

# THE ARCHITECTS' JOURNAL



## standard contents

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

## NEWS and COMMENT

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*Questions and Answers*

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## CURRENT BUILDING

*Major Buildings described:*

*Details of Planning, Construction,*

*Finishes and Costs*

*Buildings in the News*

*Building Costs Analysed*

*Architectural Appointments*

*Wanted and Vacant*

No. 3412]

[Vol. 132

THE ARCHITECTURAL PRESS

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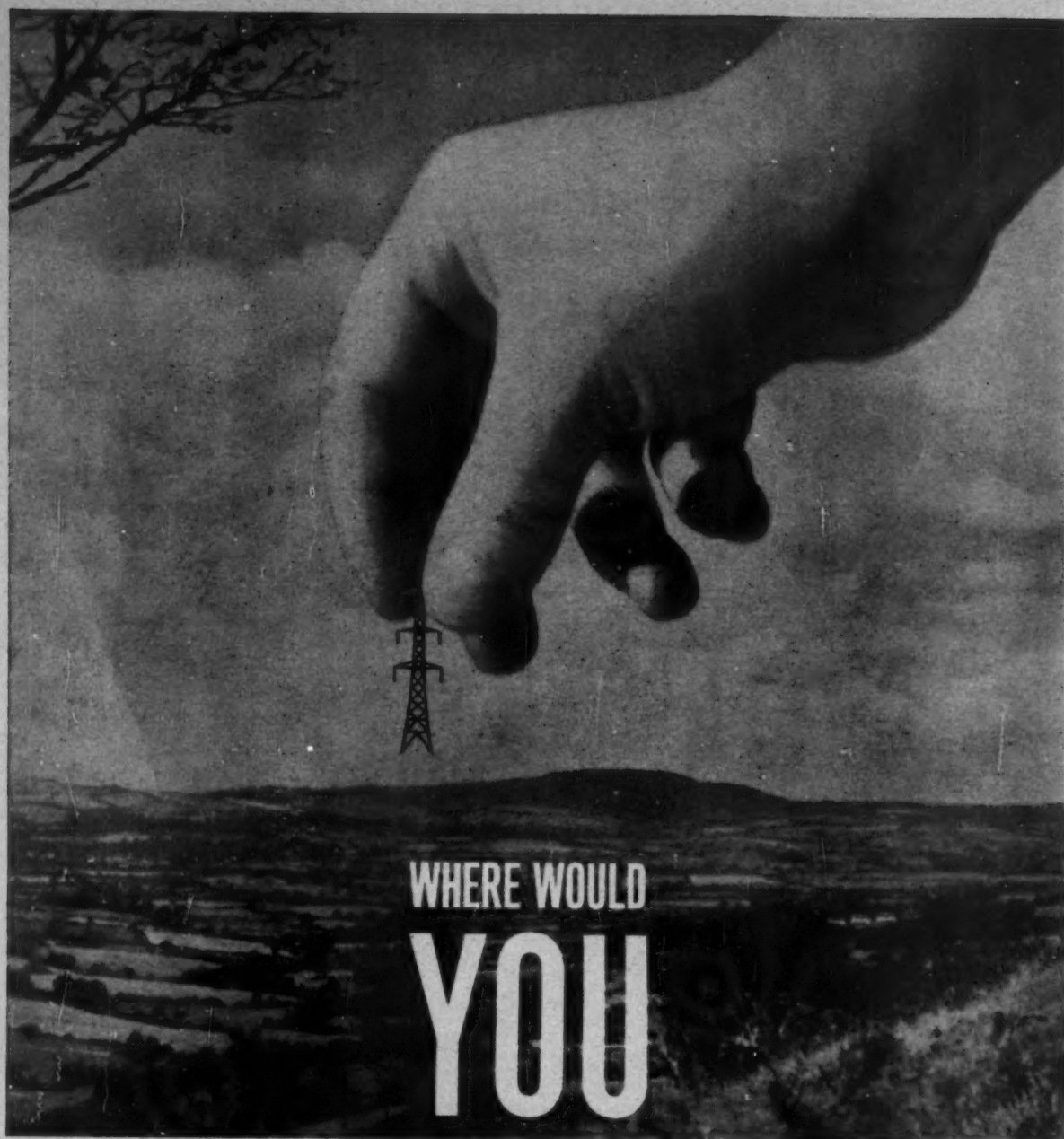
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Registered as a Newspaper.

