Paul & Sons; reinforcing steel, Whitehead Iron & Steel Co.; friction block bearings, The British Graphitised Metals Co.; expansion jointing, Expandite Ltd.; stone for masonry, Robert Evans & Sons ("Abercarn"); precast facing slabs, The Penarth Concrete Co. (1927); plastering and granolithic work, W. A. Telling (South Western) Co.; sanitary fittings, John Bolding & Sons, Adamsez Ltd.; electric wiring and installation, T. Clarke & Co.; switchgear, A. Reyrolle & Co.; light-weight insulating concrete, Celcon Ltd.; false ceilings, Denny Mott & Dickson Ltd., Trussed Concrete Steel Co.; false ceilings, expanded metal and access panels, Campbell Denis Ltd.; heating and ventilating, Matthew Hall & Co.; panel heating, G. N. Haden & Sons; aluminium windows, copings, metal screens, patent glazing and roof lights, Williams & Williams Ltd.; street lighting standards ("Adastra"), Poles Ltd.; sprayed asbestos roof insulation and applied sprayed paint finish, Turners Asbestos Cement Co.; lifts, J. & E. Hall Ltd., Herbert Morris Ltd.; hydrant and sprinkler installation and fire-resisting doors, Mather & Platt Ltd.; aluminium copings, etc., Steel Fabricators (Cardiff) Ltd.; felt roofing and "Accotile" flooring, The Neuchatel Asphalte Co.; roller shutters, Haskins Rolling Shutters Ltd.; sliding door gear, Geo. W. King Ltd.; door furniture, Mountford Bros., A. J. Binns Ltd.; handrails, balustrades, etc., S. W. Farmer & Son; weighbridge and weighing platforms, W. & T. Avery Ltd.; pumps, Sulzer Bros. (London) Ltd.; canteen equipment, Benham & Sons; canteen floor, The Granwood Flooring Co.; lavatory partitions, Henry Hope & Sons; aluminium roof light domes, The London Aluminium Co.; laboratory installation, A. Gallenkamp & Co.; cloakroom fittings, Mountford Bros.; clocks, internal telephones and loudspeaker systems, Telephone Rentals Ltd.; time clock stands and shower partitions, Sommerfelds Ltd.; time office and office partitions, Holoplast Ltd.; fluorescent light fittings and special equipment and street lighting fittings, The British Thomson-Houston Co.; tungsten light fittings, Holophane Ltd., The Benjamin Electric Ltd., Simplex Electric Co.; hose reels (offices), Pyrene Co.; precast concrete floors, Flooring Contracts (London); mirrors, B. Finch & Co.; terrazzo finish to office stairs, South Wales Tile & Terrazzo Co.; toilet roll holders, Sculthorpe & Co.; terrazzo tiles, Pietro Ltd.; flooring in laboratory, Jaconello Ltd.; tarmacadam to roads, Shepherds (Rochdale) Ltd.; steel escape stairs, B. Finch & Co.; earthing installation and lightning conductors, W. J. Furse Ltd.; fencing and gates, Bayliss, Jones & Bayliss Ltd.; poison cupboard, Medical Supply Association; duct covers, Dover Engineering Co., H. R. Paul (ex Dudley & Dowell); electric wiring to ramp and supply of conduit and fittings, Supreme Electrical Supplies.

Announcements

Mr. A. Beaumont Owles, A.R.I.B.A., practising under the style of Bostock & Partners, has opened an office at Ide House, 12, Fife Road, Kingston-upon-Thames, where he will be glad to receive trade catalogues and literature. (No telephone has yet been installed.) His main office continues at Central Hall Buildings, Station Approach, Southall, Middlesex (Tel.: SOUthall 3491.)

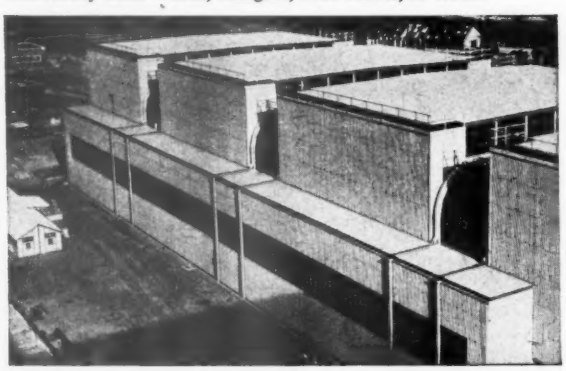
Mr. Granville F. Siegerts, F.I.A.A., M.INST.R.A., of 1, Electric Parade, Seven Kings Road, Ilford, Essex, has dissolved the partnership arranged between himself and Mr. Philip Lebor, DIP. ARCH., A.R.I.B.A. The practice will be known as Granville F. Siegerts, Architect and Surveyor.

Continuous Mill Motor Room in the Abbey Steel Works, Margam. Photo by courtesy of Williams & Williams Ltd.

DUST-PROOFING IN A STEEL WORKS

In the Abbey Steel Works at Margam, Port Talbot, built as a result of the foundation of the Steel Company of Wales Ltd., a 100% dust, water and draught proof mastic was required.
SECOMASTIC joint-sealing compound was chosen.
One of the chief applications of SECOMASTIC was on the internal screens in the main motor room, where a complete seal against dust penetration was essential.

The Abbey Steel Works, Margam, Port Talbot, S. Wales.*



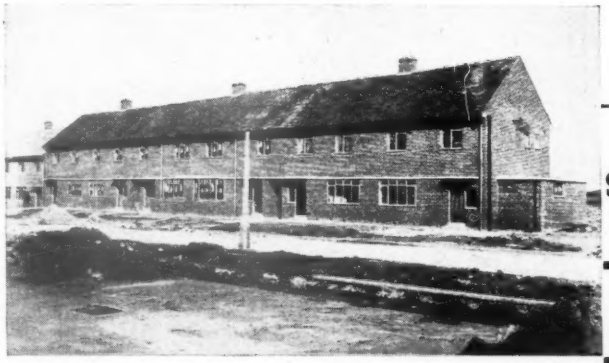
It was also used for sealing joints in the horizontal aluminium weatherings of the cascade glazing and for jamb weatherings where these abut brick or concrete work.
This particular job was, of course, of considerable size and involved the use of large quantities of SECOMASTIC. Our experts are equally pleased to assist in the solution of problems on a smaller scale. Just get in touch with our Architectural Department.

* Consulting Architects : Sir Percy Thomas & Son
Consulting Civil Engineers : W. S. Atkins and Partners

SECOMASTIC REGD.
JOINT SEALING COMPOUND

SECOMASTIC LIMITED, 15 UPPER GROSVENOR ST.
LONDON, W.1. *Telephone:* MAYFAIR 4027

A countrywide service for doors and windows



SUNDERLAND

The grand record of the many thousands of houses erected by this county borough has been assisted by the usage of Standard Joinery, Doors, Windows, etc., from our Bingley factory.

Borough Architect: Harvey C. Bishop, A.R.I.B.A.

Contractors: Sunderland Master Builders Federation.

NEWPORT

The joinery throughout all this magnificently designed housing estate was carried out exclusively by Magnet factories.

Borough Architect: Johnson Blackett, F.R.I.B.A.

Contractors: Amalgamated Building Contractors, Ltd.

LEWISHAM

The joinery for this splendidly designed block of flats was again specified and supplied by Magnet Joinery, Ltd.

