THE ARCHITECTS' JOURNAL

standard contents

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

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THE ARCHITECTURAL PRESS

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★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ig one week, Ih 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. 1, 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
ARCUK	Architects' Registration Council. 78, Wimpole Street, W.1.	Welbeck 2915
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Langh[illegible]5721
BATC	Building Apprenticeship and Training Council. Lambeth Bridge House, S	Reliance 7611, Ext. 1706
BC	Building Centre. 26, Store Street, Tottenham Court Road, W.C.1.	Museum 5400
BCC	British Colour Council. 13, Portman Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 105, Uxbridge Road, Ealing, W.5.	Ealing 9621
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 10, The Boltons, S.W.10.	Fremantle 8494
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C2.	Glasgow Central 2891
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Whitehall Gardens, Horseguards Avenue, Whitehall, S.W.1.	Trafalgar 8855
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 4040
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. British Standards House, 2, Park St., W.1.	Mayfair 9000
BTE	Building Trades Exhibition. 32, Millbank, S.W.1.	Tate Gallery 8134
CABAS	City and Borough Architects Society. C/o Johnson Blackett, F.R.I.B.A., Civic Centre, Newport, Mon.	Newport 65491
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.	Belgravia 6661
CCP	Council for Codes of Practice. Lambeth Bridge House, S.E.1.	Reliance 7611 Ext. 1284
CDA	Copper Development Association. 55, South Audley St., W.1.	Grosvenor 8811
CIAM	Congrès Internationaux d'Architecture Moderne. Doldertal, 7, Zurich, Switzerland.	
COID	Council of Industrial Design. 28, Haymarket, S.W.1.	Trafalgar 8000
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.1.	Sloane 4280
CUC	Coal Utilization Council. 3, Upper Belgrave Street, S.W.1.	Sloane 9116
CVE	Council for Visual Education. 13, Suffolk Street, Haymarket, S.W.1.	Reading 72255
DGW	Directorate General of Works, Ministry of Works, Lambeth Bridge House, S.E.1.	Reliance 7611
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Whitehall 0540
DPT	Department of Overseas Trade. Horseguards Avenue, Whitehall, S.W.1.	Trafalgar 8855
EJMA	English Joinery Manufacturers' Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Regent 4448
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architects and Surveyors. 68, Gloucester Place, W.1.	Welbeck 9966
FASS	Federation of Association of Specialists and Sub-Contractors, Artillery House, Artillery Row, S.W.1.	Abbey 7232
FBBDO	Fibre Building Board Development Organization, Ltd. (Fidor), 47, Princes Gate, Kensington, S.W.7.	Kensington 4577
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	Regent 0221
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 4341
GPDA	Gypsum Plasterboard Development Association, 11, Ironmonger Lane, E.C.2.	Monarch 8888
GC	Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
GG	Georgian Group. 2, Chester Street, S.W.1.	Belgravia 3081
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 29, Belgrave Square, S.W.1.	Belgravia 3755
ICA	Institute of Contemporary Arts. 17–18 Dover Street, Piccadilly, W.1.	Grosvenor 6186
ICE	Institution of Civil Engineers. 1, Gr[illegible]at George Street, S.W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers. [illegible]avoy Place, Victoria Embankment, W.C.2.	Temple Bar 7676
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1.	Abbey 5215
IGE	Institution of Gas Engineers. 17 Gro[illegible]nor Crescent, S.W.1.	Sloane 8266

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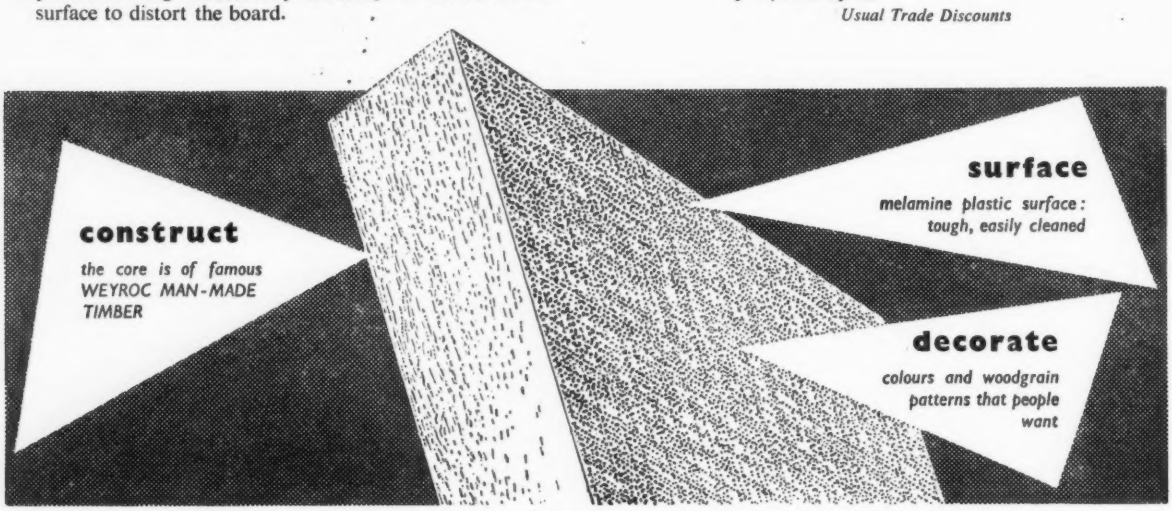

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RADIAL
SLIDING DOOR GEAR

Illustration on left shows ELLARD "Radial" Sliding Door Gear fitted to a private garage. Sliding doors are of great advantage in protecting cars against damage caused by accidental swinging of hinged doors. In addition, valuable working space is offered where it is most desired, at the entrance to the garage. Note also how ELLARD Door Gear provides easy access to and from the garage by a personal entry door. ELLARD "Radial" Sliding Door Gear is low in price and gives long service without maintenance. This gear is also suitable for the larger openings of commercial and industrial garages.

OVERDOR
GARAGE DOOR GEAR

ELLARD "Overdor" Gear, illustrated on right, represents the best method of operating an overhead type door, and it requires the minimum space, fixing time and maintenance. An entirely clear threshold is achieved, and both side walls are available for windows or shelves. "Overdor" Gear is designed for doors from 6ft. to 7ft. 3in. high and up to 200 lbs. in weight. The door is safely balanced and can be opened and closed with ease. The width of the door is not critical, but the construction should ensure that the door does not sag when in the raised horizontal position, and we suggest a maximum width of 10ft. The balance springs impose a compression force along the iambs, thus relieving the building of all stress until the door is raised, when less than half the weight of the door is supported by the twin top tracks. ELLARD "Overdor" is therefore especially suitable for lightly constructed buildings.

Immediate delivery of ELLARD "Estate", "Radial" and "Overdor" Sliding Door Gear can be obtained from ironmongers and builders' merchants throughout the country.

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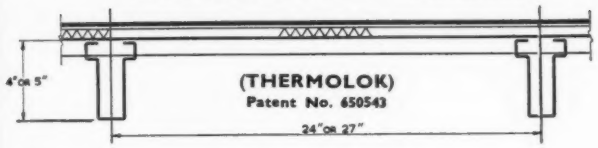
flat or sloping roofs

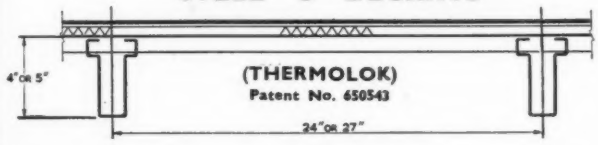
ALUMINIUM 'B' DECKING



Weight, 4½-lb. per ft. super fixed complete. Thermal Transmittance 'U' = 0·32. Standard Spans: 10ft., 11ft., 12ft. and spans up to 15ft. using Multi-Span system. Where required, can span from truss to truss eliminating purlins.

Flexible design permits variation to meet all requirements. Dry construction and top-fixing provides speedy erection. Finish—natural aluminium.

STEEL 'C' DECKING

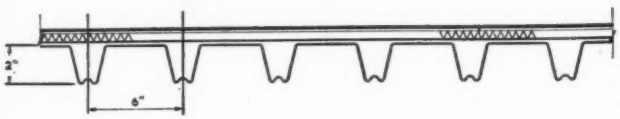


Similar in design to 'B' Decking, but units in steel instead of aluminium.

Weight, 6-lb. per ft. super fixed complete. Thermal Transmittance 'U' = 0·32. Standard Spans: 8ft., 9ft., 10ft., 11ft., 12ft. and spans up to 15ft., using Multi-Span system.

Finish—Galvanised or Red Oxide.

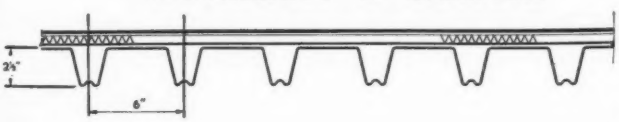
STEEL 'D' DECKING



Weight, 5½-lb. per ft. super fixed complete. Thermal Transmittance 'U' = 0·32. Standard Spans: 6ft., 7ft., 8ft., 9ft., 10ft. for 2in. depth. 3ft. 4in., 4ft. 4ft. 6in., 5ft. for 1in. depth.

Units 24in. wide by 2in. depth in 22- and 20-gauge. Also available in 1in. depth, mainly for sloping roofs on spans up to 5ft. Positive top fixing by hammer drive screws provides good anchorage, speedy erection and early protection for trades working below. Finish—Galvanised or Phosphated and Red Oxide.

ALUMINIUM 'E' DECKING

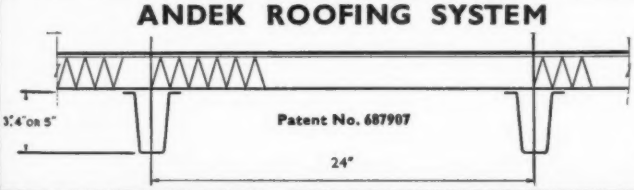


Similar in design to 'D' Decking.

Weight, 4-lb. per ft. super fixed complete. Thermal Transmittance 'U' = 0·32. Standard Spans: 7ft., 8ft., 9ft., 10ft. for 2½in. depth. 3ft. 4in., 4ft. 4ft. 6in., 5ft. for 1in. depth.

Units 24in. wide by 2½in. depth in 18-, 19- and 20-gauges. Also available in 1in. depth mainly for sloping roofs on spans up to 5ft. Finish—natural or embossed.

ANDEK ROOFING SYSTEM



Weight, 14-lb. per ft. super using wood wool, 6-lb. using straw board. Thermal Transmittance 'U' = 0·21. Insulation is continuous over points of support. Standard Spans: 8ft., 10ft., 12ft. and longer spans, using the Multi-Span system. Where required, can span from truss to truss, eliminating purlins.

The standard system incorporates 2in. heavy duty wood wool finished with a ½in. cement sand screed. Other insulating slabs such as straw board may be used as required. Finish of Andek Bars—Galvanised.

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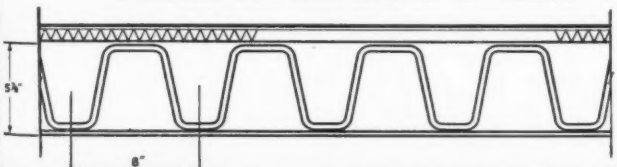

Weight, 12½-lb. per ft. super. Thermal Transmittance 'U' = 0·2. Standard Spans: 6ft., 7ft., 8ft., 9ft., 10ft.

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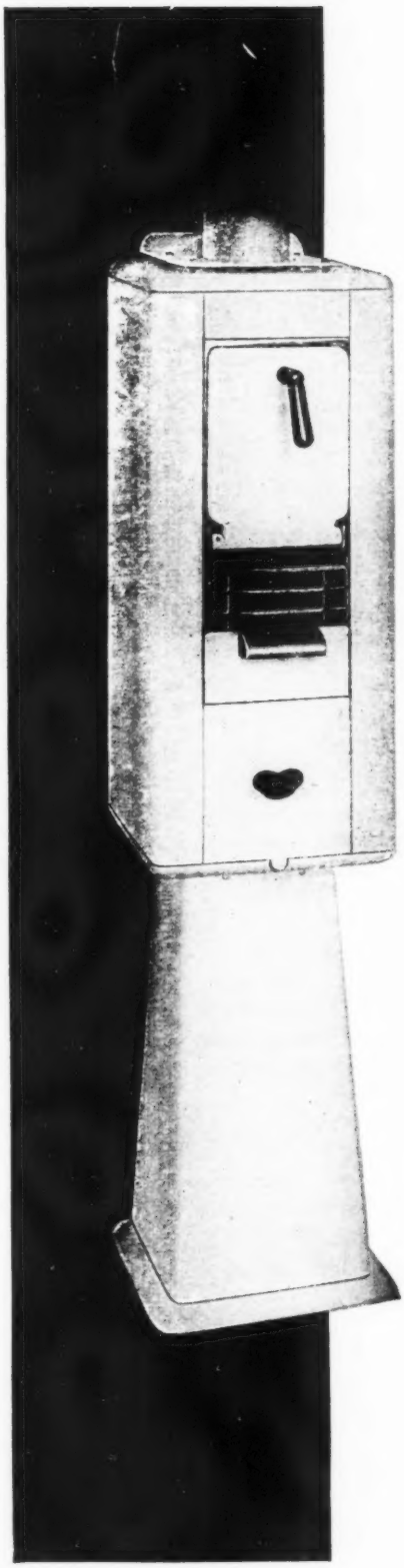

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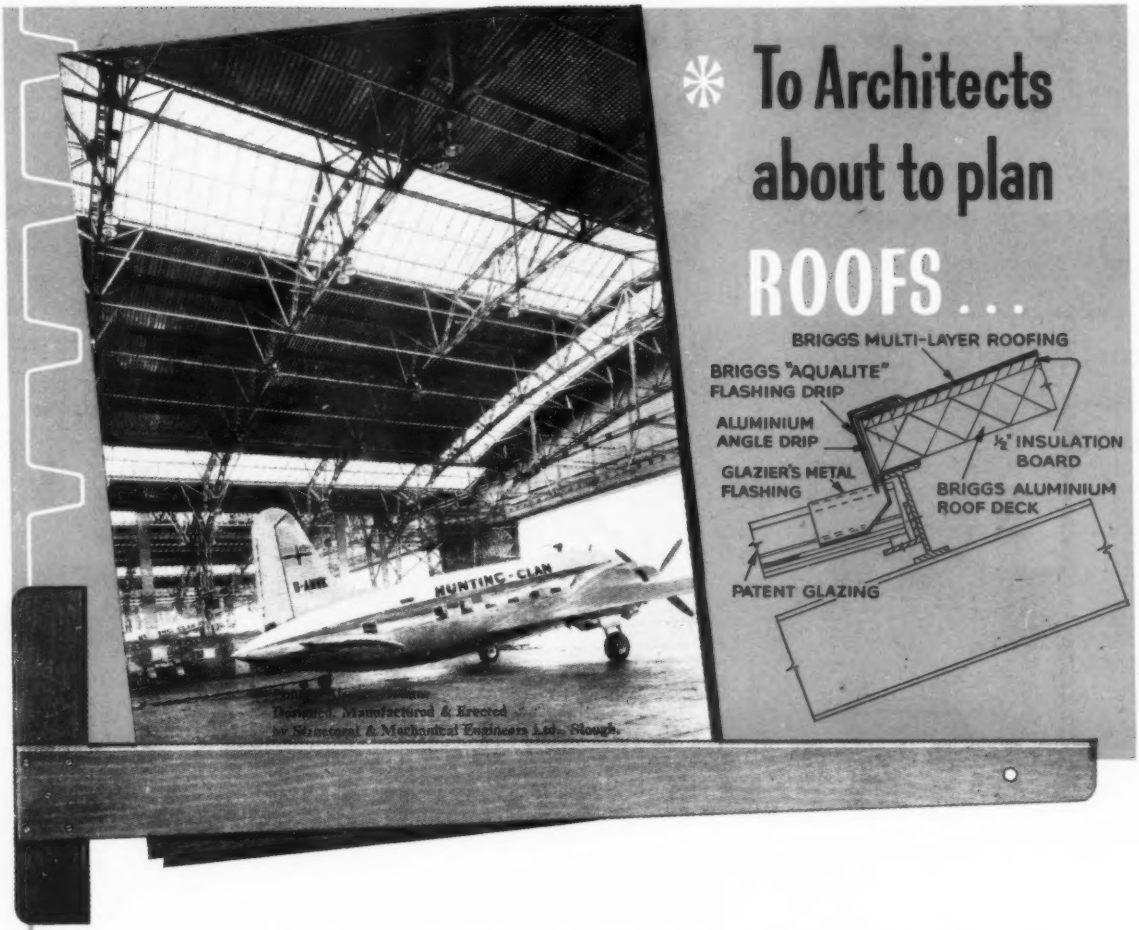

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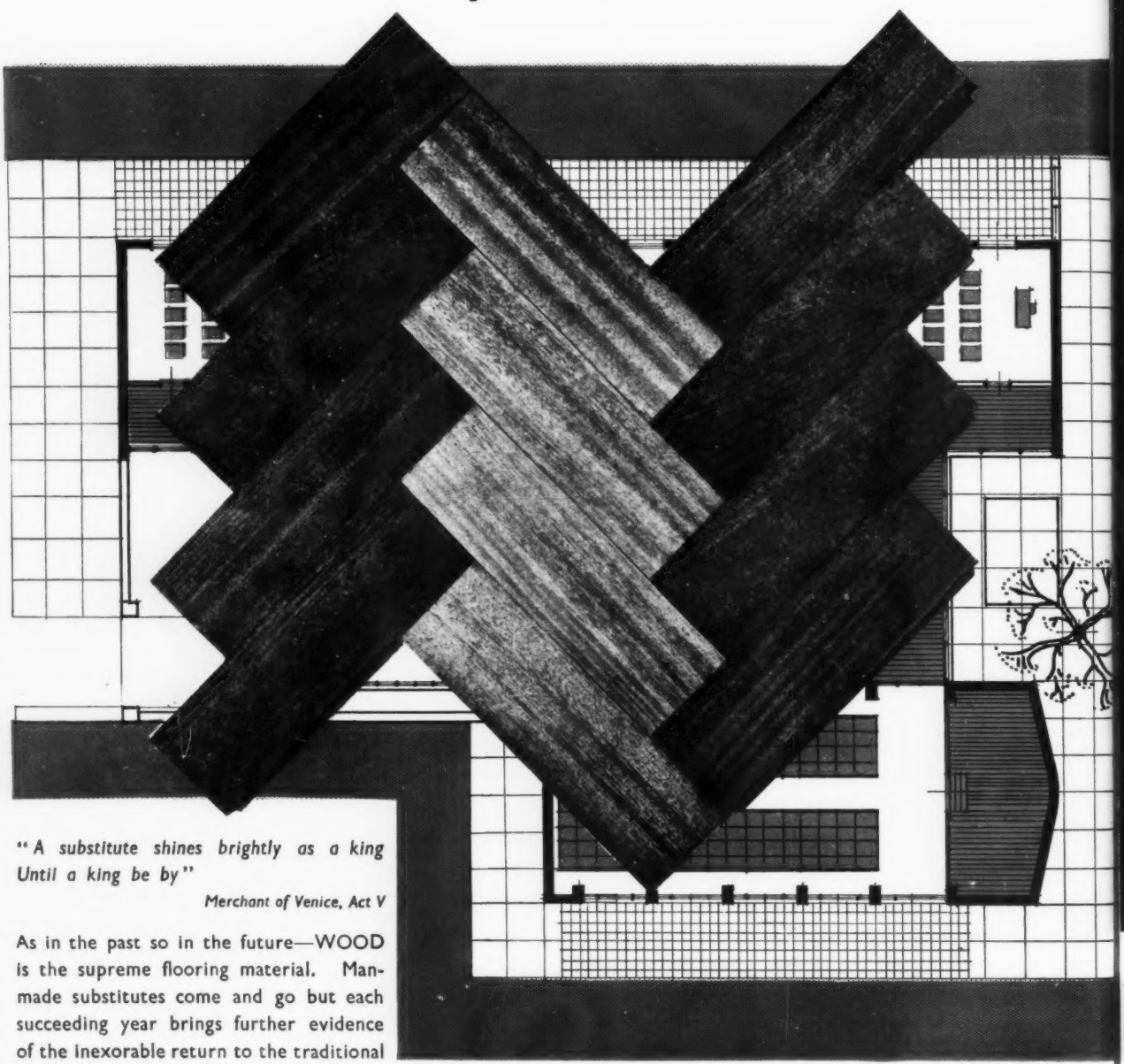

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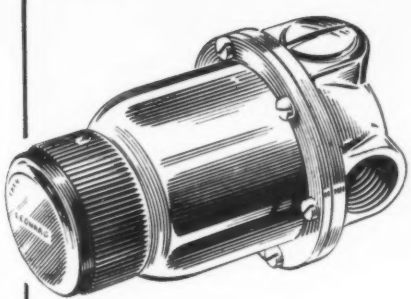

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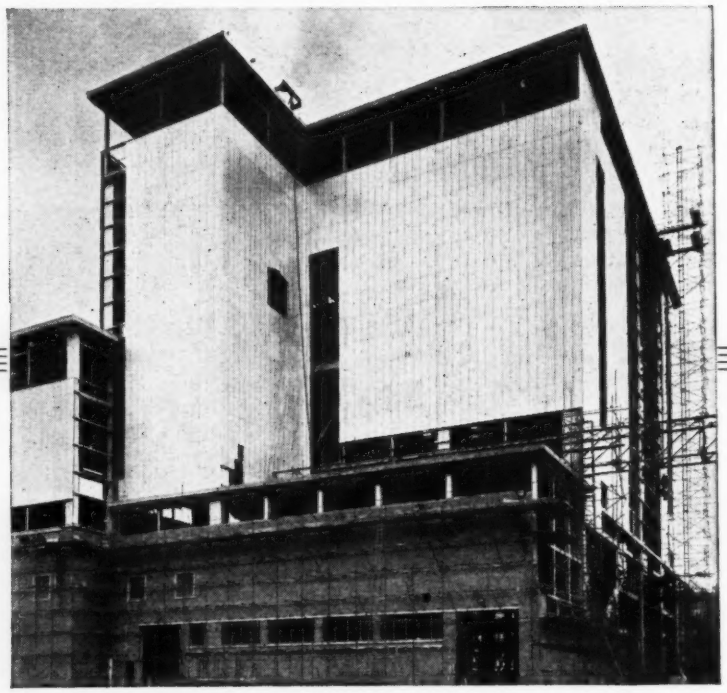

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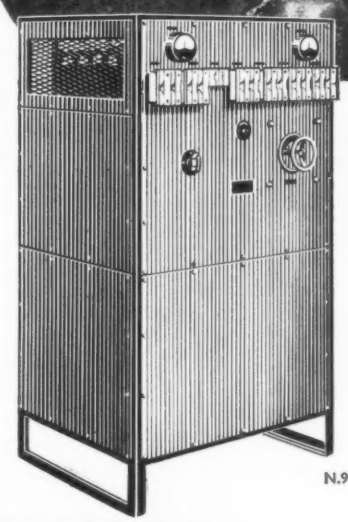

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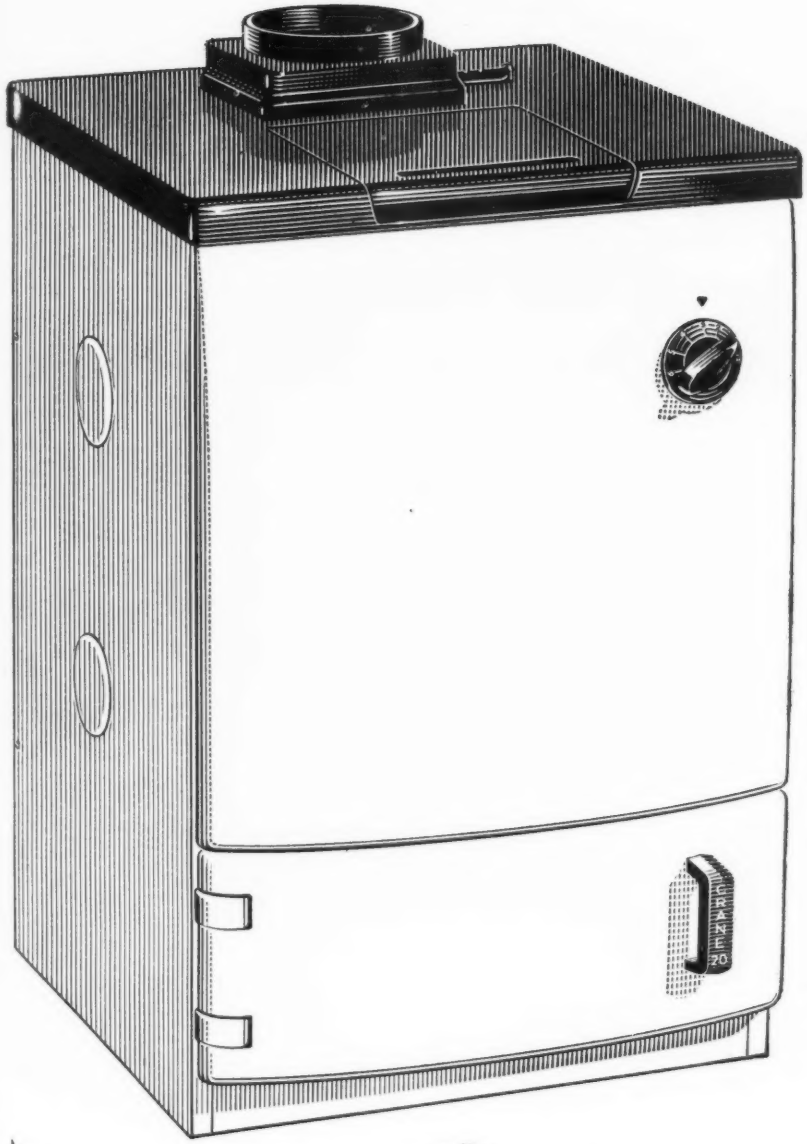

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G3

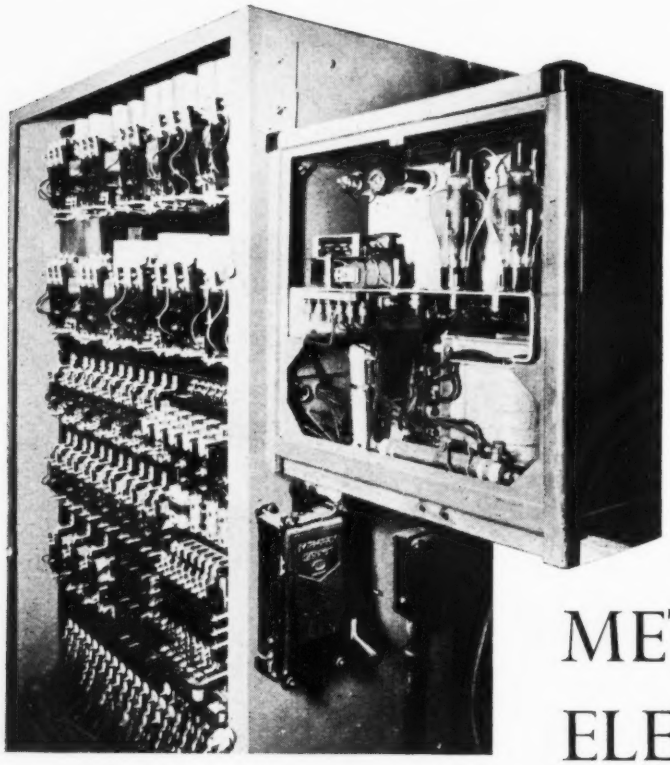
women will love these easy to manage features

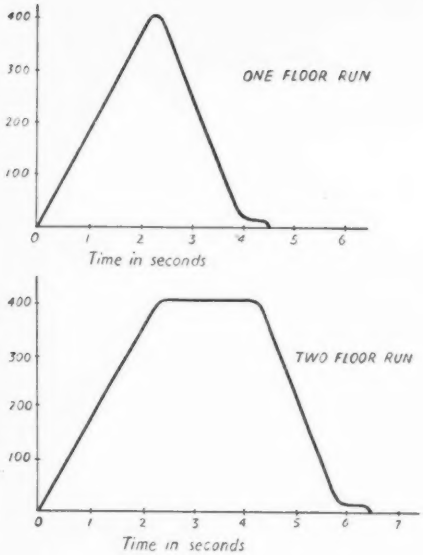
* A joy to clean—no dust—no mess
* Large deep ashpan complete with handle for easy carrying
* Smooth, compact design—no awkward projections
* Rids itself of ash with small amount of shaking
* Hinged fuelling lid * Vitreous enamel top-plate

The Crane '20' Boiler is Nationally advertised.

PRICE £25 (*Extra for bower-barffed firepot—for soft water areas*)

Write today for descriptive leaflet to: CRANE LTD., 15-16 RED LION COURT, FLEET STREET, LONDON, E.C.4. *Works:* IPSWICH.
London Showrooms: 118 Wigmore Street, W.1. Branches: Birmingham, Brentford Bristol, Glasgow, London, Manchester.

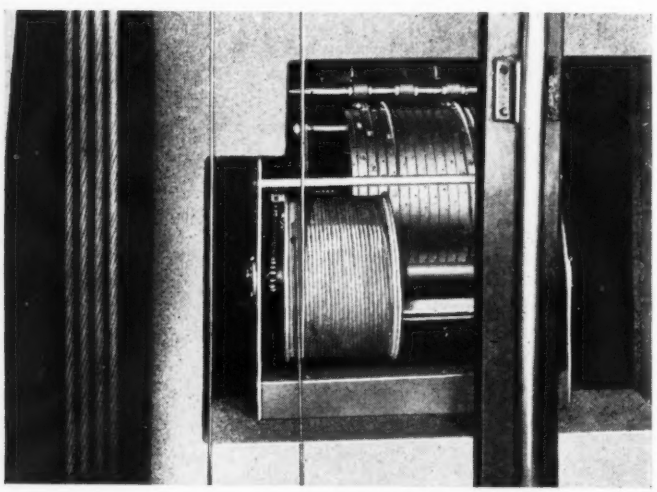




The main lift controller and electronic control equipment, which can be sited in any convenient position. Right: *Factual speed/time curves for this electronically controlled lift.* Below: *Drum mechanism, embodying cams and followers of the control gear, photographed across the lift shaft.*

METROLIFT ELECTRONIC CONTROL

STEPLESS VARIABLE-VOLTAGE LIFT DRIVE



Faster operation, more accurate levelling, with increased passenger comfort, are among the advantages of the new M-V electronically controlled lift drive. For the first time, this system enables a lift to operate in accordance with its position in the well irrespective of direction of travel or load in the cage. Maximum lift speed can be attained even between adjacent floors. Write for full details.

METROPOLITAN-VICKERS
ELECTRICAL CO LTD · TRAFFORD PARK · MANCHESTER 17

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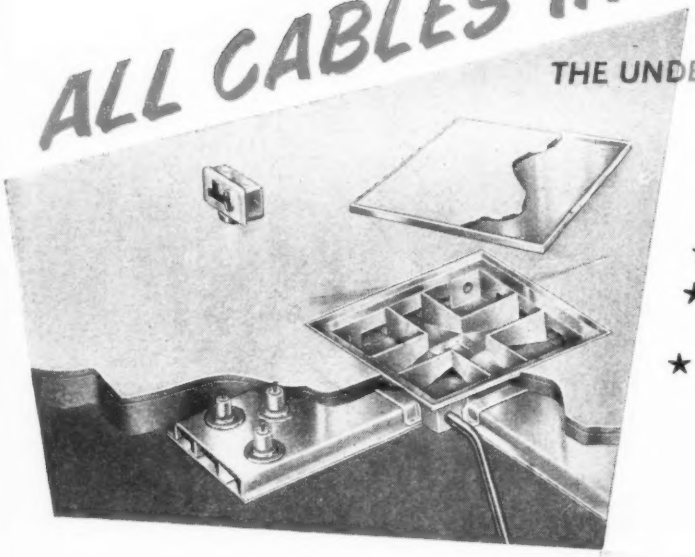
Member of the AEI group of companies

ALL CABLES IN ONE DUCT!

THE UNDER FLOOR SYSTEM FOR 1½" SCREEDS



★ SIZES FROM 4" x 1" UPWARDS—
DIVIDED AS REQUIRED

★ ALL-STEEL RUST RESISTING FINISH

★ ELECTRICAL CONTINUITY

★ FLYOVER SEPARATORS TO SEGREGATE
TELEPHONE FROM POWER CABLES

★ FLOOR OUTLETS AT PREDETERMINED
CENTRES—NO CUTTING INTO SCREED

THE SKIRTING SYSTEM FOR EASY ACCESS

★ SIZES FROM 4" x 1" UPWARDS—
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★ READILY REMOVABLE FRONT COVERS

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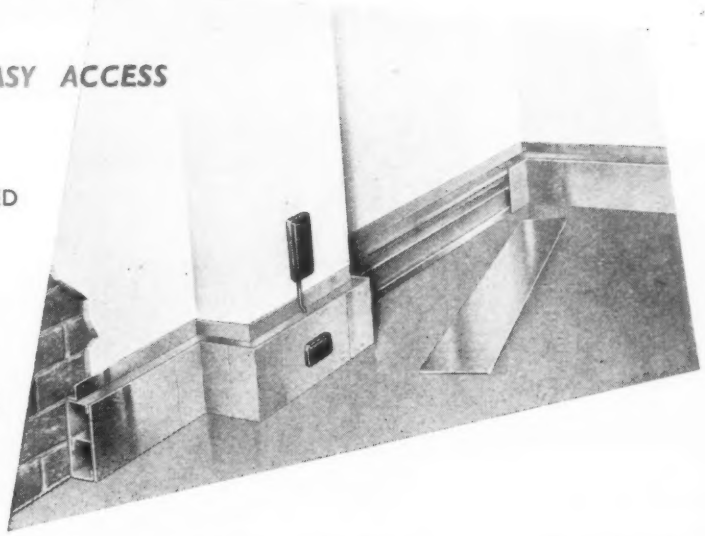
★ SUPPLIED IN 6 FT. LENGTHS

★ FULL RANGE OF BENDS, TEES,
ETC., AVAILABLE



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The publication 'Greenwood-Airvac Conduit Systems' tell you more about these patented cable ducts. Please write for a copy

Greenwood-Airvac *conduit systems*

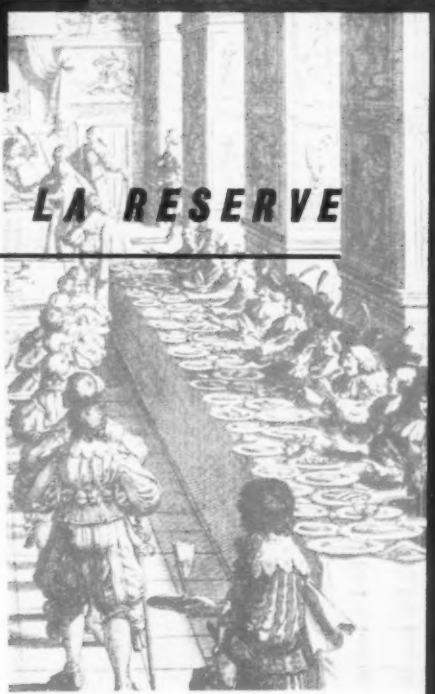
GREENWOOD'S AND AIRVAC VENTILATING COMPANY LTD.

Patentees, Designers and Manufacturers of Ventilating Equipment and Electrical Conduit Systems.

BEACON HOUSE, KINGSWAY, LONDON, W.C.2. CHAncery 8135/6/7 'Airvac', London.

Architects, Leonard Manasseh and Partners. *Photographs by courtesy of Sam Lambert.*

How they do it at LA RESERVE



You have only to step into 'La Reserve' Restaurant, in Gerrard Street, W.1, to see how seriously they take the business of attracting discriminating patrons. Soft lighting and richly contemporary decor make a perfect setting for enjoying good food and wine.

And behind the scenes? A kitchen that's chef's delight. Here food is King: extensive refrigeration by Prestcold keeps it as fresh as food can be kept. All the time it is in store it is sealed away safely in a Prestcold. Meat in a special coldroom. Fish in a Prestcold fish cabinet. And there's a large general coldroom for everything else that needs careful storing.

Prestcold specialise in fitting out catering premises. A great range of refrigeration equipment provides protection for every kind of food and drink, in almost any situation. And where standard equipment cannot be used, special units can be designed.

Next time *you* have to plan for refrigeration, have a word with Prestcold—in the early stages. You will find that it pays.

PRESTCOLD

BY APPOINTMENT TO HER MAJESTY THE QUEEN
MANUFACTURERS OF REFRIGERATING MACHINERY
PRESSED STEEL COMPANY LIMITED

THE PRESSED STEEL COMPANY LIMITED · COWLEY · OXFORD
and at Sceptre House, Regent St., London, W.1

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With OXYLENE BORAM Fire Retardant Coating which raises inflammable surfaces to Class 1 "surface spread of flame" (B.S. 476-1953).