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

ILA	Institute of Landscape Architects.	1, Park Crescent, Portland Place, W.1.	Museum 3473
I of Arb	Institute of Arbitrators.	Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders.	48, Bedford Square, W.C.1.	Museum 7197
IQS	Institute of Quantity Surveyors.	98, Gloucester Place, W.1.	Welbeck 1859
IR	Institute of Refrigeration.	Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects.	68, Gloucester Place, W.1.	Welbeck 9966
ISE	Institution of Structural Engineers.	11, Upper Belgrave Street, S.W.1.	Sloane 7128
JFRO	Joint Fire Research Organisation (DSIR & Fire Offices' Committee).	Fire Research Station, Boreham Wood, Herts.	Elstree 1341/1797
LDA	Lead Development Association.	18, Adam Street, W.C.2.	Whitehall 4175
LMBA	London Master Builders' Association.	47, Bedford Square, W.C.1.	Museum 3891
MAFF	Ministry of Agriculture, Fisheries and Food.	Whitehall Place, S.W.1.	Trafalgar 7711
MOE	Ministry of Education.	Curzon Street House, Curzon Street, W.1.	Hyde Park 7070
MOH	Ministry of Health.	23, Savile Row, W.1.	Regent 8411
MOHLG	Ministry of Housing and Local Government.	Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service.	8, St. James's Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply.	Shell Mex House, W.C.2.	Gerrard 6933
MOT	Ministry of Transport.	Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works.	Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalt Mine Owners and Manufacturers Council.	14, Howick Place, Victoria Street, S.W.1.	Victoria 1600 & 6477
NAS	National Association of Shopfitters.	2, Caxton Street, S.W.1.	Abbey 4813
NBR	National Buildings Record.	31, Chester Terrace, Regent's Park, N.W.1.	Welbeck 0619
NCBMP	National Council of Building Material Producers.	10, Storey's Gate, S.W.1.	Abbey 5111
NEFMAI	National Employers Federation of the Mastic Asphalt Industry.	21, John Adam Street, Adelphi, W.C.2.	Trafalgar 3927
NFBTE	National Federation of Building Trades Employers.	82, New Cavendish Street, W.1.	Langham 4041/4034
NFBTO	National Federation of Building Trades Operatives.	Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4459
NFHS	National Federation of Housing Societies.	12, Suffolk St., S.W.1.	Whitehall 1631
NHBRIC	National House Builders Registration Council.	58, Portland Place, W.1.	Langham 0064/5
NPL	National Physical Laboratory.	Head Office, Teddington.	Molesley 1380
NRDB	Natural Rubber Development Board.	Market Buildings, Mark Lane, E.C.3.	Mansion House 9383
NSAS	National Smoke Abatement Society.	Palace Chambers, Bridge Street, S.W.1.	Trafalgar 6838
NT	National Trust for Places of Historic Interest or Natural Beauty.	42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning.	16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association.	94, Petty France, S.W.1.	Abbey 4504
RIAS	Royal Incorporation of Architects in Scotland.	15, Rutland Square, Edinburgh.	Fountainbridge 7631
RIB	Rural Industries Bureau.	35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
RIBA	Royal Institute of British Architects.	66, Portland Place, W.1.	Langham 5533
RICS	Royal Institution of Chartered Surveyors.	12, Great George Street, S.W.1.	Whitehall 5322/9245
RFAC	Royal Fine Arts Commission.	5, Old Palace Yard, S.W.1.	Whitehall 3935
RS	Royal Society.	Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts.	6, John Adam Street, W.C.2.	Trafalgar 2366
RSH	Royal Society of Health.	90, Buckingham Palace Road, S.W.1.	Sloane 5134
SBPM	Society of British Paint Manufacturers.	Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SE	Society of Engineers.	17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association.	30, Cornhill, E.C.3.	Mansion House 3921
SIA	Society of Industrial Artists.	7, Woburn Square, W.C.1.	Langham 1984/3
SIA	Structural Insulation Association.	32, Queen Anne Street, W.1.	Langham 7616
SNHITFC	Scottish National Housing.	Town Planning Council, Hon. Sec., Robert Pollock, Town Clerk, Rutherglen.	
SPAB	Society for the Protection of Ancient Buildings.	55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association.	28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association.	21, College Hill, E.C.4.	City 4771
TPI	Town Planning Institute.	18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation.	75, Cannon Street, E.C.4.	City 5040
WDC	War Damage Commission.	6, Carlton House Terrace, S.W.1.	Whitehall 4341
ZDA	Zinc Development Association.	34, Berkeley Square, W.1.	Grosvenor 6636



# WHERE WOULD YOU

## RUN THE PYLONS?

*They still live by lamp-light up in the hills. Soon, a new transmission line will thread its way along the valley, bringing the people up on the hill the electricity they've been wanting.*

Pylons down here will mean a better life up there. But how will the people of the valley feel about the pylons? And the people who visit the valley?

The Central Electricity Generating Board are just as concerned about this as they are about bringing in the power. For the nation has charged the Board with a double duty. Not only to maintain an efficient, economical electricity supply, but also