Borough Architect: M. H. Forward, F.R.I.B.A., F.R.I.C.S.

Contractors: Rush & Thompkin Ltd., formerly Kent & Susse Contractors, Ltd.

For large undertakings you must have the facilities of a well-equipped organisation if you are to keep to a time schedule. Ample supplies of kilned and air-conditioned timber are always available together with sufficient stocks for instant delivery to cope with any emergency. Our highly skilled staff, working in three up-to-date factories, ensure that Magnet prices are right and will give every satisfaction.

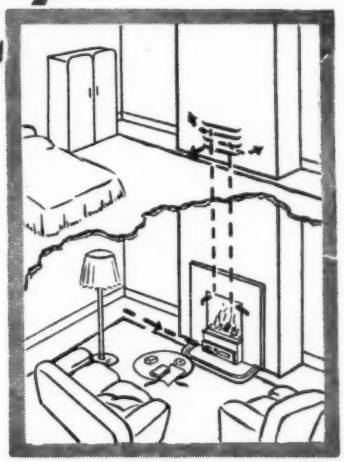
WHITLEY STREET,
BINGLEY, YORKS. Bingley 3547 (5 lines)

LOVE LANE,
ASTON, BIRMINGHAM. Aston Cross 3291/2

LONDON, ROAD
GRAYS, ESSEX. Tilbury 77 (5 lines)

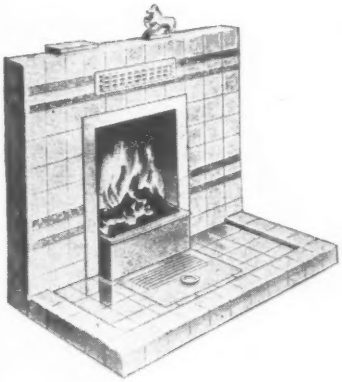
MAGNET
JOINERY LIMITED

The Modern Way of HEATING



"Convection Heat"—which really means warmed air—is the modern, economical *and* satisfactory *way of making the most of Solid Fuel and getting the best from the appliances. Briefly, clean air is heated round the back and sides of the fire and the now warmed air is then carried along suitable ducts or pipes to a grille in adjoining or upstairs rooms. If desired, the warm air can be directed into the room in which the fire is installed to provide* extra *heat.*

THE 'CAMELON' CONVECTOR FIRE



Two types of the Camelon Convector are available—the Under and Over Floor Models. Both give excellent radiant heat and distribute convection heat in much the same way as the Sofono Convector and are designed to burn continuously at a chosen rate on most types of solid fuel. Smoke emission is reduced by over 50% *and in the use of the underfloor model, room draughts are considerably reduced. An optional H.P. boiler provides up to* 9 *gallons per hour domestic purpose. A patent closure lid ensures all-night burning. Both are suitable for* 16″ *tile surrounds with* 22″—26″ *high fire openings or with cast iron mantel and hearth or cast iron interior frame.*

Vitreous enamelled in wide variety of colours. 12 *pp. booklet, Building in Instructions leaflet and price list on request.*

THE 'SOFONO' CONVECTOR FIRE

The Sofono Convector Fire is similar in appearance to the traditional type open fire. It is a continuous-burning, self-setting unit with the convector chamber formed by a cast iron jacket round the back, top and sides of the fire. The overall efficiency of this appliance is more than twice that obtained by a normal open fire. This efficiency is increased to 55%—60% *when a back boiler is fitted.*

The fire is prepared for either a pre-fabricated tile surround, a cast iron surround or hook-on C.I. Interior Frame to suit loose tiles slabbed on site. Finished in many popular shades of bright easily cleaned lustrous or vitreous enamels.

Complete details, diagrams and prices on request.

THE CAMELON IRON CO. LTD., FALKIRK
GRANGEMOUTH IRON CO. LTD., FALKIRK

ROAD KERB

Made strictly to British Standard No. 340 (1950)

Vibrated or Hydraulically Pressed of Granite or Gravel Aggregate. Tool-dressed to order.

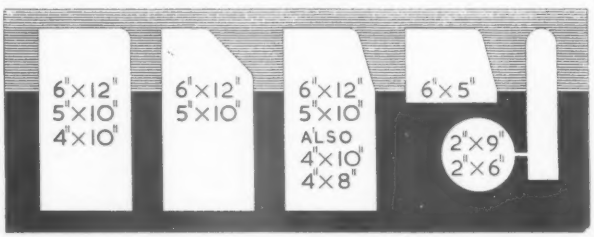
Section	Description	Approx. Weight
6" × 12" B.S. Fig. 1	Rectangular Bullnose	10½ yards per ton
5" × 10" ,, ,, 2	,, ,,	15 ,, ,,
4" × 10" ,, ,, 3	,, ,,	18½ ,, ,,
6" × 12" ,, ,, 4	Splayed Section	11 ,, ,,
5" × 10" ,, ,, 5	,, ,,	16½ ,, ,,
6" × 12" ,, ,, 6	Half Batter Section	10½ ,, ,,
5" × 10" ,, ,, 7	,, ,, ,,	15½ ,, ,,

Stocks, including Channel, Standard Radii and Quadrants are held at our Works at Willenhall, S. Staffs; Kidsgrove, N. Staffs; Iver, Bucks; Littlehampton, Sussex; Scunthorpe, Lincs; and Whitchurch, S. Wales. Full particulars and prices on request.

TARMAC LIMITED
VINCULUM DEPT.
ETTINGSHALL. WOLVERHAMPTON

Telephone: BILSTON 41101/8 (8 lines)

London Office: 50 Park St., W.1. 'Phone: GROsvenor 1422-5 (4 lines)



Checking luminous efficiency of G.L.S. lamps in an Integrating Sphere.

Take any number...

In mass production the batch number of a lamp is an important reference, as from every batch, during manufacture, a certain percentage of lamps is subjected to numerous tests. Statistical analysis of the results of these tests gives early warning of any tendency to drift from the desired standard in light output, mechanical strength, life etc. You can therefore, take any number of these lamps with the assurance of consistently high quality throughout.

METROVICK LAMPS

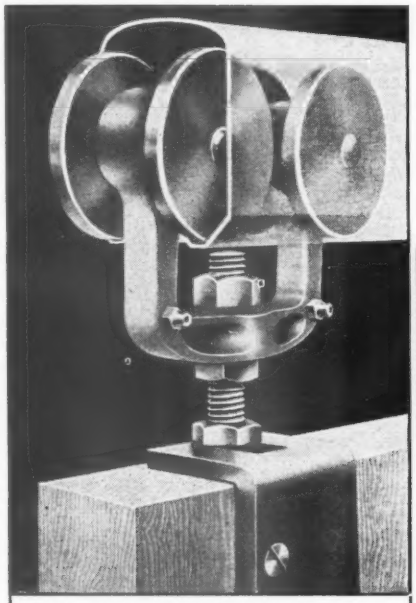
Quality controlled throughout manufacture