OXYLENE BORAM can be over-painted or applied to painted surfaces without loss of fire retarding qualities. It gives real fire protection and is approved by Local and Fire Authorities.

Free Technical Service.
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we draw the line at fire!

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"Used in every Industry"

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Tels.: GROsvenor 6421/2
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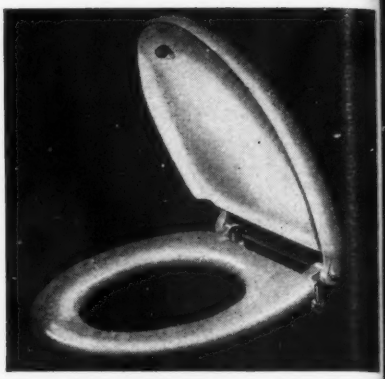
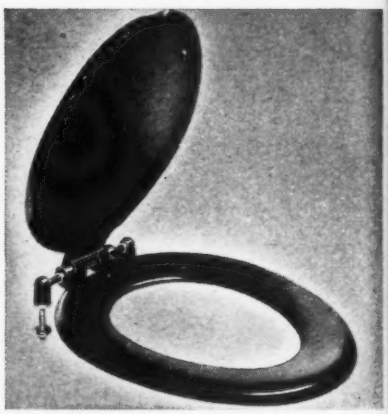
DHB/2376 A

Setting the fashion in Toilet Fittings



The Ekco 'BELVEDERE' A seat of the highest quality which will satisfy the most exacting sanitary requirements. Lustrous finish with a lid that 'encloses as it closes.'

The Ekco 'JUBILEE' The popular-priced toilet seat immaculately finished in lustrous colours. Easy to fit to any standard width pan.



When you specify plastic toilet seats, specify EKCO . . . They are hygienic, well designed and are available in a colour range which enables matching to practically any scheme of decorating and colour.

- **Smooth, lustrous surface that will not crack, chip, stain or fade.**
- **Very easily kept clean.**
- **Cannot harbour germs or dirt.**
- **Rust-proof universal fittings.**
- **Rubber buffers on seat and cover**
- **Choice of 16 permanent colours.**

Another modern touch
Ekco Flush-Pipe Connector Moulded in white, green or black P.V.C. for a long-lasting, strong, flexible, non-leaking, easily applied joint. No cement or lead pieces—and no waste of labour, materials or time. *Fits neatly and quickly.*

EKCO TOILET SEATS

E. K. COLE LTD · (*Plastics Division*) · SOUTHEND-ON-SEA · ESSEX

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NOW! selective sound control with BURGESS acoustic tiles AND radiant heating by SULZER, write for information.

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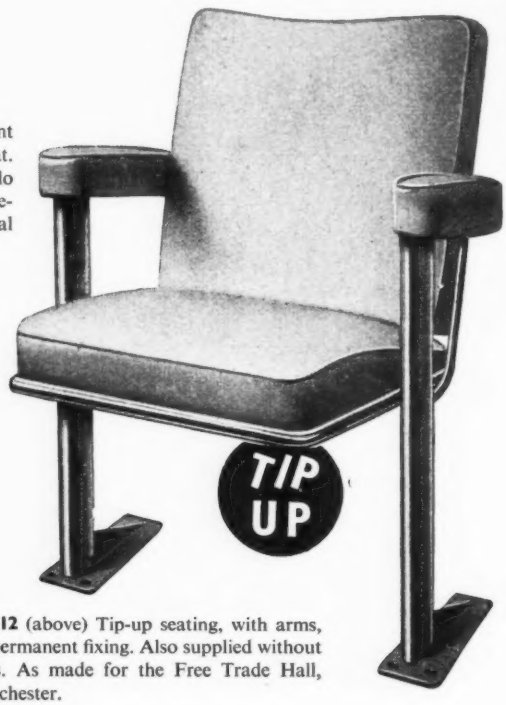
Auditorium seating

COX are specialists in the design and manufacture of tip-up seating for all types of auditoriums and have been responsible for many important installations in this country and overseas. Some of the styles are shown on these two pages, but an illustrated catalogue giving full details is available on request.

Technical staff are available to architects for consultation on any problems relating to auditorium seating, canteen furnishing and the like.

R.F.H.1 (above) Tip-up chair for permanent floor fixing, with automatically-tipping seat. Back and seat upholstered in Dunlopillo foam rubber. Frame rust-proofed and stove-enamelled in colour. As made for the Royal Festival Hall, London.



G.1312 (above) Tip-up seating, with arms, for permanent fixing. Also supplied without arms. As made for the Free Trade Hall, Manchester.

M.313 (right)
A new style nesting chair designed for maximum comfort, the seat being upholstered in foam rubber and the back in rubberised hair.

COX also produce a range of nesting furniture admirably suited for assembly halls, canteens and hospitals. The chair shown above is from this range, but there are many other models. A fully illustrated catalogue will be sent on request.

COX TUBULAR STEEL FURNITURE

COX & CO. (WATFORD) LTD. · WATFORD BY-PASS · WATFORD · HERTS · *Watford 5631*

For permanent strength and economy— use 'Aerolite' 300

The telescope housing shown here, is designed for the Quentin Gauge Telescope of the University of Durham. Built entirely of timber, in twelve prefabricated sections, it provides high structural strength from wood of relatively small sections. The only method of connection used is 'Aerolite' 300, a synthetic resin glue which gives a lasting bond of greater strength than the material it joins. This glue is widely recognised in the Building Industry for its many advantages, such as resistance to weathering and to micro-biological attack. Lighter structures of greater strength, the conveniences of prefabricating sections in the joinery shop and the overall economy of this method of construction, have done much to commend the use of timber where heavier materials would otherwise be used.

'Aerolite' 300 synthetic resin glue is available with an extensive range of hardeners. It is unaffected by heat, moisture and bacteriological attack and hardens rapidly at normal shop temperatures. 'Aerolite' can be obtained through all builders' merchants in tins of 2 lbs., 4 lbs., 7 lbs., and in larger quantities if required. Detailed technical information will be gladly sent upon request.

'Aerolite' glues for wood

'Aerolite' is a registered trade name

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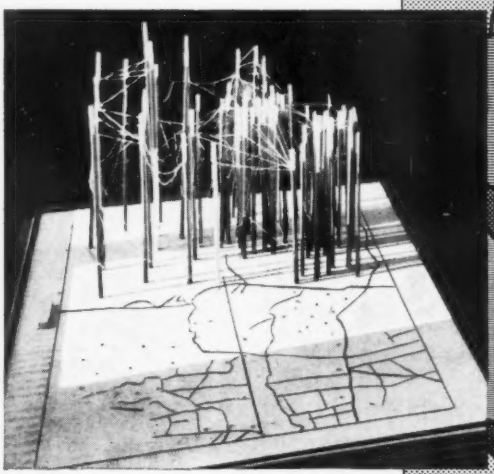
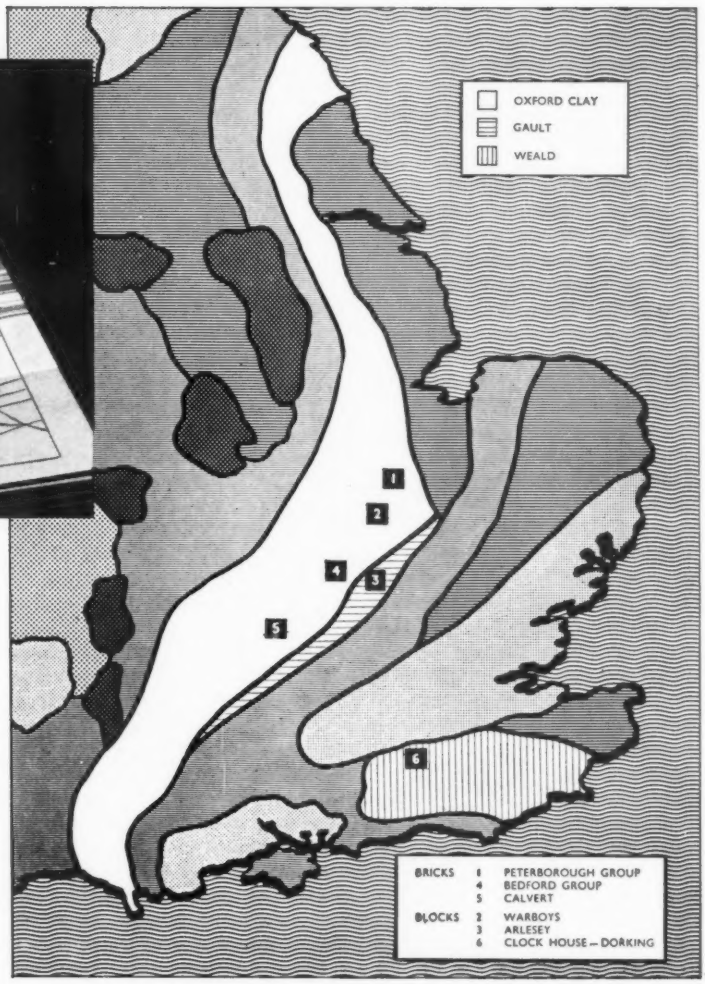
AP. 264-198

BETWEEN THE PIT AND THE SITE . . . one of the links in the 'Phorpres' service is

. . . FORETHOUGHT





PHORPRES

The works of London Brick Company Limited are strategically placed on the geologist's map.

The brick works are situated where the Oxford clay is deep, uniform and suitable for large-scale mechanical excavation. Bricks pressed from this clay are strong enough for mechanical handling before firing and their natural fuel content greatly reduces the addition of coal to complete the burning. Such Oxford clay deposits are a national asset.

The clay block works follow the Weald, Gault and upper Oxford clay strata. Lighter, more plastic clays are better suited to the "wire-cut" process necessary to produce the cellular shaped blocks.

The geologist is, therefore, an important member of the team whose planning and foresight ensure that 'Phorpres' products maintain their high quality and low cost.

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BY APPOINTMENT TO HER MAJESTY QUEEN ELIZABETH II BRICK MAKERS

LB49

Stained glass triumph

No house in Boxley Wood is like any other house. Box Wood House is typically different.

Seclusion (the nearest neighbour is almost forty feet away, behind a yew hedge) and an italianate picturesqueness have endeared it successively to two company directors, a best-selling authoress and a civil engineer.

The timid lady author, although aware of the dangers of such isolation, lived in the comparatively crime-free thirties, and died unburgled and unmolested.

The civil engineer has been less fortunate. In a recent wave of burglaries, he lost eight silver-plated golf trophies, a pair of diamond cuff links and his six-figure log tables. By the time he called in Chubb, his civility was wearing thin.

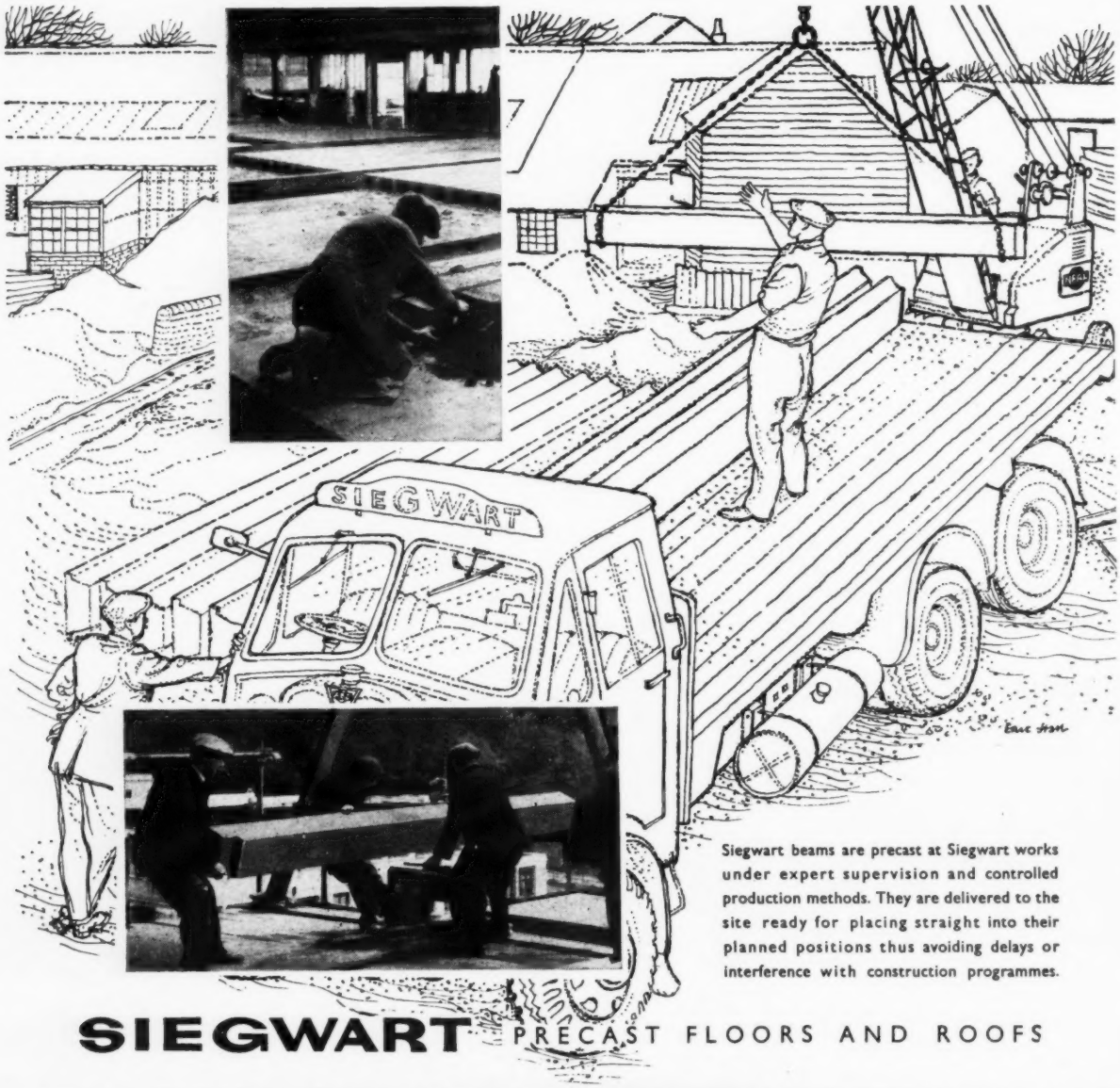
The Man from Chubb was as courteous as ever. Door locks, he explained, even by Chubb were not enough in such a quiet neighbourhood, if windows were left unfastened. For a few shillings each, simple but well-nigh impregnable Chubb window catches could be fitted.

"To any sort of window?" asked the mollified engineer, pointing to the round-headed stained-glass landing window. "Even that ridiculous item?"

"Even that," said the Man from Chubb.

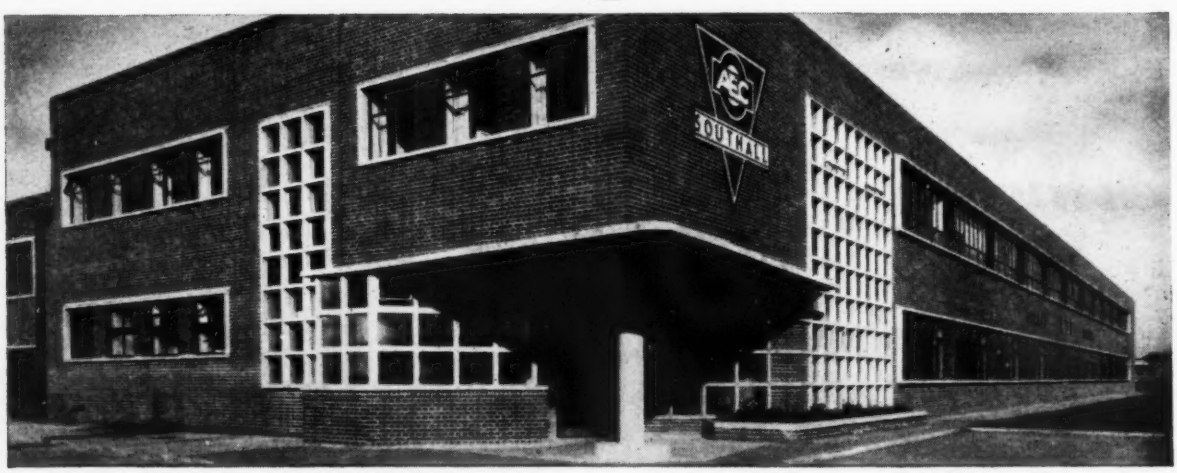
If you haven't got a Chubb catalogue (or can't find it), why not ask for the latest one? It makes an excellent door stop or paperweight, and you never know when you'll have a client who wants the best security there is. Write or telephone Chubb & Son's Lock and Safe Co. Ltd., 175-176 Tottenham Court Road, London, W.1 (MUSeum 5822).

DON'T LEAVE IT TO CHANCE—LEAVE IT TO CHUBB



Siegwart beams are precast at Siegwart works under expert supervision and controlled production methods. They are delivered to the site ready for placing straight into their planned positions thus avoiding delays or interference with construction programmes.

SIEGWART PRECAST FLOORS AND ROOFS



Office Block No 3 A.E.C. Ltd Southall—Architects Harris W Weedon F.R.I.B.A. & Partners

SIEGWART FLOOR COMPANY LIMITED

GABLE HOUSE, 40 HIGH STREET, RICKMANSWORTH, HERTFORDSHIRE
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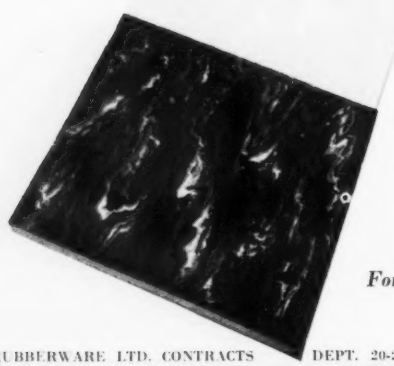
"Harefield" Rubber Flooring laid in the First Aid Room, McVitie & Price Ltd., Waxlow Road, London, N.W.10.

handsome is as handsome does!

There's nothing like rubber flooring — "Harefield" rubber flooring — for hard wear and good looks. It can make your Offices and Entrance Halls, Corridors and Canteens, Board Rooms and Waiting Rooms, all so much quieter and more inviting. Harefield Rubber Flooring looks attractive, lasts a lifetime and — most important these days — is easy to maintain.



"Harefield"

RUBBER FLOORING

For range of patterns, colour suggestions or estimates for laying, please write or telephone

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W.10.

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HEARTH-WARMING FACTS FROM FLAVEL

Essential data on five of the latest, most efficient heating units

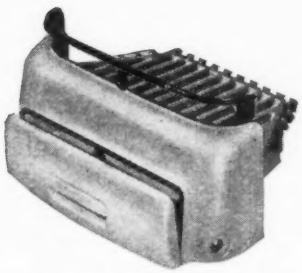
WHETHER you're specifying for a single dwelling or an entire estate, there's a Flavel appliance designed to fit almost any standard fireplace. Five of them are shown and briefly described on this page. For fuller details, you are invited to write to Flavels. Their Architectural Advisory Bureau is always ready to give expert advice and information about all Flavel appliances . . . solid fuel grates, boilers, cooker/water heaters, gas-heated clothes-dryer, water heaters, fires and cookers.

The four open fires shown can be supplied with gas burners for rapid and labour saving lighting. In the case of the Fulham Finned Back Boiler Unit, a special attachment is available for heating water when a solid fuel fire is not required.

SEE A

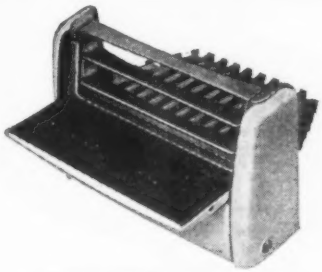
FLAVEL

FIRST!



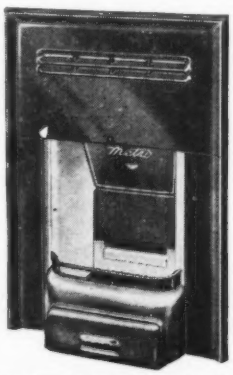
THE 'NEWBOLD'

Economical with all solid fuel, especially coke. Accurate fast or slow burning control; low construction ensures warm hearth. Cast iron construction; no costly fire bricks to replace. Available in 14" and 16" sizes for use as inset grates. In a wide range of vitreous enamel finishes.



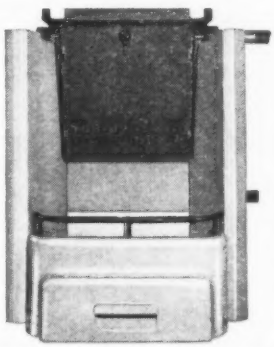
THE 'FLAVEL SEYMOUR'

New sixteen-inch safety grate suitable for use with or without back boiler. Fall door drops to show fire burning; fire intensity is controlled by opening or closing ashpit door. Closing both doors gives economical continuous burning.



THE 'METRO' BOILER UNIT AND VENTILATING CANOPY

Heats by radiation and convection. Cold air enters at sides and is heated and released through louvres. With dampers fully open the boiler unit will supply 10 to 15 gallons of hot water per hour. Output and fuel consumption can be controlled by using dampers.



THE 'FULHAM' FINNED-BACK BOILER WITH 'NEWBOLD' GRATE

Large-surface high efficiency type boiler providing 250 gallons of hot water per week and heating two radiators and towel rail of up to 35 sq. ft. combined radiation area. Requires no more space than a normal open fire with standard 9" x 9" flue.

FLAVEL FOR SOLID FUEL COOKERS, TOO!

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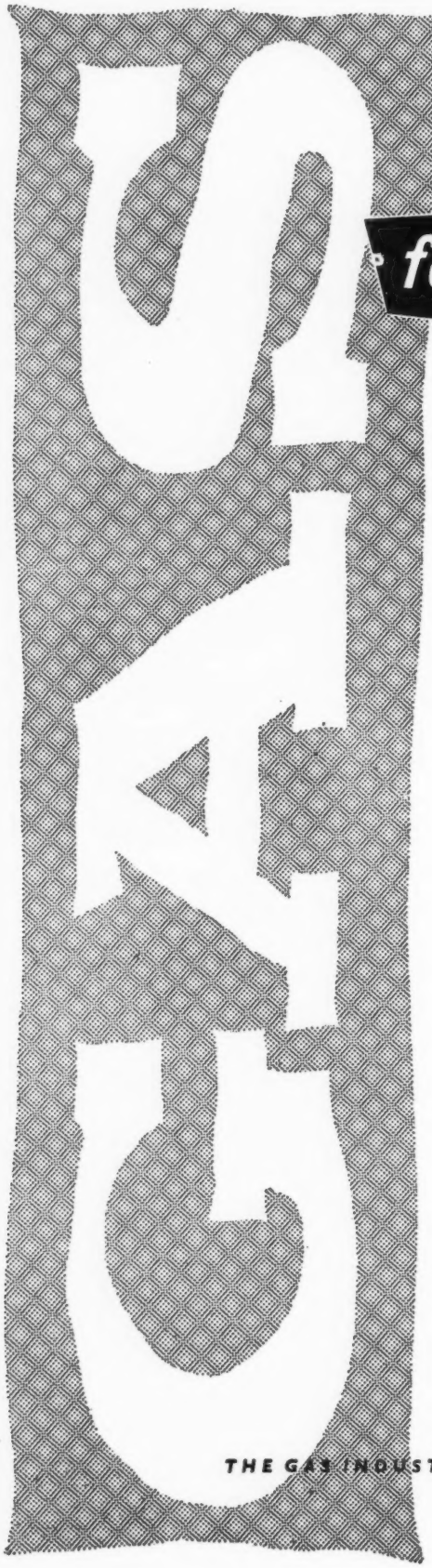
THE NEW 'COTSWOLD' COOKER/WATER HEATER

Three hotplates—fast boil, boil and simmer. Roomy main oven with automatic interior light and 'slow' oven for warming, etc. New firebox design prevents dust escaping, gives maximum fuel economy. Provision for left right or centre boiler connections; alternative back or top flueing permits flush fitting.

SIDNEY FLAVEL & CO. LTD., 1 NEWBOLD TERRACE, LEAMINGTON SPA. TELEPHONES: (Sales) 3091 and (Works) 8700. Telegrams: FLAVELS



for smokeless heat –

By usefully harnessing three-quarters of the heat value in coal the Gas Industry offers two refined smokeless fuels, coke and gas. In addition the chemical engineering process of gasmaking simultaneously converts the potential smoke in coal into useful products like coal tar and pitch—and without these, expensive chemical imports would be necessary. Each of the Area Gas Boards offers expert advice to architects, building authorities and all engaged in providing smokeless heat. The advice is based upon the pooled knowledge of all the Area Gas Boards and the users of coke and gas in other countries.

consult your area gas board

THE GAS INDUSTRY MAKES THE BEST USE OF THE NATION'S COAL

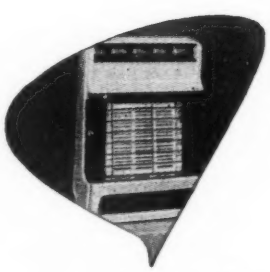
The Gas Council, 1 Grosvenor Place London, S.W.1

The skin game

In a cold room all of us, like this young lady, play the skin game. We feel cold because our body is heating the room instead of otherwise. Work at school, in the factory or office, suffers. Look at the poor girl again! She will get precious little warmth from hugging her coat! The economic and effective heating of a particular factory, warehouse, school, hospital or office often presents its own special problem. The technical staff at your Area Gas Board have had wide experience of thousands of special space-heating installations.

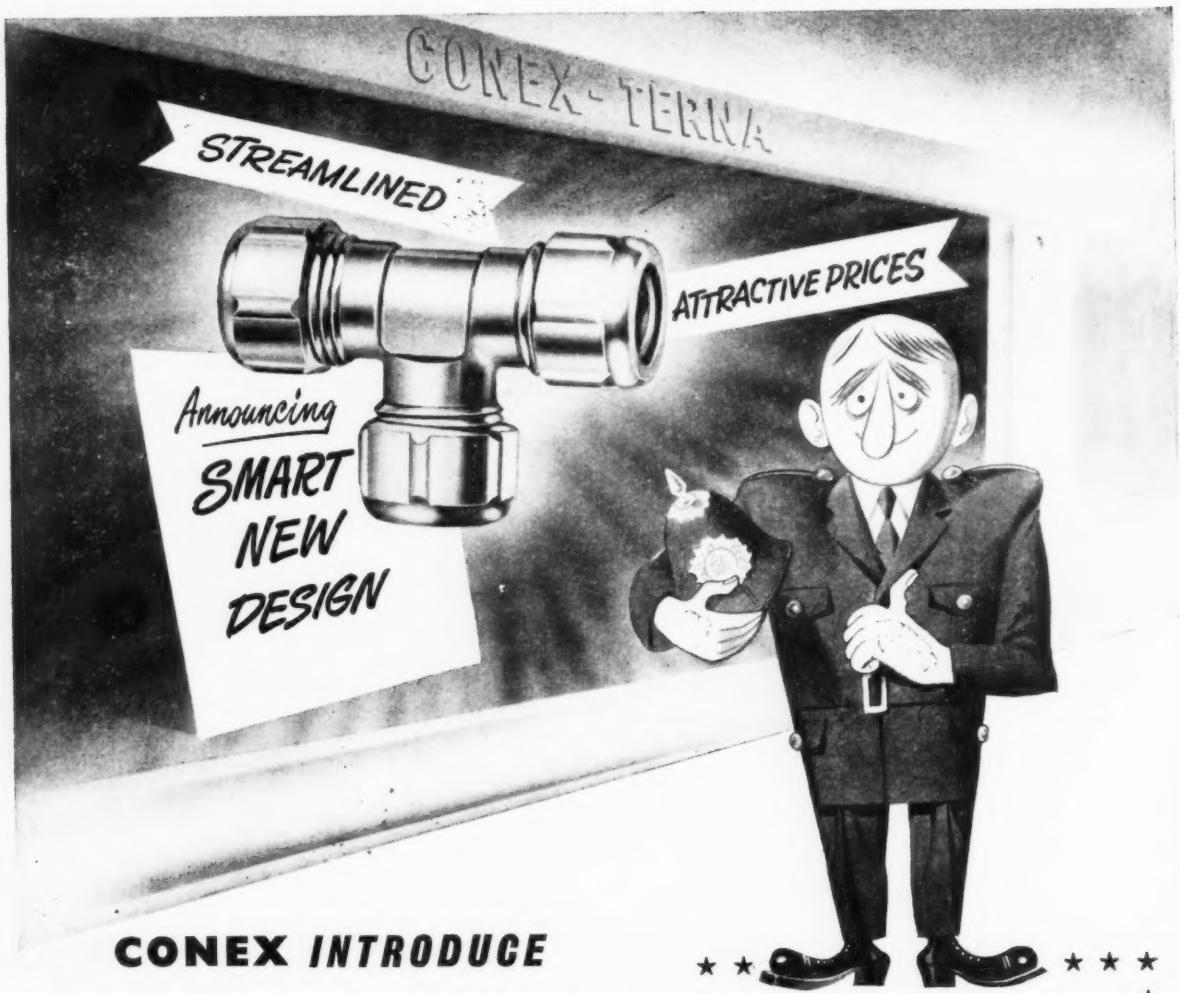
***WHATEVER YOUR BUSINESS*—The Gas Industry appreciates the needs of individual consumers for prompt service and for advice which accords with the customer's special circumstances and requirements. Each Area Gas Board offers efficient service to users of gas-fired equipment and can give expert advice based upon the pooled knowledge of all the Boards and of gas users in other countries.**

—CONSULT YOUR GAS AREA BOARD



ISSUED BY THE GAS COUNCIL

THE GAS INDUSTRY MAKES THE BEST USE OF THE NATION'S COAL



CONEX *INTRODUCE*

'NEW LOOK' DESIGNS

AT NEW LOW PRICES

To help meet the demand for reduced building costs, attractive streamlined fittings of modified design are offered at keenly competitive prices. The well-established tradition of Conex for quality has been maintained and the "new look" designs have been most enthusiastically received by discerning users everywhere, resulting in the demand for Conex and Conexcel compression fittings proving the greatest ever in the Company's history.

★ ***WRITE NOW for our new illustrated folder L.F.7 which contains full details and prices.***

7 STAR FEATURES

1. *Fine threads have been avoided.*
2. *The big safety margin of tube entry has been retained.*
3. *The famous Conex ring is unaltered.*
4. *The "across-flats" sizes are unchanged.*
5. *The same spanners can still be used.*
6. *All components are interchangeable with earlier fittings.*
7. *PRICES FOR POPULAR LINES HAVE BEEN GREATLY REDUCED.*

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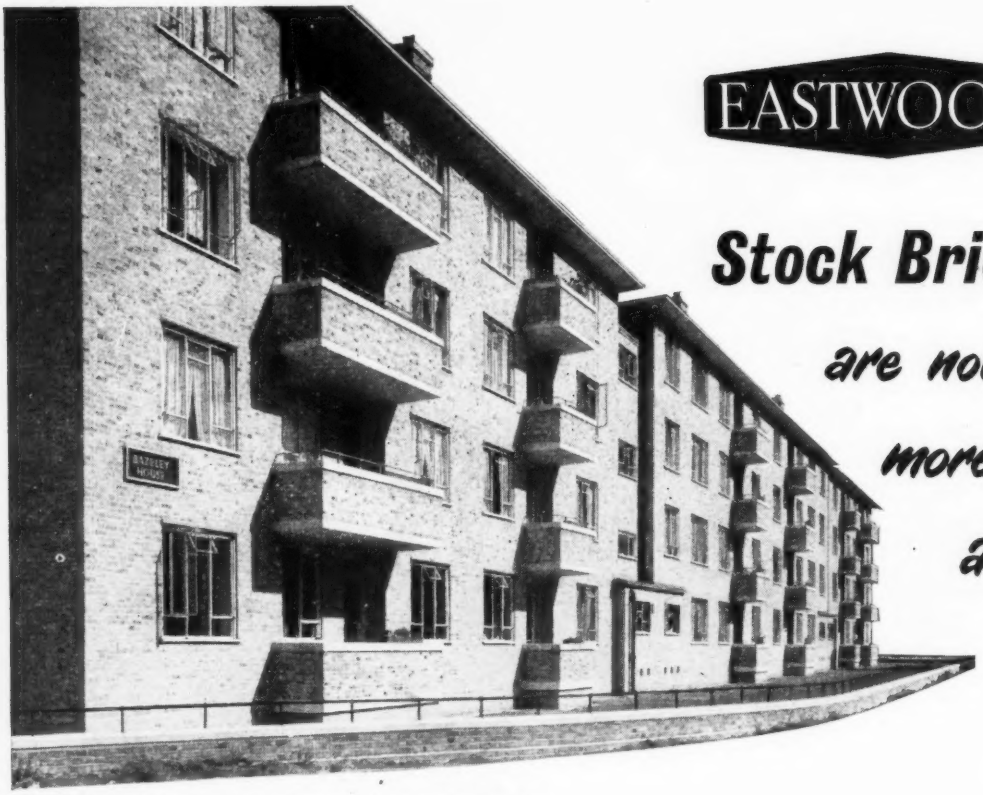

EASTWOODS

Stock Bricks

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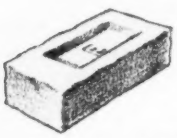
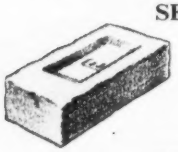
YELLOW FACINGS



A hard high grade stock facing of uniform deep yellow colour and regular shape.
Their mellow warm colour make these bricks very suitable for special architectural features.