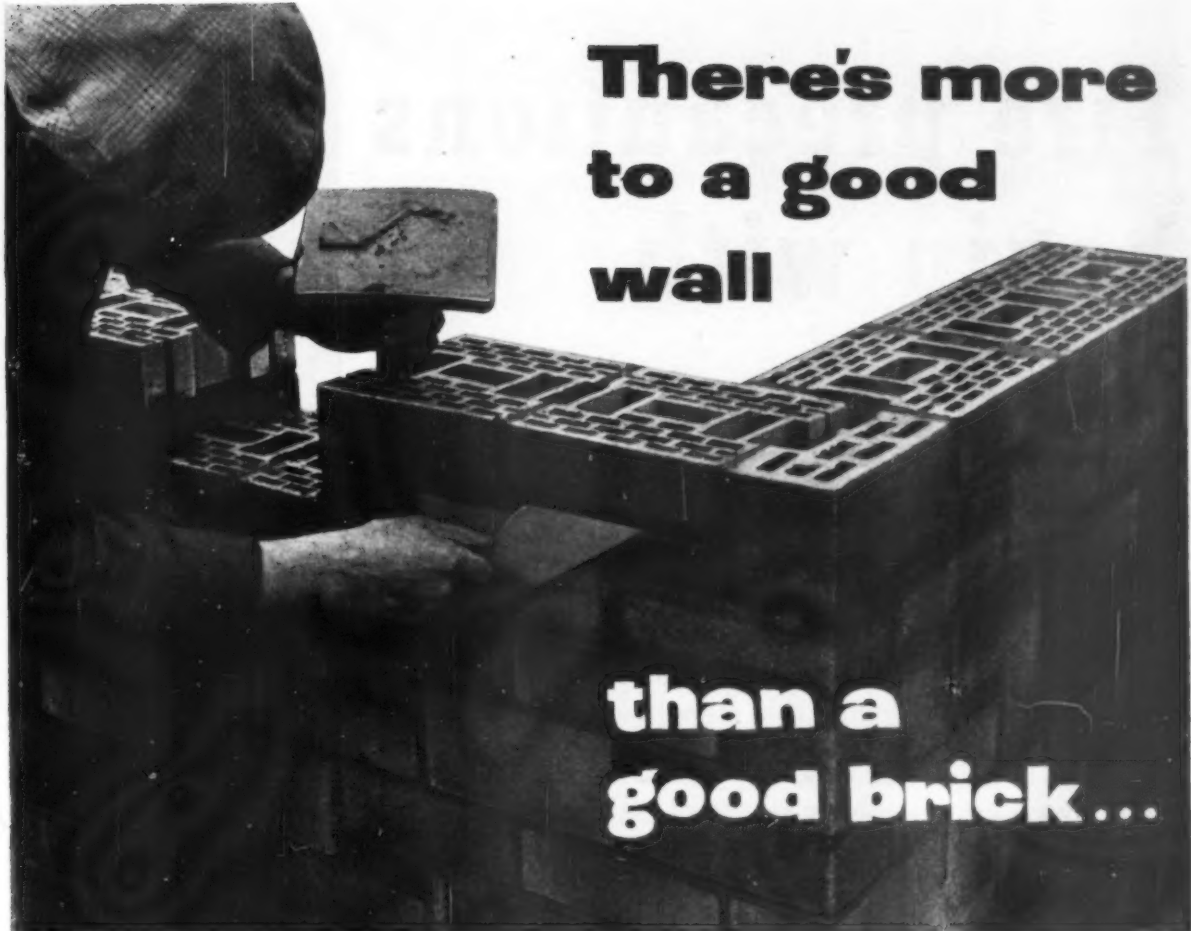
to preserve the amenities of the country as they go.

Often, these duties conflict. Again and again problems arise which seem impossible to solve. But always, they seek to achieve a balance. A balance between the need to answer demands for more power and the need to preserve the beauty, the intangible values, of a landscape, a village, the still unspoilt approaches to a town.

THE CENTRAL ELECTRICITY GENERATING BOARD







*and that means the mortar* — for the strength, stability and watertightness of the wall depends on the type of mortar used. In the soft state, the mortar must be highly plastic so that it spreads with ease and allows the bricks to be cushioned easily into position. It should hold together well and it must also have good water retentivity to prevent the bricks sucking the water out of the mortar too

quickly so that the mortar does not stiffen before the bricks are thoroughly bedded and bonded.

*In the hardened state, it should have adequate strength and a low drying out shrinkage. It should resist rain penetration and to have good durability, it must not be affected by repeated cycles of freezing and thawing.*

All these properties and advantages are obtained at low cost if a mortar is gauged 1-6 or 1-8 cement and sand with FEBMIX ADMIX Mortar Plasticiser incorporated