METROPOLITAN-VICKERS ELECTRICAL CO. LTD., ST. PAUL'S CORNER, 1-3 ST. PAUL'S CHURCHYARD, LONDON E.C.4

Member of the A.E.I. group of companies

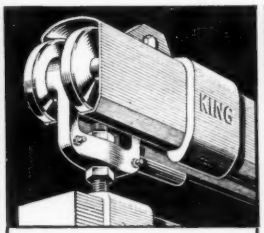
SA/103

KING SLIDING DOOR GEAR AT BRYNMAWR

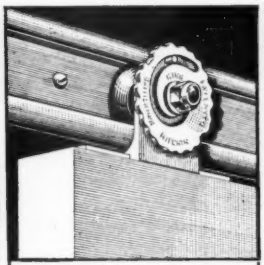


EVERY DETAIL OF DESIGN *in a Kingway door hanger helps to ensure effortless glide and long life. Note the bearing lubrication nipples; the ease of vertical and lateral adjustment; the flat wheel treads which spread the load at the wearing surface.*

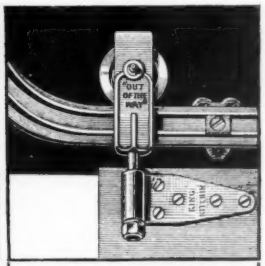
KING DOOR GEAR is playing its part at the Brynmawr Rubber factory; doors are moving smoothly and with space-saving efficiency. From light domestic doors to power-operated giants there's a KING door set for every need. Every set embodies 'plus' features developed by solid engineering experience and proved in thousands of installations. Specify KING door gear and you get basic advantages in design, material, workmanship and finish that mean silky-smooth action and long, trouble-free life.



KING TUBULAR TRACK in six sizes for straight doors up to 2-tons, or for folding or around-the-corner doors to 5-cwts. per leaf.



KING 'HOMESTIC' TRACK light alloy for straight-sliding doors in modern homes, hotels, hospitals.

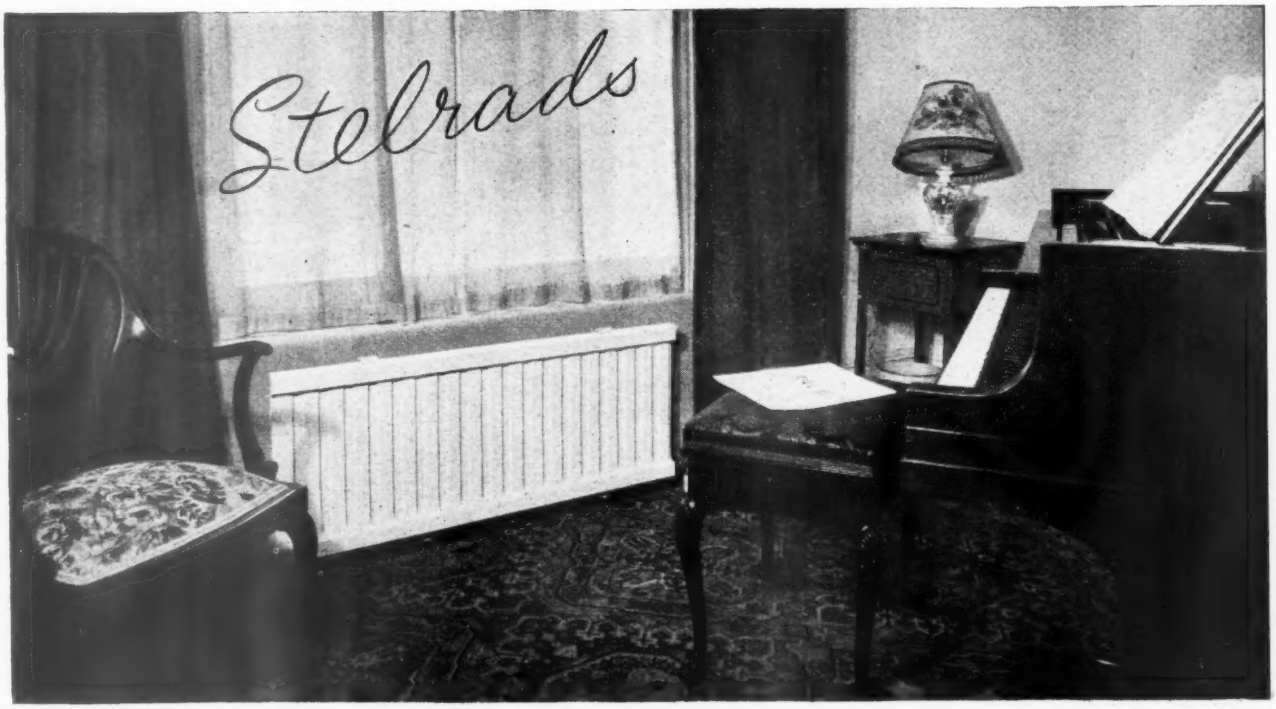


KING MAJOR TRACK for folding or around-the-corner doors up to 3-cwts. per leaf.

TO ARCHITECTS AND BUILDERS. We welcome your enquiries and our technical staff is always at your service. Please write for illustrated booklets.

KING **SLIDING DOOR GEAR**

GEO. W. KING LTD. 201 WORKS, HITCHIN, HERTS. AND AT STEVENAGE. TEL: HITCHIN 960



Photograph by courtesy of Ideal Home Magazine

STEEL RADIATORS LTD

STELRAD WORKS • BRIDGE ROAD • SOUTHALL

Telephone: SOUTHALL 2603/4 Telegrams: STELRAD, PHONE, SOUTHALL

CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

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

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

AIR MINISTRY WORKS DEPT.
ARCHITECTURAL DESIGNER/DRAUGHTSMEN required in Designs Branch by Air Ministry Works Department. Applicants should have had several years' experience in the preparation of working drawings, details and layouts for permanent and semi-permanent buildings. Vacancies are mainly in London, but there are some in the provinces. Salaries are on ranges up to £675 per annum, with starting pay dependent upon age, qualifications and experience. Applications, stating age, qualifications, previous appointments (with dates), should be sent to the nearest local Employment Exchange. 5162

BRADFIELD RURAL DISTRICT COUNCIL.
ASSISTANT IN THE HOUSING DEPARTMENT.
Applications are invited for the above appointment at a salary according to Grade I of the A.P.T. Division, commencing at £440 per annum, increasing annually by £15 to £485.

The appointment is superannuable, and the successful applicant will be required to pass a medical examination.

Applicants must possess a good practical knowledge of the preparation of building quantities.

Applications, giving full personal particulars with details of present appointment and experience, must be delivered to the undersigned not later than Tuesday, 25th March, 1952. Applicants should state the names of not more than two referees as to character and ability.

Canvassing in any form, either directly or indirectly, will be a disqualification.

H. A. CHAMP,
Clerk of the Council.
Council Offices, 26, Bath Road, Reading. 6498

SURREY COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
Applications are invited for the appointment of ASSISTANT QUANTITY SURVEYOR, Grade VI, at a commencing salary of £645 per annum, rising by annual increments of £20/£25 to a maximum of £710 per annum, plus London allowance of up to £30 per annum according to age.

Preference will be given to applicants who are Members of the Royal Institution of Chartered Surveyors (Quantities Sub-Division), and who have adequate experience in the preparation of Bills of Quantities, site measuring, and in settlement of final accounts.

The appointment will be subject to the provisions of the Local Government Act, 1937, and the successful applicant will be required to pass a medical examination.

Applications, stating age, qualifications and experience, and accompanied by copies of three recent testimonials, should be sent to The County Architect, Surrey County Council, County Hall, Kingston-upon-Thames, not later than the 28th March, 1952.