SECOND HARD STOCKS



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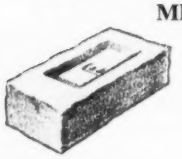
MILD STOCK FACINGS



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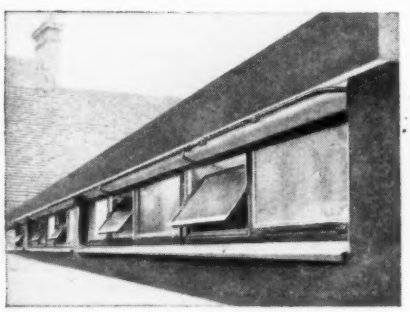

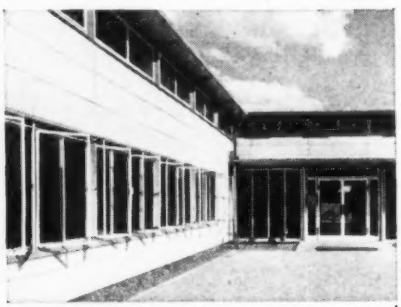

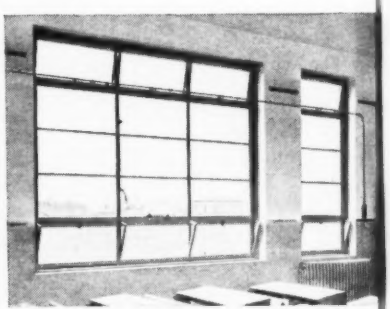

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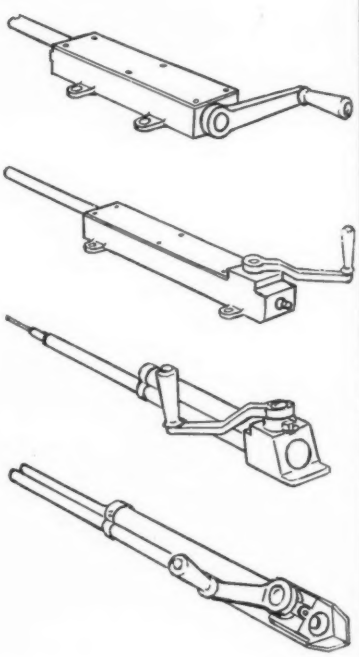

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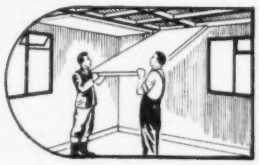

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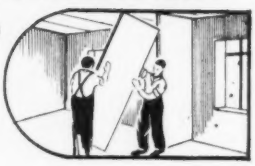

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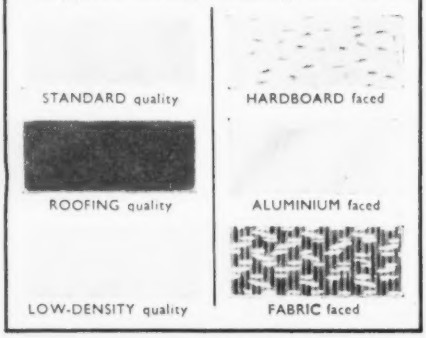

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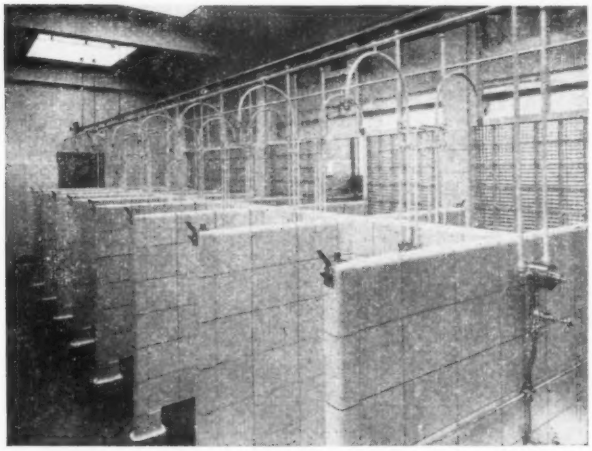

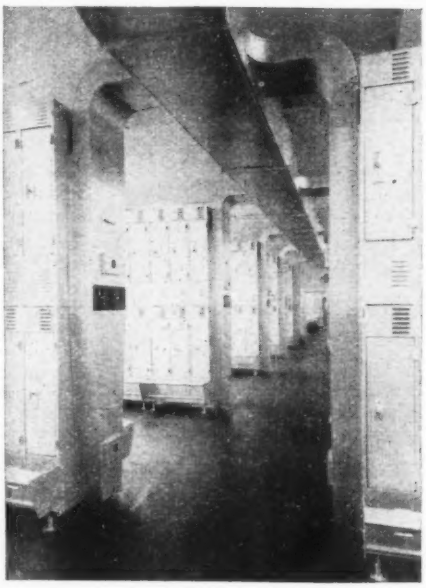

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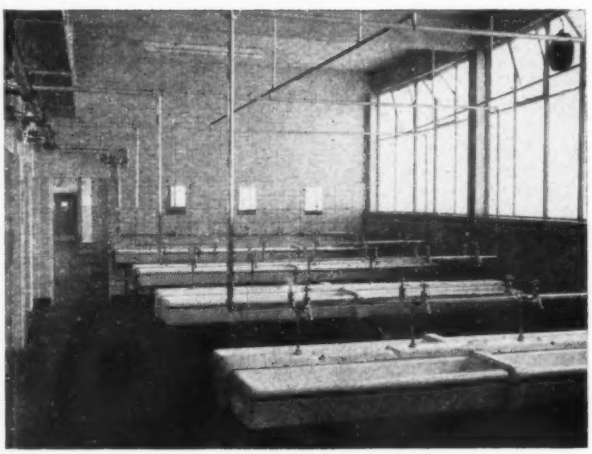

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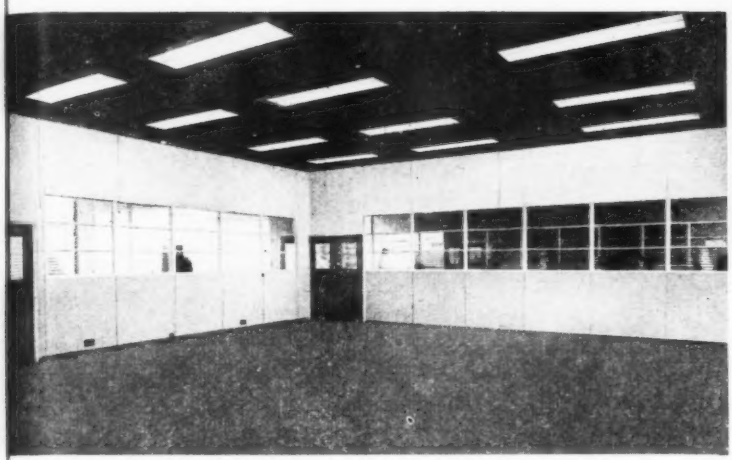

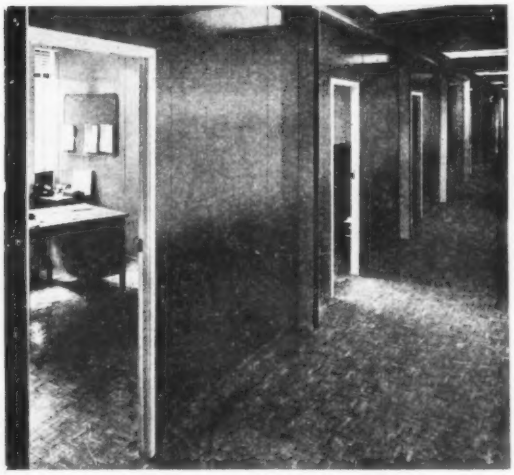

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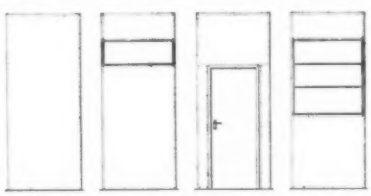

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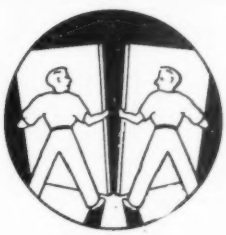

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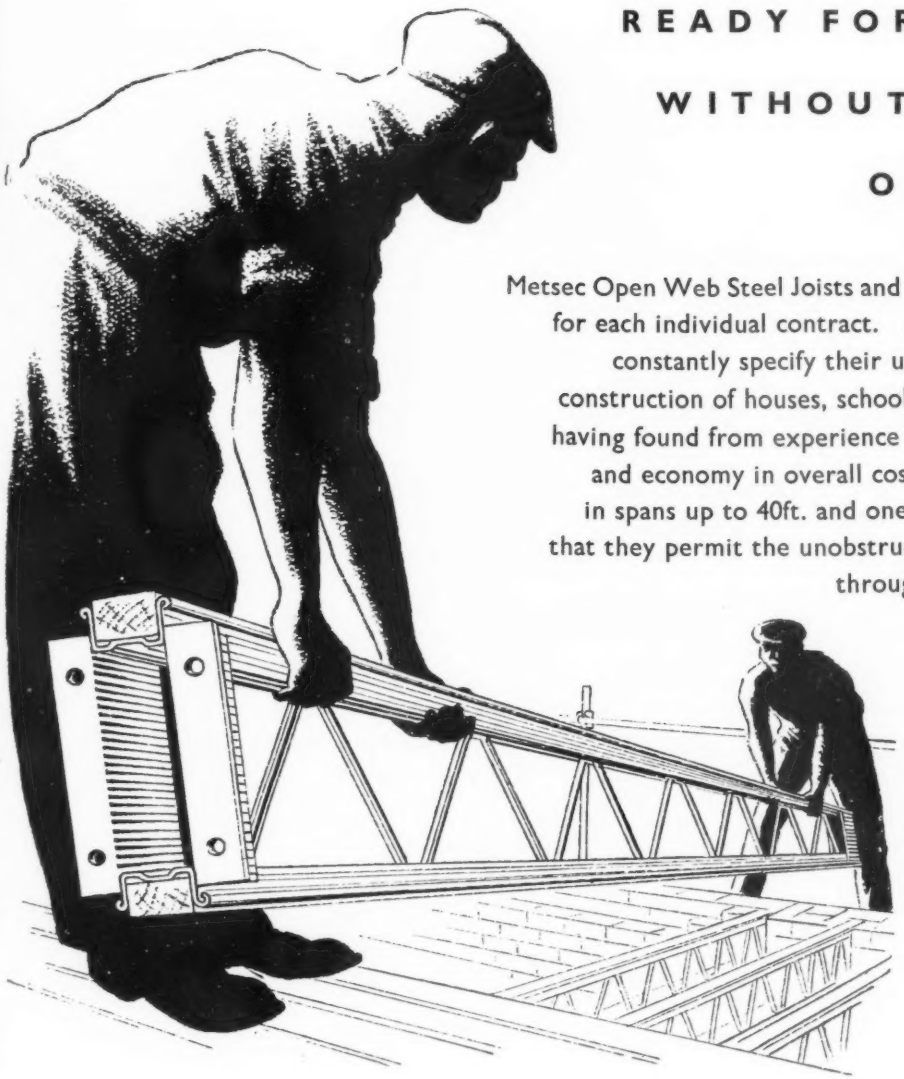

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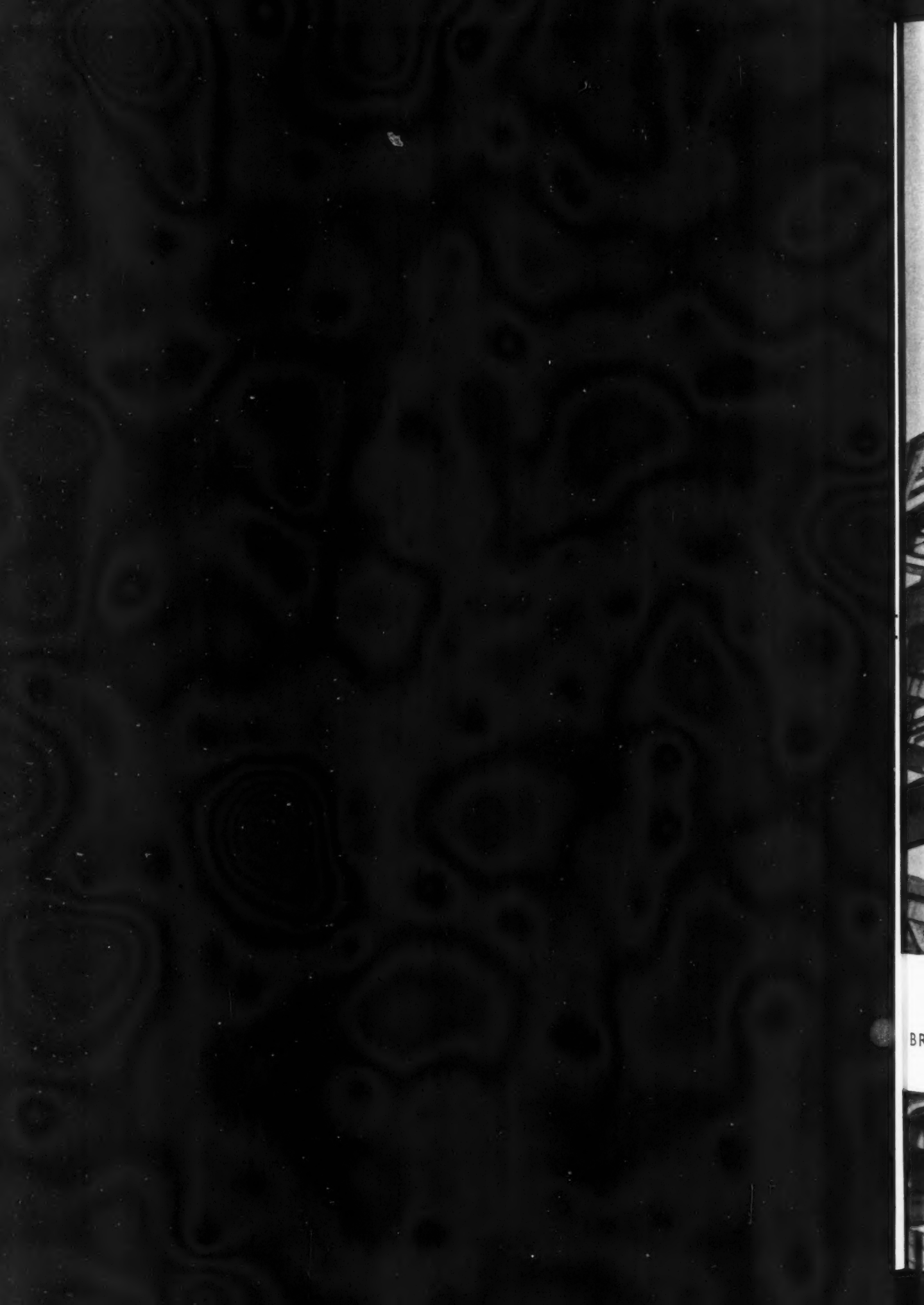

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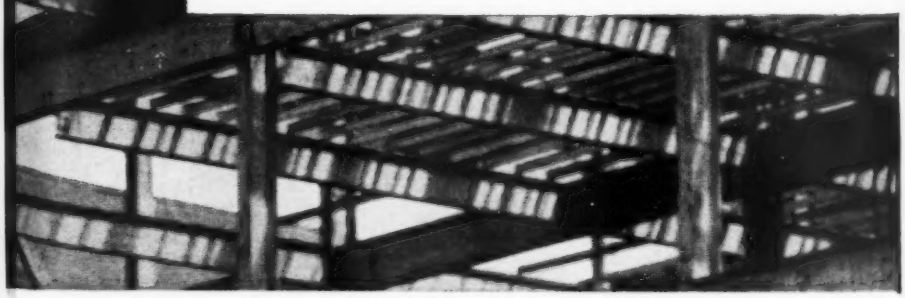

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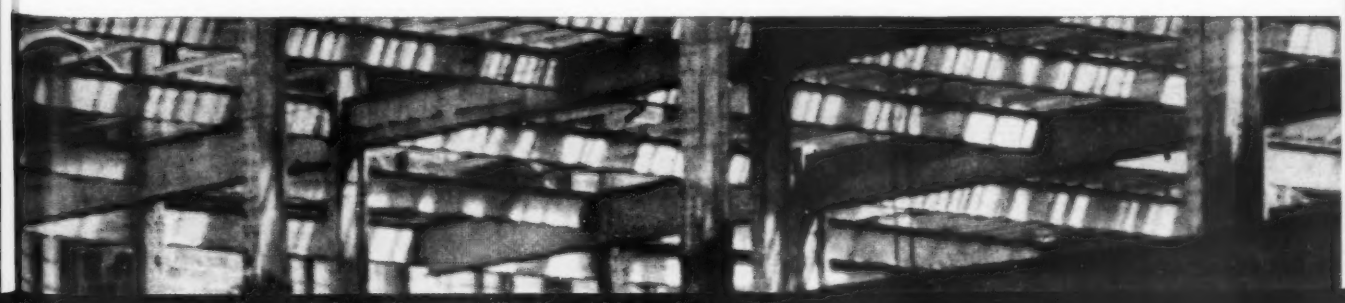

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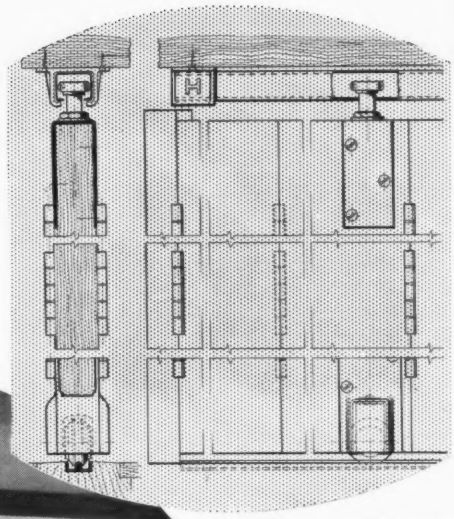

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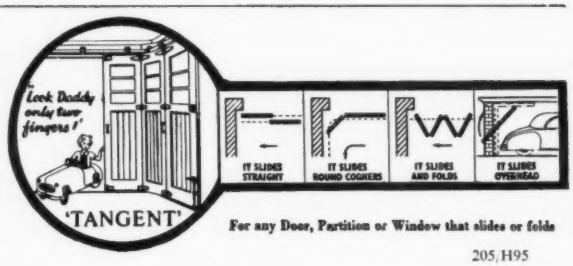

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THE ARCHITECTS' JOURNAL

No. 3231 Vol. 125 January 31, 1957

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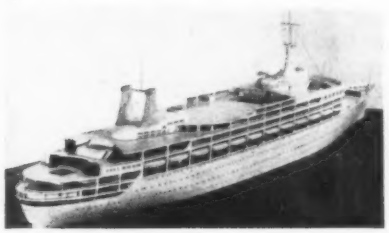
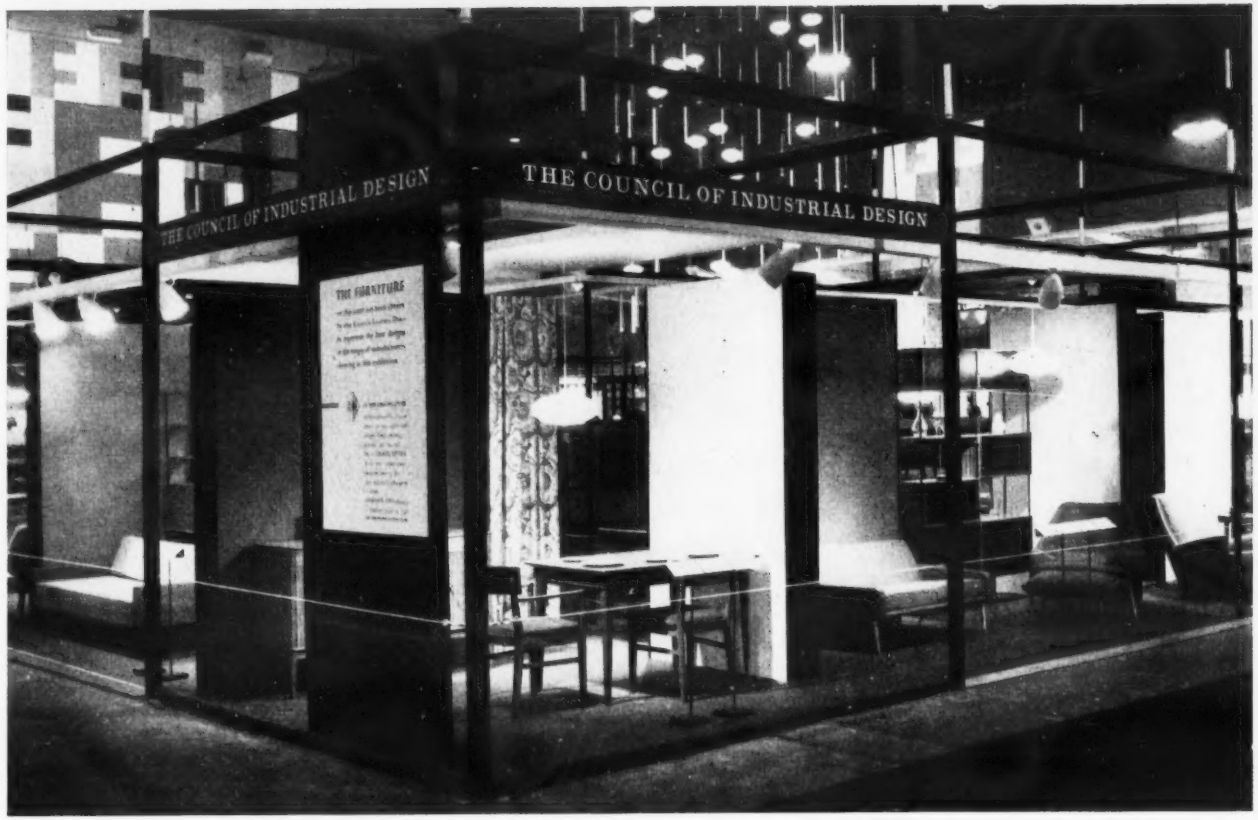
NOT QUITE ARCHITECTURE

PASSENGER LINER 1621

"Quiet, please. Quiet now, please," called the producer and the cameraman loudly to each other. "Quiet!" They were addressing each other, because no one else was speaking. A trifle confused they concentrated again on the camera and the scene before them. This consisted of a stand supporting, against grounds of light and dark blue flock, a model of a liner with the top of its superstructure amidships apparently missing, and two impeccably dressed gentlemen staring frozenly at each other with the true, kindly insincerity of Englishmen compelled to make exhibitions of themselves in public. The door opened and a cheerful florid man rushed in. "It's a boy," he cried. "It's just been announced. She's had a boy." The cameraman straightened up painfully, called "Quiet" and then, overcome with curiosity, asked: "Who's had a boy?" "Why, Princess Grace, you know—Grace Kelly." Thus did the newsreel men bring, with customary journalistic inaccuracy, the news of last week's most notable *accouchement* to the parents of a rather different baby: the P & O Company's liner No. 1621.



An unflattering view of the model of the liner is shown above. The twin verticals aft are what used to be called funnels, but are now termed exhaust outlets. The vertical feature forward contains the radar equipment and supports



Will Good Design Mean Better Business?

The Design and Features Committee for this year's Furniture Exhibition hoped that, as a result of their efforts, it would "at least, look different, if not actually better." They can rest assured that it does, in fact, look spectacularly better. Thanks to them, and to their designer, Misha Black, the whole show has a sense of style, sure enough and broad enough to absorb the individual styles of the different exhibitors without smothering them, and the central area, traditionally a desert waste of wilting palms and creaking canvas chairs—hopefully dubbed "Visitors' Lounge"—is now a feature strong enough to focus the entire exhibition space. Flanked by the institutional displays of SIA and COID (seen above) it has a raised podium at its centre, framing an experiment (albeit a debatable experiment, of which more next week) in formal gardening, into which descends, metaphorically, the Cascade of Lights. (This feature, makes use of a light fitting designed by architects John and Sylvia Reid.) The general feeling, underlined by these focal features, that this is no longer a trade bazaar, but an exhibition to be looked at as a whole, has rocketed the Furniture Exhibition from a point near the bottom of the calendar to one near the top, and the change is reflected in the fact that exhibitors are reporting enquiries from what they call "a better class of customer." Verb sap. to manufacturers who still don't believe that good design is good business. (A full report of the exhibition will be published in next week's JOURNAL.)

the mast and aerials, but the size and shape, a P & O spokesman said, is largely due to the need to have a visual emphasis to the area of the bridge. The other conspicuous feature to the layman is the position of the lifeboats. To reduce top-hamper they have been stowed three decks lower than normal. The accommodation at this deck level will contain a number of public rooms to provide assembly space should the lifeboats have to be used. Any criticism which the laymen might pass about the fenestration, the high degree of exposure of the sports deck, and the lack of reconciliation in the overall design between a traditional hull shape and main superstucture, and the curvaceous streamlining above, would be premature, as the P & O spokesman ingeniously pointed out, because the design is to be reconsidered anyway. The design and decoration of the public rooms will be undertaken by Sir Hugh Casson and by Messrs. McIness, Gardner and Partners (who have been responsible for the P. & O.'s eclectic design policy in the past). Traditionally naval architects like to have the great weight of the engines centrally placed. This results in double corridors and awkward planning around engine rooms and smoke stacks. For this ship the engines are being placed aft (as on oil tankers) a policy first adopted in a British passenger ship by the Southern Cross (1955). The P & O propose having a single, central corridor access to the cabins, many of which will be grouped round naturally-lit secondary corridors or courts. This radical planning departure will enable considerably more accommodation to be provided.

*

The propulsion is to be turbo-electric, instead of the more usual geared turbines —a method first used in the Viceroy of India in 1929, but rarely used since, due, according to a P & O spokesman, to the shipbuilders' policy of pricing it extra high. The shipbuilders (and here we are on ground familiar to architects) naturally prefer to make a good profit out of cutting gears rather than to hand out work to the electrical industry. Turbo-electric propulsion means a higher first cost, and on this ship, a further 200 tons weight. But, surprisingly, fuel consumption is expected to be the same as with geared turbines (largely because of the fuel wasted by the continuously running, but rarely used, astern turbines). The P & O company's engineering adviser on new construction and development, Sydney A. Smith, said that he expects markedly lower survey and repair costs and greater reliability.

AYDON

Statistics: length, 814 ft.; beam 102 ft.; gross tonnage 45,00 ; speed, 27½ knots ; complement 3,210 including 600 first class, 1,650 tourist class, and 960 crew; cargo capacity, 150,000 cubic feet; Cost £12½ m. Route: Southampton, Sydney, San Francisco and back. Builders: Messrs. Harland & Wolff Ltd. of Belfast.

The Editors

ELEMENTAL BILLS: EXPERIMENTS NEEDED

SINCE June a sub-committee of the RICS cost research panel has been investigating elemental bills of quantities. The elemental bill, first discussed in the A.J. in our issue of September 16, 1954, has lately begun to stir the passions of architects, surveyors and builders—readers will remember the crowded Building Centre meeting last October [AJ: November 8, 1956]—so we eagerly await the RICS findings.

The RICS has consistently declared that the main function of a quantity surveyor is to produce a bill and the main use of the bill is to get prices by competitive tender. But the elemental bill, while retaining this traditional function is also designed to fulfil needs of more recent origin: it provides the architect with a ready-made cost analysis of his buildings, which he can use in the setting of target prices for subsequent projects (see AJ, May 10, 1956). It can provide the builder with quantities of material broken down in terms of site operations, and it can simplify the computation of interim payments. In brief: it is a powerful tool for pre-planning.

The main disadvantage alleged against the elemental bill—extra time and trouble for the builder in working out his tender price, largely disappears when a negotiated-collaborative contract is used. And this contractual procedure, although we have only modest experience of it so far, enjoys rapidly-growing support among the cost-conscious.

The RICS have officially supported the idea of pre-planning* Thus they can hardly do other than support the purposes that the elemental bill is designed to serve. When they formed a sub-committee to investigate the method, it was a very welcome and timely move.

Isolated experiments with various kinds of elemental bill by individual quantity surveyors, architects and builders can go only so far. What is now required is further experiment over a wider range of contracts (competitive and negotiated) under some kind of centralized co-ordinating body, so that experiences may be compared and findings be made available to the professions and the industry. Who or where the co-ordinating body shall be is a difficult, and until the report emerges, a premature question; but it should represent all sides—not least the builders.

* The Chartered Quantity Surveyor and his Work. RICS *Report of the Joint Committee on Tendering Procedure* published March, 1954.

HEAT PUMPS AGAIN

The excellent paper* given by Miss M. V. Griffith to the Institution of Electrical Engineers earlier this month served once more to show how slowly those brought up in commerce and economics respond to ideas put forward by technicians. There is nothing new about heat pumps: they have been running efficiently in many countries for 30 years or more. Though they may be powered in different ways, they are most conveniently powered by electricity. By means of a mechanism which is comparable in size and intricacy to the motor of a small car, you can reasonably expect to get between three and four-and-a-half times as much heating for your current as you would by direct electrical heating.

Why have we not all done this long ago? The first reason is that the margin of saving which this shows over the burning of solid fuel is not sufficiently overwhelming to make us spend this much more capital on our heating equipment. The second reason (which flows from the first) is that heat pumps suitable for space heating are still much more expensive than they ought to be. To judge from the people who spoke after Miss Griffith's paper, the heat pump world is similar to the motor car world *circa* 1905. Enthusiasts from all over the country told of their experiences: of heat extracted from the air, from the earth and from running rivers, of a 500 gallon tank used to trap waste heat from the bath and of lawns which swelled because of the ice pack which formed beneath them during the winter heat extraction. If the case for the use of the domestic heat pump is still in the balance, this is not so of many commercial applications. Wherever air-conditioning equipment has to be installed (see for instance the Sylvania Thorn Laboratory, Enfield, November 15, 1956) and wherever refrigeration or drying is part of a factory process, the case for the heat pump becomes exceedingly strong, since most of the required mechanism must be installed anyway and the capital cost bogey does not exist. It is these cases which must provide the commercial experience and confidence which are so sadly needed. Architects, therefore, who have this kind of job on their boards will be doing their clients and everyone else a good turn if they make a point of considering the case for a heat pump.

* Some Aspects of Heat Pump Operation in Great Britain, with particular reference to the Shinfield installation.

FILE THIS WEEK

BRISTOL FASHION

The local architects of Bristol, whose efforts to draw the Bristol citizens' attention to the city's blemishes by means of an exhibition, were nullified by the exhibitions being banned from the City Art Gallery (see last week's column), continue to gain local support. ASTRAGAL'S latest news is that the *Bristol Evening World*, who are publishing their own series of outrages, have now offered space in their main offices to house the exhibition. This is an admirable gesture, but we would like most of all to hear what action the city corporation proposes to take over this rather absurd example of civic pomposity.

BARRINGTON HOUSE

Last week an enormous block of offices in Gresham Street, London, was ceremonially named after the chairman —the Hon. W. B. L. Barrington—of the owners of the property, the Legal and General Assurance Society. The composition of the building, which was designed by Sir John Burnet, Tait and Partners (in association with G. Felix Wilson and Partners), is too massive, but one elevation and much of the detailing are excellent. And Holland, Hannen and Cubitts' workmanship is of a high standard. Nevertheless, the building is not of the quality of Gordon Tait's Monsanto House. It replaces

One of Alvar Aalto's most admired post-war buildings: the Library at Säynätsalo in central Finland, part of a group of municipal buildings.

about a dozen offices and warehouses damaged in the blitz. The sumptuous basement restaurants provide an anti-climax: their design was supervised by Alan Farley, a joint chairman of the Mecca restaurants, who has combined mock panelling, brass lanterns, Persian-style carpets and trimmings and gilded, painted coffered ceilings in a manner which can fairly be described as leaving one speechless.

FINLAND IN MID-WINTER

J. M. Richards, who introduces in this issue the series of critical articles he is to do for the JOURNAL, has just come back from a quick visit to Finland. He was asked to go there by the Finnish architects to see their latest buildings and to give some advice about the exhibition they are to stage at the RIBA in April. I asked him what were his strongest general impressions. They were as follows:

1. The importance (in spite of the disadvantages) of sometimes visiting the northern countries at this time of year. English people normally go in the summer holiday season, when they get a delightful but most misleading picture. In winter they will see not only the life that people really live, but the true relationship of life, landscape and architecture.

*

2. The high standard, and especially the well thought-out detail, of the better buildings—Finnish architecture isn't all Aalto, though he has certainly been the main inspiration, and the RIBA exhibition will bring several other names to our notice: Ervi, Rewell and Järvi in particular. Their work has a muscular quality which is most refreshing after the softness of some of the post-war Swedish architecture.

*

3. The readiness with which air travel has become accepted in a country that is still so undeveloped in many ways. It is well covered by internal air services that operate frequently and punctually in spite of ice and snow. Richards flew up to Jyvaskyla, 200 miles north of Helsinki, to see Aalto's newest (still uncompleted) job, a group of university buildings; and the aeroplane was well filled by business men and others who take frequent air trips for granted.

*

4. The problem of not getting too hot while inside the Finnish houses, shops and restaurants in spite of near-zero

temperatures outside. The English winter costume of multiple waistcoats and pullovers is difficult to adjust to the efficient central heating (even in the buses) and the consequent need to wrap up only when out of doors. Are we the only country that puts up with cold indoors?

*

Richards also reports that he found Aalto in wonderful form. We can look forward to some stimulating times when he comes over to receive his gold medal in April. He is also exceedingly busy, his admirers will be glad to know. Besides a number of important buildings and planning schemes in Finland, he is doing some housing for the 1957 exhibition at Berlin, he is building a country house between Versailles and Chartres, and he is redesigning the war-devastated centre of Catania, Sicily, in collaboration with two Italians—the architect Moretti and the engineer Nervi.

COALS TO THE AJ

At one time coals were taken to Newcastle. Nowadays there is a variant which is proper to an age of lightning international communications: ideas are taken to New York, where they started from. ASTRAGAL feels that other sections of the JOURNAL should be very flattered that *Architectural Forum's* influential and opinion-forming feature "For All Concerned" should recently have echoed in some detail the observations and comments made by Ian McCallum in his article *Coast to Coast*, which appeared in the JOURNAL in August, on the subject of the growing number of piazzas and plazas that have begun to be *de rigueur* around the feet of the newest New York skyscrapers. As the *Forum* notes, "some far-seeing architect persuades a smart client to make a new move. Others then follow his example. Suddenly an analytic observer notes that the total effect is bigger than the sum of the individual parts, and when he describes it, a new concept is launched." It is nice to know that in this case, the concept-launching ceremony was performed right here in Queen Anne's Gate.

CITY WAYS

It was good to see that the Commons, Open Spaces and Footpaths Preservation Society is aware, unlike some other societies for preserving this, that and the other, that it has a job to do in towns as well as in the country. The New Year issue of COSFPS' *Journal* has a short article on the present condition and future state of pedestrian ways in the City of London. Many of these disappeared in the blitz, for the simple reason that constant sapping and undermining for cellars and services had left them several feet above effective ground level, and when the buildings went, the paths went with them, leaving no trace behind—except a legal right of way suspended in space. Others are now threatened by redevelopment and rebuilding schemes, for the more soggy-witted kind of developer can never see that a pedestrian snicket through his building might enhance the value of the property more than the lost floor-area reduces it.

*

The City Corporation does watch these footway interests as much as it can, and does point out to developers that a bit of multi-levelling might not come amiss, in improving access to the building, as well as maintaining the rights of way. But a good deal of propagandizing and persuading still seems to be needed. More power to the COSFPS elbow.

TIMBER

In a BBC discussion on living in Crawley one speaker instanced George Orwell's policy of planting an acorn as a penance for every bad act. It is a good, sensible idea because trees, as everyone learns and forgets, provide free energy. And at a time when our other stores of energy—oil and coal, for instance—are diminishing fast, a surplus of trees could stand us in very good stead. As every architect knows, trees are the cheapest feature which would peg down post-war housing estates and new towns into the landscape, and ASTRAGAL constantly regrets that the parks departments are always so far behind the builders. But that is just an æsthetic digression. What this country still needs is a plentiful supply of timber, not just as a building and furniture material, but for its cellulose content. The point was made by Professor F. W. Jane in a worthy address given at the inaugural reception of the Institute of Wood Science last week.

This new Institute met at the RSA, in a room impressively packed with dozens of directors of research, scientists, botanists, wood technicians and so forth, and was formally blessed by Professor Sir Albert Richardson. Architects and builders will look forward to its progressive influence on their industry.

*

A word, however, of warning. Prepare yourselves for the square-sectioned tree-trunk. According to Professor Jane there is an experimental lime tree in Cambridge which has three straight sides and one slightly convex. This boon to the saw mills (but not, presumably to veneerers) is the possible forerunner of a forest of giant table-legs. Will this form another subject of worry to æsthetes? Or will it be accepted, as Russell's giant lupins, the copper beech, and other startling refinements and sports have been? We'll see.

INVEST IN INSULATION

If Gerald Nabarro's Bill goes through Parliament smoothly anyone with shares in insulating materials should be happy. His Bill, which is complementary to his Clean Air Bill, will make it compulsory for all industrial buildings to be properly insulated (except, of course, those buildings which need to lose heat, like foundries). This seems good sound common sense which should have been made law years ago. It should be welcomed by miners, who won't see their product being wasted; by the insulating materials manufacturers; by architects; by the workers, who will be warmer in winter and cooler in summer; and by industrial managements who will have lower fuel bills. It is appalling to learn that of 40 million square feet of industrial building erected last year, only 10 per cent. was insulated. How profligate with the country's resources can one get?

*

ASTRAGAL'S fear is that industrialists, reluctant to spend money, will use the credit squeeze as an excuse for persuading the Government not to accept the Bill. This would be a great mistake. Apart from the waste of fuel—oil or coal— the cost of insulation can largely be met, in a new building, by the concomitant reduction in the size of the heating plant.

ASTRAGAL

CRITICISM

by J. M. Richards

J. M. Richards, who, as already announced, is to contribute a regular critical article on current architecture to the JOURNAL, writes the following introduction to this new venture. His first article, discussing a building now on the point of completion, will be published on Thursday week.

As the JOURNAL has announced, I have promised the editors to contribute a regular article under the above heading in the attempt to do something to meet the demand, which the JOURNAL itself has been assiduous in encouraging, for routine criticism of current architecture.

There is no need for me to enlarge on the good that criticism can do, both in helping architects to raise their own standards and in helping to establish that body of informed public opinion without which, it is always said, architecture cannot make useful progress, but there are one or two things I want to say about the aims and limitations of this kind of criticism, of which I am most conscious. I am therefore writing this introductory statement. The first article will appear in a fortnight's time.

The first thing I want to do is to appeal to architects to accept criticism tolerantly. I have been saddened in the past by discovering how many architects express a strong belief in the usefulness of frank architectural criticism until it happens that the subject of the criticism is one of their own buildings ; then they become as touchy and resentful as a prima-donna. Criticism by its nature tends to be unfair—no one but the architect himself can know quite what difficulties he met with and what good reasons there were for not doing what the critic may suggest would have been better than the thing done. But the critic—like the public—can only judge by results, and it is equally unfair to him to deny him the right to appraise the result without inside knowledge of every factor that influenced it.

The JOURNAL is nevertheless anxious to give architects every chance of explaining their point of view, and is inviting them to answer my comments on their buildings. Space will also willingly be given in the pages of the JOURNAL to letters from readers. Given this safety-valve, I hope architects will accept criticism of their buildings in the constructive spirit in which I assure them it will be meant.

In return for this tolerance on the part of architects, I make five promises: 1. I shall not criticize any building which I have not seen with my own eyes. I don't believe one should ever judge a piece of architecture from photographs. This will probably mean that most of the buildings I deal with will be in the London area, but I think that is the lesser evil, and I will try to get around as far afield as I can.

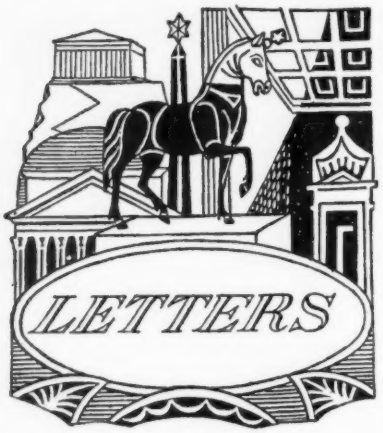
2. It follows from the above that I intend to criticize finished buildings, not projects. The process of building is an essential part of the art of architecture, not only because standards of craftsmanship matter but because architecture is partly a matter of spatial experience, which cannot be had except to full size and in the round.