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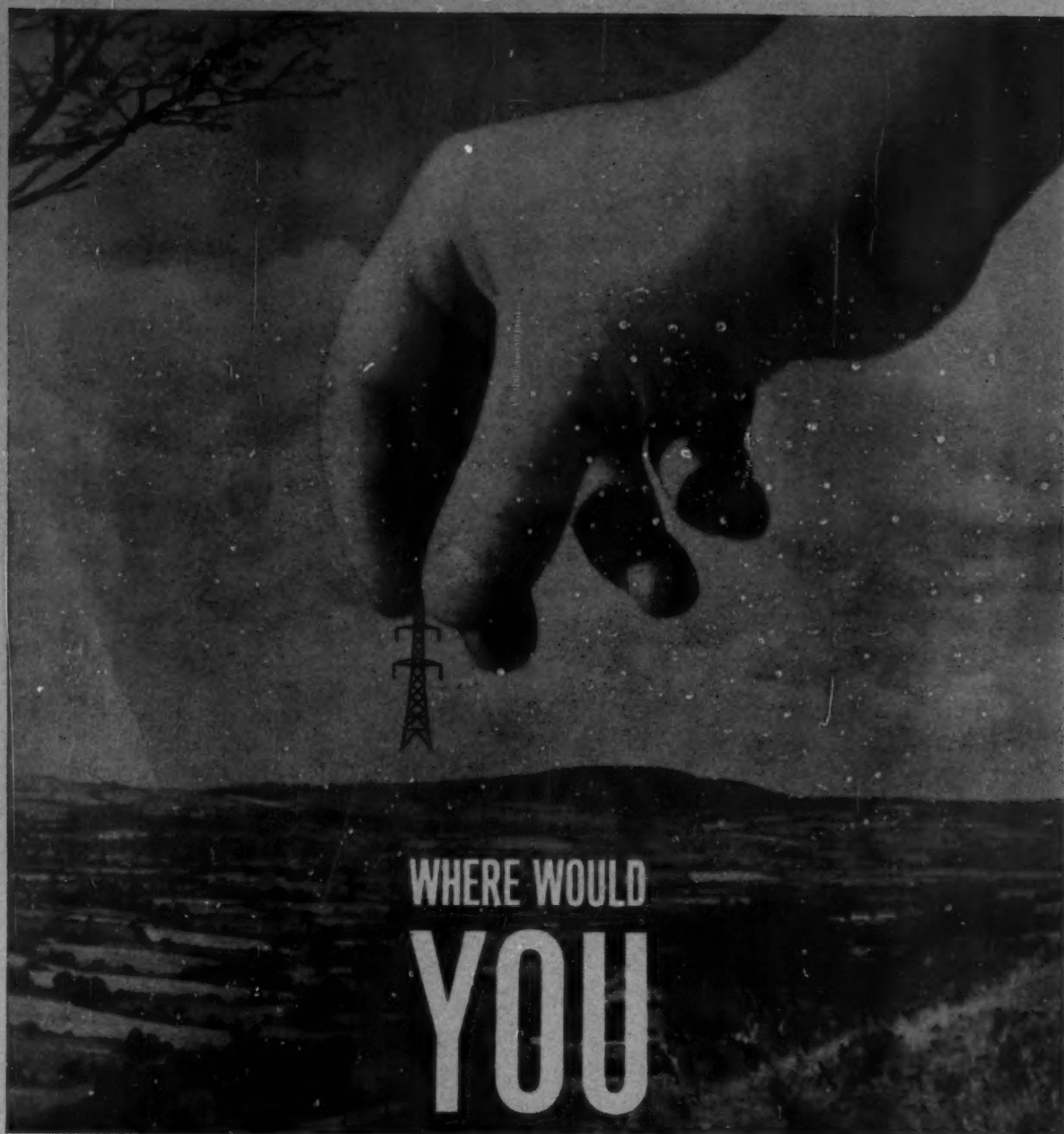
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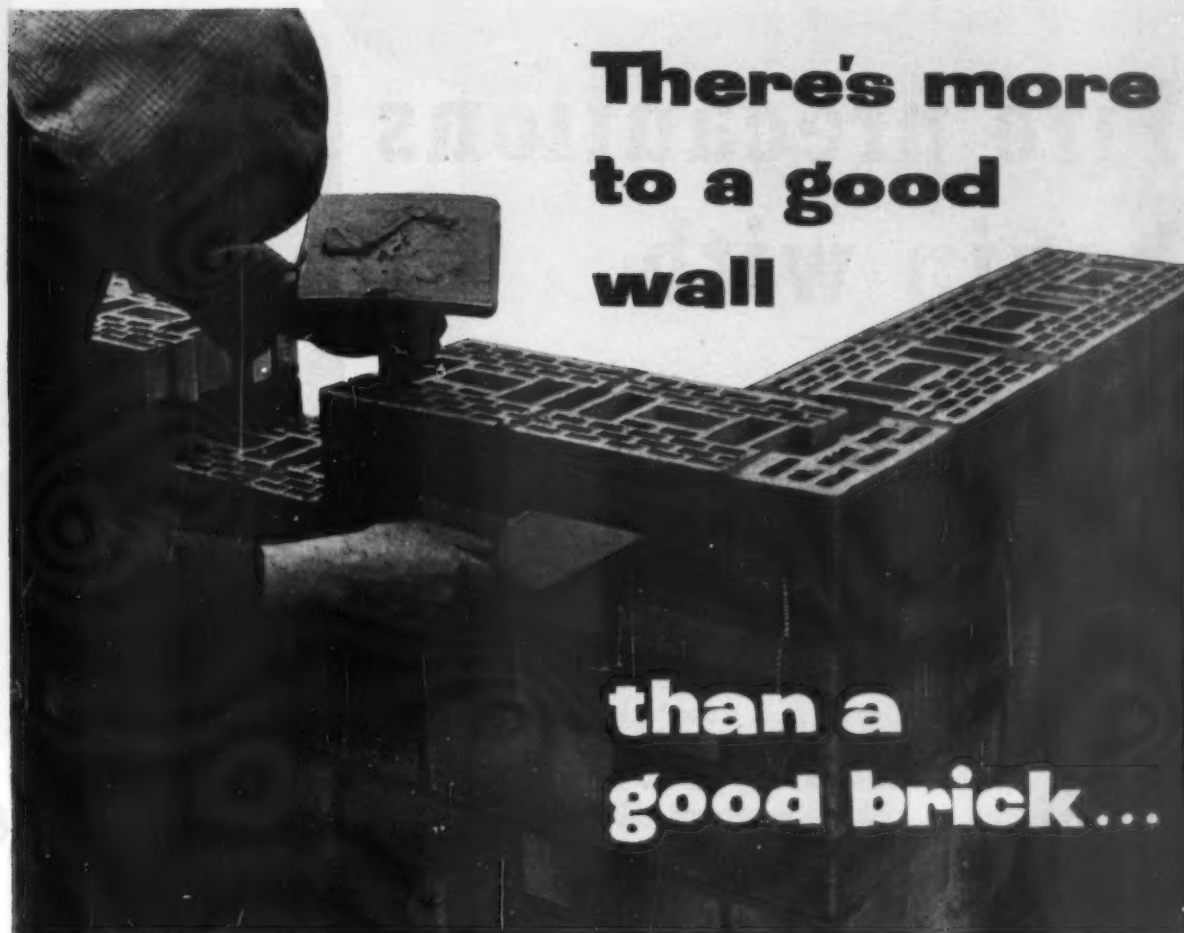
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THE CENTRAL ELECTRICITY GENERATING BOARD







**There's more  
to a good  
wall**

**than a  
good brick...**

*and that means the mortar — for the strength, stability and watertightness of the wall depends on the type of mortar used. In the soft state, the mortar must be highly plastic so that it spreads with ease and allows the bricks to be cushioned easily into position. It should hold together well and it must also have good water retentivity to prevent the bricks sucking the water out of the mortar too*