Canvassing, either directly or indirectly, will disqualify a candidate from consideration.

The Council will be unable to provide any housing accommodation, and the successful applicant will be expected to make his own arrangements in this direction.

T. W. W. GOODERIDGE,
Clerk of the Council.
County Hall, Kingston-upon-Thames. 6496

SALOP COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
APPOINTMENT OF SENIOR ARCHITECTS, A.P.T., GRADE VIII
(£737 to £810 per annum).

Applications are invited from suitably qualified persons for appointment to the Established Staff as SENIOR ARCHITECTS.

Applicants must have had experience in the design, construction and supervision of works for new education and/or General County Buildings.

An expenses allowance of not exceeding 30s. a week will be paid to married officers taking up these appointments, together with third-class return railway fare once a month to visit their families, such allowances to be limited to a period of six months or until such time as the officers are able to obtain accommodation for themselves and their families in Shropshire, whichever is the earlier.

Application forms may be obtained from the County Architect, C. H. Simmons, A.R.I.B.A., Dip.T.P., Column House, London Road, Shrewsbury, to whom they must be returned, accompanied by copies of three recent testimonials, not later than Thursday, 3rd April 1952.

G. C. GODBER,
Clerk of the Council.
Shrewsbury.
March, 1952. 6538

HOLLAND COUNTY COUNCIL.
COUNTY PLANNING DEPARTMENT.
Applications are invited for the following appointments in the Boston office of the Department:—

(*a*) CHIEF ASSISTANT PLANNING OFFICER. A.P.T., Grade VIII (£735-£810 per annum).

(*b*) PLANNING ASSISTANT. A.P.T., Grade IV (£530-£575 per annum).

Applicants for post (*a*) must have had wide technical and administrative experience of planning in county, urban and rural areas, including the preparation of Development Plans, and must be either Members or Associate Members of the Town Planning Institute: preference will be given to applicants holding additional professional qualifications in architecture, engineering or surveying.

Applicants for post (*b*) should have had good experience in planning survey and research work under current legislation, and should have passed the Intermediate Examination of the Town Planning Institute; further qualifications will be an advantage.

The appointments are subject to the provisions of the Local Government Superannuation Act, 1937, and the successful applicants will be required to pass a medical examination. For post (*a*) the successful applicant will be required to provide and maintain a motor car, for which allowance will be paid in accordance with the County Council's scale.

Applications, stating age, education, qualifications and experience, accompanied by two recent testimonials and the name of one person to whom reference may be made, should be sent to the undersigned, to arrive not later than 14 days after the publication of this notice. Canvassing, either directly or indirectly, will be a disqualification.

H. C. MARRIS,
Clerk of the County Council.
County Hall, Boston, Lincs.
1st March, 1952. 6487

COUNTY BOROUGH OF WEST HAM.
BOROUGH ARCHITECT AND PLANNING OFFICER'S DEPARTMENT.
Applications are invited for the following posts on the permanent establishment, in connection with the reconstruction programme of the County Borough:—

(*a*) SENIOR ASSISTANT ARCHITECT. A.P.T., Grade VIII (£735×£25—£810).

(*b*) ASSISTANT ARCHITECTS. A.P.T., Grade VI (£645×£20×£20×£25—£710).

(*c*) ARCHITECTURAL ASSISTANTS. A.P.T., Grades I/III (£440×£15—£485; £470×£15—£515; £500×£15—£545).

(*d*) SENIOR ASSISTANT (PLANNING). A.P.T., Grade VIII (£735×£25—£810).

(*e*) ASSISTANT (PLANNING). A.P.T., Grade VI (£645×£20×£20×£25—£710).

(London allowance in addition.)

Applicants for post (*a*) should be A.R.I.B.A., having considerable practical experience of Housing works, and should be capable of taking complete charge of Contracts.

Applicants for posts (*b*) should be A.R.I.B.A. or Registered Architects, and have had experience in large Housing works and be able to supervise Contracts.

Applicants for posts (*c*) should have had at least three years' practical experience in an Architect's office, and preference will be given to candidates who have passed the Intermediate Examination of the R.I.B.A.

Applicants for post (*d*) should be A.M.T.P.I., preferably with one other qualification, and should have administrative ability and good all round experience.

Applications for post (*e*) should be A.M.T.P.I., with administrative ability and experience in development control.

Application forms (returnable by 31st March, 1952) to be obtained from the Borough Architect and Planning Officer, Thomas E. North, F.R.I.B.A., 70, West Ham Lane, Stratford, E.15.

G. E. SMITH,
Town Clerk.
West Ham Town Hall, Stratford, E.15. 6521

LONDON COUNTY COUNCIL.
Vacancies for PLANNING ASSISTANTS (salaries up to £837 10s.). Professional qualifications: A.R.I.B.A., A.R.I.C.S. and/or A.M.T.P.I. required. Particulars and application form from Architect, County Hall, S.E.1, enclosing s.a.e., and quoting AR/EK/P/4. (219) 6479

BOROUGH OF DEVIZES.
ARCHITECTURAL ASSISTANT.
Applications are invited for the temporary appointment of Architectural Assistant in the office of the Borough Surveyor and Water Engineer to assist in the preparation of schemes for the Council's permanent housing programme, at a salary in accordance with Grade IV (A.P.T.) of the National Scale of Salaries (£530 p.a., rising by annual increments of £15 to £575).

Applicants should have had good experience in the preparation of schemes of Municipal Housing, and must be Registered Architects or have passed an examination of the Royal Institute of British Architects.

Forms of application and any further particulars may be obtained from and applications should be addressed to the Borough Surveyor and Water Engineer, The Chequers, Devizes, Wilts.

All applications should be received in an envelope endorsed "Architectural Assistant" by not later than noon on Tuesday, 15th April, 1952.

A. HODGE,
Town Clerk.
Midland Bank Chambers, Devizes, Wilts.
5th March, 1952. 6547

CORPORATION OF LONDON.
APPOINTMENT OF ARCHITECTURAL ASSISTANT—AUXILIARY STAFF
Applications are invited for the appointment of an Assistant within the range of the General Grade, maximum salary (including cost of living addition) £540 per annum at age of 30 years, commencing salary related to age by scale.

Applicants should have had good office experience and have passed or be preparing for Intermediate R.I.B.A. or R.I.C.S. Examination.

The appointed officer will require to pass a medical examination and to contribute to the Corporation's Superannuation Fund as maintained under the City of London (Various Powers) Acts, 1931 and 1950.

Applications, giving full personal details, particulars of qualifications, experience, age, past and present appointments, and the names of two persons to whom reference may be made, should be sent to the City Surveyor, Corporation of London, 55-61, Moorgate, London, E.C.2. 6540

METROPOLITAN BOROUGH OF WANDSWORTH.
CHIEF QUANTITY SURVEYOR.
Applications are invited for the above established post in the department of the Borough Engineer, Surveyor and Architect, at a salary in accordance with Grade A.P.T., IX (£820-£940 p.a.). The appointment will be subject to the Wandsworth Borough Council (Superannuation) Acts.

Applicants must be thoroughly experienced in the preparation of Bills of Quantities for all types of housing and public buildings, interim certificates, and final accounts, and preference will be given to Associates of the Royal Institution of Chartered Surveyors, or those holding an equivalent qualification.