3. My aim will be to go rather deeper than superficial appearances. Too much criticism consists of subjective reactions to visible arrangements of forms and colours, and to discussions about niceties of taste. Although in the small space at my disposal I shall obviously not be able to analyze planning or structural problems very deeply, and although I maintain that in criticism it is the result, as apprehended by the user of the building, that matters—not how it got like that, I appreciate that planning and the use of structure are the basis of architecture and must be taken into account equally with the picture presented to the eye. Normally the photographs that illustrate my article will be accompanied at least by a sketch plan.

4. We are more conscious nowadays than we have been for many years, I am glad to say, that architecture does not begin and end with the individual building. Its relation to its surroundings is almost equally important, as is the type of environment it helps to create. These are summed up in the word " planning," and any serious criticism must take note of planning considerations, though in a small space these can only be touched on. I will take care to remember, however, that a building's relation to its environment is often outside the architect's control.

5. I do not regard criticism as being synonymous with fault-finding. It is as useful to analyze the good points of a building as the bad. This raises the rather difficult problem that there is always a temptation to choose the better buildings to criticize because they are more worth serious attention and provide interesting points for discussion. In the thoroughly bad building, its badness and the reasons for it are usually evident to everyone and there is little purpose in pointing them out, yet it is unsatisfactory if this results in the better buildings being chosen for criticism and the worse buildings getting off scot-free.

I suppose the answer is that most buildings are somewhere in between, and in all except the worst there is something worth discussing. Nevertheless, if in these articles more pains seem to be taken to criticize buildings that are clearly worth criticizing than to condemn what already condemns itself, I hope the architects who feel it unfair that they should be picked on when others build much worse will see that in fact a compliment to them is implied.



Alan Meikle, A.R.I.B.A.

"Insider"

"Techtologist"

Paul Ritter, A.R.I.B.A.

R. B. Hellard, John Brunton, Eric Boobyer, A|A|A.R.I.B.A.

James Codrington Forsyth and Michael Linnett, A|A.R.I.B.A.

K. F. Isitt, of Buenfeld and Isitt, Architectural and Civil Engineering Design Consultants and Surveyors.

Arnold E. Towler

R. Gordon Brown, F.R.I.B.A.

Dean, Faculty of Architecture, University of Hong Kong

Thomas A. Markus, A.R.I.B.A.

Look Back In Criticism

SIR,—Your decision to re-introduce architectural criticism into our well-mannered professional world is most welcome. Inevitably you will be chiefly concerned with buildings in the news, but it would be most interesting if some of our idols of, say, four or eight years ago were also examined to see whether they now sit as firmly on their pedestals as they did when we first beheld them in the freshness of the glossy plates.

Perhaps the two most acid tests of any building are firstly: has it, in the course of its life, been really what the client wanted, and secondly, how has its construction stood the tests of time, weathering and use?

After all, it is comparatively easy to design "prettily" in the current fashion, whatever it may be; but there must be many architects who have found themselves with duller buildings than they would have liked, simply because they looked beyond the honeymoon period of architectural criticism into the more permanent realities of middle age.

ALAN MEIKLE.

Nottingham.

[We are planning to criticise older new buildings, as well as those recently constructed. We shall begin with the Royal Festival Hall. Mr. Richards writes an introductory article to a series of criticisms of *new* buildings on page 169.—The EDS.]

No Lags At Holloway

SIR,—Congratulations to Mr. Richards, who runs his annual critical marathon without pulling punches or treading on other people's toes and who manages to paint a coherent picture on the way!

May I quibble about a small point of fact? Mr. Richards says that Holloway County School is "a tribute to the fact that the LCC Schools Division which at first rather lagged behind the others . . . has made notable progress." This school was the first (equal) post war secondary school by the Division and was opened in 1955; it was almost the first building completed by the Division since the spate of primary schools which you frequently praised in 1951 and 1952. At that time the Housing Division had only recently been formed and the licence-bound General Division had completed little of interest except for Festival Hall.

"INSIDER."

Middlesex.

What The Minister Didn't Say

SIR,—All of us must have read the Minister of Transport's letter in your New Year issue with the utmost disappointment. To give a précis of it:

"Hello, everybody (5 lines). Most of your problems are not mine, but the Ministry of Housing's problem (7 lines). We are already doing an awful lot (8 lines) and do not intend doing anything more at present (5 lines).

In fact we have no intention of any radical improvement, all we may do is to increase the cost of living for the motorist or prevent him from using his car (10 lines)."

What we hoped for was:

"The road problem is urgent. Time and petrol, due to congested roads, is wasted to a sum of £10 million (? or whatever it is) per annum. We have therefore decided to build roads on top of the railway lines in all the major cities; toll will be levied on these, towards the cost. It will, however, lower the cost of suburban stations as they will thus be roofed. We also intend to build a number of inner circular roads in London as well as tunnels, flyovers, etc.

"Last, but not least, together with the Ministry of Housing we shall start rebuilding a number of slum areas in London, demolishing half a square mile at a time (compensation will be in the form of shares in the rebuilt areas). Roads will be based on Le ville Radieuse, there will be lots of parks and green belts, people will no longer have to travel two hours a day to and from work as we have at last worked out a Master Plan for London.

"We are doing this now and not in ten years' time, as it is cheaper to do it Now."

Signed:

The best Minister of Transport you have got.

Alas, what foolish realists we architects are; another mild and bitter, please.

"TECHTOLOGIST."

London.

Criticising The Unread

SIR,— I am grateful to you for publishing K. Douglas Bundy's letter. It illustrates vividly my contention that part-time lecturers often do not spend enough time on educational work: he admits that he did not read my original article. It can only be lack of time for it is he who says it was unfortunate that he did not read it, and after all, it was the first article on the subject to appear for a long time in any serious British architectural paper.

It strikes me further that a man who teaches history ought to know that ignorance of the original source forfeits the right to, and the authority of, criticism or comment.

Mr. Douglas Bundy talks down to students and this is significant: "I am foolish enough to believe that students get some benefit from that fact"; his English is vague, what "fact" he has in mind is impossible to ascertain.

I should like to encourage Mr. Bundy to take up some of "the many far more profitable ways of augmenting an income," he thinks of, rather than remain the hurt teacher who has not been appreciated.

PAUL RITTER.

Nottingham.

Why Complain To The AJ?

SIR,—We have read with varying emotions the view of your correspondents upon matters concerned with RIBA policy, views and practice, the most recent of which was that by J. Evans (January 10). We agree with the consternation expressed by the writers but would like to make one or two comments to past, present and any future writers on these matters.

Doctors, dentists and lawyers rarely air their dirty linen in other than their house magazines. The JOURNAL reaches many people in the building industry outside the architectural profession. Would it not, therefore, be better that these views should be expressed in the Institute's own journal where their expression would surely add greater force to the argument? Or can it be that the authors consider they would be suppressed by the Editors of the *RIBA Journal*—in which case they could then resort to your correspondence columns with a much stronger argument against their own professional body, but we doubt that this would be necessary.

We also think there might be surprise at the effect these letters would then have within the portals of Portland Place.

R. B. HELLARD.
JOHN BRUNTON.
ERIC BOOBYER.

Middx.

Sixpenn'orth Of Deaths?

SIR,—We wonder how fellow members would react to the idea of their subscriptions being reduced by publishing the *RIBA Journal* monthly in two sections. These could consist of a leaflet (6d.) giving information about Institute functions and news which would keep members up to date on the qualifications or deaths of their friends, and the other (2s.) containing such things as those lengthy articles on colour (generously illustrated in black and white). We should then be given the opportunity of choosing what we wanted, and be charged accordingly.

JAMES CODRINGTON FORSYTH and
MICHAEL LINNETT.

Sweden.

Is It Fair? Asks Mr. Isitt

SIR,—We were interested in J. Evans' letter (January 10) regarding the RIBA.

We are not members of this honourable and respected Institution, but we still feel that most of his remarks were completely without foundation.

Firstly, regarding unqualified practice: it is time he realized that many of us, whilst preparing for practice in the most thorough manner, not only by studying architecture in all its aspects, but also the structural field, do not become members of the institute for reasons other than lack of knowledge or ability.

May we suggest that many of the practices in this country are failing not because of unfair competition, but due to the shortcomings of individuals, who, having gained membership of the RIBA, also believe that overnight they have acquired business acumen and know-how, whereas in fact in most cases this is not so.

With regard to Mr. Evans' remarks about

the RIBA headquarters, we feel that with such a large membership the extensions to this worthy building are long overdue.

He also talks of "fashionable members" with big contracts, as if they were born in this enviable position, when in reality most of them got ahead by hard work. May we say that in our experience (we have been in practice three years and have an average staff of 25-30 men) it is not who you know, but who knows your work; and if your work is good you will not need to worry about the RIBA, the "fashionable members" or anyone in the profession.

K. F. ISITT.

London.

Variations Please !

SIR,—The section of the JOURNAL entitled "Building Illustrated" is useful and interesting and forms a practical basis for comparing new projects with completed jobs.

I am not sure that wall to floor ratios and roof to floor ratios, etc., mean a lot to me but the time schedule is most interesting. Might I suggest, however, that an additional column, "number of variations," is included. I am discovering to my great concern that to have about 300 variations on a job is not unusual. Perhaps also a further column headed "architect's loss" would complete the picture.

ARNOLD E. TOWLER.

Preston.

RIBA and Hong Kong

SIR,—It is apparent that a speech by the vice-chancellor of this University, regarding the recognition of the degree in Architecture, by the RIBA, has been misunderstood in some quarters. The vice-chancellor did not suggest that the RIBA should depart from the academic standard which it has always maintained, but he wondered whether our dealings with the RIBA had not been affected by matters other than those of purely academic standards. The records show that the RIBA has been aware of the University intention to apply for recognition since 1951, and it accepted and considered such an application in 1953, after the chairman of the RIBA Board of Architectural Education had visited Hong Kong to inspect the school. It was not until 1956, after a correspondence which had continued over five years, that the RIBA first stated that recognition must be obtained from the Architects Registration Council of the United Kingdom before the granting of RIBA recognition could be considered. The ARCUK had not been mentioned in any previous correspondence in regard to this matter. With these events in mind and in view of the fact that major Universities had accepted our degree as a qualification to enter upon post-graduate studies, the vice-chancellor stated: "All this tends to make one wonder whether this question of recognition by the RIBA is not bound more intimately with questions of British architectural politics and expediency, rather than with that of academic status."

This school is now seeking recognition from the ARCUK and, as the vice-chancellor is away at this time, I feel that it is necessary for me to remove any misconception about the matter. The following is a concise record of events:—

(*a*) 1950: Course founded.

(*b*) 1951: RIBA informed officially of the intention of the school to apply for RIBA Intermediate Recognition.

(*c*) 1953 Applied for Intermediate Recognition.

(*d*) 1953: Intermediate Recognition refused.

(*e*) 1954: Letter dated November 20, 1954, Application to apply for Intermediate or intermediate and Final Recognition in 1955.

(*f*) 1955: February 28, 1955, RIBA replied to application "e" above saying that the RIBA had not settled their policy in this matter with regard to schools overseas and advised that application for recognition should not be made that year.

(*g*) 1955: June 25, 1955, application to RIBA to apply for recognition in 1956, at Intermediate and Final levels simultaneously.

(*h*) 1956: February 15, 1956, RIBA replied to application "g" stating that recognition must first be obtained from the Architects Registration Council of the United Kingdom.

R. GORDON BROWN.

Hong Kong.

Enthusiasm Is Not Enough

SIR,—Although one must admire ASTRAGAL'S enthusiasm for history, he seems to be in danger of committing more of the kind of injustice which he committed in your issue of December 27, 1956, unless he realises that enthusiasm is not a prime qualification for writing of historical matters. I am referring to his comments on the lecture by Messrs. Johnson and Skempton on William Strutt and the early iron mill structures.

The implication that this was by way of being a pioneering lecture on virgin historical ground is false, and one assumes that the lecturers must have taken pains to try to avoid this impression, but apparently not sufficient pains for at least one member of their audience. It was Turpin Bannister who first gave a detailed description of the Strutt mills, as well as of the later Benyon and Bage mills, in his paper *The First Iron Framed Buildings*, published by the *Architectural Review* in April, 1950. If, according to ASTRAGAL'S description, the new material presented at this lecture shows Bannister to have been wrong in assuming that the first Strutt mills had iron beams as well as columns, then this is certainly a valuable addition to our knowledge. But it does not relegate Turpin to the limbo of "false starters," and any discussion of the Strutt mills, no matter how brief, which omits his pioneer work, is unjust. One assumes that no such injustice was either intended or done by the lecturers.

ASTRAGAL'S final comment: "All the same it is still to Strutt that the credit must go for initiating a major revolution in the history of structure," is equally unjust, though this time to the dead. It would make Jeremy Bentham turn in his grave, or rather rattle in his glass box in London University, for he published full details of a building which certainly was intended to have iron columns, and probably iron floors, in the *Panopticon* in 1791, a year before the first Strutt mill. Whether Bentham is dismissed by ASTRAGAL merely because his scheme was never executed and Strutt's was, I do not know; it would certainly be unjust to make such an artificial division between theory and practice when we are dealing with *ideas*. I blushingly recommend ASTRAGAL my paper on Bentham's and other prisons in the *Architectural Review* of October, 1954.

THOMAS A. MARKUS.

Billinge.

Sixty planners, administrators, architects, engineers, geographers and surveyors, to mention only a few of a dozen or more disciples, came together at the offices of the Architectural Press on Tuesday, January 22, to form the British Group of the International Centre for Regional Planning and Development. The following is a report of the meeting.

Readers will recall the International Regional Planning Conference held at Bedford College in September, 1955, which incurred the then Government's disfavour. Since then a permanent secretariat for the Centre has been established in Brussels and national groups, with the encouragement of the governments concerned, have been formed in Belgium, France and the Netherlands.

The inaugural meeting of the British Group—the fourth to be formed—was appropriately addressed by Sir Patrick Abercrombie who is, as Professor R. Gardner-Medwin, the chairman of the meeting described, "a true son of Sir Patrick Geddes, the father of the regional approach to planning." Sir Patrick Abercrombie opened by saying that he welcomed the initiative taken to establish a permanent international centre. Despite considerable earlier progress, when England had been parcelled out for planning purposes into geographical regions on Geddesian principles, more recent developments, arising from the operation of the 1947 Act had resulted in a retrogression of the machinery of planning.

Turning to the overseas areas, Sir Patrick referred to his experiences in Ethiopia, Ceylon, Hong Kong and Ankara. He had found that despite the enthusiasms of individual experts a great deal of planning was wasteful, if not futile. It was essential that there should be a comprehensive approach on a region basis. Citing the Tanganyika Ground Nuts scheme, he said that this was a well-motivated proposal with tragic consequences resulting from the absence of a regional survey.

In the discussion, Dr. Dudley Stamp emphasized that one could not intelligently plan the development of an area without an adequate survey of land and natural resources. Dr. S. F. Collins (West Indies) stressed the need for planning with, rather than for, the people.

Above, the inaugural meeting of the British Group of the International Centre for Regional Planning and Development, held last week at the JOURNAL'S *offices in Queen Anne's Gate. Left foreground is Dr. G. P. Wibberley, Professor of Agricultural Economics at London University. Beyond is Professor R. Gardner-Medwin, who was elected chairman of the Constitution Committee of the Group, Sir Patrick Abercrombie, and Sir George Peplar,* P/PTPI. *Standing in the background is Dr. Stirling, lecturer in anthropology at the London School of Economics. Seated, left to right, beyond, is S. L. G. Beaufoy, of the MOHLG; Laethem Koenig, economist; T. Swaminathan, ICS, Minister (economic), Indian High Commission; Dr. Wise, economic geographer, LSE; Col. C. W. G. Walker, secretary of the Association of Consulting Engineers; John Madge; Dr. Harrison Church, lecturer in geography, LSE; and J. F. Q. Switzer (right foreground). Below left, Richard Bailey, Director, PEP; on the left, with right, Italian sociologist Dr. Carlo Doglio. Below right, having refreshment before the meeting: left, S. L. G. Beaufoy, Chief Technical Officer of the MOHLG, with Miss Sylvia Crowe, vice-president of the ILA, and Noel Moffett, architect planner.* *See news item on page 171.*

At the conclusion of the discussion a resolution was passed establishing the British Group, appointing a committee to prepare a Constitution, to recruit members and prepare a programme. Professor R. Gardner-Medwin was elected Chairman of the Committee, P. J. O. Self, Lecturer in Administration, London School of Economics, Vice-Chairman, and Miss M. C. Solomon, Secretary of the Housing Centre Trust, Hon. Treasurer. The Secretary is F. J. C. Amos. Members of the new Committee include John Madge, Richard Bailey, Director of PEP, Dr. G. P. Wibberley, Professor of Agricultural Economics, London University, and G. E. Janson-Smith, recently Deputy-Director of Education, Sudan.

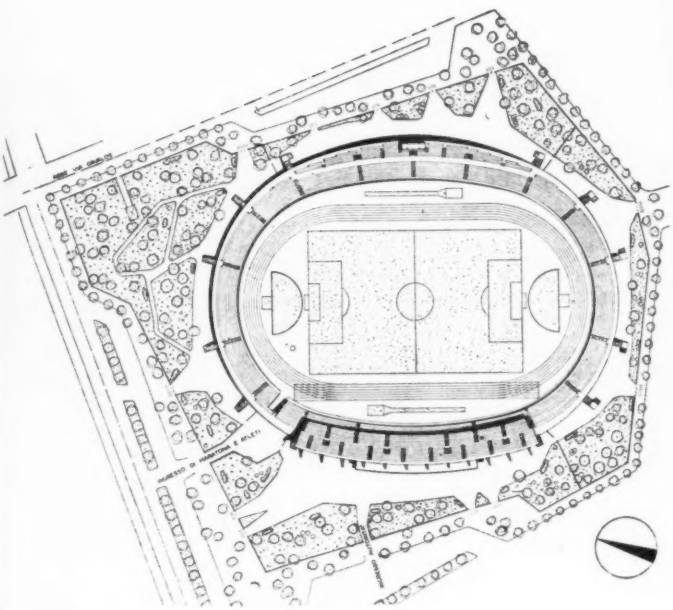
Many well-known members of the architectural and town planning professions have joined with other professions in the formation of this new group. Among those attending were Sir George Pepler and S. L. G. Beaufoy, the Chief Planning Officer of the Ministry of Housing. (He was, it is understood, the only Ministry representative invited.) It would appear that as a result of the meeting the Group has got off to a good start. Their task now is to provide services which will be of real value in the fields of documentation, research and education for the diverse professions concerned with planning problems at home and, particularly, overseas.

The ABT sponsored conference, " Housing the City Dweller," held last week at the AA, proved a lively affair (writes a correspondent). Mr. Arthur Ling, who was in

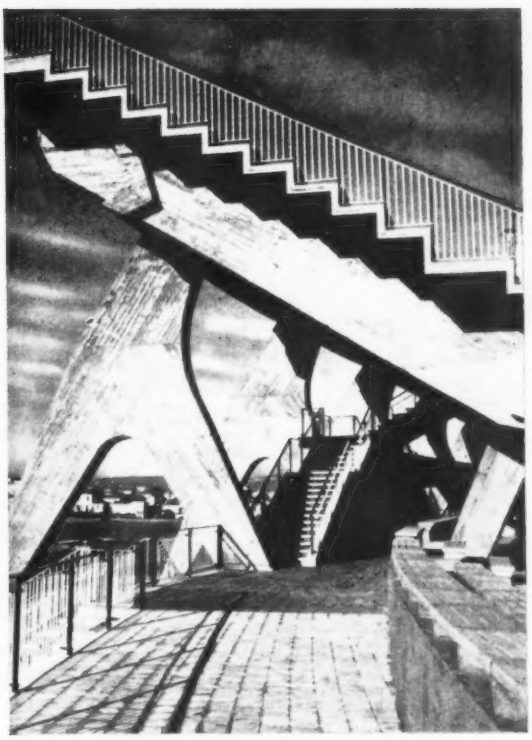
(*Continued on page* 174)

SPORTS STADIUM AT PESCARA, NORTH ITALY

This stadium, designed by Luigi Piccinato, consists of a football field, running tracks, springboards for jumping and pitches for javelin throwing and putting the shot.



Site plan



It holds 25,000 spectators, who enter and leave by 18 stairways each handling 1,300 people. The stands (above) hold 5,800 people and are constructed on r.c. trestles.

Continued from page 172

the chair, opened at 10.30 with some well-considered criticisms of the present policy of dispersal. Mr. Toms explained the ABT Housing and Planning Committee's views on what should be done (higher densities all round and minimum suburban densities of 100 persons per acre), and Councillor R. Edmonds, Chairman of the Town Planning Committee of the LCC, in opening the afternoon session showed the tremendous grasp he has of London's problems.

The purpose of the Conference was rather lost in the day's discussion and the early intervention by the Secretary of the TCPA who plugged the party line started the usual argument. A continuous flow of talk ranged from Glasgow's problem of re-housing people now living at 700 persons per acre to Miss Elizabeth Denby's hypothesis that Wakefield is a lovesome thing, God wot! Although there were no really new theories put forward and the ABT discussion memoranda by no means accepted, the general idea crystallized that there is an urgent need for some Organization to stimulate public and government interest and action in redeveloping our urban areas in a truly urban way.

With this in mind a Committee was formed to continue the work of the ABT Housing and Planning Committee, probably independent of the ABT. Here perhaps are the seeds for that "organic momentum in urban renewal" called for by Derrick Rigby Childs and Jack Whittle in their recent articles on Slum Clearance. It is indeed high time that we had an antidote to the TCPA; let us hope that if a new organization is born it is as successful in influencing public opinion as the TCPA has been.

The Government will not restrain industrial development one moment longer than necessary, said Iain Macleod, Minister of Labour, at the LMBA's annual lunch last week. He acknowledged that an enormous amount of building work remained to be done, but insisted that export must come before domestic industrial development. He went on to point out that manpower was being wasted by accidents on building sites—there was a 5 per cent. increase in 1955 over 1954—and asked the building industry to educate members to understand safety regulations and promote a sense of responsibility by the individual. He pleaded for good human relations in the building industry, because it was good business, and because it was a direct contribution to greater productivity. Many employment problems stemmed from a sense of insecurity, and he said that he was consulting the industry about proposals for a longer period of notice for workers with long service. He concluded by asking the industry to recruit and train apprentices from the increasing number of children who will be leaving school in the next four years—an opportunity unlikely to recur, and to study the responsibilities of management.

Introducing the Minister, the President of the LMBA, Kenneth Foster, emphasized the achievement of the building industry in expanding and training an industry from a mere 300 000 men after the war to its present strength of over 1 million, a size which makes it rank with the top two or three industries in the country. He pointed out the need for a large building programme for many years to come.

The IUA's fifth congress, which was to have been held in Moscow this year, is to be postponed until some time in 1958. The biennial assembly—a business meeting—will take place in Paris during the coming summer.

Helicopters will be used in building work before long, says Igor Sikorsky, who is described in America as a helicopter pioneer. He suggests that they will be used instead of cranes for heavy construction work.

We publish here the scripts of three BBC talks given in the past fortnight. In the first Derek Senior, a journalist, discusses the effect of local government changes on planning; in the second, architect Lionel Brett discusses points made in the December issue of the Architectural Review, *entitled "Counter Attack," and in the third a housewife from a New Town describes her Subtopian environment.*

PLANNING AND LOCAL GOVERNMENT

By Derek Senior

"Don't push aside local government reorganization and say 'That's the clerk's department.' Planners are enormously concerned in it. The *productivity* of planning depends a very great deal on the *shape* of local government."

So said Dame Evelyn Sharp, the Permanent Secretary to the Ministry of Housing and Local Government, when she addressed the Planning Summer School at Nottingham last year. How right she was, and how I wish I could feel confident that planners *realized* how right she was.

Six months ago the Minister told us what sort of machinery he was thinking of setting up to reorganize our system of local government. He published his proposals in a White Paper, so that we could all have a chance to discuss them, and so that legislation could be framed in the light of the views expressed "*in Parliament and elsewhere.*" But there's been little indication yet that planners have any views. They go on writing papers—and very interesting papers—about the *technique* of planning, but they don't seem to be giving much attention to the far more important question of the *productivity* of planning—the question of how much of what they plan gets done. Nor do they show much sign of seeing how closely that depends on the scope and structure of the planning unit. It's not just a matter of *scale*—of having units big enough to make good planning possible. It's a matter of getting the unit to fit the present-day pattern of settlement and the range of present-day social activity—of catching up with 60 years of rapid change in the distribution of homes and workplaces, in the speed and volume of transport and communications, and in the standard and complexity of the provisions we collectively make for our individual well-being. It's the *fitness* of the *planning unit,* more than anything else, that determines the nature, the *value* and the *effectiveness* of the planner's work.

Some planners I've talked to say they're well aware of all this, but what's the use of getting excited about a White Paper? Nothing will come of it. That, I think, is a mistake. It's true—more or less—that there are no votes in local government reform, and far be it from me to indulge in political prognostication, especially at a time like this; but I should think any government would rather go through with it now than risk having to start all over again later. Of one thing, at any rate, we can be reasonably certain: if we do get a Local Government Act in the near future, we shan't get another for at least a generation. And by that time, if it's a bad Act, local government may well have ceased to be the instrument of choice for the administration of our social services.

Others say that the White Paper is such a timid document, so tied to the *status quo,* that any Act based on it is bound to be useless from the planning point of view. Now *that,* I'm quite *sure,* is a mistake—a disastrous mistake. Because I'm quite sure that the White Paper does open the way for a great advance—an advance that could solve at a single stroke the worst of our planning problems. Whether that way is taken, or blocked up, depends on how the Minister decides to deal with what *looks* like a mere matter of administrative procedure. The trouble is that the *wrong* decision will automatically be taken if the case for the *right* one goes by default—and it *will* go by default if a lot of people don't wake up to its implications and make their voices heard. It is, I believe, no exaggeration to say that on this one Ministerial decision hangs the whole future of planning and local Government in this country. And I'll tell you why.

It's perfectly true, of course, that the White Paper is ostensibly based on the proposition that "There is no convincing case for radically reshaping the existing form of local government." It *had* to be. The Minister, rightly or wrongly, thought it was no use *trying* to reorganize local government until there was some measure of agreement among the local authority associations. These are bodies founded for the specific purpose of defending and promoting the interests of the various *existing forms* of local authority, and their representatives flatly refused to sit down together until the Minister had assured them that he didn't even contemplate any general departure from its County and County Borough system. So there's no point, at this stage, in challenging the basic principles of the White Paper. Whether we like it or not, we've got to accept its limitations, and face the fact that, over most of the country, local government will continue to be organized as it is today, whatever adjustments may be made in the boundaries or status of individual authorities.

Over *most* of the country, geographically speaking, yes. But not necessarily in the conurbations, the groups of towns in which most of us live. Because the White Paper acknowledges that the conurbations present special problems, calling for special forms of organization. It refers to various possible methods of rationalizing the hotchpotch of authorities of different types and sizes within each conurbation. It then points out that none of these approaches would solve the problem of "those local authority services which may need to be co-ordinated or administered in common for the whole conurbation"—and of these planning is obviously one. It goes on to say that this co-ordination or common administration *might* be secured by creating joint representative bodies, but it adds that "this course would have the disadvantages of any system of indirect representation." And the last sentence of this pregnant paragraph (number 42) reads as follows: "Alternatively a directly-elected upper-tier authority might be created to deal with all the services requiring joint action."

So we have, *within* the limitations of the White Paper, the possibility of what amounts to an administrative county that

really is based on the present-day pattern of settlement, a county that doesn't have gaping holes in it wherever it's most important that it shouldn't, and whose people look on its own centre, not on some city beyond its boundary, as the hub of their community life. This *could* mean a revolutionary advance in the productivity of planning, as well as in the capacity of local government to handle other services that have had to be taken or withheld from it. On the other hand, it could mean no more than a welcome improvement. Which it's to be depends on the Minister's answer to a question which the White Paper leaves entirely in the air.

What exactly is a conurbation?

As Dame Evelyn said in the address I quoted at the beginning, it's something you know when you see it, but it's very hard to define—at least in the sense of drawing a line round it. Its nucleus is a cluster of towns, usually dominated by one big city, whose growth has swallowed up most of the countryside between them and spilled over into neighbouring towns and villages, some of which may already be joined to the central urban mass by ribbons of development. Beyond these lie other towns and villages, still separated from the central mass, and from one another, by more or less broad belts of open country, but none the less dependent on the conurbation's centre for the satisfaction of many of their more specialized needs—commercial, cultural and social.

Where, then, should the boundary of the conurbation be drawn? Patrick Geddes, who coined the word some 40 years ago, doesn't seem to have defined his concept very precisely. Professor Fawcett limited it to the continuously built-up area, excluding any towns separated from one another by rural land. The Barlow Commission, on the other hand, thought that what mattered was how far out from the centre people looked on that centre as being essential to their normal life and as the natural focus of their business activities. Obviously, it depends on the purpose for which the boundary is drawn. A few years ago, when it was decided to define the six major conurbations for *census* purposes, it was clear that the boundary had to coincide with existing *local authority* boundaries, so that useful comparisons could be made between the census figures and other statistics normally compiled on a local authority basis. Beyond that, the regional committees whose job it was to recommend boundary lines were given only vague and conflicting guidance as to what was the object of the exercise. But the general tendency seems to have been to draw a line round the edge of the solidly built-up core, and then shift it inward or outward to fit the nearest local government boundary—cutting out a chunk of the central mass if it belonged to a predominantly rural district, and bringing in the rural rump of a district or borough that was mainly built up, but not including any town that was still detached from the nucleus (or attached to it only by a ribbon of development) unless it was a dormitory town.

The resultant areas may well be perfectly satisfactory from the Registrar-General's point of view, but his purposes have nothing to do with ours, as he himself went out of his way, in his report, to make crystal clear. "Finally," he said (and I'm quoting)—"Finally it must be emphasized that these definitions have been formed to delimit areas for *statistical analysis* and are *not at all* concerned with the way in which the boundaries of individual urban areas or groupings of areas should be determined for general administrative or *local government purposes.*" (End of quotation.) Nothing, surely, could be plainer than that.

Yet I'm afraid that so far as the six major conurbations are concerned, the Registrar-General's line will be adopted, with only minor modifications, in spite of his explicit warning against any such nonsense. Because the Registrar-General's line has one fatally seductive attraction: it's the line of least resistance. It's there. It's been drawn. It's official. Any other line, drawn specifically for the purpose of local government reorganization, would have to be justified on some principle that would be open to challenge by the counties affected. The Registrar-General's line, precisely because it was drawn for an entirely different purpose, is at least neutral. Its political inoffensiveness may well outweigh, in the official mind, its utter irrelevance to the purpose in hand.

What matters in the definition of a local government area, of course, is not continuity of bricks and mortar but community of interest and accessibility.

Admittedly you can't measure how much community of interest the outlying towns have in a given conurbation centre. But what you *can* do is define the area within which that centre is more readily accessible than any other centre offering services of a comparable kind; that'll give you a pretty accurate guide to the area which can most conveniently be served by that centre as headquarters for the wider and more specialized functions of local government. All you need is a time-table of week-end bus and train services; you can cross-check your findings against the annual turnover, per head of local population, of shops selling things like pianos, or against an evening newspaper circulation map. The Ministry has already produced an admirable *local* accessibility map, based on the bus services used for everyday shopping; this provides an ideal framework for the redrawing of *district* boundaries. A similar map, showing the areas for which larger centres provide more specialized and less frequently used facilities, would serve the same purpose in respect of upper-tier authorities.

I've given you some of the *general* reasons why I think the conurbations should be defined, for *local government purposes*, on a broader basis than they are for *census* purposes. I can't here go into the effect that such a change would have on the vitality of local government, by enabling it to meet many of the urgent, practical needs—like the need for a unified administration of the health service—which the present system has proved itself quite incapable of meeting. But I must draw attention to one very practical advantage of the wider definition which is all-important from the planning point of view.

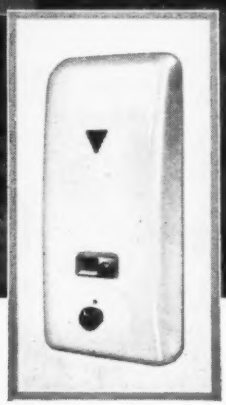
By far the biggest and most intractable problem in the planning field today is that of resettling the excess population and industry from our congested cities in new or expanded towns beyond their green belts. It's a problem that'll be with us as long as it takes to clear the slums, and that, so far as the great industrial conurbations are concerned, will be at least as long as any reorganization of local government is likely to last. It's a problem which local government is manifestly failing to tackle on anything like the scale required, for the very good reason that our present system of local government just isn't *designed* to tackle it. Yet it's a problem which the Ministry doesn't want to take away from local government, because it's the local authorities that would reap the benefits of its solution in the end. Well, that's fair enough—but *only* if the Minister sees to it that local authorities are organized in such a way that they *can* grapple with it. And that's entirely a matter of how he defines the conurbations. Let him draw the line in the right place, on the basis of accessibility and community of interest, and the overspill problem is solved —*for every conurbation except London*. Let him draw it in the wrong place—anywhere near the Registrar-General's line—and the overspill problem will remain forever insoluble, by local government at any rate. It's as simple as that.

As Dame Evelyn told the summer school, overspill is not a *physical* problem: it won't overtax our resources. And it's not a *technical* problem. It's almost entirely an *administrative* and *financial* problem. Humanly speaking, the rehousing of the overspill from a congested city is a single, indivisible process. But our present system of local government divides the responsibility for that process between two different and often antagonistic sets of authorities. It's a financial problem for the same reason —because the authority that could finance the overspill development doesn't control the site, can't provide the services and won't draw the revenue, and the authorities that *do* control the site, that *would* have to provide the services, and that *could* ultimately profit from the development haven't the resources to finance it, and often wouldn't if they had. Obviously both the administrative and the financial difficulties would vanish if the exporting and receiving ends of the process were both brought under the control of the same overall authority.

But that would be impossible, Dame Evelyn argued, without a revolution in local government, because overspill may entail rehousing people in places up to 50 miles distant from the parent city. That, of course, is true—*in the case of London;* but *only* in the case of London. Every other conurbation in the country could rehouse its overspill in self-contained new towns on excellent sites within 20 miles of its centre and still leave a green belt at least five miles broad between them and the fringe of the continuously urbanized area. And in not a single case, *except London*, would the inclusion of these sites within the conurbation's boundary line do the slightest violence to the principles of the White Paper.

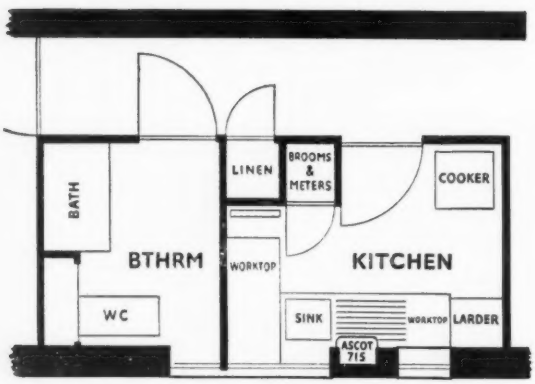
Now, Dame Evelyn quite frankly pleaded guilty to the charge of being rather obsessed with the problems of London. So, of course, is everybody else at the Ministry. They're bound to be. They live in the place. They can't help it, and I don't blame them in the least. But I do most bitterly complain when a solution for the overspill problem that would work perfectly for every other conurbation in the country, without overstepping the limits set by the White Paper, is dismissed out of hand simply and solely because it wouldn't work for London. The London conurbation, as the White Paper says, is unique. In my opinion it's long since outgrown the possibility of good local government, but even if it hadn't, it's quite unreasonable to expect that its problems could be solved on the same lines as those of the other conurbations. The best thing, both for London and for the rest of the country, would be to set up a separate boundary commission for the metropolitan region—it needs one much more than Wales —with a free hand to suggest constitutional devices as unique as the problem. Then there would be some chance of getting a remedy for the difficulties of the other conurbations considered on its merits.

Put London aside, then, and think for a moment what would happen if the Registrar-General's definition of a conurbation, or anything like it, were adopted for local government purposes elsewhere. The neighbouring counties, impoverished and ruralized, would be less able or willing than they are now to play their part in overspill development. The remodelled urban authorities would be under irresistible pressure to use for building the green wedges and bits of peripheral green belt that had come under their joint control, or else to take refuge in high-density, high-cost high flats. Either way the dispersal policy would be doomed. I'm not suggesting, of course, that a conurbation's boundary should be drawn round the outer edge of its green belt; that would be worse still. It's essential that the line should embrace adequate reception areas beyond the green belt. That, I think, would be a better guarantee against encroachment than leaving the green belt wholly in the hands of the neighbouring counties. Because cities that have ample sites elsewhere for their own housing needs can be relied on to



ASCOT IN NEW HOUSING (1)

84 old people's flats newly built at Stoneleigh Court, Woodford Avenue, Essex for the Ilford Borough Council, are equipped with Ascot 715 Balanced Flue Multipoint instantaneous gas water heaters. Installed in the outer wall of the kitchens, the Ascot 715's supply instant, endless hot water to sink, bath and wash basin in each flat. Stoneleigh Court consists of five 2-storey blocks of flats, each block containing 10 bed-sitting room types and six one-bedroom with sitting room types, for one and two persons respectively and one 3-storey community block having 4 bed-sitting room flats and a Caretaker's flat. Each flat contains kitchen (see plan, below) fitted with cupboards, and a bathroom containing a special "sitting position" bath and W.C. Weekly inclusive rental of the one-bedroom flats is 26/11d; and that of the bed-sitting room flats is 25/5d.