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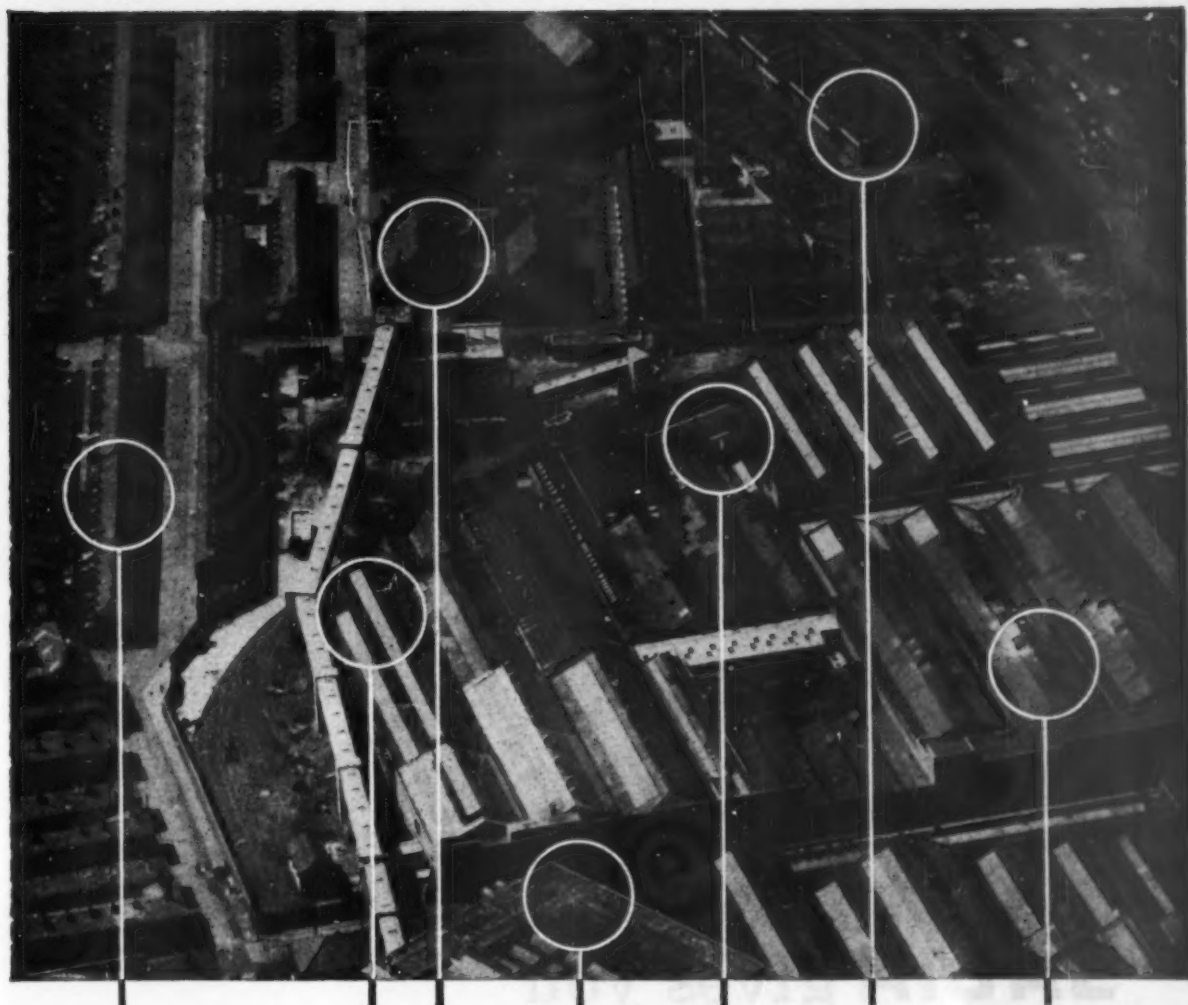
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*Illustration shows "The Weymarks" flats in Weir Hall Road, Tottenham, where Tretolin paint was used extensively on new concrete and brickwork. Borough Engineer and Surveyor: W. BRYANT, A.M.I.C.E., M.J. MUN.E., M.R.S.H. Chief Architect: V. A. JOLLEY, A.R.I.B.A.*

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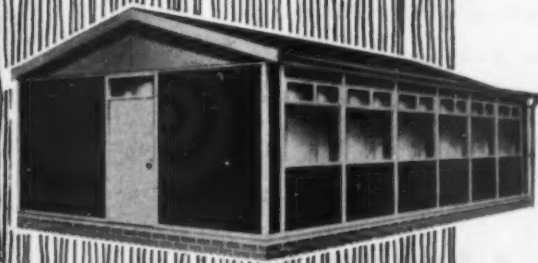
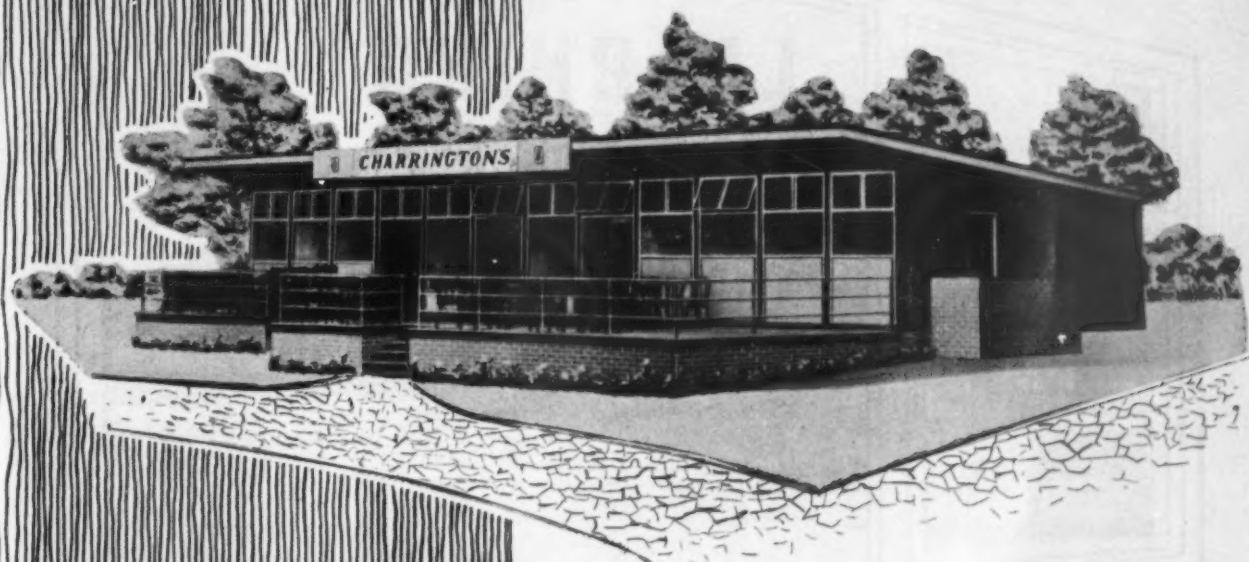