Applications, stating qualifications and previous experience, and the names of three referees, should reach the undersigned, endorsed "Chief Quantity Surveyor," by 24th March, 1952.

R. H. JERMAN,
Town Clerk.
Municipal Buildings, Wandsworth, S.W.18.
7th March, 1952. 6527

COUNTY BOROUGH OF GATESHEAD.
APPOINTMENT OF TECHNICAL ASSISTANTS.
Applications are invited for the following appointments in the Borough Surveyor's Department:—

(*a*) ONE SENIOR TOWN PLANNING ASSISTANT, Grade VII (£685-£760), who must be qualified by examination in Town Planning, and preference will be given where a recognised qualification in Civil Engineering or Architecture is also held. Good experience in Town Planning and Redevelopment Work in built-up areas is necessary.

(*b*) TWO JUNIOR TOWN PLANNING ASSISTANTS, Grade IV (£530-£575), who should have had experience in the application of Town Planning Regulations and development control. Preference will be given to candidates holding the Intermediate Examination of the Town Planning Institute or possessing an approved equivalent qualification.

(*c*) ONE TOWN PLANNING BASIC SURVEY ASSISTANT, Grade I (£440-£485), who should have had experience in Surveying and Town Planning.

The above appointments, which are terminable by one month's notice on either side, are subject to the Local Government Superannuation Acts, and the successful candidates will be required to pass a medical examination.

Applications, stating age, qualifications, training, experience, present and past appointments, and accompanied by copies of not more than three recent testimonials, must be sent to Mr. A. J. McGregor, Borough Surveyor, Municipal Buildings, Swinburne Street, Gateshead, 8, by Saturday, 29th March, 1952.

Candidates must declare their relationship, if any, with any member or senior official of the Council.

J. W. PORTER,
Town Clerk.
Town Hall, Gateshead, 8.
10th March, 1952. 6529

MERIONETH COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
The Merioneth County Council invite applications for the appointment of ASSISTANT ARCHITECT, at a salary in accordance with Grade VI, A.P.T. Division of the National Joint Council Scale, commencing at £645 per annum and rising to £710 per annum, together with travelling allowance in accordance with the Council's scale.

Applicants should be Registered Architects and Associates of the Royal Institute of British Architects, with experience in preparation of surveys; design of buildings; preparation of working drawings, particularly school buildings, and supervision of buildings in course of erection.

The appointment will be subject to:—

(*a*) One month's notice on either side;

(*b*) the Local Government Superannuation Acts, 1937-39;

(*c*) the Council's Sick Pay Regulations;

(*d*) the successful candidate satisfactorily passing a medical examination by the County Medical Officer of Health.

Applications, endorsed "Assistant Architect," stating age, and present position, also giving particulars of qualifications, experience, and accompanied by copies of not more than two recent testimonials, must be forwarded so as to reach the undersigned not later than Saturday, the 12th day of April, 1952.

HUGH J. OWEN,
Clerk of the County Council.
County Offices, Dolgelley.
11th March, 1952. 6539

BRITISH ELECTRICITY AUTHORITY.
EAST MIDLANDS DIVISION.

Applications are invited for the following superannuable posts:—

28/52. CIVIL ENGINEERING DRAUGHTSMEN.

Candidates should preferably have had experience in:—

(*a*) Design and detail of steel frame buildings, bridge and gantries, etc., or

(*b*) design and detail of R.C. structures, piled and slab foundations for heavy plant, culverts, cable subways, etc., or

(*c*) general building construction, drainage and sanitation schemes, associated with offices and administrative buildings.

29/52. MECHANICAL ENGINEERING DRAUGHTSMEN.

Candidates should have had experience in the layout and installation of boiler and turbine auxiliaries, condensing plant, coal and ash handling plant, H.P. and L.P. pipework installations.

30/52. ELECTRICAL DRAUGHTSMEN.

Candidates should have had experience in the layout and installation of E.H.T. and L.T. switchgear, transformers, E.H.T. and L.T. cabling.

The salary for the above appointments will be within Grade V (£547-£651 p.a.), or Grade VI (£413-£547 p.a.), according to experience and qualifications.

Applications should be submitted on the official forms, which may be obtained from the Divisional Establishments Officer, British Electricity Authority, Barker Gate, Nottingham, and should be returned not later than 7th April, 1952. Please state Vacancy Number.

L. F. JEFFREY,
Divisional Controller.

7th March, 1952. 6525

CITY AND COUNTY OF NEWCASTLE-UPON-TYNE.
CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments in the Quantity Surveyor's Section:—

(*a*) ONE PRINCIPAL ASSISTANT QUANTITY SURVEYOR. A.P.T. Division, Grade VIII (£735-£810).

(*b*) ONE SENIOR ASSISTANT QUANTITY SURVEYOR. A.P.T. Division, Grade VI (£645-£710).

Candidates for appointment (*a*) must be thoroughly experienced in the preparation of Bills of Quantities for Housing, Flats, and building work of a general character. In addition, the post requires a Surveyor capable of assisting in the supervision of the Quantity Surveyor's Section under the direction of the Contracts Officer and Chief Surveyor. Candidates for appointment (*b*) must have had experience in the preparation of Bills of Quantities, specifications, estimates, and the settlement of final accounts on all kinds of building contracts. Preference will be given to professional Associates of the Royal Institution of Chartered Surveyors.

The appointments will be subject to the National Conditions of Service as adopted by the City Council, to the provisions of the Local Government Superannuation Act, 1937, and to one month's notice on either side. The successful candidates will be required to pass a medical examination.

Applications, stating position applied for, age, particulars of training, qualifications, experience, present and past appointments, together with copies 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, not later than the 31st March, 1952.

JOHN ATKINSON,
Town Clerk.

Town Hall, Newcastle-upon-Tyne, 1.
6th March, 1952. 6524

NEW TOWN OF CWMBRAN
(MONMOUTHSHIRE)
APPOINTMENT OF ASSISTANT ARCHITECT.

Applications are invited for the above post in the office of the Chief Architect (J. C. P. West, A.R.I.B.A., A.M.T.P.I.) on a salary range of £575 rising by increments of £25 to £700 per annum.

The commencing salary will be in accordance with the experience and qualifications of the successful candidate.

Applicants should have a very good general experience in house design, construction and layout and must be either Associates of the R.I.B.A. or Registered Architects.

The appointment is superannuable and the successful candidate will be required to furnish a medical certificate of fitness.

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

Applications, stating age, experience, details of present and past employment (together with applicable salaries) and the names and addresses of two referees, must reach the undersigned by Tuesday, 1st April, 1952.

Envelopes should be endorsed "Assistant Architect."

T. W. REES,
General Manager.

Victoria Street,
Cwmbran, Mon.
10th March, 1952. 6541

CORPORATION OF MANCHESTER.