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guard the openness of their surroundings against private development much more jealously than rate-hungry county councils.

All these considerations will, of course, impress themselves on the boundary commissions when they come to make their comprehensive reviews of the needs of the conurbations. My fear is that it will then be too late—that the commissions, like their predecessor of 10 years ago, will find themselves hog-tied by Ministerial instructions that prevent them from recommending the changes they find indispensable to the proper discharge of their task. That *could* happen, not as the result of political difficulties or the influence of pressure-groups, but simply because the implications of what looks like a merely procedural decision were not realized in time. It *will* happen, I'm very much afraid, if the Minister thinks that nobody will mind if it does, or if the many people who have been quietly working on the technical problems of boundary definition fail to recognize that the chance to make their knowledge useful is *here, now*, and may never recur in their lifetime.

A PASSION FOR PLACES

By Lionel Brett

"London," wrote E. M. Forster half a century ago, "is a foretaste of the nomadic civilization which is altering human nature so profoundly, and throws upon personal relations a stress greater than they have ever borne before. Under cosmopolitanism, if it comes, we shall receive no help from the earth. Trees and meadows and mountains will only be a spectacle, and the binding force they once exercised on character must be entrusted to love alone. May love be equal to the task!"

Now that we have this nomadic civilization of his, the civilization of the motor-car, it is painfully obvious that love has not proved equal to the task. We have less time than ever for personal relations, and we are too busy for love. We know now that there is no substitute for silence, solitude, timelessness. We don't really like our subtopian world, in spite of all its conveniences. But we don't really like the people who want to interfere with it, or their idea of what would be better for us.

What has gone wrong?

Well, briefly, I think that what has gone wrong is that human nature hasn't changed a great deal: temperaments haven't kept pace with techniques. If we allow contemporary trading techniques to express themselves quite happily and naturally we get the main shopping street of Slough, of Reading or of any other of a thousand English towns. For these places to try to be different from one another would be an affectation. If we allow contemporary housing to be the natural resultant of the tug-of-war between human desires and economic facts, we get high flats where land is expensive and little houses where it is cheap. If we allow the motor-car to take the space it desperately needs, we get exploded cities, far-flung new towns and tentacles of Subtopia between them. If we allow an egalitarian society its natural physical expression, we get housing estates of a uniform texture and one place much like another.

Yet our temperaments still lead us to want places to be different, places to be worth visiting, places to be remote. So we cultivate regional accents, dig up obsolete local customs, fight doggedly for rural England, and publish more and more books about it, though every year fresh outcrops of lamp-posts make it more difficult for the photographers to find their viewpoints.

If this conflict between technique and temperament is not to lead to national schizophrenia, somebody has got to focus public opinion. Somebody has got to say: Look, what *do* you want? And if, as I firmly believe, we want wild places that are wild, country that is unspoilt, and towns that are both exciting and cosy to live in, then an effort of will has to be made by us all.

This focusing of opinion is what the *Architectural Review* has been trying to do in the second of its two special numbers. Ingeniously, and I think absolutely correctly, it fines down all our manifold problems of landscape and townscape to four simple rules, which anybody can apply to any locality.

The first rule is: classify your locality, ask yourself what it claims to be—the wild, the man-made countryside, the arcadian suburb, the town, or the great city. Having decided, set to work to eliminate the alien elements that are the mark of the mongrel Subtopia.

The second rule is: get rid of the clutter of distracting verticals, poles, posts, pipes, pylons. "Recreate as far as possible a horizontal world, with verticals in their proper place as man's way of expressing things that are worth saying."

The third rule is the Principle of Economy: never waste a foot of precious land. "Dead ground means a dead town," whether it is dolled up with lobelias or left to weeds and refuse.

The fourth rule, and the final stage in the process, is called quite frankly camouflage. Not every horror can be chased away, and if it can't, the right paint and the right planting will often do the trick.

I have stated these rules pretty baldly, and for illustrations you will have to go to the *Review* itself, where you will find a whole casebook of splendid examples, both good and bad. Probably the most frightening of all is the picture of the rush-hour on a Los Angeles super-highway, and my first criticism of Counter-Attack is that the demands of the motor-car are not really looked full in the face. It is the motor-car that is knocking all the life and character out of our cities and towns, straightening the kinks, chamfering the corners, bulldozing hedges and roadside trees, lopping the avenues, swamping the moonlight and generally making no town fit to walk about in.

My own view is that we shall never come to terms with the motor-car until we decentralize industry and business to a far greater extent, and to greater distances, than we dream of at present, so that we get a reasonably distributed traffic load instead of a small number of terrific concentrations. Unless we can induce businesses to move out of London in unprecedented numbers we shall be faced with traffic problems which the capital, unlike New York, is simply not rich enough to solve.

The fact is that the ramifications of these problems of environment are endless, and there is, to my mind, something rather arbitrary about the particular ones Counter-Attack chooses to explore in detail, such as forestry and housing density, while neglecting, or maybe postponing, this fundamental problem of the motor-car.

Take, for instance, this interminable argument about housing densities—about how many people should live on an English acre. The fundamental question, not faced by the writers, is whether our people want to live in what they charmingly, if disingenuously, call Arcadia—so lovingly described by writers like Betjeman and J. M. Richards—or whether they want to live in a modern version of the traditional Georgian street. The new towns can be criticized for going too exclusively for the arcadian rather than the urban environment, particularly since we have so much of it already, and for not experimenting with compacter layouts without necessarily spending money on high flats. But to describe Welwyn Garden City as Arcadia in one article and Prairie-Planning in the next shows, well, a loose editorial rein. The real case against our average housing scheme is not that it is too loose or too dense but that it *is* so appallingly average. It is as if every British family really did contain three and a quarter persons. We have so much of this unhappy mean by now that I believe it could do nothing but good if a dictatorial minister were to declare a 10-year moratorium on conventional housing schemes and only allow alternative ideas to be used. Then there might be some chance of one place being different from another.

Excursions into controversial fields like forestry and housing densities will, I fear, line up a certain number of people on the wrong side of the barricades. That is, perhaps, inevitable. If there were no enemy, there would be nothing to counter-attack, and we would spend the rest of our lives being too polite to one another on too many committees. But the real test of the counter-attack comes at the end, when having stated admirable principles and illustrated them superbly, it has to decide what administrative action should be taken.

And here, since one can't follow it through pages of recommendations, I shall pick out what I believe to be the really vital ones, and the ones which I think most people who are involved in these things are agreed about.

The first is that if you are going to have a planning umbrella at all, it is perfectly useless if it is full of holes. In 1950, in what has proved a disastrous "experiment in freedom," Mr. Hugh Dalton exempted from planning control a whole list of activities which have an absolutely decisive effect on landscape, such as agricultural buildings, forestry, development under private or local acts of parliament, highway works and impediments, water, gas, electricity and road transport undertakings. Apart from this, anything done by the armed services, the Ministries of Fuel and Power, of Works, of Supply and of Transport, the G.P.O., the Central Electricity Authority and the Atomic Energy Authority, all of this is automatically exempt. I think it is these exemptions above everything which have given planning a bad name, as a socialist machine for pushing the small man around while the official does as he pleases. But we can only end them on one condition: that we recreate a system of national and regional planning, which we have largely dismantled.

Planning has to do with geographical facts, and has nothing to do with administrative frontiers that have occurred by historical accident. The London region is a fact, Tyneside and the Birmingham conurbation and the South Wales coalfield are geographical facts in a sense that is not true of, say, Middlesex or Gateshead or Glamorganshire. These local planning authorities are so busy struggling with regional problems like the location of industry and decentralisation (which are really quite beyond most of them) that they simply haven't time or money for the tangible things that we finally have to live with, and that Counter-Attack is concerned with. The idea of regional grouping is unpopular right up the scale of local government; yet I am certain that only where we have regional authorities handling the big problems of land use will our counties and boroughs be able to get busy on the creative and sympathetic local planning that we all want to see.

And only then will they attract into this work the people who ought to be taking part in it, the young architects and artists and students of English landscape. When you hear complaints that the right people are not going into a profession like politics or local government, it generally means that there is something wrong with the way the profession is run and with the way these

right people are educated. This is certainly true of the architects in relation to planning. Planning has got itself bogged down in routine, and architects are brought up to think themselves virtuosi and to look down on the work of the planner as the conductor of the orchestra. Yet ironically enough this is a period when new ideas and techniques are two-a-penny, and what we desperately need and lack is the organisation to apply them on a scale that makes a real impression.

So to my mind these problems of administration matter a great deal, and I am glad that Counter-Attack has not neglected them. When somebody tackles them in a tough and enlightened spirit, as in the County of London, as in Coventry, at once the right people flock to the colours and in next to no time you get modern architecture on a truly urban scale, the sort of thing people will cross the world to look at. And the sense of design, of the creative will at work, soon extends right down to the individual lamp post or litter-bin. Unfortunately you can count the English cities and towns that give you this feeling on the fingers of one hand.

I said at the beginning that an effort of will would have to be made, and I have come back to this word at the end. We want this country to look like the England of our dreams; but equally we want our own television mast or caravan or bungalow or implement-shed. We can only have both if every one of us cultivates a good eye, and the will to use it.

Even then, we shall still need an administrative machine that works. As the responsibilities and ramifications of local government increase, the gulf seems to widen between it and the adventurous go-ahead minds of each generation. When these minds were running half the world, and local government was a matter of drains and the Poor Law, the gap was inevitable. But if it goes on it will be fatal For the most formidable challenge to our generation is not the Black Continent, but the Black Country.

The whole of our environmental crisis, for that is the only word for it, cannot be tackled inside the pages of a monthly magazine. But the first creative step is taken, the moment of illumination occurs, when, like Adam in the book of Genesis, Man looks out on the things around him, and calls them names.

I LIVE IN SUBTOPIA

by June Franklin

Five years ago my husband and I came to live, with our children, in a new town. I believe the majority of young couples who settle in new towns are moving into a house of their own for the first time; this was not the case with us. During eight years of marriage we had moved around quite a bit, starting in a top-floor flat in a decaying Victorian house with no electricity where I had to drag the pram up and down the stairs every day, and progressing to a small modern house, which we were struggling to buy, in a pleasant Surrey suburb.

My husband's work made the move to a new town unavoidable. At first glance there seemed no reason to avoid it anyway. The house we were going to live in was similar to the one we were leaving; bright, modern, clean and undistinguished. The garden was smaller but the pavement in the front had a broad grass verge and a couple of ageing trees. My husband would be going to work in a brand-new factory about twenty minutes' walk from home. Superficially it was hard to find fault with the set-up.

That was five years ago. We have done a good deal since to make ourselves feel at home, covering up the Corporation distemper with wallpapers of our own choice, laying new garden paths and planting fruit trees. We have joined local organisations, two of our children attend local schools, and last year my husband was a candidate in the parish council election.

Why, then, do I hate it? On fleeting return visits to old friends I find myself savouring the smell of London as if it were Mother's cooking. I'd pack a bag tomorow if I could, and never look back at the five maddening, boring, frustrating years I've spent as a new town housewife.

I've counted my blessings over and over again, but they all seem to boil down to fresh air. I ask myself—what did you expect to find here? What's really missing from your life that you *used* to have?

When I came to the new town I think I expected to find a blend of town and country. It never occurred to me that in other words that's the worst of both worlds—a hybrid—but I certainly think it's what we've got.

I was disappointed to find that it doesn't feel like a town. It's just housing estates sprawling in all directions, looking rather pink and flat and very uninteresting indeed. I soon discovered when I set out for the afternoon walk with a pram which used to be a voyage of discovery in London, that no matter how far I walked all I could see was thousands of houses exactly like my own . . . with an occasional outbreak of new shops, a new school, or a bald-looking new church, to vary the monotony.

Like many Londoners, I had always supposed that the countryside was for people to enjoy. This illusion was one of the first to be shattered. I searched diligently for a field that was not being bulldozed, a country lane without a cement-mixer in it, a park or a common or something beautiful that wasn't privately owned and jealously guarded by a fence.

I didn't have much luck. It seemed as if all the adjacent countryside that wasn't already a "new town neighbourhood" (another name for "estate") was being butchered to make one. And where the miles of new houses left off, old houses were being pulled down to make way for an extended airport.

All this had once been farmland or forest, ruthlessly wiped out by the planners in order to build the town in which I had come to live. Perhaps a thought like that is always a bad beginning, perhaps pioneers need to be tougher than I was. I don't know; but I know I came to hate the noise of the tractors and excavators, the sight of once-green fields now churned up and bald and strewn with mountains of pink bricks and orange sand, with lengths of piping and these things like monster cotton-reels.

But I found that if I said so, I was liable to get a glassy stare and the remark "People have got to live *somewhere*!" There is not much community spirit really, not a lot of getting together except in *anger*, by a small noisy element who are seizing the opportunity to become self-appointed social leaders of this raw, unfinished town.

The social life is simply that of a village. I tried, but I find it difficult, to work up enthusiasm for an endless round of whist drives, beetle drives and jumble sales. It bored me, I feel my life shrinking. And I don't think it's really a good way to make friends, in spite of the official advice handed out to us to "Join something."

No—new town life is not for me. But where do we go from here ? At first I wanted to go back where I felt I belonged, where life seemed to be so much fuller. But I don't believe one can ever really go back. The people and places I left behind must have changed just as *I* have changed. The thing I want to do now is go forward and try again in a new place. This time I want something I can get my roots into. And somewhere where I can bury the memories of five years in Subtopia !

The British Caribbean Federation wants a capital city. Three men, including Professor H. Myles Wright, the architect, recently returned from a tour of the British West Indies which they had undertaken in search of a suitable site for the capital. The report they have prepared is reviewed here by R. Gardner Medwin.*

CARIBBEAN

Choosing a Capital

Last summer three men from the United Kingdom were appointed by the Secretary of State for the Colonies to tour the British West Indies and recommend "the three most suitable sites in order of preference" for a capital city to serve the Federation of the Islands which was agreed upon earlier last year. They were Sir Francis Mudie (chairman), Professor H. Myles Wright (town planning adviser), and A. E. Cook (financial advisor).

None of these men had ever visited the West Indies before: it was the wish of the Federation Committee that the problem should be studied by men with fresh and unprejudiced minds. This will be understandable to anyone who has lived in the West Indies, where patriotism for one's island is intensely strong and prejudice runs high.

To understand the problem we must look at the map. The one reproduced here is from the Commission's Report, and shows the air communications between the islands. In such a scattered group of islands air communications are obviously important; in fact, it is unlikely that Federation would succeed without the advantages of air travel.

All the smaller British islands are in a crescent enclosing the Caribbean Sea on the east, stretching from Trinidad and Tobago in the south, just detached from the South American mainland, to Antigua, St. Kitts and Montserrat in the north (the Leeward Islands). Between Trinidad and the Leeward Islands are the four Windward Islands of Grenada, St. Vincent, St. Lucia and Dominica; and well to the east of these lies Barbados, the only island which was never occupied by the French or Spanish and has always been British.

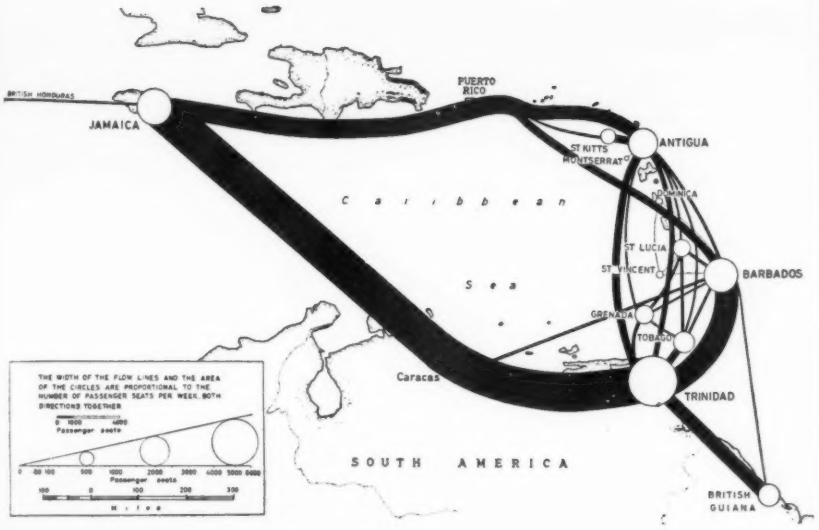
Over a thousand miles of sea to the west of Barbados is the large island of Jamaica, with more than half the population of the British West Indies (1,500,000 out of 2,800,000). Between it and the smaller islands lie Haiti, the Dominican Republic, Puerto Rico, and the American Virgin Islands. Still another 800 miles beyond Jamaica to the west, on the Central American mainland, is British Honduras, and at the other end, to the south and east, the vast "under-developed" territory of British Guiana. But these two mainland territories are not among the colonies who agreed to federate.

The Commissioners' first choice for the capital is Barbados. Second comes Jamaica and third Trinidad—the island which was recommended by the Federation Committee last year. Such is the recommendation, but there are bound to be fierce arguments before a decision is made.

There were two main problems facing the Commission: should the capital be on a large island or a small island; and should it be a new town or based on an existing town?

They found a strong body of opinion in

* *Report of the British Caribbean Federal Capital Commission.* HMSO 3s.



Air communications between the Federation's islands.

favour of the small island, for many thought it would stimulate one of the less developed territories and avoid undesirable domination by a big one. They also found "two alternative doctrines": the new town idea and the base town idea. The new town school thought that "it would proclaim to the islands, and to the world, a new era inaugurated by Federation and the hope of further advancement," and that "it would facilitate, as no other solution would, the growth of a new West Indian patriotism and of a new federal spirit untinged by any insular prejudice whatever.

The Commissioners agreed with these aims but did not think they would best be achieved by building an entirely new town well away from other towns. Having presented strong practical arguments for having a base town to serve the "twin" capital, quite separate from it but within easy range, they then dismissed the small island theory because none of them had towns sufficiently well developed with community services, housing facilities, water supply, or harbour works to serve as a satisfactory base during the first ten years of the capital's development.

Thus they concluded that the only towns that could possibly serve as good bases were Bridgetown in Barbados, Kingston in Jamaica, or Port of Spain in Trinidad. One of their reasons for dismissing Trinidad will be hotly contested: namely, that the island has a reputation for corrupt government and that corrupt practices "appear to be tolerated." The success of Eric Williams's party of reform came just after the report was written, and as this party has given enthusiastic support to Federation and has produced cogent arguments for having the headquarters in Trinidad, a great deal of West Indian argumentation is likely to follow. There is, however, another difficulty about Trinidad. While the majority of people in the other islands are of Negro and European descent (the majority of the West Indian intelligentsia are "coloured"—i.e., racially mixed), in Trinidad 35 per cent. of the population are of East Indian descent. Thus the island is not racially typical, and the Commissioners seem to agree with views expressed in the other islands that the differing ideals and loyalties of the East Indian group might make difficulties.

The arguments against Jamaica are more precise and practical. More than twice as many Federal representatives would have to travel the 1,000 miles from the small islands to Jamaica than from Jamaica to one of the small islands. Also Jamaica is already in such a dominating position in view of its size, and of the presence there of the University, that it would be likely to have an unfortunately dominating influence which could threaten the healthy progress of the federating spirit.

Perhaps the main doubt about Barbados, in the other islands, would be its bad reputation for colour prejudice; but it is good to read the Commissioners' evidence that this is reported as much less serious now than it was ten years ago. Barbados, incidentally, is really a "small island" (about the size of the Isle of Wight) but it has a large population for its size and is comparatively prosperous and go-ahead.

Jamaica and Trinidad would provide more *spectacular* sites than Barbados. The University of the West Indies has already chosen one of the finest potential sites in Jamaica, high and cool above Kingston with a magnificent range of tropically covered hills for backdrop; but there are many more fine settings to be found within range of the town. The Port of Spain district in Trinidad is in an amphitheatre of precipitous hills and has the most lush and brilliantly colourful tropical vegetation; but the Commission seemed to find the sites too expensively steep.

Barbados is a delightful island with a perfect sub-tropical climate, fanned by the trade winds; but it has none of the romantic mountain scenery of the volcanic Windward Islands, which are its nearest neighbours. It is a coral island except for a small volcanic area, far away from the "base town" of Bridgetown, which is mildly hilly and known as Scotland; and Barbadians have a good deal of Scottish vigour and tenacity. It is almost wholly a sugar island, with great stretches of canefields, relieved here and there by groves of mahogany trees. There are superb beaches of white coral sand and a brilliantly blue sea breaks on the coral reef. The island has yet to build a deep-water harbour, but in its careenage can still be seen a wonderful fleet of schooners. There is a very fine tradition of colonial architecture, in coral stone and mahogany. The coral can be cut with a wood saw as easily as the mahogany, and these two exquisite materials could be used today even for an *economical* federal building.

Some excellent town planning advice is given about the acquisition and control of the site for the capital, but the authors wisely, after so short a tour (less than three months), avoid making suggestions for any specific site. They say it should be from three to seven miles from the base town and quite distinctly separated from it. The general area they suggest in Barbados lies on the coast, somewhere between the airfield and the town.

If the capital is to be much more than three miles from a base town, care will have to be taken to establish highly efficient access, for otherwise the urban facilities of the old town will not be shared with its "twin" in the way that is anticipated.

The Commissioners recommend that 1,000 acres should be purchased freehold as the development area of the capital, and they urge that this should be in a "Federal District," 15 to 25 square miles in extent. They think that the extra population resulting from the establishment of the capital would not be less than 2,000 after 10 years and might be more than 10,000. They point out that the Federal Government, by controlling the Federal District around the development, will avoid the risk of "blighting" the area by incompatible use on its boundaries and approaches. "Great harm would be done to the Federation if for the first 10 or 15 years of its existence, the capital were something between a dead-end and a construction camp." They discuss the advantages of freehold purchase of an area much larger than the development area, and they warn that "it will be necessary for the Government to balance the financial difficulties of large-scale purchase against the well-known administrative difficulties of compensation and betterment."

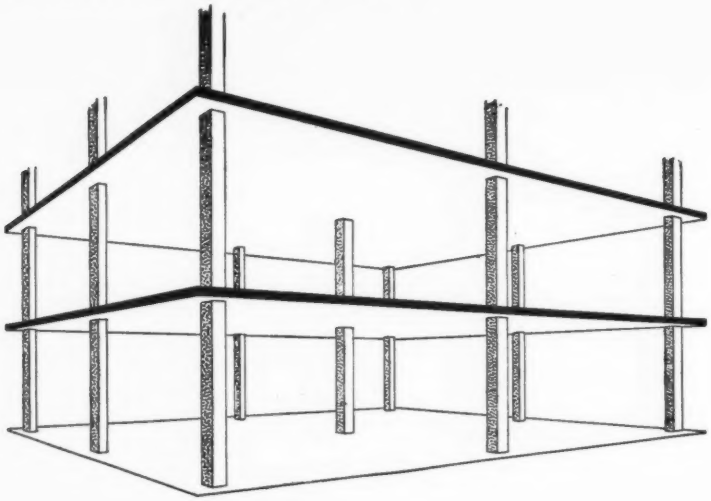
It is argued that a twin town will cost considerably less than a new town, which will need to provide far more commercial, social and educational buildings. A new town, say the authors, would cost at least £10 million of Government money, a twin town £4 million. But cost is not the only argument: the atmosphere of a self-contained capital, detached from a flourishing town, would be "dead and depressing, save in so far as it was enlivened by pressure groups."

The advice for the founding of the new capital is excellent, and admirably brief and clear. However, a great deal of the success of the capital, spiritually as well as practically, will depend upon the extent to which the architectural opportunities are understood. A great building project like this—far greater than anything yet attempted in the West Indies—will have important practical significance for the development of the building industry and important artistic significance for the cultural development of the islands. Scores of architects and assistants (and, I hope, some painters and sculptors) will be needed to work on the buildings for at least the next 20 years; but in all the islands together there is only a mere handful of qualified West Indian architects. There is no School of Architecture, even to intermediate stage; yet there are many young West Indians who long to find some way of training as architects.

What a golden opportunity, this great building project, to set up a new kind of School of Architecture and Building: a live architecture training centre in which research and demonstration in sub-tropical design will develop along with the building programme, bringing in as many West Indian apprentices as possible to participate in the project. They would learn the principles of architecture and building science from a wealth of examples, and they would help to establish a modern West Indian architecture in the most inspiring conditions possible for research and experiment.

If the new capital is to be in Barbados (or Trinidad?), why not establish a Field School of Architecture and Building there, combining it with a Tropical Design Research Centre? It would have a healthy start, and later it could be handed over to be developed into a fully-fledged School in the University of the West Indies.

ROBERT GARDNER-MEDWIN



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technical section

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.

7.57 practice
BUILDING IN THE COUNTRY

Procedure for Building and Other Work on Farms and Estates. Ministry of Agriculture, Fisheries & Food Fixed Equipment of the Farm Leaflet No. 28. (HMSO. 8d.)

Though not meant for the architect, this modest publication gathers much information which may occasionally be useful to him and which was hitherto only to be found in many diverse sources: and—perhaps because it is not meant for him—it explains everything in terms which even he can understand. Thus it tells what to do if you want to get a licence to fell a tree (and when you need one), to put up a building for milk production, to construct a well, to divert a watercourse, to stop up (or divert) a highway, to build a cattle grid, or to store petrol; lastly, exactly how your liberty is curtailed if you have the misfortune to live in an ancient monument or in a national nature reserve.

14.84 materials: concrete
CONCRETE TECHNOLOGY

A Note on the History of Reinforced Concrete in Buildings. NBS Special Report No. 24. (HMSO. 3s. 6d.)

The Durability of Reinforced Concrete in Buildings. NBS Special Report No. 25. (HMSO. 3s. 6d.)

These are complementary studies which derive from a joint DSIR/CCA survey of upwards of 50 buildings, of varying ages and in different atmospheres, undertaken in 1954 to form an opinion on the general durability of concrete. It became evident that the historical development of the material was an important aspect of this, since techniques are persistently changing and most of the work inspected in the survey differs in important details from that which we are using today. The Report proper, therefore, is accompanied by a most interesting historical note outlining the main patents and codes. Because the main weight of the durability enquiry centres round the period 1900-1939, later developments such as shell roofs, prestressing and precasting are dealt with sketchily, but the achievements of the early pioneers (of Wilkinson, of the Newcastle plasterer, Monier, the Coignets and Hennebique) could hardly be more lucidly described. One aspect of concrete exploitation which is specially interesting to us today and which is satisfactorily discussed is the contractual procedure adopted by patentees, contractors and building owners to secure their interests while concrete was still a doubtful quantity. On this point it is worth recording that works constructed up to the time of the first world war show a reliability which does not always apply to those built in the period which followed. The reason for this is that the former were supervised by technicians who knew that they were handling a comparatively new thing; but that, after the war, concrete construction had to be thrown open to the building industry and had become "the cheap way of building": honeycombs are commoner, rods poke dangerously near the surface. It is indeed the buildings of this age which have caused most of such scandal as the material has collected and which are thus the cause of the survey on durability. This, which is the subject of the second document treated in this note, is rather more than a report on the buildings inspected as it concludes with useful advice about the repair of old buildings and recommendations on how to avoid the defects which were observed. The advice given is a useful advance on BRS's post-war *Repair of Damaged Buildings* Leaflet series. The technique of gunite is fully described: those who enjoy technical oddities will be amused to learn (if they did not know it already) that this useful dodge was originally thought up by an American naturalist who wished to blow plaster into his animal skins. Since gunite involves further reinforcement and cover to match, the finished surface will normally project at least 2 in. proud of the original. As this will not always be acceptable, mention is made of a new method of spraying the old work with a mixture of bitumen and sand and following this with a bitumen emulsion primer ($\frac{1}{16}$ in.), a second coat of bitumen and sand ($\frac{1}{16}$ in.) and "a flash coat of sand, crushed stone or other fine aggregate to give the final texture and colour desired." In view of the comparatively high cost of any worthwhile resurfacing, the recommendations for future work include one small but important modification of CP.114 : 1948. *The Structural Use of Normal Reinforced Concrete in Buildings.* It is that for external work the cover for all steel should be not 1 in. but at least 1½ in.

27.18 furniture: fittings
FLUSH WOOD DOORS

Flush Wood Doors. Section A: General Requirements. BS.459: Part 2A: 1956. (BSI. 3s.)

This is the first stage in the conversion of BS.459: Part 2: 1945 *Flush Wood Doors* from a design standard (*i.e.*, specifying precisely *how* the doors are to be made) to a functional standard. This reform was all the more pressing since the old framed door with horizontal rails which was the only type countenanced by the old standard is now becoming obsolete. Unfortunately this part of the standard only gives such requirements as dimensions and finishes and we still have to wait for the strength and stability requirements. The standard has therefore to be supplemented (as the compilers put it) "by appropriate understanding between supplier and purchaser" on how strong and stable a door should be. There is one curious change. The old standard specified only glazed openings which extend to the full width of the solid frame: but the new standard adds two glazed door patterns with vertical panels of glass 10-in. wide and 1-ft. 8-in. and 3-ft. 4-in. high. These are "design standards" which the architect might prefer to do without.

CLASSIFICATION FOR INFORMATION CENTRE

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I knew it when it was a tree . . .

Tree Sir? Palm Court—second on the left
No, son—I'm looking at that ceiling.
When it was felled in the forest they shouted 'Timber'!
It won't fall down now, will it, Sir?
Not likely, son. It's been through the Bowater Mill—went in as wood, came out as Acoustic Board. It's strong, silent and handsome—and it's fixed up so it will *never* fall down, with Bowaters' Concealed Fixing. These days, for Acoustic Board, Insulation Board, Hardboard and Decorative Boards, everyone's paging Bowaters.

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7 PRACTICE
drawing office equipment
2 presentation

This is the second of a series of articles by John Read, who has been making a survey of equipment and services now available for architects' offices. In his first article (AJ, January 10, 1957) he dealt with drawing materials; this week he continues with the subject of presentation. Under this heading he includes direct aids to presentation, such as stencils and shading media, and reproduction processes.

Many architects are not fully aware of the printing services available to them or do not use them economically. As this article shows, some attention should be given to whether a great deal of money could be saved by making even small adjustments to such matters as drawing sizes, or by cutting down draughting time on repetitive work.

It is possible to print almost anything from anything. In the extreme case there is the possibility of obtaining a transparency from an opaque drawing and reproducing further copies from that. The full scope of photoprinting can easily be verified at a printing office, and these offices will always give advice on difficult printing problems.

Drawing sizes: Most printing offices work to British Standard drawing sizes as a framework for pricing, filling in their lists with graduated sizes: consequently the usual list includes 12 BS and 15 other sizes. Odd-sized prints are priced to the next largest list size, and are therefore uneconomical. For this and other reasons it is important that drawing sizes in individual architects' offices should be standardized. It is probably possible (and is, in fact, the case in many offices) to adhere to Double Elephant and Imperial sizes for most drawings. Some offices, however, have special requirements for folding or filing drawings which also govern the sheet sizes, but it is as well to ascertain that the size chosen is a standard printing size, otherwise there may be considerable financial wastage.

Another way in which money is wasted on printing is by drawing the border of the drawing in the wrong position. Borders should be about ½ in. *inside* the standard sheet size all round, unless the photo-printer is instructed to " trim print to this line " on each drawing. The usual practice (unless so instructed) is to trim the print about half an inch outside the border, which, if the border is drawn to the exact sheet size, would produce an over-sized print priced at the next highest size.

The following table shows the relationship of the sizes of drawing boards to the three main BS sheet sizes, and to border sizes:

Type	*Size of Board*	*Size of Sheet*	*Border Size*
½ Imperial ..	23 in. × 16 in.	20 in. × 15 in.	19 in. × 14 in.
Imperial	32 in. × 23 in.	30 in. × 22 in.	29 in. × 21 in.
Double Elephant ..	42 in. × 32 in.	40 in. × 30 in.	39 in. × 29 in.

A 30 in. × 22 in. dyeline (from a tracing) costs 1s. 6d., the next size would be 34 in. × 30 in. at 2s. per print. Similarly, a 40 in. × 30 in. dyeline costs 2s. 6d.; a 44 in. × 30 in. dyeline 2s. 6d.; a 40 in. × 40 in., 3s.

It is possible on a £60,000 contract having, say, 40 Double Elephant final drawings, producing perhaps 500 prints during the course of the job, to waste £15 in this way, through drawings being an inch or two over the standard size.

Types of print: For the normal run of reproduction work, dyeline positive prints or blueprints on medium weight paper are adequate. More durable prints can be prepared on stout paper or opaque cloth, and air-mail paper prints are among several other mediums available. Two recent developments are worth noting. The first is sensitized dyeline paper with a surface suitable for taking watercolours. It could be specified when prints for Local Authority and other applications have to be coloured. The second is a two-colour (blue and red) dyeline process, developed by ammonia gas. Dense ink lines on a drawing produce blue lines on the print and pencil lines produce red. The chief use of this process to architects would seem to be on alteration jobs when the new and old work must be shown on the same drawing, without confusion. The manufacturers (Hall Harding Ltd.) are experimenting with other colour combinations which they hope to make available shortly. For best results ink lines should be dense and uniform, fine lines being avoided. Pencils used should be 2H or harder, applied with consistent average pressure, and the paper should be the purest available.

Because original negatives are seldom true to scale due to movement in the material, it is seldom necessary for an architect to stipulate the process known as " true-to-scale " copying for normal work, particularly as this method is often no more accurate than dyeline printing. It can be usefully used, however, in several instances. For example, it may be necessary to omit a certain part of the original drawing on the print. This blocking out would give an unsightly area of black on a dyeline, but on a TTS print it would show as the same colour as the background. TTS prints are also often preferred for presentation drawings as they can be made on almost any medium (including stiff card) with the line in a choice of several colours.

It is often desirable to reproduce a tracing drawing on tracing paper, possibly in order that sub-contractors or

technical section

consultants can insert their details independently or because it is necessary for the architect to insert information of a complicated nature (*e.g.* pipe runs) on the tracing print of an outline drawing before the original is completed. Although it is now possible to obtain dyeline prints from normal ink drawings on sensitized tracing paper of a much better quality than formerly, TTS tracing copies, even though more expensive, are normally preferred due to greater clarity of line and less grainy background. TTS should definitely be specified when the quality of the original drawing is poor, or when the original or copy is on cloth.

A further and much used refinement is to have the TTS tracing "gold-backed." This means that the TTS line is on the back of the copy rather than the front, and that the ink is dusted with "gold" powder before drying. It gives a denser line for repeats and protects the ink line.

There is no extra charge for goldbacks as opposed to normal TTS tracings.

A price comparison for various types of print is as follows:

	Dyeline				True-to-scale			
	Medium paper	Stout and airmail paper	Opaque cloth	Tracing paper	Medium paper		Tracing paper	
					1st copy	Extra copies	1st copy	Extra copies
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Imperial	1 6	2 4	6 3	2 10	4 6	2 3	5 10	3 3
Double elephant	2 6	3 11	12 0	4 10	7 2	3 8	9 4	5 3

Several different colours can be reproduced on one TTS print and this is invaluable for indicating complicated service pipe runs. For this most printing offices would prefer to be supplied with an overlay tracing of runs only, but they will, if asked, prepare this themselves. There is no rate for this work, which is charged according to the intricacy.

Photographic reproduction: Enlargements, reductions or copies of opaque or transparent drawings and documents may be made by this process. So far as the architect is concerned, they have a particular use when reducing basic working drawings to a reasonable size for, say, site reports, showing main service runs, or records. Useful Ordnance Survey enlargements may also be made in this way. As with TTS prints additional copies cost about half the original copy, as this includes the cost of the negative.

Size	Dyeline medium paper	TTS medium paper	Photographic enlargement or reduction	
			1st copy	2nd copy
Imperial	1s. 6d.	4s. 6d.	16s. 10d.	6s. 8d.

Drawing office printing equipment

Despite the excellent service many printing offices afford, it is nevertheless a practical proposition for drawing offices over a certain size to possess and run their own printing machines for normal dyeline work. Although it is not absolutely necessary, and indeed not the case in many offices operating printing equipment, it is economically preferable to employ an office boy, either full time or as part of his general office duties, on printing work. The necessary equipment is as follows.

A Photoprinter: Photoprinters (or copier) which consume 4-6 amps, range in price from £92 for a simple bench model to over £1,000 for a double feed, high-speed machine.