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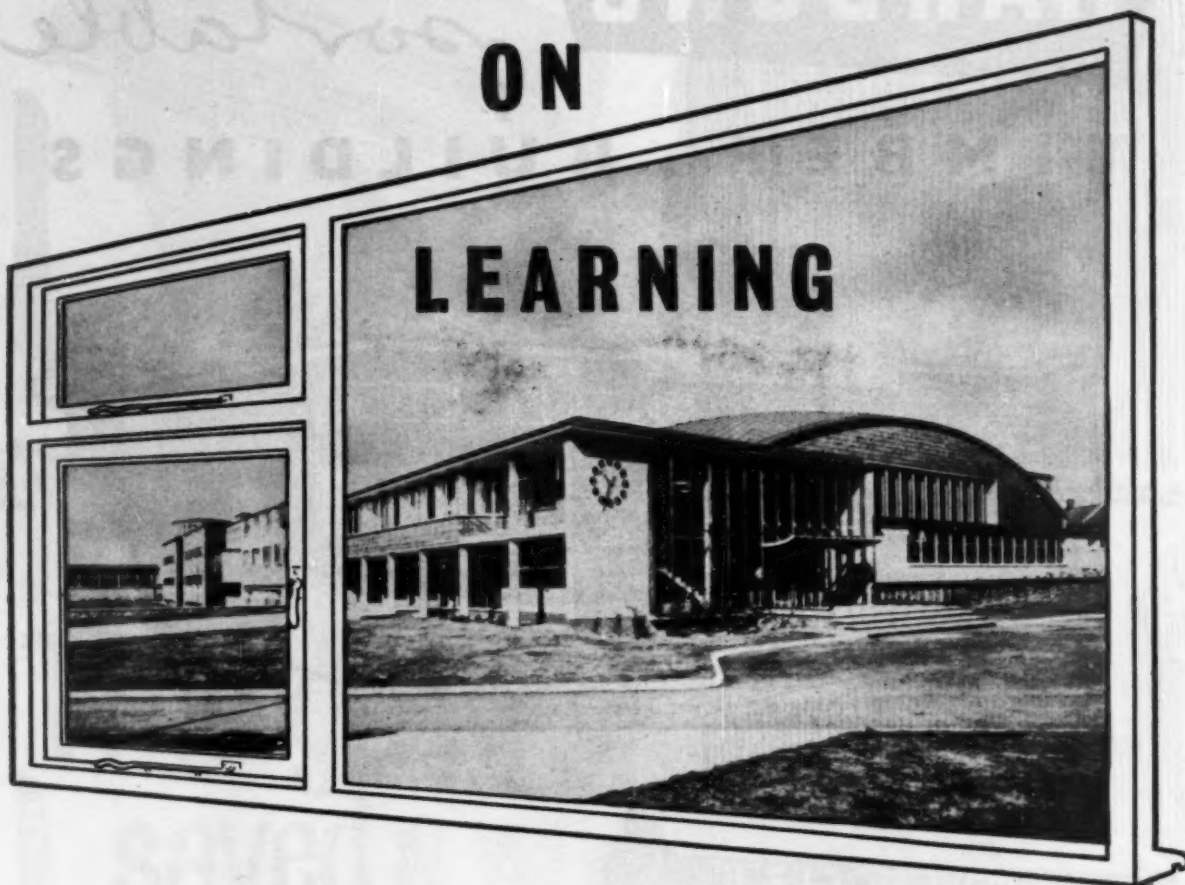
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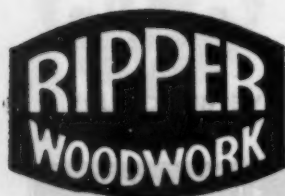
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