City Architect's Department, Manchester. Applications are invited from suitably qualified persons for the following positions at salaries in accordance with the National Scheme of Service Conditions:—(*a*) TWO SENIOR ASSISTANT QUANTITY SURVEYORS. Salary: A.P.T., Grade VIII (£735-£810 per annum). (*b*) TWO ASSISTANT ESTIMATING AND MEASURING SURVEYORS. Salary: A.P.T., Grade VII (£685-£760 per annum). (*c*) ONE ASSISTANT QUANTITY SURVEYOR. Salary: A.P.T., Grade Va (£600-£660 per annum). (*d*) ONE BUILDER'S ESTIMATING SURVEYOR. Salary: A.P.T., Grade IV (£530-£575 per annum). (*e*) ONE ASSISTANT ARCHITECT. Salary: A.P.T., Grade V (£570-£620 per annum). All the foregoing appointments are on the permanent establishment. (*f*) ONE TEMPORARY ARCHITECTURAL ASSISTANT. Salary: A.P.T., Grade III (£500-£545 per annum). Further particulars and forms of application may be obtained from the City Architect, Town Hall, Manchester, 2, the forms to be returned to the same address by 5th April, 1952. Canvassing is prohibited. 6554

THE GLASGOW SCHOOL OF ARCHITECTURE.
DEPARTMENT OF TOWN PLANNING.
POST GRADUATE COURSE FOR THE DIPLOMA IN TOWN PLANNING.

The Diploma may be taken either as a full-time Day Course of one session (5 terms) or as a part-time Course of two sessions. The part-time Course involves a minimum attendance of two afternoons and three evenings per week. Both courses have been approved by the Town Planning Institute.

Only candidates who have qualified for the Degree or Diploma in Architecture or who have passed the Final Examination of the recognised professional body in (*a*) Architecture, (*b*) Engineering or (*c*) Surveying are eligible for admission.

A limited number of candidates, qualified as above, or who have passed the Intermediate Examination of the Town Planning Institute, may be admitted to lectures only in preparation for the external Final Examination of the Town Planning Institute.

Fees:—Full-time Day Course: £42, payable £10 10s. for summer term, £31 10s. for remainder of course.
Part-time Course: £21 per session.
Lectures only: Each subject £1 10s. per term.

The Courses will commence in the College on Monday, 7th April, 1952, at 5.30 p.m., when prospective candidates should present themselves for enrolment. Further particulars may be had from The Secretary (T.P.), The Royal Technical College, Glasgow. 6548

COUNTY BOROUGH OF BARNSLEY.
BOROUGH ENGINEER AND SURVEYOR AND PLANNING OFFICER'S DEPARTMENT.
APPOINTMENT OF ARCHITECTURAL STAFF.

Applications are invited for the following appointments:—

(*a*) GENERAL ASSISTANT ARCHITECT, A.P.T., Grade V (£570-£620).

(*b*) JUNIOR ARCHITECTURAL ASSISTANT, A.P.T., Grade II (£470-£515).

Applicants for post (*a*) should have good general experience in design and the carrying through of Building Contracts. Preference will be given to candidates who are A.R.I.B.A. If necessary, housing accommodation may be offered to the successful candidate.

Applicants for post (*b*) should be good draughtsmen and have experience in the layout of housing estates and the design of houses. Preference will be given to candidates who are in the course of becoming qualified.

The Council have a large programme of Housing and Public Buildings in hand, and the positions offer wide scope to persons with initiative.

The appointments will be subject to the Scheme of Conditions for A.P.T.C. Services, to the General Conditions of Service within the Corporation as varied from time to time, and to the provisions of the Local Government Superannuation Act, 1937.

The successful candidates will be required to pass a medical examination, and the appointments will be subject to one month's notice on either side.

Applications, stating age, present and previous appointments, experience and qualifications, etc., together with the names of two referees, should be addressed to the Borough Engineer and Planning Officer, Town Hall, Barnsley, to reach him not later than the 12th April, 1952.

Canvassing will disqualify, and applicants should disclose whether or not to their knowledge they are related to any member or senior officer of the Council.

(Sgd.) A. E. GILFILLAN,
Town Clerk.

Town Hall, Barnsley.
March, 1952. 6553

BOROUGH OF BARKING.
APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of Architectural Assistant on Grade A.P.T., I-V (at a commencing salary of £440 p.a.).

This salary is subject to the addition of London weighting.

Further particulars and form of application may be obtained from Mr. C. C. Shaw, B.Arch., F.R.I.B.A., Borough Architect, Town Hall, Barking, Essex. Completed applications should reach the undersigned not later than 31st March, 1952.

E. R. FARR,
Town Clerk.

Town Hall, Barking. 6551

METROPOLITAN BOROUGH OF FULHAM.
ASSISTANT ARCHITECT.

Applications are invited for this appointment in the Architectural Section of the Housing and Public Buildings Department.

Salary: A.P.T., Grade IV/V, £530-£620 per annum, plus London weighting of £20 per annum (21 to 25 years) or £30 (26 years and over).

Applicants should either have passed the R.I.B.A. Intermediate Examination (or its equivalent), and have worked for at least two years in an architectural office, or be Registered Architects. The applicant's qualifications and experience will be taken into account in fixing the commencing salary.

The successful applicant will be employed in connection with the planning, design and execution of large schemes of Flats and Public Buildings. Lack of previous experience in a Municipal office will not debar applicants from consideration.

Applications, on forms obtainable from me, to be returned by 1st April, 1952.

CYRIL F. THATCHER,
Town Clerk.

Town Hall, Fulham, S.W.6. 6546

CITY OF ST. ALBANS.
ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of an Architectural Assistant in the Department of the City Engineer and Surveyor (Grade A.P.T., II, £470-£515 per annum).

Candidates must be suitably trained, good draughtsmen, and have had experience in the design and layout of housing contracts.

Consideration will be given to the provision of housing accommodation.

The appointment, which is terminable by one month's notice, and is for a period of not less than 2 years, will be subject to the National Scheme of Conditions of Service of Local Government Officers, to the Local Government Superannuation Act, 1937, and medical examination.

Applications, stating age, qualifications, present and past positions and experience, together with names of two persons to whom reference can be made, should be sent to the undersigned, to arrive not later than 4th April, 1952.

W. B. MURGATROYD,
Town Clerk.

38, St. Peter's Street, St. Albans.
March, 1952. 6552

LONDON COUNTY COUNCIL.
HAMMERSMITH SCHOOL OF BUILDING AND ARTS AND CRAFTS.

Applications invited for inclusion on panel of suitably qualified visiting TEACHERS for September next in following subjects:—

(1) ARCHITECTURE: Design, draughtsmanship, history and theory of architecture.

(2) BUILDING: Construction, science, geometry, brickwork, carpentry and joinery, heating and ventilating mathematics, maintenance and repair of building mechanics, plastering, plumbing, specifications, estimating and costing, woodcutting machinists' work.

(3) INTERIOR DESIGN.

(4) STRUCTURAL ENGINEERING: Mathematics, mechanics, steelwork and reinforced concrete, theory of structures, etc.

(5) SURVEYING: Land surveying, quantity surveying.

Applicants should state subjects offered on forms obtainable from Secretary, at the school, Lime Grove, W.12, returnable not later than 30th April, 1952. (268) 6555

NATIONAL COAL BOARD—WEST MIDLANDS DIVISION.

Required CLERK OF WORKS, Grade I. Salary scale: £550 × £25 to £700.

Applicants must have a sound knowledge of all building trades and also good experience in reinforced concrete work, drainage, heating and electrical installations, water treatment and sewage purification plants, and also preparation of reports and supervision of contracts.

The post will be superannuable, and headquarters are expected to be in the Stafford/Cannock area. Commencing salary will depend on qualifications and experience.