An efficient and adequate model, Fig. 1, costs £100 and is very simple to operate. The basic components are a canvas-shielded perspex drum, a battery of fluorescent tubes and a time switch, the drawing and sensitized paper being placed between the drum and curved shield and exposed to the light of the tubes for a certain length of time. This model will take drawings up to Double Elephant (40 in. × 30 in.) size, and the average exposure for a paper print from an ink on tracing original is about three minutes.

A larger similar machine costing £147 takes drawings sizes 54 in. × 30 in., the average corresponding time being one minute.

A developing machine: There are two standard methods of developing: dry and semi-dry. The dry method involves exposing the print to ammonia vapour within a sealed transparent container. The container and incorporated stand can be fixed vertically to a wall or to the above type of copying machine, Fig. 2, and the Winchester bottle of ammonia which supplies the vapour lasts for several months without recharging. It is a clean, straightforward process, the main drawback being the strong ammonia smell immediately on completion of the operation. The cost is £20.

The alternative is the semi-dry unit which can also be simply incorporated on the above copying machines, Fig. 3. The exposed print is fed directly from the copier over a roller which coats it with a slightly acid developer, producing a stable, clear print. These prints, particularly if on cloth, need a few minutes to dry out before going into circulation.

If the machine is being used regularly, the developer feed bottle needs refilling at least every two days, necessitating the preparation of solution from powder. Furthermore, the developing machine should be drained and cleaned with water each day after use. Consequently it is a much messier process than the dry method.

The cost of the electrically-driven model fitted to the small copier is £29. The hand model costs £13 but is much more awkward to operate.

A Guillotine, for cutting sheets off sensitized rolls and for trimming finished prints. This can be a very

technical section

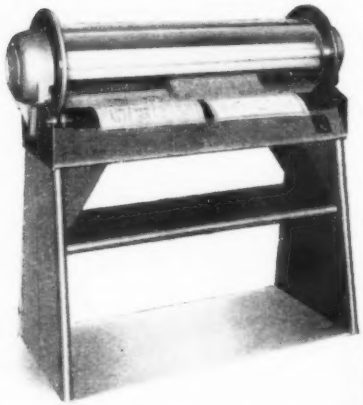
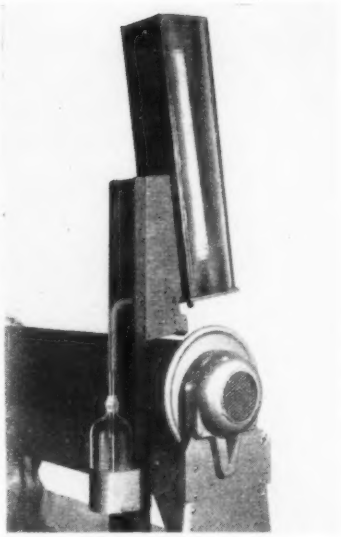


Fig. 1 (above). Small stand-model photoprinter.



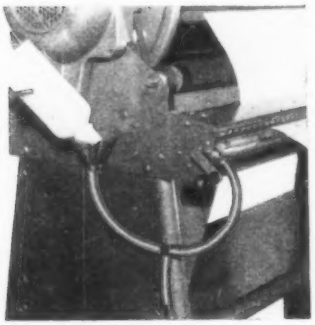


Fig. 2 (left). Dry developing attachment. Fig. 3 (above). Semi-dry developing attachment. These three items are made by Hall Harding, Ltd.

expensive item, £23 for a Double Elephant size, and should be resharpened frequently. It must be securely fixed to a rigid bench and the blade should be protected when not in use to deter the inexperienced from using it. It is felt that initially a guillotine could be dispensed with in lieu of a pair of large scissors.

Sensitized paper and cloth: This is available in rolls of 10, 20 or 50 yds., 30 in. or 40 in. wide. Ideally, opened rolls should be stored away from the light, although in practice the rate at which a paper roll is used, once started, does not warrant undue precautions of this nature, which, however, should be taken with cloth which is probably used less frequently and is more expensive.

A 30 in. × 10 yd. roll of paper costs 6s. 6d. and a similar quantity of cloth costs £2 15s. 6d. A 30 in. × 10 yd. roll of sensitized tracing paper costs 14s. a roll, but unless used by an experienced operator it would be preferable to leave this sort of work to a printing office.

Accommodation: Apart from the equipment mentioned, one must allow space for laying finished prints and originals and for the storage of sensitized rolls. The minimum total accommodation required would be a well-ventilated room 10 ft. square.

Economically "when to take the plunge" is not easy to solve, and before contemplating this step it would probably be advisable to consult one's accountant.

Much depends on the pressure at which an office works, the ratio of paper to cloth prints used, and, of course, the size of the office. However, a few basic facts and assumptions may act as a starting point for calculations.

Taking as our standard a Double Elephant print, the sensitized paper and developing materials would cost about 9d. As a similar print from a drawing office costs 2s. 6d.; the immediate saving is 1s. 9d.

Similarly, a print on sensitized opaque cloth costs 6s. 3d. against 15s. 8d.

The minimum cost of equipping and maintaining a print room may be £150. This spread over ten years would work out at £15 p.a. To this must be added a minimum rent and operator's wages (assuming the operator doubled the office boy's duties) of, say, £250 p.a. This would give a total annual expenditure of £265, say £280 with administration, *i.e.* checking costs of prints to individual clients, etc.

To pay this off at a saving of 1s. 9d. per paper print, about 3,200 prints per annum would need to be prepared.

If the ratio of paper to cloth prints is, say, 10:1, then the necessary total output would have to be about 2,300.

The above assumptions are very rough but may give the necessary lead. Linked with them one may guess that an office employing 12 men working full time at the board may seriously investigate the possibility of installing photoprinting equipment, particularly as many architects feel that the availability of prints at a few minutes' notice in a busy office is a valuable asset.

Lettering stencils

Packing case type: There are several varieties of this. The simplest is in strip copper with several letters on one stencil. Another type is the individual metal stencil, a refinement being a tip-up lip to avoid smudging when removing the letter. Ink is applied with a stippling brush from an ink block and the ink should be kept as dry as possible to avoid it running under the letter. They are made normally in sizes from $\frac{1}{8}$ in. upwards, and are probably most suitable for titling and numbering drawings. The range of type faces is very limited. Special alphabets and numerals can be cut to order by engravers experienced in sign work.

Plastic and alloy transparent stencils. The two most popular types are UNO (British) and Standardgraph (German). UNO have a well-tried comprehensive range of alphabets, numerals and technical symbols.

technical section

The styles can be upright (most commonly used), upright condensed, architectural (a finer type) and italic in the upright and architectural range. The makers have recently changed the stencil frames from plastic to alloy as they tended to warp after a time. This new range also incorporates numbers on the same stencil, which means fewer stencils to clean and store. Also available are pencil lettering stencils without guide strips so that the stencil lies flat on the surface.

Amber coloured stencils : The great advantage of these stencils, made by Standardgraph, is that the lower case lettering is on the same stencil as the capitals. The stencil is turned upside down to change from one to the other, yet retains the same guide line.

Stencil pens : UNO make a standard and de luxe model and the Standardgraph pen is similar to the UNO de luxe model. All are of the wire and plunger type.

Prices of these two types of stencil are comparable, a comprehensive range of lettering and numbering stencils costing about £3 10s. 10d.

Drawing stencils

The usual inconvenience of hunting out old window detail drawings or catalogues in order to trace off sections can be avoided by using the UNO stencil range covering all the standard metal window sections. There is also the choice of two north-point stencils.

Shading film

There are three makes available, Zip-a-tone (American), Plastitone (British), and Selutint (German). The agents for these are, respectively Hunter, Penrose Ltd., A. West and Partners Ltd., and Langford and Hill Ltd.

Shading film is transparent, adhesive, patterned sheet plastic, and may be used for speedy rendering and hatching and for producing special effects on presentation drawings. It is extremely simple to mount and is best used on an ink drawing that can be thoroughly cleaned beforehand. The backing sheet is stripped off and the film is pressed firmly on to the drawing. A razor blade or knife is used to cut away the film where not required. The pattern on the surface of the British and German products can be scraped off to produce effects. Plastitone is also less affected by heat than the others, but is slightly more difficult to apply. Shading film can be fixed to the back or front of the tracing, preferably the back, and should be burnished on hard after cutting away the surplus. The illustrations to the first article in this series were shaded with film.

The American range is much greater than the British and German ; the British is, however, being extended. Plastitone do a range of colours and such useful patterns as stretcher brickwork to $\frac{1}{8}$-in. or $\frac{1}{4}$-in. scales. It can also be drawn over, but when ink is used a dusting with talc is advisable. Prices are 3s. a sheet for Zip-a-tone and Plastitone and 3s. 3d. for Selutint. The sizes of sheets are: Zip-a-tone and Plastitone 12 in. × 8 in., and Selutint 10 in. × 8 in.

Lettering film

The Zip-a-tone range of film also includes a number of printed alphabets in various sizes, which can be applied letter by letter in the same way as shading film. Application is made easier by a printed guide line below each letter which is placed over a ruled pencil line on the drawing ; the printed line is cut off afterwards. There are some attractive sans-serif faces in the range, and the medium should prove useful for titling, etc., on presentation drawings.

Printed cut sheets : Drawing office printers will supply cut sheets of tracing paper printed with the name, address, etc., of an office, with borders and " please trim print to this line " and any other required information. The process used is litho, and the architect should supply a master copy to the finished size, preferably drawn on a stiff white cartridge paper. The cost of printing for fairly large quantities is about 5d. per Double Elephant sheet ; this is much less than the cost of time taken by a draughtsman in doing the same necessary work. The initial outlay, however, is rather large for the smaller office—about £70 for 1,000 D.E. sheets, including the paper. The price per sheet on smaller orders works out rather higher.

Printed adhesive tapes

A product which serves a similar purpose is Speedfix Printcraft, a transparent adhesive tape on which the manufacturer will print information. This tape has been used for some time in the electronics industry, where standard valve symbols, etc., are simply stuck on the drawing in the required position. It could be used for the information " boxes " which many offices draw in the corners of working drawings to contain the name and address, scale, date, etc. The tape may be drawn on in ink or pencil. The minimum quantity which may be ordered is six 72-yd. rolls ; a $\frac{1}{4}$-in. wide tape (there are wider) costs 15s. 8d. a roll. With the initial order the cost of the printing block would also have to be paid for: about 10s. to £1 according to its size. The tape should be used in a dispenser to keep it clean and to ensure cutting off at a right angle.

Dry mounting

For special presentation drawings and photographs there is a method of mounting which is completely clean as it does not entail the use of a wet adhesive. Dry mounting is done by inserting a sheet of prepared tissue between the drawing and the mount, and heating slightly under pressure. The shellac in the tissue melts and adheres to both surfaces. The process is carried out commercially at a very reasonable cost, and perfect results are of course ensured ; it may, however, be done in the office by using an electric clothes iron to apply the heat and pressure.

Tracing paper may be mounted in this way without cockling ; on a white card it appears slightly brown owing to the shellac in the tissue. The tracing paper may also be coloured after mounting.

building illustrated

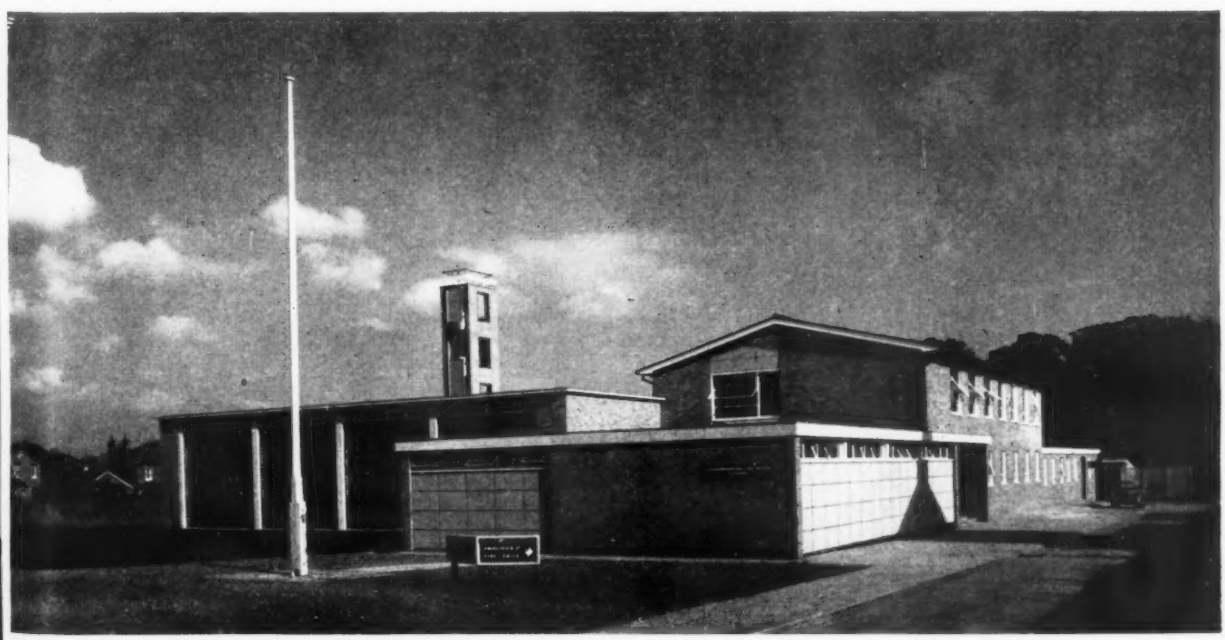
Fire and ambulance station at Slough, Bucks.

FIRE and AMBULANCE STATION

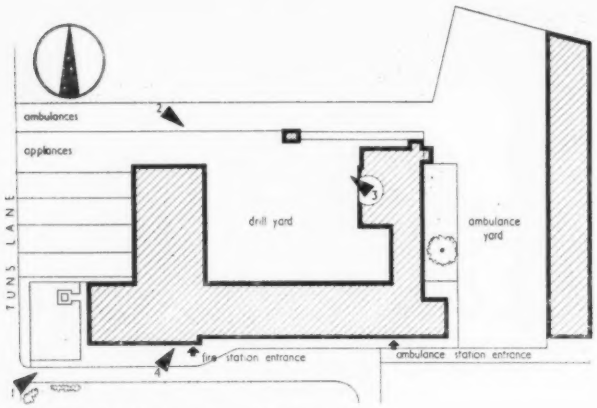
in TUNS LANE, SLOUGH, BUCKS; designed by F. B. POOLEY, county architect RON WALKER, assistant county architect; NORMAN TAYLOR, architect-in-charge quantity surveyors GEORGE CORDERY and CO.

The combined fire and ambulance station at Slough, which is the first building of its kind to be analysed in the JOURNAL, serves the whole of the Slough area and surrounding district. The station, which is situated near the junction of Tuns Lane and the Bath Road, has accommodation for four fire appliances and 14 ambulances. There is also a workshop block, for vehicle maintenance, and a 50-ft. high drill tower. The 75-ft. hoses are not dried vertically beside the tower, as is the custom at most stations. Instead, they are laid horizontally on racks, in a chamber, and are dried by circulated hot air.

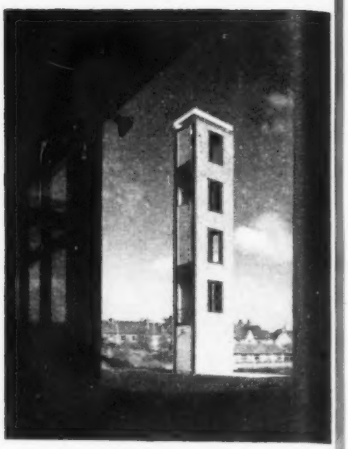
Viewpoint 1: the fire and ambulance station from the main approach road.



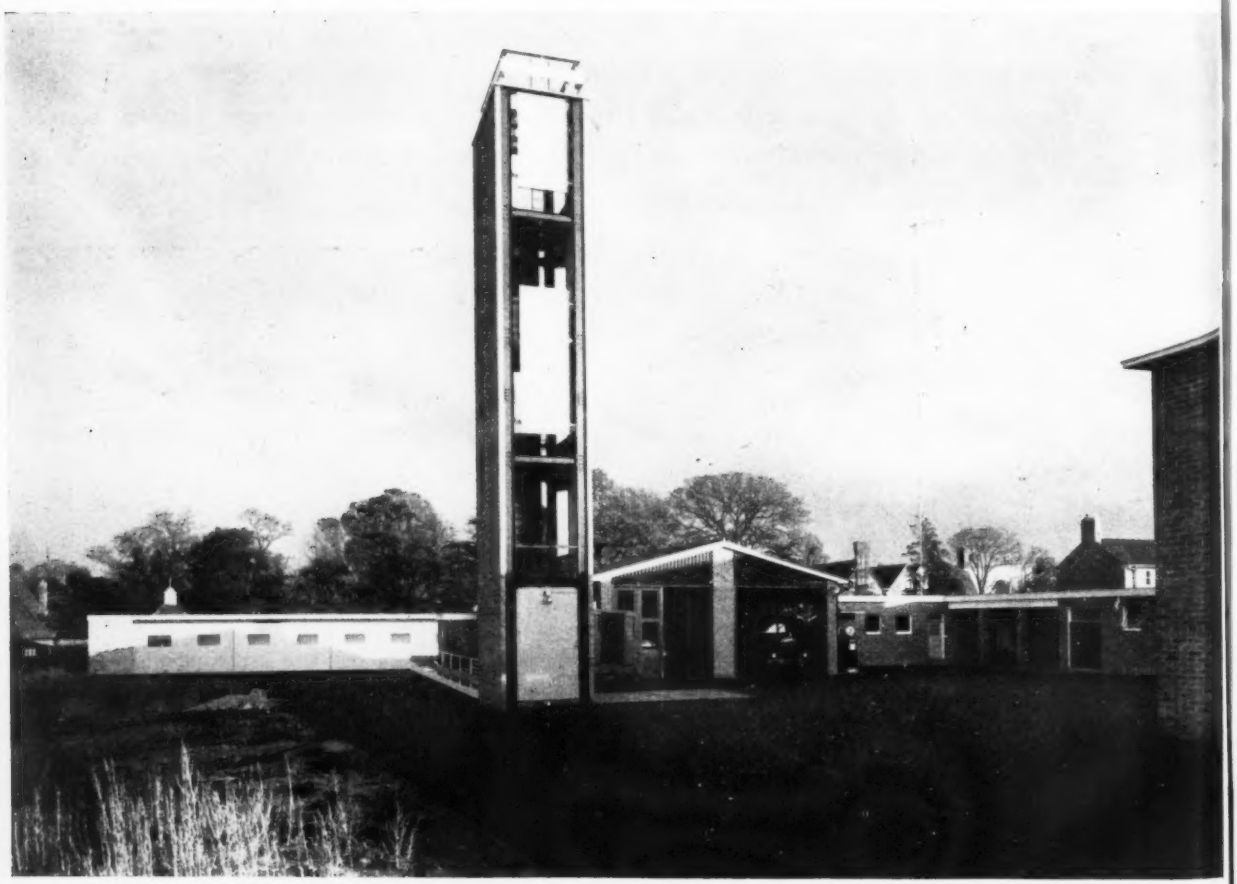
building illustrated



Key plan showing photographic viewpoints



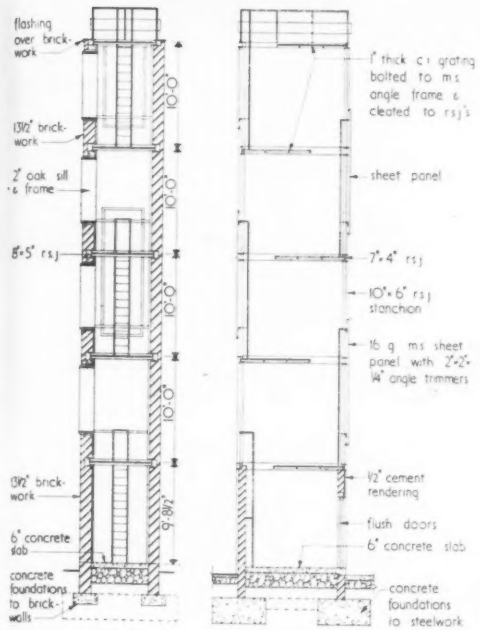
The photograph on the previous page, from the south-west, shows the firemen's dormitory wing in the foreground, the fire appliance room on the left and the ambulance station offices extreme right, beyond the two-storey block. On the right of the end wall of the dormitory wing is an external microphone, which allows people to give details of alarms without entering the building. On the signboards are white plastic relief letters in Doric italic upper and lower case. Below (viewpoint 2): the drill yard and tower and, to the left of the tower, the ambulance garages with light grey (archrome N.8) doors. To the right of the tower is the workshop block, which has a copper roof and spandrel panels over the doors of ribbed aluminium sheets, painted black. Colour emphasis is obtained by panels of light blue on the tower, a bright yellow (2.5Y 8/12) door to the right of the workshop and bright red (7.5R 5/16) double doors, extreme right. Above right (viewpoint 3): the drill tower seen across the drill-yard from the doors of the appliance room. The tower is used for practice climbing with hook ladders etc., hose practice and various other fire-fighting techniques. The steel frame is black and sheet-metal panels blue (7.5B 6/6). Hand-rail round balustrade and window surrounds are oiled oak. The sill of the window surrounds undergoes severe wear and tear and on that account has been made replaceable. At the foot of the tower, leading away to the right, can be seen the hose-washing trough, a long shallow channel about 3-ft. wide which can be filled with water. After washing, the hoses are laid out on long racks in a drying tunnel down which warm air is forced.



building illustrated

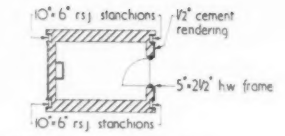
FIRE and AMBULANCE STATION

in TUNS LANE, SLOUGH
designed by FREDERICK POOLEY
county architect

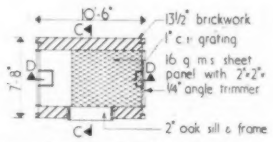


Section C-C drill tower [Scale: $\frac{1}{16}$" = 1' 0"]

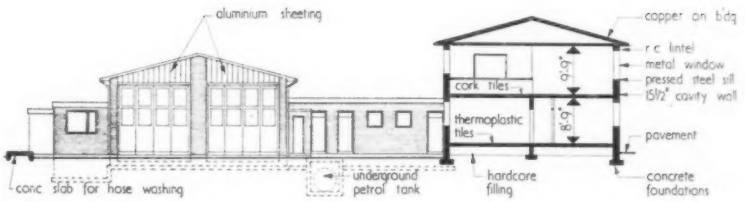
Section D-D



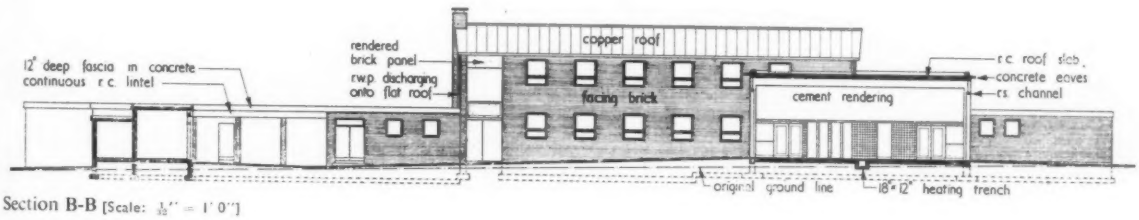
Typical upper floor plan



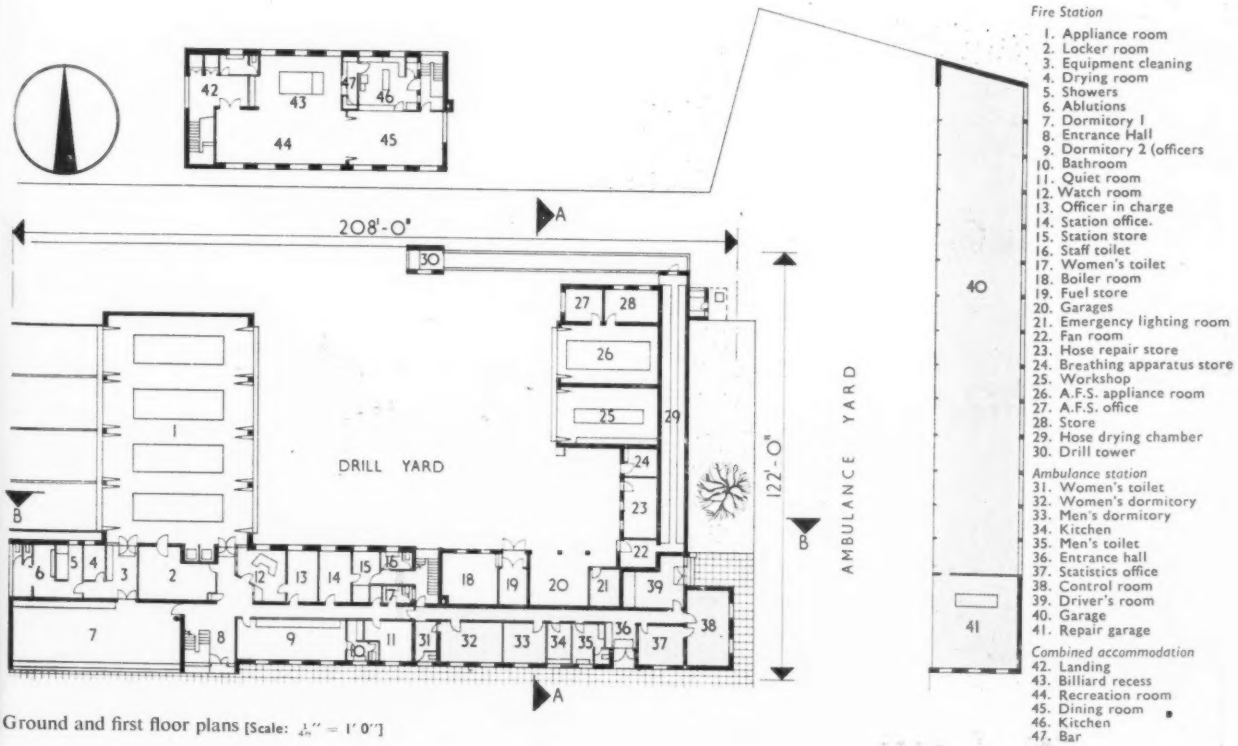
Ground floor plan drill tower [Scale: $\frac{1}{16}$" = 1' 0"]



Section A-A [Scale: $\frac{1}{32}$" = 1' 0"]



Section B-B [Scale: $\frac{1}{32}$" = 1' 0"]



Ground and first floor plans [Scale: $\frac{1}{64}$" = 1' 0"]

Fire Station

1. Appliance room
2. Locker room
3. Equipment cleaning
4. Drying room
5. Showers
6. Ablutions
7. Dormitory 1
8. Entrance Hall
9. Dormitory 2 (officers
10. Bathroom
11. Quiet room
12. Watch room
13. Officer in charge
14. Station office.
15. Station store
16. Staff toilet
17. Women's toilet
18. Boiler room
19. Fuel store
20. Garages
21. Emergency lighting room
22. Fan room
23. Hose repair store
24. Breathing apparatus store
25. Workshop
26. A.F.S. appliance room
27. A.F.S. office
28. Store
29. Hose drying chamber
30. Drill tower

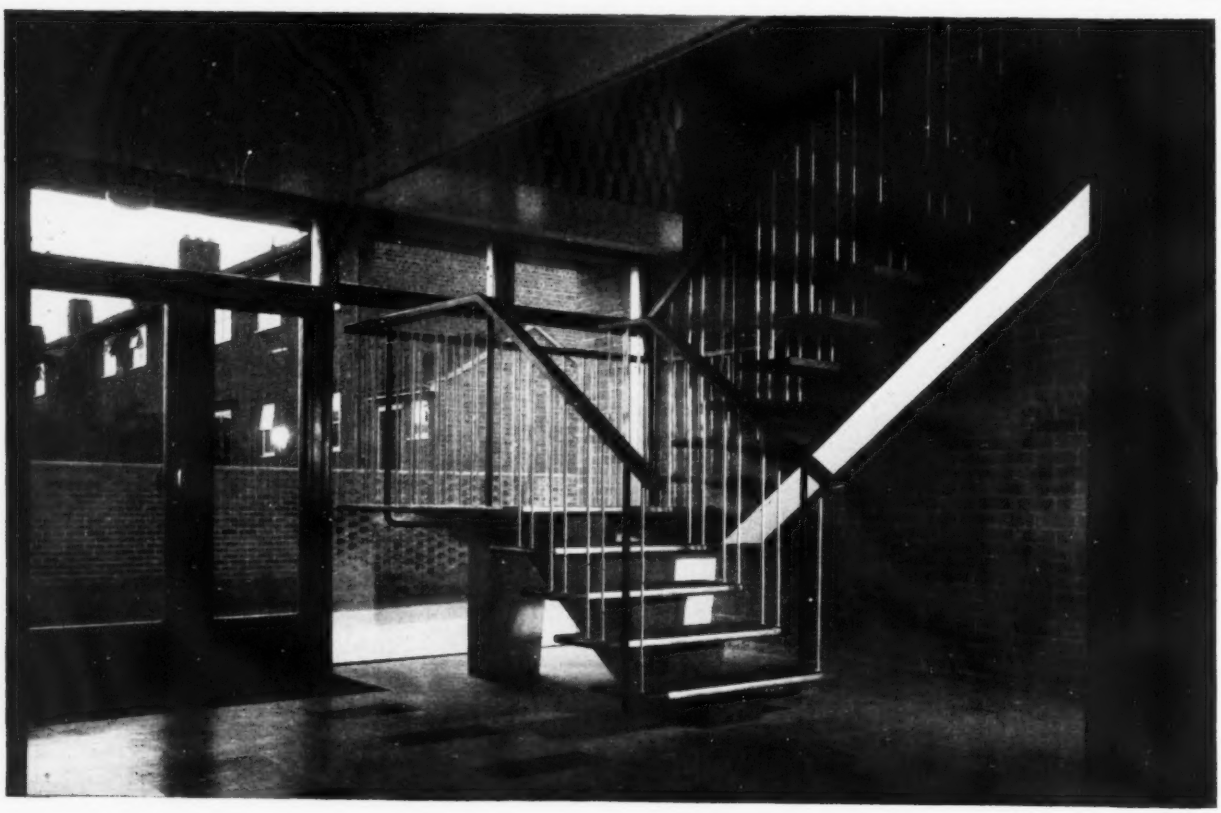
Ambulance station

31. Women's toilet
32. Women's dormitory
33. Men's dormitory
34. Kitchen
35. Men's toilet
36. Entrance hall
37. Statistics office
38. Control room
39. Driver's room
40. Garage
41. Repair garage

Combined accommodation

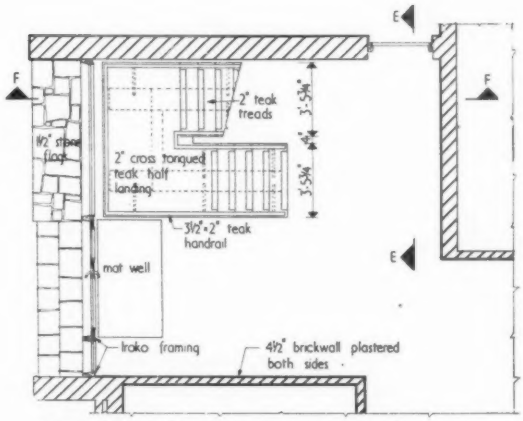
42. Landing
43. Billiard recess
44. Recreation room
45. Dining room
46. Kitchen
47. Bar

building illustrated

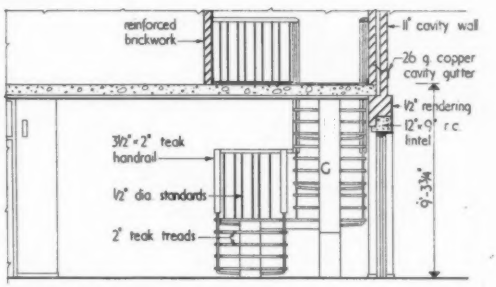


building illustrated

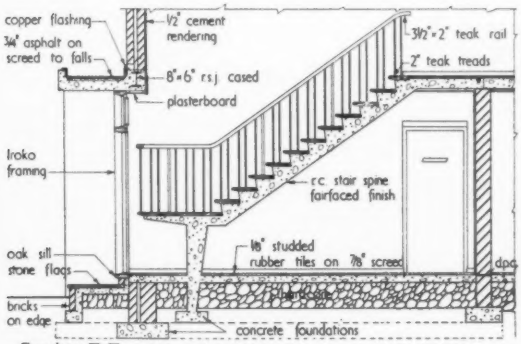
Opposite page, top (viewpoint 4): the public entrance to the fire station. To the right of the oiled hardwood doors is a hardwood panel painted red, and the soffit of the canopy is painted light blue. The kicking plates are of close-ribbed aluminium. Throughout the building, facing bricks are rose-buff hand-made Sussex stocks with light buff mortar. Fascias are painted off white (N.8), window sills are white. The pre-cast concrete cladding, extreme left, has a Derbyshire white spar exposed aggregate. The doors to workshops and appliance room are of teak, with a raw linseed oil finish. Opposite page bottom: the entrance hall to the fire station, used by members of the public as well as by firemen. The stair leads up to the recreation rooms where social activities can be held. Thermoplastic tile floors, marbled light grey and black. 2-in. × 2-in. galvanized m.s. angle welded frame to mat-well. Door and window frames afromosia. Door furniture satin aluminium. External eaves soffit blue—7.5 B 6/6, ceilings white, wall-paper black and white. The stairs have teak hand-rail and treads. The *in-situ* reinforced concrete spine was erected first, then the treads, and finally the balustrade and handrail. The answer seems to have been found here to the frequently recurring problem of how to combine lightness with sturdiness in an open balustrade to a free stair. The soffit of the spine is white, and remainder grey (N5). Below: the watch-room. One fireman sitting at this console commands a view of the main entrance hall, the appliance room and the drill yard.



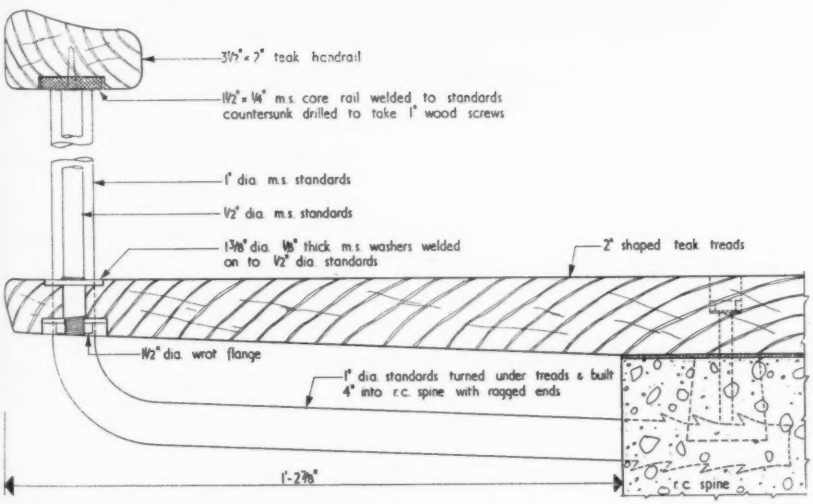
Ground floor plan, main entrance and staircase [Scale: ⅛" = 1' 0"]



Section E-E [Scale: ⅛" = 1' 0"]



Section F-F [Scale: ⅛" = 1' 0"]

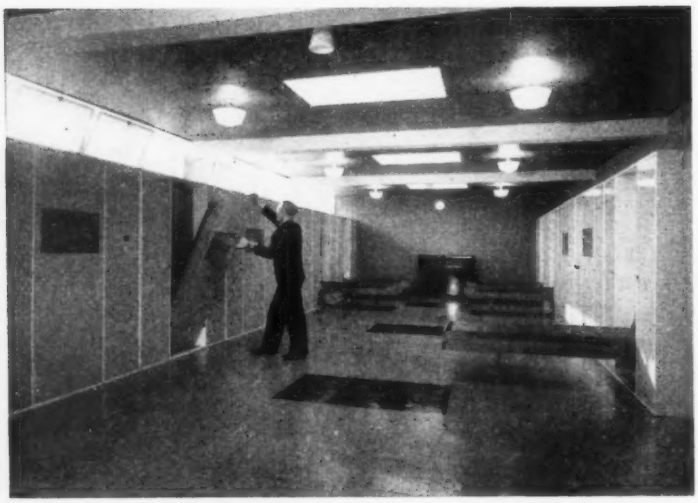


Detail section at G [Scale: ¾" = 1' 0"]

FIRE and AMBULANCE STATION

at TUNS LANE, SLOUGH, BUCKS.
designed by FREDERICK POOLEY,
county architect

building illustrated



Above: the firemen's dormitory. Firemen sleep in the dormitory on alternate nights. In addition to each bed therefore, are two sets of bedding and two kit cupboards. One of these folding bed units is illustrated as a Working Detail in this week's JOURNAL. Since firemen are trained to drop everything and run the moment an alarm goes, the drop beds had to be very carefully balanced so as not to crash on the floor in such an emergency. The cupboards are finished in white N5 and N7, and the end wall is 2·5Y 5/2 with the radiator black. Beams, white and the ceiling blue (2·5 PB 4/10.) The smaller light fittings down the centre of the room are part of the emergency lighting system which is installed throughout all the main parts of the building. Below: the appliance room looking towards the dormitory wing. The large doors on the left are for appliances returning by way of the drill yard, those on the right for appliances rushing out to answer a call. The cables hanging down from the roof are located within hand's reach of the appliance crew, and with no more effort than is required to pull a lavatory chain release a spring mechanism which throws open the front doors. In the lower half of the end wall can be seen, from left to right, the glazed panel of the watch-room, the entrance from the main hall, two firemen's poles (3-in. diameter polished stainless steel outside drawn over cold drawn seamless m.s. tubing 19 ft. high with fixing flanges top and bottom) which shoot down from the first floor landing; then the forced warm air cabinet for keeping the room at an ambient temperature of 45 degrees F., the exit from the locker room and the exit from the ablutions room and dormitory. The wall surfaces here have a light grey glazed tile finish. The upper half of the wall is rendered and painted black. Floor finishes: generally 9-in. × 9-in. × 1¼-in. quarries but with bays of dark grey glazed non-slip matt tiles 6 in. × 6 in. × ½ in. under appliances for easy cleaning of oil droppings. Asphalt expansion joints run across whole width of appliance room under beams.

building illustrated

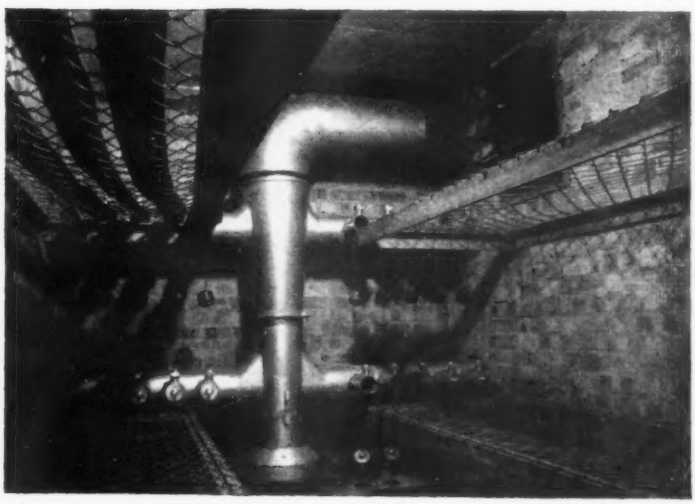
FIRE and AMBULANCE STATION

at TUNS LANE, SLOUGH, BUCKS

designed by FREDERICK POOLEY, county architect

Above : the firemen's recreation room seen from the mess-room. The billiards annexe can be curtained off when required. Left: the firemen's mess-room. The sliding-folding doors enable the mess-room to become part of the adjoining recreation space. The far door on the left gives on to the second staircase leading down to the ambulance station. Thermoplastic floors light brown, wallpaper black and white. Far door lime green (2·5 GY 7/8), other doors tan, architraves white and frame to folding doors plastic-polished walnut. Fluted hardboard panel under hatch grey (N 7), roller shutter black.