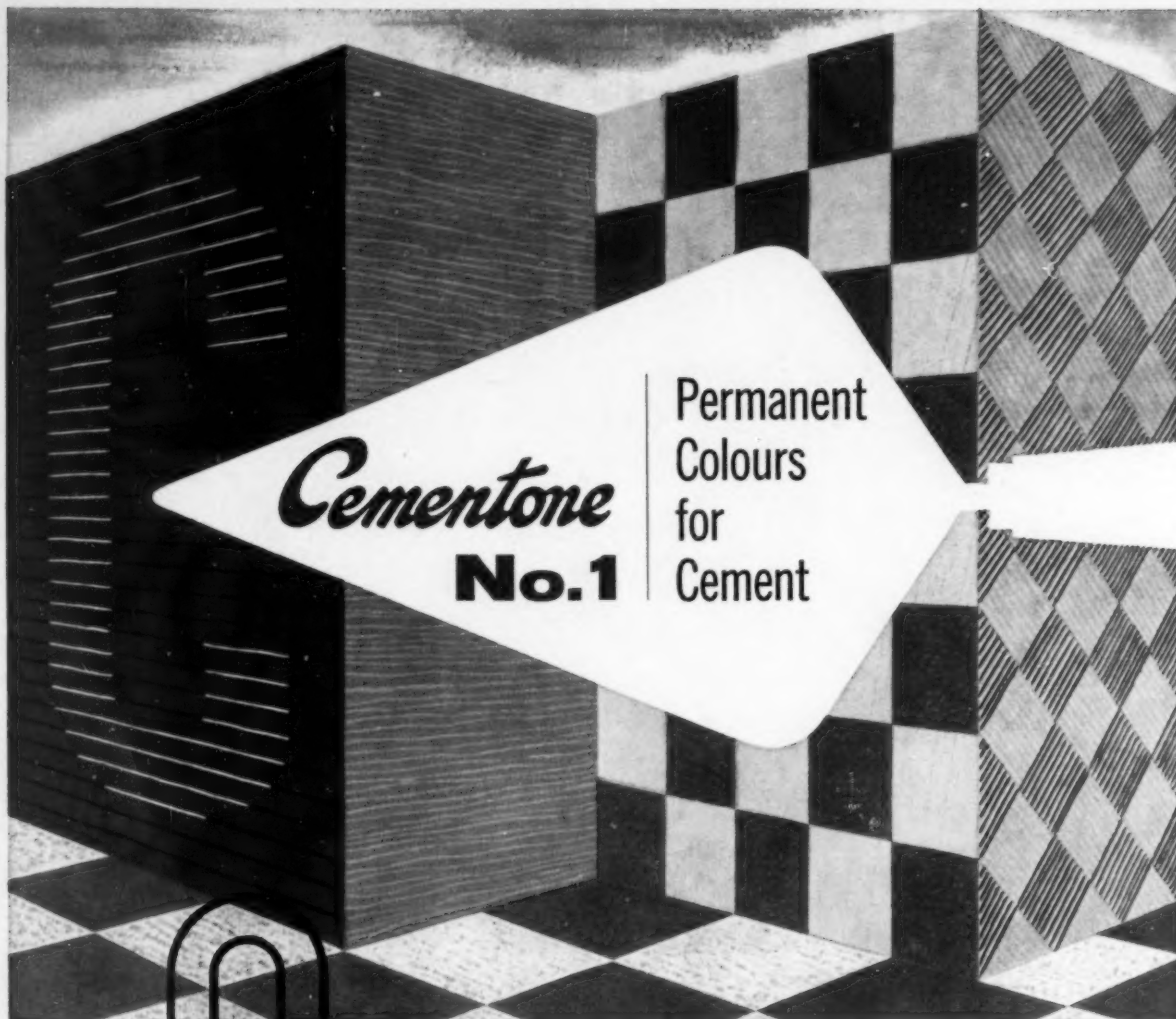
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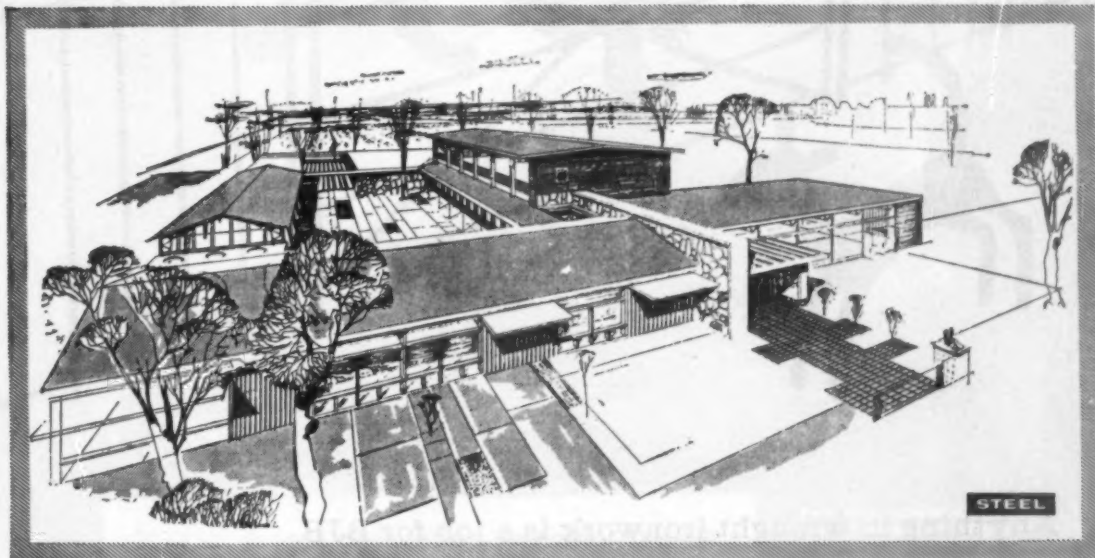
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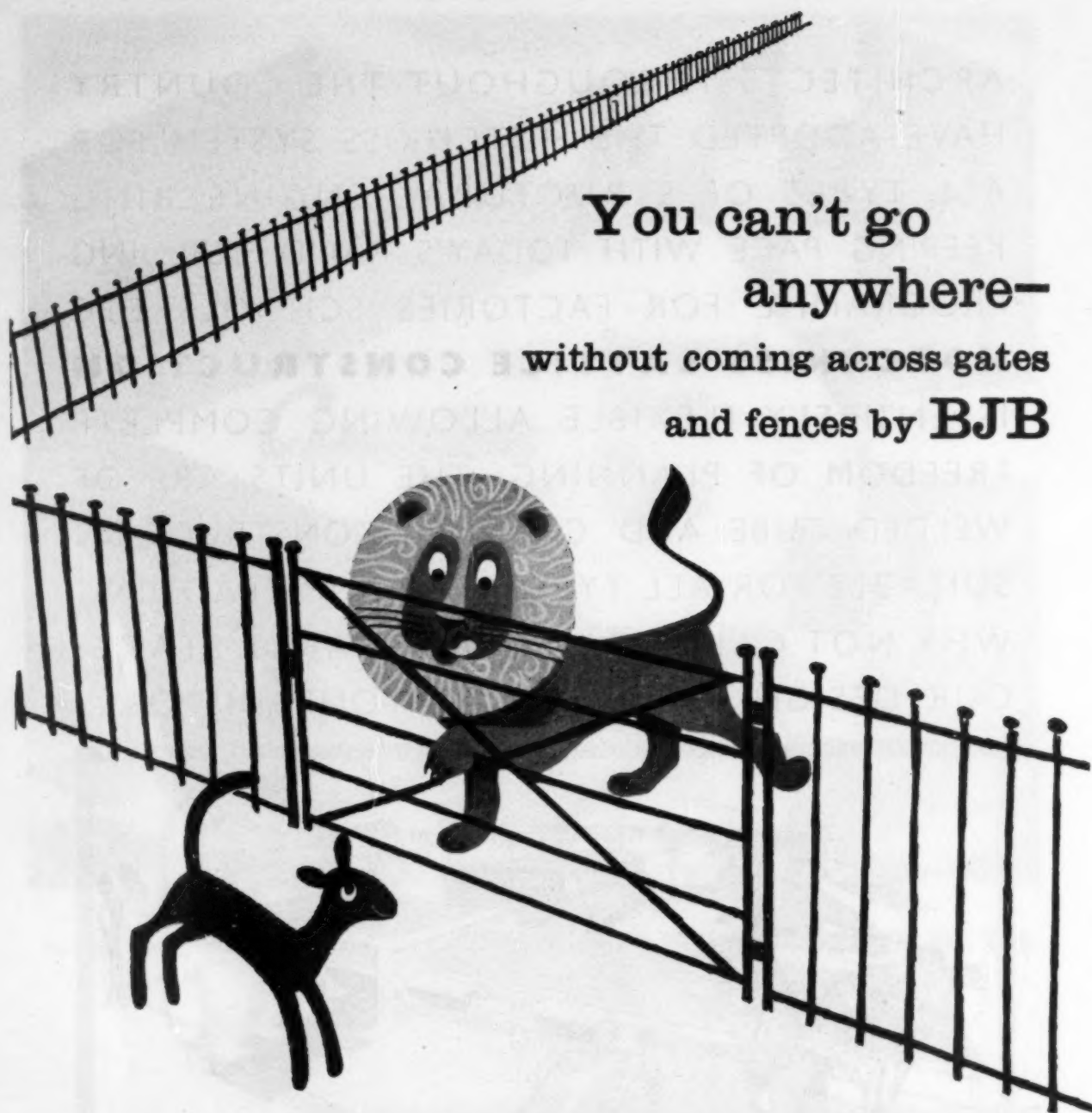