Applications, giving age, education, qualifications and experience, should be made as soon as possible to the Divisional Establishment Officer, National Coal Board, Himley Hall, Dudley, Worcs.

Envelope should be marked "C. of W." 6528

Architectural Appointments Vacant

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

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

ARCHITECT, with good knowledge of Quantities, required as CHIEF ASSISTANT. Partnership prospects. Reply with full details, giving age, qualifications and experience, to Box 6464.

EAST AFRICA.—ARCHITECTURAL ASSISTANTS of Intermediate and Final R.I.B.A. standard required for interesting work. Free housing. Salary according to experience and ability. Airmail full particulars to H. G. Radford, A.R.I.B.A., & Partners, P.O. Box 1500, Kampala, Uganda. 6473

ASSISTANT wanted for Architect's Branch Office at Andover, Hants. Must have had three or four years' training. Box 6556.

ARCHITECTURAL ASSISTANT, with not less than a year's experience (preferably on housing), is required by Fry, Drew, Drake & Lasdun. Applicants should write, giving details of qualifications, experience, salary, etc., to 63, Gloucester Place, W.1. 6558

ARCHITECTURAL ASSISTANT required immediately for small private office. Varied and interesting work. Salary according to experience and qualifications. Apply by letter, with all particulars, to Robert C. Carvell, L.R.I.B.A., 3a, Charlotte Street, Perth, Scotland. 6549

ARCHITECT in South-west London requires ASSISTANT, age about 25-30, used to busy office and capable of preparing eighth scale working drawings and details for large projects. Full particulars, age and salary required to Box 6534.

Architectural Appointments Wanted

ASSISTANT, age 22, with 3 years' office experience, seeks position in London architect's office. Box 404.

A.R.I.B.A. (age 40) requires position in managing capacity. For the past 5 years has had the sole responsibility for a company's architectural work in the London area—light industrial and commercial, war damage and new work. Conversant with modern procedure and legislation. Box 405.

QUALIFIED ARCHITECT (A.R.I.B.A.), with considerable experience of many types of architectural projects, has held positions of responsibility, seeks Senior position with firm in or near London offering interesting and responsible work. Salary required, £800 per annum. Box 6511.

CHARTERED ARCHITECT, with experience of many types of architectural works involving complete responsibility and initiative, seeks part-time position of three or four days per week with firm in or near London. Salary by arrangement. Box 6512.

A.R.I.B.A., 18 years' experience, seeks post as SENIOR ASSISTANT (London or Southern Counties). Box 6518.

A.R.I.B.A. available for part-time assistance to other Architects. Box 6519.

YOUNG South African Student (4th year Diploma), with 2 years' office experience in South Africa, seeks 6 months' position in London Architect's office. Box 411.

ASSISTANT (25), 1½ years' office experience, passed R.I.B.A. Final, requires position in private office, London or Home Counties. Scott, 13, St. Georges Square, S.W.1. 416

WOMAN ARCHITECT, A.R.I.B.A., A.A.Dipl., 18 months' office experience, ¼ scale plans and working drawings, secretarial training, seeks work in London area or provinces. Box 415.

ASSISTANT, having Thesis to submit for recognised diploma; two years' office experience (London and provincial), seeks position in London office. Box 412.

ASSOCIATE (33) requires appointment, preferably in small office. Experienced in housing, industrial, and general practice, including full negotiations, design, and control of contracts in London area. Box 413.

ARCHITECTURAL ASSISTANT, A.R.I.B.A. (27), just arrived from South Africa, seeks appointment with architects of contemporary outlook in London area. Three years' office experience in well-known Johannesburg office. Experience in sketch designs and working drawings of houses, flats, shops, schools, office, and industrial buildings. Box 414.

Other Appointments Vacant

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

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

APPLICATIONS are invited by Gas Chambers & Coke Ovens, Ltd., for the positions scheduled herewith. All posts are pensionable and offer good prospects to ambitious men. A five-day week of 38 hours is in operation. Applicants should state age and give brief particulars of experience. All applications will be treated in strict confidence. Assistance will be given to successful applicants to obtain suitable housing accommodation.

(*a*) SENIOR REFRACTORY BRICKWORK DESIGNERS, experienced in design of Intermittent Chambers and/or Coke Ovens. Salary: from £600, according to ability and experience.

(*b*) JUNIOR DRAUGHTSMEN, as above. Accustomed to detailing Refractory Brickwork. Salary: from £350, according to experience. Applications should be addressed to the Secretary, Gas Chambers & Coke Ovens, Ltd., Chandos House, Buckingham Gate, Westminster, London, S.W.1. 6447

"THE ARCHITECTS' JOURNAL" requires a JUNIOR DRAUGHTSMAN, to assist in the preparation of final ink drawings for Information Sheets and Working Details. Good draughtsmanship, a knowledge of building construction, and a keen interest in the above type of work are necessary. Write to the Editor (Information Sheets), 9, Queen Anne's Gate, S.W.1, stating age, architectural training, and experience (if any). 6501

SHORTHAND-TYPIST required, aged 25-35, in Architect's and Surveyor's office, large commercial company, Mayfair; 9.30-5.30. Salary £335 and free lunches. Box 6532.

WEST GERMANY.—Frankfurt Architect wants SECRETARY. Some German essential. Interview London. Box 6550.

Partnership

6 lines or under, 12s. 6d.; each additional line, 2s.

QUALIFIED ARCHITECT, with experience of surveying and all branches of architectural practice and procedure, having held positions of responsibility, seeks Partnership or position leading thereto, in London or surrounding districts. Small number of own clients and capital available. Box 6509.

A.R.I.B.A., Dipl.T.P.(Lon.), M.R.San.I., 10 years' varied experience, seeks Partnership or position leading thereto offering scope for initiative and hard work with commensurate remuneration. Preferably Southern England. Box 6533.

Services Offered

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

CHARTERED ARCHITECT, with small but growing practice in London, offers his services in connection with work on all types of Architectural projects and surveys for house purchase and dilapidation settlements. All commissions will be given special and speedy attention. Box 6510.

DRAUGHTSMANSHIP, Designing and Artistry for all trades and professions. C. Leslie New, Architectural Designer, 46, Westfield Road, Birmingham, 15. 'Phone: EDG. 3723. 6514

QUALIFIED ENGINEERS are able to undertake Reinforced Concrete and Steel Designing. Box 6516.

QUALIFIED BUILDING SURVEYOR (22), awaiting National Service, seeks temporary post or even part-time work in Architect's or Surveyor's office. Able to prepare working drawings and details, specifications, schedules, and check accounts. Box 6559.

QUANTITY SURVEYORS—Eastburns, 24, Weymouth Street, W.1, Langham 9178/9—prepared to see building works through to completion including development charges, all consents, licences, etc. 6531

CHARTERED ARCHITECT requires spare or part-time work—surveys, design, research, reports, W.D. schedules, etc., also structural or R.C. design. Strictest confidence. Box 6537.

PERSPECTIVES in any medium prepared by experienced Associate (London). Preliminary sketches submitted if required. Moderate fees. Box 6542.

QUALIFIED ENGINEER, wide experience, seeks part-time employment. Own board available. Box 6544.

For Sale or Wanted

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

ARCHITECTURAL Practice for Sale in Northern Ireland, with good varied connection, including churches, schools, industrial premises, houses, etc. Excellent office accommodation in very central position, with exceptionally low rental. Enquiries in first instance to Box 6557.