Below left: the hose drying chamber. Hoses are stretched out on racks formed of chain-link netting on r.s. angle bearers. At the far end of the chamber they are connected up to the hot-air trunking as seen below right. Hot-air is then forced down them by a fan blowing over a unit heater.



analysis

FIRE STATION

at TUNS LANE, SLOUGH, BUCKS

designed by FREDERICK POOLEY, county architect

CLIENT'S BRIEF: his stated requirements

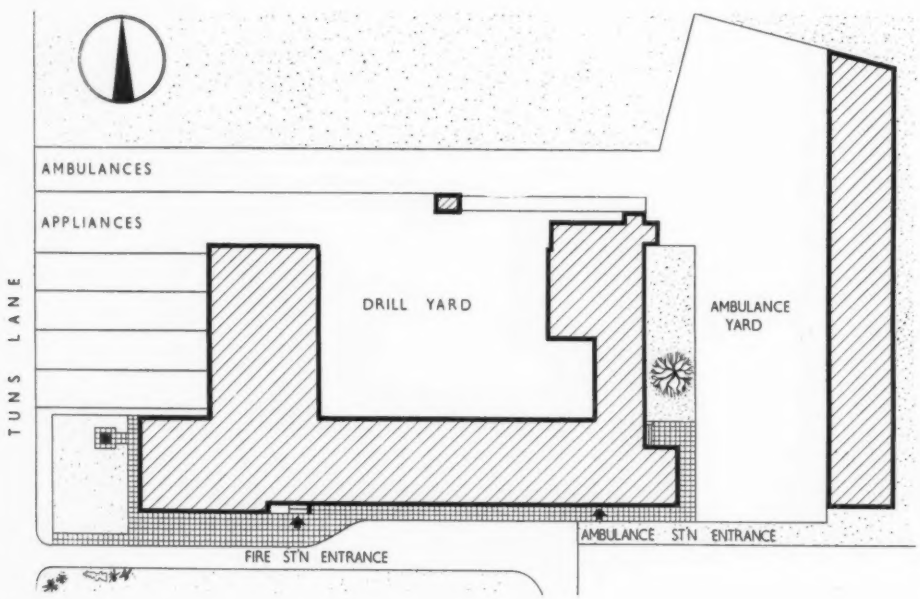
The fire station: the fire station had to provide accommodation for four appliances and was to be staffed by a personnel of 36 firemen, requiring whole-time administrative, dormitory and recreational facilities. In addition, locker provision for retained personnel had to be included. The hub of the building is the watchroom. This room has been so positioned that it can oversee the general station activities and provide easy access for officers in charge of appliances to obtain information prior to responding to emergency calls. The general public also have ready access either for emergency calls or administrative enquiries. Contrary to usual fire station planning the watchroom has been placed to the rear of the appliance room so that supervision of the drill yard is also obtained. Control of the traffic lights at the road junction adjoining the north-west corner of the site is effected from the console in the watchroom. A further fundamental difference in the client's requirements was connected with the sleeping arrangements of the personnel. It was felt desirable that in order to minimise the danger factor associated with the use of sliding poles by personnel aroused from sleep, the dormitories should be placed on the ground floor and in the immediate proximity of the appliance room. Thus, when operations were in progress the firemens' movements were reduced to a minimum and on returning from a fire call their movements from the appliance room to the ablutions, drying room and dormitory were localised. Specially designed bed units have been installed in each dormitory so that when the beds are not in use they occupy a vertical position against the walls and present, with the lockers which separate the beds, a common front along the walls thus providing a neat and tidy appearance. This arrangement allows the dormitory to be used for lecture and demonstration purposes and thus makes the fullest use of the accommodation provided. The upper floor was freed for recreational and dining facilities. A large room capable of sub-division by a sliding-folding screen and curtains was planned so as to permit 150 persons to attend in comfort. A billiard table, recognised as an integral part of the recreational facilities of a whole-time fire station, has been placed in this room, adjacent to which is a small bar. The ambulance service share these recreational and dining facilities and have easy access to them from a rear staircase which adjoins the operational rooms in their block of offices. In connection with fire training facilities, a 50 ft. high drill tower was requested in the drill yard and an underground water storage tank capable of holding 5,000 gallons of water. The normal method of drying the hoses by vertical suspension in a chamber forming part of the tower was departed from and a horizontal hose drying chamber was planned. This method of hose drying involves pumping hot air through and around the hoses and expedites the drying process. Eighteen hoses of 75-ft. length laid out on special racks can be dried every 2 hours by this method, which is, of course, independent of the natural elements. Additional A.F.S. accommodation has been incorporated with the workshop block which provides maintenance for the vehicles. The building is centrally heated by means of oil fired boilers. *The ambulance station:* the administrative portion of the ambulance station forms an integral part of the main block and comprises a control room, drivers' room and dormitories for male and female staff. Messing facilities are shared with the fire service. A spacious yard separates the administrative offices from the garages which house 14 ambulances, and to which is added a repair bay for 2 vehicles for carrying out maintenance repairs.

SITE: topography, surroundings, access and planting

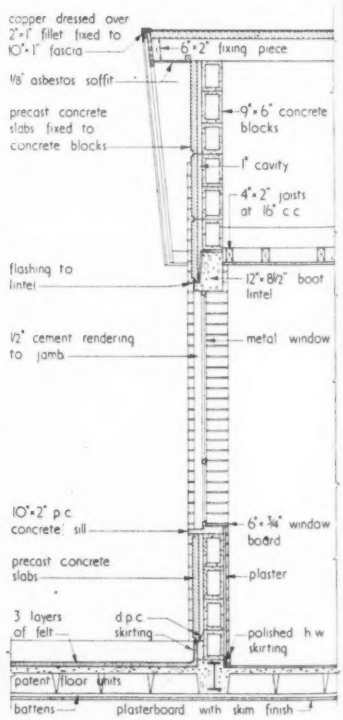
The site is situated at the junction of the Bath Road with Tuns Lane, Slough, and is a short distance from the centre of the town. The combined station serves the whole of the Slough area and surrounding district.

MAIN CONSTRUCTION: general appreciation

The appliance room and garages have a steel frame, whilst the remainder of the building is of a traditional nature with load-bearing brickwork. The first floor and flat roofs throughout are precast concrete units. The pitched roof to the two-storey block is compressed straw sheet boards on TDA roof trusses, and the garage roof is steel decking with woodwool slabs. The staircases are constructed in concrete and the one in the main entrance hall comprises a spine beam with cantilevered teak treads. The appliance room doors are constructed in polished teak with Georgian wired glass panels and are controlled by hand-operated gear from the appliances. Horizontal centre-pivoted metal windows have been used throughout the major part of the building.



Site plan



Section through first floor landing, see figure 42 on plan

[Scale: ¼" = 1' 0"]

analysis

cost per sq. ft.	**s**	**d**
preliminaries and insurances	**3**	**0**
contingencies	**1**	**10**

STRUCTURAL ELEMENTS

Work below ground floor level, foundation type	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Strip foundations to brickwork	Load bearing walls	Mass concrete		Good bearing capacity of soil		
Point foundations	Under columns in appliance room, tower and ambulance garages	Mass concrete				
				work below ground floor level	**5**	**7**

External wall and facings	*Location*	*Materials*	*Finish*	*Reasons and comments*		
	Brickwork	11-in., 13½-in. and 15½-in. cavity Sussex brown hand made, sand-faced facing brick				
	Facing slabs	Croft-granite slabs, 2-in. thick, with exposed Derbyshire white spar aggregate				
				external walls and facings	**3**	**11**

Frame or load bearing element	*Location*	*Materials*	*Beam spans*	*Column grid*	*Reasons and comments*		
Beam and column	Appliance room	R.s.j's (encased in concrete in appliance room and dormitory)	41-ft. 6-in.	15-ft. bays	Floor space free from obstruction was considered essential in these rooms. Drill tower height necessitated a steel frame		
	Dormitory 1		18-ft. 6-in.	12-ft. bays			
	Ambulance garages		24-ft.	10-ft. bays			
Load bearing brickwork	Remainder of scheme						
					frame or load-bearing element	**3**	**1**

Upper floor construction	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Prestressed concrete beams, spanning 15-ft. 9-in.	Floor to recreation, mass and billiard room	6-in. deep prestressed beams				
				upper floor construction		**6**

Staircases	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Concrete spine beam with cantilevered treads	Main entrance	Reinforced concrete	Concrete, finished fair, treads, twice oiled. 3 coats emulsion paint on concrete spine			
height: floor to floor = 9 ft. 3¾ in. width between landings = 8 ft. 2 in.						
				staircases		**6**

Roof construction	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Flat roofs—precast concrete beams	Flats everywhere apart from two-storey block	Precast concrete beams	Screed, 3 layer felt and chippings			
Pitched roof—timber trusses at 9-ft. 4-in. centres	Steel decking and wood-wool slabs	TDA timber trusses and compressed straw slabs	Copper to pitched roof			
Garage roof			Felt to garage roof			
				roof construction	**8**	**1**

Roof lights	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Rectangular and square dome roof lights	Dormitory 1 and ambulance station corridor, ablutions and drying room	Transparent plastic domes on concrete upstands				
				roof lights		**5**

Windows	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Large horizontal centre pivoted windows in brickwork	To most of building	Metal windows	Hot dip galvanised and 3 coats paint			
				windows	**1**	**3**

External doors	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Glazed and panelled doors	Appliance room	2-in. teak glazed with Georgian wired glass	Twice oiled	Large doors, 12-ft. 6-in. high, required with special opening gear		
Glazed doors to entrances	Main entrance	1¾-in. fully glazed doors	Twice oiled			
				external doors	**4**	**8**

analysis

Glazing	*Location*	*Materials*	*Finish*	*Reasons and comments*	s	d
¼-in. polished plate, 24 oz. and 32 oz. Georgian wired	Large pivoted windows Doors					
				glazing		**6**

PARTITIONING

Internal partitions	*Location*	*Materials*	*Finish*	*Reasons and comments*		
3-in. breeze, 4½-in. brickwork, 9-in. brickwork	Generally	Brickwork	½-in. plastered			

Screens	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Hardwood screens	Watchroom and billiard room	Walnut and soft-wood	Polished with synthetic plastic			
Sliding folding screen	Recreation messroom	Plywood faced, solid core	Painted			
				internal partitions and screens	**2**	**2**

W.c. doors and partitions	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Flush doors and breeze partitions		Plywood faced, solid core	Painted—gloss paint			
				w.c. doors and partitions		**2**

Internal doors	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Solid core, flush plywood-faced doors and glazed doors	Throughout	Timber and glass	Painted—gloss paint			
				internal doors		**9**

Ironmongery to internal doors	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Door furniture	Throughout	Aluminium		German manufacture		
				ironmongery to internal doors		**5**

FINISHINGS

Floor finishes	*Location*	*Materials*	*Finish*	*Cost per sq. yd.*		
9-in. × 9-in. thermoplastic tile on screed	Offices, dormitories, recreation rooms, etc.	Self finished		s. d. 38 9	excluding screed	
6-in. × 6-in. × ⅜-in. quarry tile on screed	Toilets and kitchen			27 0	excluding screed	
9-in. × 9-in. × 1¼-in. quarry tile on screed	Appliance room			36 0	excluding screed	
					floor finishes	**3**	**1**

Wall finishes	*Location*	*Materials*	*Finish*	*Reasons and comments*		
¼-in. plaster (medium hard gypsum)	Most rooms		Prime and 2 coats emulsion and wallpapers			
6-in. × 6-in. tiling fair-faced facing brickwork	Appliance room dado. Entrance hall					
				wall finishes	**1**	**4**

Ceiling finishes	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Plaster board and skim (on battens cast in precast beams on first floor)	Generally	⅜-in. plasterboard	Prime and 2 coats emulsion paint			
	Appliance room	¼-in. hard plaster				
				ceiling finishes		**11**

Decorations	*Location*	*Paint types*	*Munsell or other ref.*	*Reasons and comments*		
Applied paint finish	Two coats full-gloss oil on primer	Doors, soft-wood	Archrome (Munsell) colour range and special "E" range for architects	Different colour scheme for each set of rooms having a different function, i.e., dormitories, administration, recreational and toilets		
	Two coats plastic emulsion	Plastered walls generally				
				decorations	**1**	**4**

FITTINGS

Cloak rooms	*Location*	*Materials*	*Finish*	*Reasons and comments*
30 hat and coat hooks on rails	Toilets, station office, drivers' mess room			
Venetian blinds	To most windows of larger rooms			Preferable to curtains in a public building

analysis

					s	d
Other fittings	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Station recreation room bar counter and sink				Bed and wardrobe dormitory units excluded. Supplied and fixed outside contract. Approximately £60 each		
2 sliding poles	First floor landing to appliance room					
				other fittings	2	8
Kitchen equipment	*Location*	*Materials*	*Finish*	*Reasons and comments*		
2 sinks, potato peeler, oven, griller, hot cupboard, vegetable racks, table	Kitchen on first floor					
				kitchen equipment		4
Benches in stores and workshop	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Hose-drying equipment	Hose-drying chamber	Supplied by specialist		Horizontal internal drying preferred to vertical suspension of hoses in tower		
				cost included in fittings		

SERVICES

Plumbing: external	*Location*	*Materials*	*Finish*	*Reasons and comments*		
R.w. goods	General	Stove-enamelled	Black in colour			
Rain water disposal	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Standard roof outlets	General					
				plumbing: external, rain water disposal		4
Plumbing internal: waste disposal	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Lead wastes and steel wastes	General					
Hot water storage	*Location*	*Materials*	*Capacity*	*Reasons and comments*		
Domestic hot water storage, served from either gas or oil-fired boilers	Boiler room (night fuel)	Galvanised steel indirect cylinders	200 gallons			
Cold water storage	*Location*	*Materials*	*Capacity*	*Reasons and comments*		
Cold water storage tanks in roof space of pitched roof over rear staircase			600 gallons			
Plumbing: sanitary fittings	*Location*	*Materials*	*Finish*	*Reasons and comments*		
8 w.c.'s, 15 hand basins, 2 urinal slabs, 1 bath and 3 shower baths	Ablutions and toilets	White glazed fireclay generally with steel cisterns				
				plumbing internal, hot water storage, cold water storage, sanitary fittings	2	9
Heating installation: heat exchanger type	*Location*	*Criteria temperature*	*Air change rate*	*Reasons and comments*		
Radiators	Generally					
Forced warm air convectors	Appliance room					
Boiler type and capacity	*Location*	*Heat load and fuel type*	*Stoking method*	*Reasons and comments*		
One cast-iron sectional	Boiler house	811,000 B.Th.U's per hour	Automatic oil-fired	200 seconds oil, stored in one 1200 gall. tank		
Water heater type	*Location*	*Fuel type*	*Stoking method*	*Reasons and comments*		
One gas sectional type	Boiler house	220,000 B.Th.U's per hour	Gas fired	For domestic hot water supply only during summer months		
				heating and hot water installation	3	9
Drainage: type of system	*Location*	*Materials*	*Finish*	*Reasons and comments*		
Separate soil and surface water system	General	Salt glazed stoneware pipes. Manholes in brickwork with cast-iron covers				
				drainage	2	3

analysis

					s	d
Gas installation	*Location*	*Materials*	*Finish*	*Reasons and comments*		
There is a gas supply for kitchen		Cooking equipment	Gas-fired boiler in boiler room and to the hose drying equipment in the fan room			
				gas installation		1
Electrical installation: source and fitting type	*Location*	*Illumination level*	*Quality*	*Reasons and comments*		
Tungsten lighting-dispersive plastic reflectors and fluorescent	Generally	Average 10 ft.-candles with extra lighting in watchroom	Daylight			
Wiring and switching types	*Location*	*Materials*	*Reasons and comments*			
Consisting of standard main controls with copper sheathed cable to sub-distribution boards and screwed conduit circuits to various fittings and other points			Electrical call bell system throughout fire station			
Power supply type	*Location*	*How distributed*	*Reasons and comments*			
Pillar to controls used for lighting with power points provided in most rooms						
				electrical installation	1	10
Paved areas	*Location*	*Materials*	*Reasons and comments*			
Tarmacadam on hardcore	Drill yards and forecourt	3½-in. thick tarmac				
Concrete paving slabs on consolidated ashes	Pavements	2-ft. × 2-ft. × 2-in. concrete slabs				
				paved areas	6	11
				total net cost per sq. ft. of floor	64	5

TIME SCHEDULE

Drawings	*Contract signed*	*Work commenced*	*Work completed*	*Type of contract*
To tender January, 1955	March, 1955	April, 1955	October, 1956	RIBA form

RATIOS

Area of enclosing walls / Total floor area	=	0.9006 / 1	Area of windows (including external doors) / Total floor area	=	0.3322 / 1
Area of solid wall / Total floor area	=	0.5684 / 1	Total roof area / Total floor area	=	0.8708 / 1

COST SUMMARY

Total ground floor area of superstructure	*Total floor area (excluding basement)*	*Tender date*	*Tender cost of superstructure, installations and finishings*	*Tender cost of foundations*
15,447 ft. super	17,770 ft. super	January 10, 1955	£43,100 6s. 0d.	£5356 5s. 6d.

Tender cost of external works	*Gross total cost*	*Cost per ft. super of floor area*	*Cost per ft. cube*
£8811 2s. 11d.	£57,267 14s. 5d.	£3 4s. 5d.	4s. 0d.

COST COMMENTS

Points of special interest are these:

Roof: 8s. 1d. per sq. ft. of floor area represents 14 per cent. of the total cost of the building. The appliances room is spanned by a steel decking and woodwool slab and, as an architectural feature, copper sheathing is provided to the pitched roof, both of which are expensive materials. The actual cost per unit area of the whole roof area is 8s. 1d. $\frac{1770}{15374}$ = 9s. 4d. per sq. ft. A high proportion of the overall cost is taken up by the roof construction for this type of building, more so than is perhaps realised.

External walls. The cost of 3s. 11d. per sq. ft. of floor area when translated by wall to floor ratio of 0·5684 gives an actual cost per unit area of 7s. 9d. per sq. ft. The main construction is brick including drill tower, but note should be taken of the 2-in. thick croft granite slab, the cost of which is unfortunately not shown separately.

External doors, at 4s. 8d. per sq. ft. of floor area, appear unusual, but this cost includes the 2-in. thick door 12-ft. 6-in. high, to the appliance room, an item not normally encountered and which might be considered as part of the external wall construction.

Drill tower. The cost of the drill tower is spread over each of the elements where applicable and will, due to the relatively small floor area, be misleading in some of the elemental costs, e.g. structural frame and external walls. The cost of these might well have been shown separately.

SITE ORGANIZATION

Site labour and equipment: General foreman, two carpenters, four bricklayers, two brick labourers and two general labourers. *Sub letting:* glazing and plastering—normal practice. *Job management:* Periodic review and visiting contracts manager at fortnightly intervals.

working detail

BED UNIT: FIRE STATION AT SLOUGH

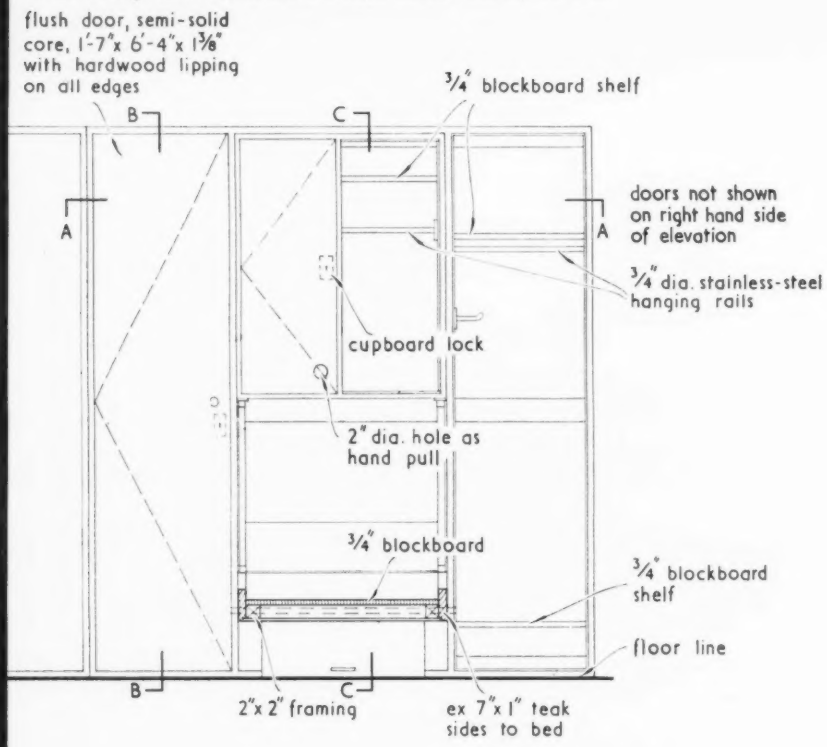
F. B. Pooley, Architect to the Buckinghamshire County Council

The unit is constructed of blockboard and plywood on a softwood framing. Each bed has two identical sets of cupboard units so that it can be used by two firemen alternately.

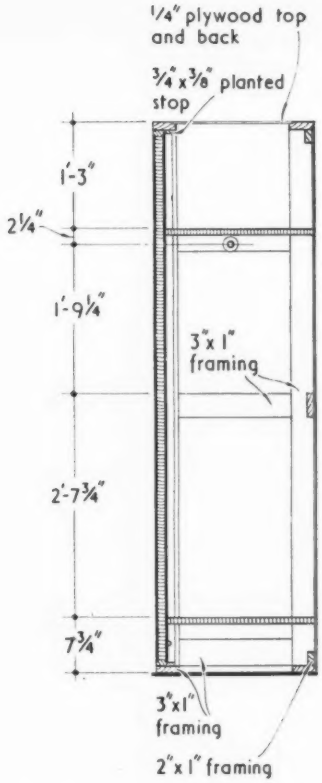
working detail

BED UNIT: FIRE STATION AT SLOUGH

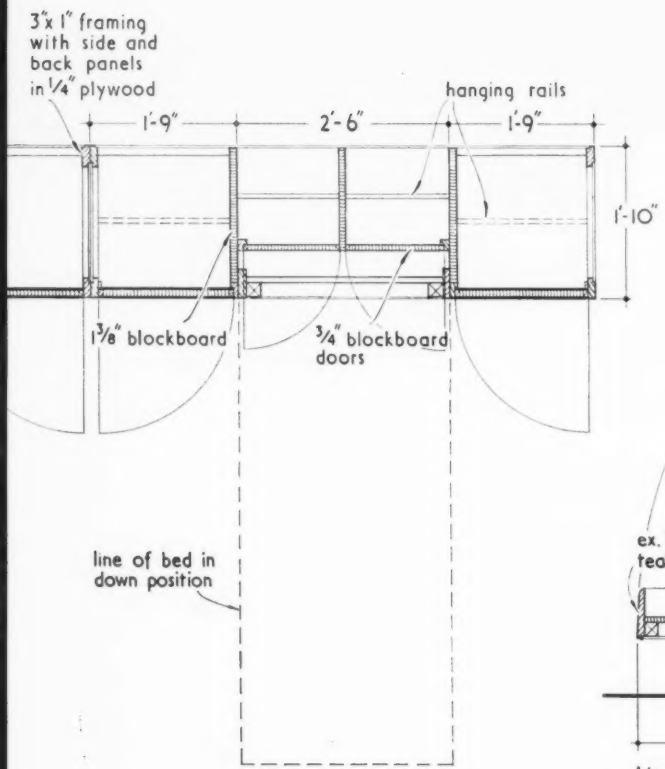
F. B. Pooley, Architect to the Buckinghamshire County Council



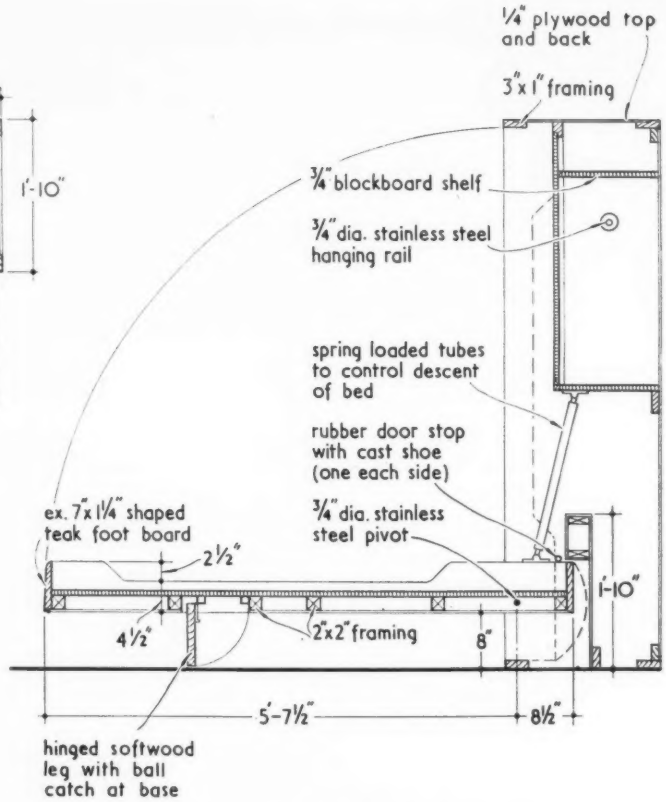
ELEVATION. scale ½" = 1'-0"



SECTION B-B. scale ½" = 1'-0"



PLAN AT A-A. scale ½" = 1'-0"



SECTION C-C. scale ½" = 1'-0"

working detail

WINDOW WALL: OFFICES IN ZURICH

Werner Stücheli, architect

(material supplied by Norman Gilroy)

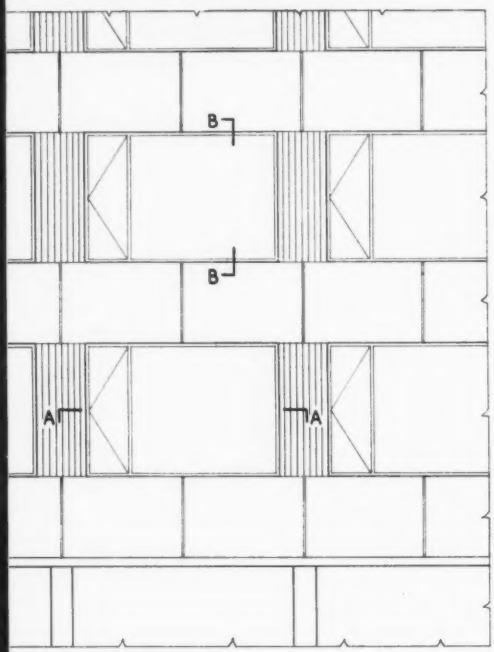
The wall is constructed of a 6-in. outer skin of concrete and a 3-in. inner skin with 2-in. cork insulation between them. The window openings are lined with cork insulation and it extends across the fronts of the columns between the windows, behind the aluminium facing. The aluminium-framed windows are double-glazed and the panels beneath them are of opaque glass.

working detail

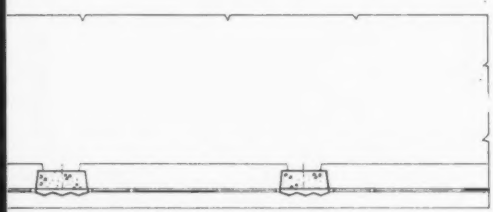
WINDOW WALL: OFFICES IN ZURICH

Werner Stücheli, architect

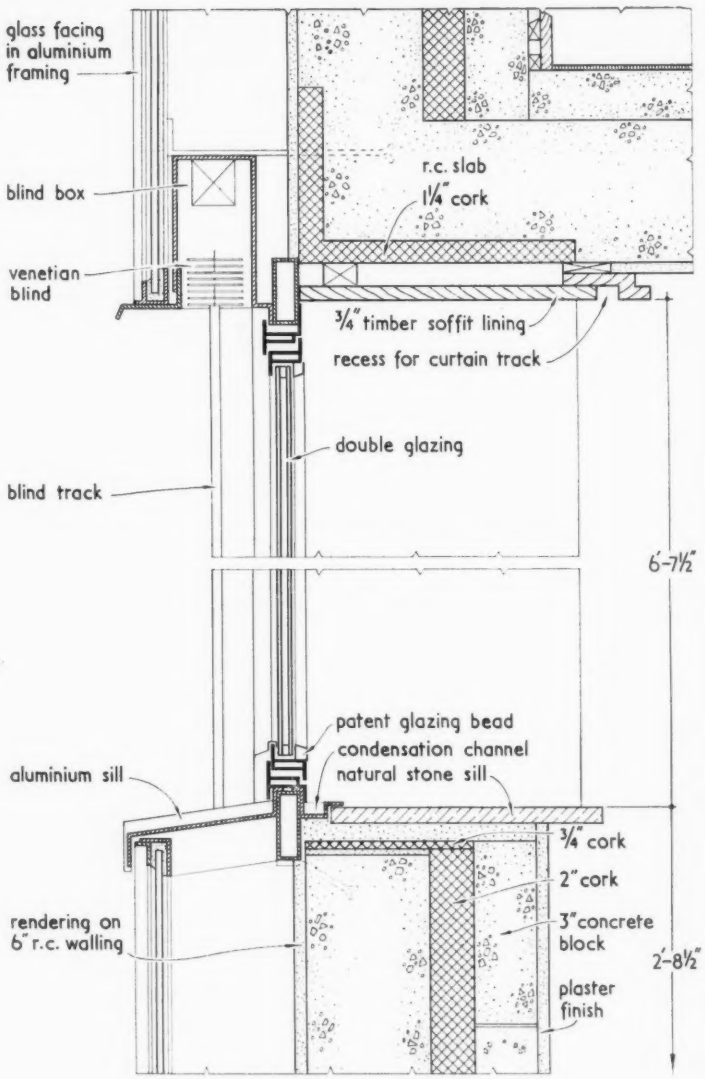
(material supplied by Norman Gilroy)



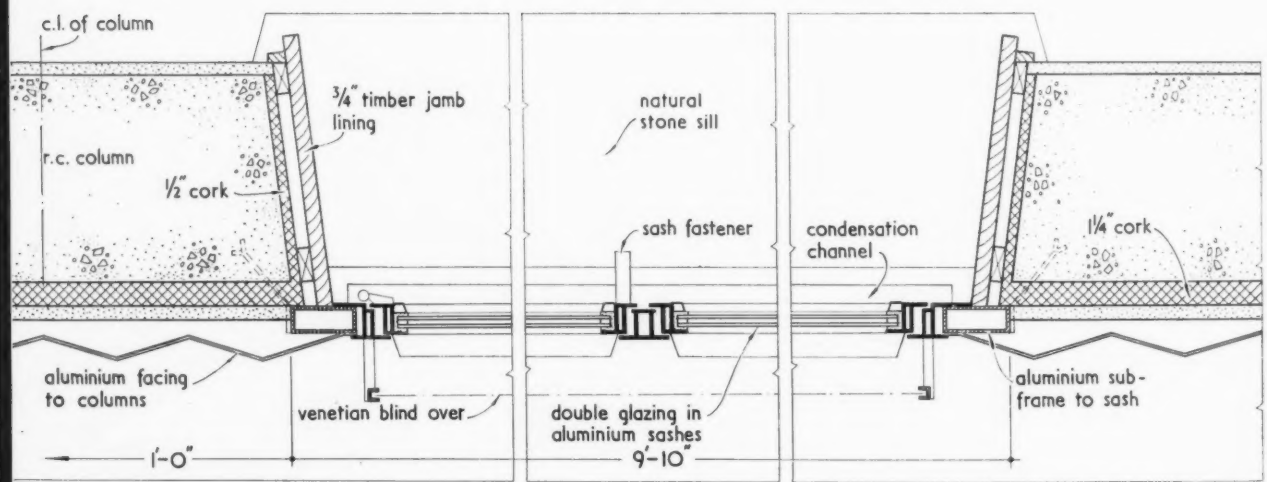
ELEVATION. scale 1/8" = 1'-0"



PLAN. scale 1/8" = 1'-0"



SECTION B-B. scale 1½" = 1'-0"



PLAN AT A-A. scale 1½" = 1'-0"

note: figured dimensions in feet and inches are approximate

Ballroom at Butlin's Holiday Camp
Pwllheli, Caernarvon
Designed by W E. Butlin

Show *floorthought* with MARLEY tiles

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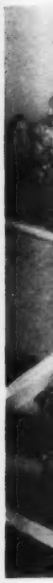

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BUILDINGS IN THE NEWS

ABS Competition Houses

This is a model of the homes for old people which are being built at East Horsley to the design of Clifford Culpin, who won the competition organized last year by the Architects' Benevolent Society. The Society is still in need of funds to complete the scheme. Donations should be sent to Miss B. N. Solly, the ABS secretary, at 66, Portland Place, W. 1.

Announcement

Langley London Ltd., manufacturers of clay roofing tiles, announce that their South Wales representative is now J. O. Whinham of Robin's Rest, Vennaway Lane, Park Mill, Swansea, Glam., (telephone Bishopston 171) and that their Midlands representative is J. F. Duxbury of The Nook, 32 Westdown Drive, Thurmaston, Leics (telephone Syston 8607).

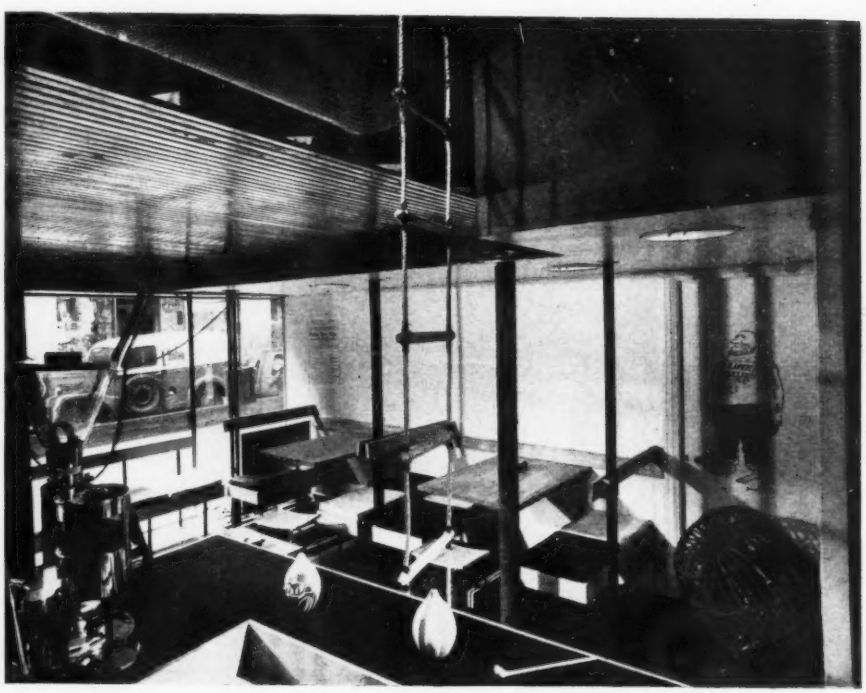
Contractors

Fire and Ambulance Station at Slough (pages 185-196). *Clerk of works:* H. M. Johnson. *General contractors:* W. J. Simms, Sons & Cooke Ltd. *Sub-contractors—Asphalt, roofing felt:* Permanite Ltd. *Stone:* Croft Granite & Brick Co. Ltd. *Special roofings:* Copper Holloway Metal Roofs Ltd. *Glass:* Mustill Wallis. *Patent glazing (roof lights):* William J. Cox Ltd. *Structural steel:* Bolton & Paul Ltd. *Patent flooring:* Marley Tile Co. Ltd., Semtex Ltd. and Hollis Bros. Ltd. *Central heating:* Weatherfoil Heating Systems. *Gas fixtures and gas fittings:* North Thames Gas Board. *Electric light fixtures:* Merchant Adventurers Ltd., C. M. Churchouse Ltd. and Falk, Stadelmann & Co. Ltd. *Staircreads:* Small & Parkes Ltd. *Plumbing and joinery:* W. J. Simms, Sons & Cooke Ltd. *Door furniture:* Alfred G. Roberts Ltd. and Comyn Ching & Co. Ltd. *Casements, window furniture:* Haywards Ltd. *Roller shutters:* G. Brady & Co. Ltd. *Sanitary fittings:* John Knowles & Co. Ltd. *Tiling:* Teuten-Davis & Bennett. *Wallpaper:* Coles Ltd. *Sun blinds (venetion blinds):* J. Avery & Co. Ltd. *Paint:* Hadfields Ltd. *Electric wiring:* Southern Electricity Board.

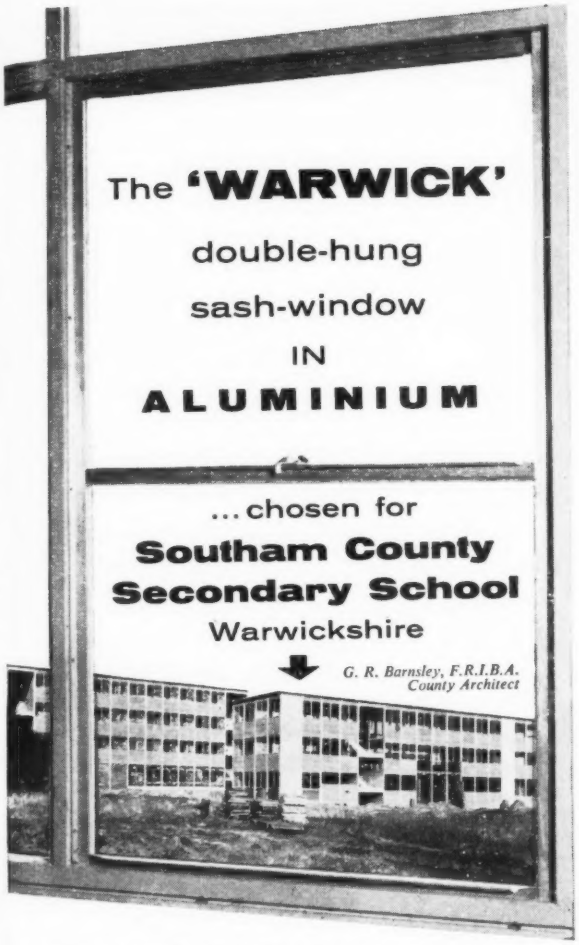
BUILDINGS IN THE NEWS continued

Coffee Bar in Regent Street

This coffee bar, the "Mousehole," just off Regent Street, was designed by C. Wycliffe Noble and Partners. As the architects point out, this was a conversion in which a theatrical approach was used. The boatyard atmosphere was created by the use of things which are not quite architecture: tar-finished, fibrous-plaster brickwork; lobster crates; sail-cloth; cabin hooks; ships' furniture; signal colours; nets; a varnished ceiling and photostats of a marine character. Interesting effects have been achieved by means of the careful placing of spotlights.



The main entrance and foyer to this new building for the Austin Motor Company Limited, together with certain decorative work in the Exhibition Hall and Restaurant, were carried out by our organisation to the design and under the direction of H. W. Weedon, F.R.I.B.A., & Partners.



- *The "WARWICK" window is a traditional sash in aluminium.*
- *Constructed from extruded aluminium sections of architectural alloys.*
- *Smooth light action by patent arrangement of stainless steel weatherstrip and suspension springs.*
- *Completely weatherproof with interlocking meeting styles and capillary grooved head and cill members.*
- *Cheaper than timber, more efficient than steel.*
- *Can be fitted into metal or timber surrounds.*
- *Can be fitted and cleaned from the inside of the building.*
- *Can be supplied as double glazed unit.*
- *Elegant appearance with slender jambs and styles.*
- *Maintenance free; no painting required.*

The "WARWICK" window, a traditional double-hung sash produced in new materials, is available in any size up to 8ft. by 4ft. —or purpose made at standard rates. It is a flexible unit particularly suitable for curtain walling and multi-storey building Over 500,000 have been fitted in Canada in the past seven years.

ALUMIN BUILDING COMPONENTS LTD

Write (or 'phone, for fully descriptive literature to :-
Central Chambers Weston-Super-Mare,
Phone: Weston-Super-Mare 1582 Telegrams: ALUMIN

AEROFLEX **Fluvent**

CABINET STYLE DISTRIBUTION BOARDS

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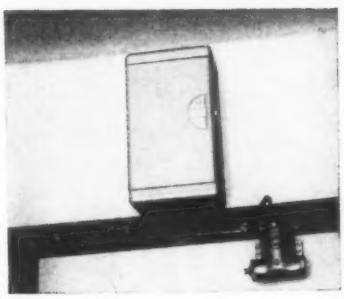

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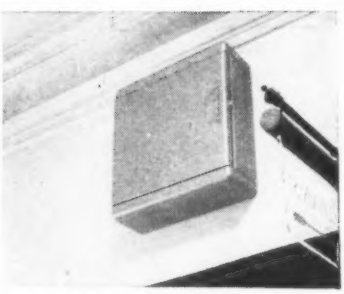
Everywhere



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Unobtrusively Efficient

The new range of Fluvent Cabinet Style Fuseboards, whilst conforming to the highest standards of electrical and mechanical efficiency, has been designed to give the minimum offence to those concerned with æsthetic values. The pressed steel cabinets, which have rounded corners and no projections, are finished to give a "beaten metal" effect which will take any applied decoration. Full details are contained in illustrated literature, ref. DBC/1 available on request.

Parmiter Hope & Sugden Ltd.

MANCHESTER 12

London: 34 Victoria St., S.W.1. Glasgow: 5 Somerset Place, C.2.
Birmingham: 39/41 Carrs Lane, 4.

dm PH114

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.

QUANTITY SURVEYING ASSISTANTS required by Air Ministry Works Directorate in London and Provinces. Grade and commencing salary based on not less than 3 or 5 years' previous experience under Quantity Surveyor or Building Contractor. Approved full time study will count towards 5 years period. Normally technical qualifications in Builder's quantities or building, e.g. C. & G. final or O.N.C. or proof to equivalent standard. Duties include abstracting and billing, site measurement and preparation of estimates. Salary range £515 to £790 London rate starting pay dependent on age, qualifications and experience. Salaries somewhat lower in Provinces. Pensionable and promotion prospects. 5-day week, 3 weeks leave a year. Applicants normally should be natural-born British subjects. Write stating age, qualifications and previous appointments including type of work done to AA.879/80, London Appointments Officer, Ministry of Labour and National Service, 1-6, Tavistock Square, W.C.1. No original testimonials should be sent. Only candidates selected for interview will be advised. 4833

CITY OF OXFORD
CITY ARCHITECT AND PLANNING OFFICER'S DEPARTMENT

CHIEF PLANNING ASSISTANT. Salary within the range £902 to £1,107 per annum; required to take charge of the Planning Section of the Department. Candidates must have had a wide experience of Town Planning practice and be qualified members of the Town Planning Institute; additional qualifications an advantage. Car Allowance (Essential User) on the Council's Scale. Housing accommodation provided for successful applicant, if required. Appointment subject to National Conditions of Service and Local Government Superannuation Acts: medical examination.

Forms of application and conditions of appointment from The City Architect and Planning Officer, Town Hall, Oxford, to whom completed forms must be returned by 16th February, 1957.

HARRY PLOWMAN,
Town Clerk.

Town Hall,
Oxford. 5087

BOROUGH OF WILLESDEN
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT

Applications are invited from suitably qualified and experienced persons for the following permanent appointments:—

(a) ASSISTANT ARCHITECTS (2 posts), Grade A.P.T. V (£814 17s. 6d.—£994 5s. p.a.).
(b) ASSISTANT ARCHITECT, Grade A.P.T. III/IV (£656—£907 2s. 6d. p.a.).
(c) ASSISTANT ARCHITECTS (3 posts), Grade A.P.T. III (£656—£784 2s. 6d. p.a.).
(d) ASSISTANT ARCHITECT, Grade A.P.T. I (£543 5s.—£625 5s. p.a.).
(e) TECHNICAL ASSISTANT, Grade A.P.T. III (£656—£784 2s. 6d. p.a.).

Maintenance work and improvement on schools, Intermediate R.I.C.S. (Building) an advantage.)

London weighting, maximum £30 p.a. is payable in addition to the above salaries.

The Council is unable to assist with housing accommodation.

Forms of application and conditions of appointment may be obtained from the Borough Engineer and Surveyor, Town Hall, Dyne Road, Kilburn, N.W.6. Applications to be returned to the undersigned not later than 9 a.m. on Monday, 11th February, 1957.

When writing for application forms candidates must state for which appointment they wish to apply.

R. S. FORSTER,
Town Clerk.

15th January, 1957. 5051

CITY OF NOTTINGHAM

Applications are invited for the following appointments in the Housing Architect's Department:—

(a) ASSISTANT QUANTITY SURVEYOR of R.I.C.S. Final standard. Grade A.P.T. V. £814 17s. 6d. to £994 5s. per annum.
(b) ARCHITECTURAL ASSISTANT of R.I.B.A. Intermediate standard. Grades A.P.T. I-II. £543 5s. to £691 17s. 6d. per annum.

The persons appointed will have an opportunity of working on interesting and varied projects and the commencing salary in each case will be according to qualifications and experience.

The appointments will be subject to the National Joint Council's Scheme of Conditions of Service.

Applications stating age, qualifications, experience, present appointment and salary, together with the names of two referees, to be sent to the City Housing Architect, The Guildhall, Nottingham, by Tuesday the 12th February.

T. J. OWEN,
Town Clerk.

The Guildhall,
Nottingham. 5089

NATIONAL COAL BOARD
SOUTH WESTERN DIVISION

Applications are invited for the following appointments in the Divisional Chief Architect's Branch, Cardiff, for work on industrial and welfare buildings, housing and offices, etc.

ARCHITECTURAL ASSISTANT, Grade I. Salary: Males, £620×£25—£750; females, £520×£20—£620. In exceptional circumstances these scales can be increased to: Males £900, females £770. Qualifications: Should have passed the Intermediate R.I.B.A. Examinations, and have had not less than three years' subsequent practical experience, or those who have passed the Final Examination, but have not less than one year's subsequent practical experience.

ARCHITECTURAL ASSISTANTS, Grade II. Salary: Males, £520×£20—£615; females, £432×£16—£507. Applicants should have passed the Intermediate Examination of the Royal Institute of British Architects, and have had not less than three years' subsequent practical experience. Applications will also be considered from those who have had exceptional practical experience but not passed the Intermediate Examination.

QUANTITY SURVEYING ASSISTANTS, Grade I. Salary: Males, £625×£25—£750; females, £520×£20—£620. In exceptional circumstances this scale can be increased to a maximum of males £900, females £770. Applicants should have passed the Intermediate Examination of the Royal Institute of Chartered Surveyors, Quantities Section, and have had not less than three years' subsequent practical experience, or should have passed the Final Examination but have had less than one year's practical experience. Applications will also be considered from those who have not passed the Intermediate Examination but have had considerable practical experience.

QUANTITY SURVEYING ASSISTANTS, Grade II. Salary: Males, £520×£20—£615; females, £432×£16—£507. Applicants should have passed the Intermediate Examination of the Royal Institute of Chartered Surveyors and have had not less than three years' subsequent practical experience. Applications will also be considered from those who have not passed the Intermediate Examination but have had considerable practical experience.

MEASURING SURVEYORS. Salary range £565—£665 per annum. Applicants should have had considerable experience in site measuring and preparation of variation accounts.

Point of entry into the above scales will be according to qualifications and experience. The appointments are subject to provisions of the Board's Superannuation Scheme.

Applications in writing, stating age, education, qualifications, experience, previous and present appointments, present salary, the names and addresses of two referees, and the desired appointment, should be sent to the Divisional Chief Staff Officer, National Coal Board, South Western Division, Cambrian Buildings, Mount Stuart Square, Cardiff, by 17th February, 1957. 5127

HITCHIN URBAN DISTRICT COUNCIL
SURVEYOR'S DEPARTMENT

Applications are invited for the appointment of ARCHITECTURAL ASSISTANT in the Surveyor's Department, at a salary on Grade A.P.T. II (£609 17s. 6d.—£691 17s. 6d.). The commencing salary within the Grade will be fixed according to qualifications and experience.

Applicants must hold the R.I.B.A. Intermediate Examination or its equivalent.

The appointment is superannuable and subject to the National Scheme of Conditions of Service.

THE COUNCIL WILL BE PREPARED, IF NECESSARY, TO PROVIDE THE SUCCESSFUL APPLICANT WITH HOUSING ACCOMMODATION.

Applications, stating age and experience, together with the names of two referees, must be received by the undersigned in envelopes marked "Architectural Assistant" not later than Monday, 10th February, 1957.

Canvassing will disqualify.

W. WILSON,
Clerk of the Council.

Council Offices, Brand Street, Hitchin, Herts. 5112

DERBYSHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT

Vacancies for ARCHITECTS. Salary range £707 5s. to £994 5s., on grades Special, IV and V of the National Joint Council, A.P.T. scales. These three grades are merged to provide a continuous progression to the maximum of Grade V, subject to satisfactory service. Commencing salaries in accordance with experience and qualifications. Pensionable posts. Canvassing disqualifies.

Details and application forms from F. Hamer Crossley, Dipl.Arch.(L'pool), F.R.I.B.A., County Architect, County Offices, St. Mary's Gate, Derby. 5125

BERKS COUNTY COUNCIL, PLANNING DEPARTMENT

Applications are invited from suitably qualified persons for the post of SENIOR ASSISTANT PLANNING OFFICER on A.P.T. Grade VI (£902—£1,107 p.a.). Duties of post are concerned initially with preparation and review of County Development Plan, and applicants should therefore be experienced in development plan and development control work.

Forms of application from County Planning Officer, 7, Abbot's Walk, Reading, to whom completed applications must be returned not later than 14 days from the date of this advertisement. 5113

CITY OF STOKE-ON-TRENT
CITY ARCHITECT'S DEPARTMENT

Vacancies for QUANTITY SURVEYORS on the permanent staff on Grades A.P.T. IV (£727 15s.—£907 2s. 6d.) and A.P.T. III (£656—£784 2s. 6d.).

Previous Local Government service not essential, but applicants should be capable of taking-off and/or settlement of accounts.

HOUSING ACCOMMODATION can be made available to suitable applicants.

Applications, stating date of birth and giving full details of qualifications, training and experience, to J. R. Piggott, T.D., F.R.I.B.A., City Architect, Kingsway, Stoke-on-Trent, by Saturday, 9th February, 1957.

HARRY TAYLOR,
Town Clerk.

5131

AIR MINISTRY Works Designs Branch requires in London and Provinces ARCHITECTURAL ASSISTANTS, experienced in planning preparation of working drawings and details for permanent and semi-permanent buildings. Salaries in London up to £790 p.a. for men and £735 for women. Somewhat lower in Provinces. Starting pay dependent on age, qualifications and experience. Long term possibilities, with promotion and pensionable prospects. 5-day week, 3 weeks 3 days leave a year. Liability for overseas service. Normally natural born British subjects. Write, stating age, qualifications, employment details, including type of work done, to any Employment Exchange, quoting Order No. Borough 1000. 5141

COUNTY BOROUGH OF DEWSBURY
BOROUGH ARCHITECT AND BUILDINGS SURVEYOR'S DEPARTMENT

Applications are invited for the appointment of PRINCIPAL ASSISTANT ARCHITECT (Housing and General Section), at a salary in accordance with A.P.T. Grade V (£814 17s. 6d.—£994 5s. p.a.), the commencing salary to be fixed within the scope of this grade, according to qualifications and experience.

Applicants should be Associates of the R.I.B.A., with good architectural experience and knowledge of local government procedure. Housing accommodation will be made available if required.

The appointment will be subject to one month's notice on either side and to the provisions of the Local Government Superannuation Acts. The successful applicant will be required to pass a medical examination.

Applications, stating age, education, qualifications, full particulars of training and experience, together with copies of two recent testimonials, should be sent to the undersigned not later than Tuesday, 12th February, 1957, endorsed "Principal Assistant Architect."

A. NORMAN JAMES,
Town Clerk.

Town Hall, Dewsbury.
18th January, 1957. 5111

BOROUGH OF LARNE

The Larne Borough Council invite applications for the under-mentioned temporary post—

PLANNING AND ARCHITECTURAL ASSISTANT.

Salary in accordance with experience and within the salary range £385×£20 to £625 p.a., plus pay supplement of £69.

Qualifications: Candidates must have passed the Intermediate Examination of the Royal Institute of British Architects or have adequate drawing-office experience.

Preference will be given to candidates who served with H.M. Forces during wartime, provided the Council is satisfied that such candidates can, or within a reasonable time will be able to, discharge the duties efficiently.

Applications, giving date of birth, full particulars of qualifications and experience, with copies of two recent testimonials, should be sent to the undersigned not later than 5 p.m. on Friday, 15th February, 1957.

R. LYTTLE,
Town Clerk.

Gardenmore House, Larne.
18th January, 1957. 5101

SKEGNESS URBAN DISTRICT COUNCIL
APPOINTMENT OF GENERAL ASSISTANT

Applications are invited for the appointment of a General Assistant in the Surveyor and Water Engineer's Department at a salary within Grades A.P.T. I and II (£543 5s. to £691 17s. 6d.), the commencing salary to be fixed according to the experience and qualifications of the successful applicant.

Candidates will be expected to have had some experience in a Municipal office, and it is preferable, though not essential, that they should have had some experience of building works and alterations.

The appointment will be subject to the National Scheme of Conditions of Service, the provision of the Local Government Superannuation Acts, and the passing of a medical examination.

Applications, suitably endorsed, together with names and addresses of two referees, to be delivered to the undersigned not later than 16th February, 1957. Candidates should disclose whether they are related to any member or officer of the Council.

IVOR M. CULE,
Clerk to the Council.

Town Hall, Skegness. 5139

CORBY DEVELOPMENT CORPORATION
ASSISTANT QUANTITY SURVEYOR

Applications are invited for the appointment of Assistant Quantity Surveyor in the offices of the Chief Architect.

Candidates must be qualified A.R.I.C.S. (Quantities).

Salary according to qualifications and experience within the Grade A.P.T. IV (£710×£30 to £885).

Appointments are subject to superannuation under the Local Government Scheme, for which medical examination will be required.

Housing is available.

Applications, stating age, training, qualifications, present and past appointments and salaries, together with the names of two referees, must reach the undersigned by Monday, 4th February, 1957.

R. F. BROOKS GRUNDY,
General Manager.

Spencer House, Corby, Northants. 5108

COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE
OFFICE OF THE COUNTY ARCHITECT

Applications are invited for the appointments of ASSISTANT ARCHITECTS in the grades shown below, the salary ranges of which are:—

Special Grade (£707 5s.—£861).

A.P.T. IV (£727 15s.—£907 2s. 6d.).

Applicants should be Registered Architects and have had good training in the design and construction of modern buildings. Opportunities available for taking responsibility and supervising works in progress in connection with extensive and interesting programmes of first-class architectural work.

The appointments are subject to the provisions of the Local Government Superannuation Acts.

Applications, on forms obtainable from this office, must be delivered not later than the first post on Monday, 18th February, 1957.

A. W. GLOVER, F.R.I.B.A.,
Deputy County Architect.

Bishopsgarth, Westfield Road, Wakefield. 5108

COUNTY LONDONDERRY EDUCATION COMMITTEE
ARCHITECTURAL ASSISTANT

Applications are invited for the above position in the Committee's Offices in Coleraine.

Applicants should be of Intermediate R.I.B.A. standard. Salary will be within the range £485—£766 per annum, according to qualifications and experience. Applicants holding the Intermediate R.I.B.A. Certificate will enter the scale at £505 per annum.

Application forms and conditions of appointment may be obtained from the Director of Education, New Row, Coleraine, and completed forms should be returned not later than 14th February, 1957. 5128

MIDDLESEX COUNTY COUNCIL
EDUCATION COMMITTEE
TOTTENHAM TECHNICAL COLLEGE, HIGH ROAD, N.15

Required by 1st September, 1957:—

SENIOR LECTURER or LECTURER IN BUILDING CONSTRUCTION. Applicants should be Corporate Members of a professional Institution and have had extensive experience in a responsible capacity in the building industry or an associated profession. Previous teaching experience is essential.

Salary in accordance with the Burnham (Technical) Report, 1956.

Application forms (stamped addressed foolscap envelope) from the Principal, to whom completed forms should be returned within 14 days of the appearance of this advertisement.

C. E. GURR, M.Sc., Ph.D.,
Secretary to the Education Committee.

5102

COUNTY BOROUGH OF TYNEMOUTH
BOROUGH SURVEYOR'S DEPARTMENT
Appointment of
SENIOR TOWN PLANNING ASSISTANT.

Applications are invited for the post of Senior Town Planning Assistant, within Grade A.P.T. V (£814 17s. 6d. to £994 5s.).

The applicant should be a qualified Engineer, Surveyor or Architect, and in addition possess a Town Planning qualification. Application forms, together with conditions of appointment, should be obtained from D. M. O'Herlihy, Esq., O.B.E., B.Sc.(Eng.), M.I.C.E., 16, Northumberland Square, North Shields, and returned before 2nd March, 1957.

The Corporation may be prepared to assist in the provision of housing accommodation.

(Signed) F. G. EGNER,
Town Clerk.

5105

BASILDON DEVELOPMENT CORPORATION
DEPARTMENT OF ARCHITECTURE AND PLANNING

Applications are invited for the post of MODEL MAKER on Grade A.P.T. II, within the salary range £595—£675 per annum. Experience in construction of scale topographical, landscape and building models of New Town Development. Ability to read drawings essential.

Appointment subject to the provision of the Local Government and Other Officers' Superannuation Act, and medical examination.

Housing available in approved cases.

Applications on the special form (obtainable from the Chief Architect), to be made to the General Manager, Basildon Development Corporation, Gifford House, Basildon, Essex, by Monday, 11th February, 1957. 5123

COUNTY BOROUGH OF SOUTHAMPTON requires under N.J.C. Conditions of Service:—

(*a*) SENIOR ASSISTANT ARCHITECT, Grade A.P.T. IV-V (£727—£994). Applicants must be Associate Members of the R.I.B.A. and have had experience in housing design and construction, estate layout, and the administration of contracts.

(*b*) ASSISTANT ARCHITECT, Special Scale (£707—£861). Applicants must have passed Parts I and II of the R.I.B.A. Final Examination, and have had at least five years' experience, including the period spent on theoretical training.

(*c*) PRINCIPAL ASSISTANT QUANTITY SURVEYOR, Grade A.P.T. VI (£902—£1,107). Applicants must be fully qualified chartered surveyors, with considerable experience in building contracts in all stages, and in the control and supervision of staff.

(*d*) QUANTITY SURVEYOR, Grade A.P.T. IV-V (£727—£994). Applicants must have passed the Final Examination of the Royal Institute of Chartered Surveyors (Division IIIQ), and preferably have had experience in housing work.

If assistance in Housing accommodation is needed, please state requirements.

Apply, with copies of two testimonials, to the Borough Engineer and Surveyor, Civic Centre, Southampton, by Monday, 18th February, 1957. 5144

COUNTY OF CORNWALL

Applications are invited for the appointment of SENIOR QUANTITY SURVEYORS on A.P.T. Grade VI (£902—£1,107).

Applicants must be Chartered Quantity Surveyors, and should have experience in taking off for all types of buildings and, in particular, new Schools. They will be responsible for site measurements, valuations, final accounts, etc.

The appointments are subject to the usual conditions of Local Government Service. Applications, accompanied by the names of two persons to whom reference can be made, should reach Mr. F. K. Hicklin, A.R.I.B.A., County Architect, County Hall, Truro, not later than Saturday, 9th February, 1957.

E. T. VERGER,
Clerk of the County Council.

County Hall, Truro.
18th January, 1957. 5120

CITY OF PORTSMOUTH
CITY ARCHITECT'S DEPARTMENT

There are vacancies on the permanent staff in the Special Grade (£707 5s.—£861) for an ASSISTANT ARCHITECT who has passed the Final Examination of the R.I.B.A., and in Grades III (£656—£784 2s. 6d.) and II (£609 17s. 6d.—£691 17s. 6d.) for ASSISTANTS of Intermediate standard, commencing salaries according to experience.

The Department is engaged on a programme of works comprising new Law Courts, Police Headquarters, College of Art, Schools, Flats, Houses, etc.

Applications, setting out in tabular form, name, age, qualifications, present post and salary, previous posts with dates, details of experience, with names of two referees, must be delivered to the undersigned not later than 12 noon, Friday, 22nd February, 1957.

Canvassing will disqualify.

V. BLANCHARD,
Town Clerk.

City Council Chambers,
1, Clarence Parade, Portsmouth. 5130

LONDON ELECTRICITY BOARD
SENIOR DRAUGHTSMAN

Applications are invited for the above position in the Hampstead Willesden district.

Applicants should have had a good general and technical education in Electrical Engineering and building construction, and experience in a mains records office dealing with systems of all voltages up to 11 kV. In addition, the applicants should be capable of supervising Engineering Draughtsmen and/or Junior Draughtsmen, if required.

The post is graded under Schedule "D" of the National Joint Board agreement as Grade V (£735 to £840 per annum), inclusive of London allowance.

Application forms obtainable from Personnel Officer, 46, New Broad Street, London, E.C.2, to be returned completed by 16th February, 1957. Please quote Ref. PER/2288/A. 5137

ISLE OF ELY COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:—

TWO ASSISTANT ARCHITECTS (Special Grade), £707 5s.×£30 15s.—£861.

Point of entry subject to previous experience. Applicants will be required to have completed Parts I and II of the R.I.B.A. Final or Special Final Examination, or to have satisfactorily completed the course at a recognised School of Architecture.

The appointments are subject to the N.J.C. Scheme of Conditions of Service, the Local Government Superannuation Act, and to passing a medical examination.

Applications, giving details of training and experience, together with names of two referees, to be sent to County Architect, County Hall, March, Cambs., not later than Monday, 18th February, 1957.

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

County Hall, March, Cambs. 5143

CAMBRIDGESHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for the appointment of an ARCHITECTURAL ASSISTANT, Grade III A.P.T. Division (£656 to £784 2s. 6d.). Applicants should have passed the Intermediate Examination of the Royal Institute of British Architects, or its equivalent at one of the recognised schools of Architecture, and have worked in an Architect's office for a period of at least two years. They should have a good knowledge of construction and details, and be able to prepare working drawings, etc., from preliminary sketches.

The appointment is subject to the Local Government Superannuation Acts 1937 to 1953, the National Scheme of Conditions of Service, a satisfactory medical examination and termination by one month's notice on either side.

Applications, stating age, present salary, present and previous appointments, details of training and experience, together with one recent testimonial and the names and addresses of two referees, should be submitted to the undersigned, not later than Thursday, 7th February, 1957.

CHARLES PHYTHIAN,
Clerk of the County Council.

Shire Hall,
Cambridge.
17th January, 1957. 5079

STAFFORDSHIRE COUNTY COUNCIL
COUNTY PLANNING AND DEVELOPMENT DEPARTMENT

Applications are invited for the appointment of JUNIOR PLANNING ASSISTANTS on A.P.T. Grades I-II (£543 5s. to £691 18s.) on the Headquarters Staff at Stafford, the Central Area Planning Office, Stafford, and the Southern Area Planning Office, Wolverhampton.

Applicants for the appointment should have had training in an Architect's, Engineer's, Surveyor's or Planning Office, and preference will be given to those who have passed the Intermediate Examination of the Town Planning Institute or its equivalent.

Applicants should give details of age, education and training qualifications, present and previous appointments and experience, and the names of two persons to whom reference can be made. Applications, in which relationship to any member or senior officer of the County Council must be disclosed, should be sent to D. W. Riley, County Planning and Development Officer, 41a, Eastgate Street, Stafford, not later than the 6th February, 1957.

T. H. EVANS,
Clerk of the County Council.

5110

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Vacancies exist for ARCHITECT/PLANNERS (salaries up to £817). Tasks include 3-dimensional planning within London's eight major Comprehensive Development Areas (including Stepney/Poplar, the South Bank, and Elephant and Castle) and other Redevelopment Areas.

The work includes the preparation of comprehensive layouts covering all the important areas of new public and private development throughout the County, and covers the whole field of planning technique.

Particulars and application form from Architect (AR/EK/ATP/1), County Hall, S.E.1. (907) 4543

ISLE OF ELY COUNTY COUNCIL
PLANNING DEPARTMENT

Vacancy for SENIOR PLANNING ASSISTANT. Salary £727—£907 (A.P.T. Grade IV). Applicants should hold A.M.T.P.I. or other qualifications. Duties concerned, *inter alia*, with preparation of Town Maps for March and Ely. National Conditions. Application form and Conditions of Appointment from County Planning Officer, returnable by the 16th February, 1957.

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

County Hall,
March, Cambs. 5088

CRAWLEY DEVELOPMENT CORPORATION require ASSISTANT ARCHITECT, A.P.T., IV-VI (£710—£1,080), qualified preferably with a landscape qualification. JUNIOR ASSISTANT ARCHITECT, A.P.T. I-III (£530—£765), to Intermediate R.I.B.A. standard. DRAUGHTSMAN, A.P.T. I-III (£530—£765), capable of producing working drawings without supervision. Contributory Superannuation. Apply (stating post) on forms from Chief Architect (Vacancy), Broadfield, Crawley, Sussex, by 18th February, 1957.

C. A. C. TURNER,
Chief Executive.

5135

NORTHAMPTON
SENIOR ASSISTANT ARCHITECT
(HOUSING SECTION) A.P.T.VI

Registered Architects may obtain particulars and application form, returnable by 12th February, from Borough Architect, Guildhall, Northampton.

C. E. VIVIAN ROWE, *Town Clerk.*

5147

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Vacancies for ARCHITECTS Grade III (up to £987), and ARCHITECTURAL ASSISTANTS (up to £818), for widespread construction programme which includes houses, blocks of flats, schools of all types, and various public and industrial buildings. Application forms and particulars from Architect (AR/EK/A/2), The County Hall, S.E.1. (1189) 4544

COUNTY BOROUGH OF EAST HAM
HOUSING DEPARTMENT
SENIOR ARCHITECTURAL ASSISTANT
(A.P.T. V/VI).

Applications are invited. Salary £814 17s. 6d. per annum, rising by annual increments to £1,107, plus London weighting.

Further details and form of application (returnable by 20th February, 1957) from the Town Clerk, Town Hall, East Ham, E.6. 5138

BOROUGH OF EALING. TOWN PLANNING ASSISTANT, A.P.T. IV (£727 15s.–£907 2s. 6d. per annum, plus London weighting). Applicants must be suitably qualified and experienced in development control. Full particulars and application form from Borough Surveyor, Town Hall, Ealing, W.5. Closing date: 11th February, 1957.

E. J. COPE-BROWN,
Town Clerk.
5100

METROPOLITAN BOROUGH OF BATTERSEA

Applications are invited for the permanent appointment of ASSISTANT QUANTITY SURVEYOR, Grade A.P.T. I, £543 5s.–£625 5s. The point of entry within the grade may be fixed above the minimum. London weighting is payable in addition (£10 p.a. under 21 years; £20 p.a. 21 years and under 26; £30 p.a. 26 years and over). Application forms from the Borough Engineer and Surveyor, Town Hall, S.W.11. Closing date: 18th February. 5155

OLDHAM EDUCATION COMMITTEE

Applications are invited for the following posts in the Schools Architect's Department:—

ARCHITECTURAL ASSISTANT, Special Grade (£707 5s. to £861).

ARCHITECTURAL ASSISTANT, A.P.T. Grade II (£609 17s. 6d. to £691 17s. 6d.).

ARCHITECTURAL DRAUGHTSMAN, Misc. Grades IV-VI (£502 5s. to £686 15s.).

The appointments will be made within the grades indicated according to qualifications and experience, and the posts are permanent and pensionable subject to medical examination.

Housing accommodation is available to suitable applicants if required.

The department is engaged in an extensive educational building programme, which includes contemporary primary and secondary schools, Special Schools and Further Education work, and each post offers ample opportunity for responsible and interesting work.

Applications should be forwarded by letter to the Director of Education, Education Offices, Union Street West, Oldham, as soon as possible, and should give full details of age, qualifications and experience. 5154

STAFFORDSHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for ARCHITECTURAL STAFF at commencing salaries within the range of £609 18s. per annum–£902 per annum (A.P.T. Grades II-VI). Applicants for Grades IV and above should be Associates of the R.I.B.A.

Applications, together with copies of three recent testimonials, should be forwarded to C. M. Coombs, F.R.I.B.A., County Architect, County Buildings, Stafford, not later than Wednesday, the 6th February, 1957, giving full details of experience and qualifications, and stating age, present salary and salary required.

T. H. EVANS,
Clerk of the County Council.

County Buildings, Stafford.
23rd January, 1957. 5152

Architectural Appointments Vacant

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

EXPERIENCED ASSISTANT ARCHITECT wanted for work on Sports Grounds and building development schemes. Apply by letter stating experience and salary required to Sudell & Waters, 2, Guildford Place, London, W.C.1. 4877

SENIOR and JUNIOR ASSISTANTS required for West End office for interesting and varied work. 5-day week.—Box 4887.

CO-OPERATIVE WHOLESALE SOCIETY LTD. ARCHITECT'S DEPARTMENT, MANCHESTER
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ARCHITECTS require ASSISTANT: passed R.I.B.A. Intermediate; large scale commercial work. Salary about £520 according to experience. Watson, Johnson & Stokes, 5, Victoria Square, Birmingham, 2. 5029

ADAMS, HOLDEN & PEARSON require ARCHITECTURAL ASSISTANTS. Write giving particulars of experience and salary required to 38, Gordon Square, W.C.1. 5025

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ASSISTANT ARCHITECTS AND SHOPFITTING DRAUGHTSMEN. Co-operative Wholesale Society, Ltd., invite applications for the following appointments: (1) Assistant Architects capable of preparing working drawings from preliminary details. (2) Shopfitting Draughtsmen with experience in Shop Equipment and modernisation of Interiors.

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ARCHITECTURAL ASSISTANTS are invited to apply for posts in the Architect's Department at Ericsson Telephones Limited, Beeston, Nottingham. Starting salary will be according to ability, qualifications and previous experience.

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Only applicants with an enthusiastic approach to new ideas and progressive design, and willing to accept responsibility, will be considered.

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Apply for interview giving age, details of training and experience to the Personnel Officer, Ericsson Telephones Limited, Beeston, Nottingham. 4965

ARCHITECTURAL ASSISTANT, with drawing office experience required for small general practice. Salary range £500—£600. R. Jelinek-Karl, F.R.I.B.A., 22, Chancery Lane, W.C.2. 5002

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CITY Architects require JUNIOR ASSISTANT with office experience up to Intermediate. Five-day week. Phone London Wall 3825. 5134

ASSISTANTS required, salary range £750. Write full particulars: R. H. Gallannaugh, L.R.I.B.A., 54, Queen Anne Street, London, W.1. 5133

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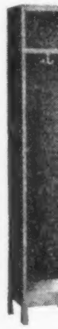

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