SALE.—David Joel Mahogany Sideboard, as new; £17. Seen Uxbridge. Write Box 6545.

FOR SALE at less than cost.—Unused No. 1 "Empire" Gas Water Heater with 7-day clock controller and relay valve; £40. Glass, Elgin House, Heath Road, Weybridge. Phone 633. 6530

BUILDERS LEVEL, 3 screw, tripod, 10 ft. staff, case; all as new; £25. Underwood Portable Typewriter, £10. Write Box 6560.

Miscellaneous

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

A. J. BINNS, LTD., Specialists in the supply and fixing of all types of Fencing, Gates and Cloakroom Equipment. Harvest Works, 96/107, St. Paul's Road, N.1. Canonbury 2061.

WINKFIELD MANOR NURSERIES, ASCOT, lay out Rock and Formal Gardens and Labourless "Allweather" Tennis Courts. Eight Chelsea Gold Medals since 1947. Contractors to the Festival of Britain. Winkfield Row 393. 1716

HOTELS

DOUGLAS (I.O.M.).—HOTEL METROPOLE. Tel. 2381. Fully licensed. Resident orchestra. Ballroom. Room service. Manx farm produce. 'Phones all rooms. Ideal Holiday. Moderate tariff. Brochure apply I. Barker. 6502

ASSOCIATE gentleman, aged 38, wishes find other gentleman share his Hampstead flat; artificial daylight lighting available. Telephone Primrose 2093 or at work Whitehall 1212 extension 332. Write Box 6535.

ARTISTS HOUSE EXHIBITION. From Abstract Art to New Realism. Sculpture, Murals by Peri. Manette Street (Charing Cross Road) 11-6 daily including Saturdays until 4th April. 6452

AUTHORS invited to submit MSS all types (including Poems) for publication. Stockwell Ltd., Elms Court, Ilfracombe. (Estd. 1898.) 6543

FENCING FOR ALL PURPOSES supplied and erected. Established over 100 years. Cloakroom equipment also a speciality. Write Parker, Winder & Achurch Ltd., 80, Broad Street, Birmingham, 1. (MIDland 5001.) 6526

Educational Announcements

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

R.I.B.A. and T.P.I. EXAMS.—Stuart Stanley (Tutor Sch. of Arch., Lon. Univ.) and G. A. Crockett, M.A./B.A., F./A.R.I.B.A., M./A.M.T.P.I. (Prof. Sir Patrick Abercrombie in assn.) prepare Students by correspondence tuition. 10, Adelaide Street, Strand, W.C.2. TEM. 1603/4.

RIBA INTER, FINAL & SPECIAL FINAL

Postal Courses starting now in all or any subject including Design and Professional Practice.

THE ELLIS SCHOOL

Principal: A. B. Waters, M.B.E., G.M., F.R.I.B.A.

103B, OLD BROMPTON RD., LONDON, S.W.7

Phone: KEN 4477/8/9 *and at Worcester*

IRISH SHELL LIMITED

INVITE ARCHITECTS

TO

SUBMIT DESIGNS

FOR

PETROL FILLING

AND

SERVICE STATIONS

★

The competition is in two sections:

(i) a country service station;
(ii) a suburban service station.

The assessors will be MR. GERALD MCNICHOLL, B.Arch., F.R.I.A.I., A.M.T.P.I.; MR. MICHAEL O'BRIEN, B.E., M.T.P.I., A.M.I.C.E.I.; and MR. MICHAEL SCOTT, F.R.I.A.I.

The premiums in each section are:

To the author of the design placed FIRST by the assessors **£200**

To the author of the design placed SECOND by the assessors .. **£100**

The last day for submitting designs is the 30th April, 1952.

Conditions may be obtained on payment of a deposit of £1 1s. 0d. on application to

IRISH SHELL LTD.

IRISH SHELL HOUSE,

13/16 FLEET STREET, DUBLIN, C.4

Please mark application "Architectural Competition" on top left hand corner of the envelope.

QUANTITY SURVEYING

Postal Courses for R.I.C.S., I.A.A.S., and I.Q.S. Exams. in all or any subject starting now. Tuition by well qualified tutors under the direction of the Principal: A. B. Waters, M.B.E., G.M., F.R.I.B.A. Descriptive booklet on request.

THE ELLIS SCHOOL

103B, OLD BROMPTON RD., LONDON, S.W.7

Phone: KEN 4477/8/9 *and at Worcester*

SIGNS and LETTERS

IN METAL, WOOD, PERSPEX.
PRODUCED IN OUR OWN UP-TO-DATE WORKSHOPS BY SKILLED CRAFTSMEN BUILT TO YOUR SPECIFICATION.

SIGN SERVICE 9, HIGH SREET, BIRMINGHAM 23

Phones: Erdington 5234/5

WHITE FACING

BRICKS

(S. P. W. BRAND)

Telephone: BULwell 78237-8 ● Telegrams: "Maclime", Bulwell, Nottingham.

M. McCARTHY & SONS, LTD

BULWELL ● NOTTINGHAM

Towards better CATALOGUES

You don't have to suffer in silence every time you get a catalogue that annoys you because it doesn't give the information you want, or doesn't give it in a convenient form.

If you care to let us know of any sub-standard catalogues that you receive we shall be pleased to contact the manufacturers concerned and explain to them how the information about their products should be presented in order to be of maximum value to the user.

We have done our bit, over the last fifteen years, towards raising the standard of building trade publicity and will gladly produce to those interested evidence of our efforts.

BIS

Building Industries Service

90, EBURY STREET, LONDON, S.W.1

Telephone: Sloane 0474

A FIRST CLASS TRACING CLOTH

MARKSMAN

MANUFACTURERS

J. N. HOPKINSON LTD.

16 JOHN DALTON ST., MANCHESTER 2

LIGHTNING PROTECTION *By* **FURSE**

W. J. FURSE & CO., LTD.

10, TRAFFIC STREET, NOTTINGHAM.

LONDON—MANCHESTER—BRISTOL

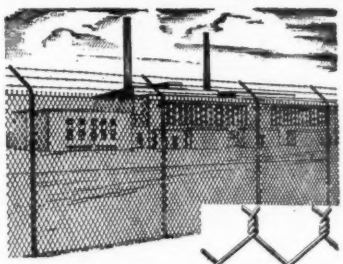
IMPORTED STEEL AND CAST IRON WINDOW FRAMES

DELIVERY ONE MONTH

MINGERS & CO. LTD.

163 Tankerton Road, Whitstable.

Whitstable 2815



CHAIN LINK FENCING

A complete service

BOULTON AND PAUL LIMITED

NORWICH

CRC 1

KISOL VERMICULITE

ROOFING SCREED

FOR LIGHT WEIGHT, LOW COST, HIGH INSULATION VALUE

for details and technical data write to:—WM. KENYON & SONS LTD · DUKINFIELD · CHESHIRE

V5

Alphabetical Index to Advertisers

For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Educational, Legal Notices, Miscellaneous Property, Land and Sales, see lxxiv, lxxvi, lxxv, lxxvi, lxxvii

Printed in Great Britain for the Proprietors of "THE ARCHITECTS' JOURNAL" (The Architectural Press Ltd.), 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, by HARRISON & SONS LTD., Printers to His late Majesty King George VI, London, Hayes (Middx.), and High Wycombe.