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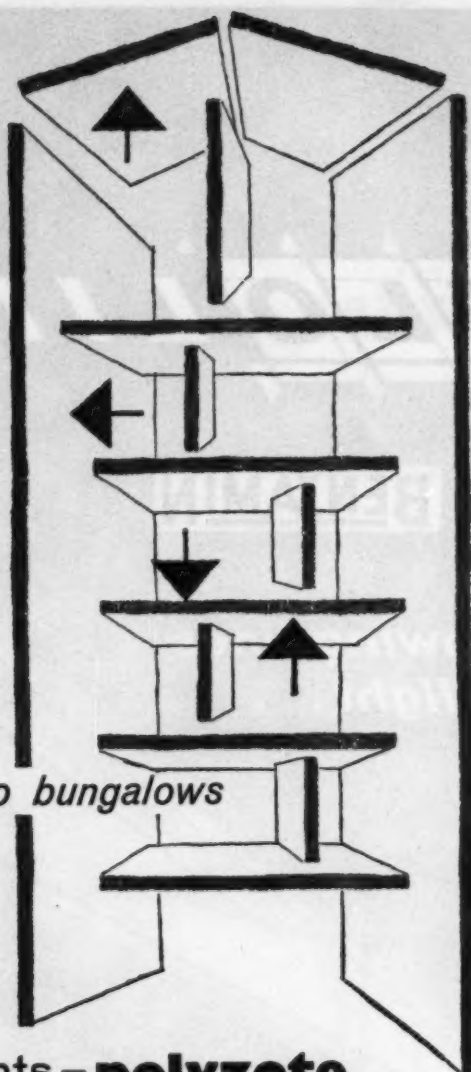
Roofs

Walls

Ceilings

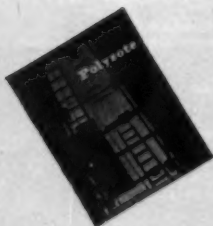
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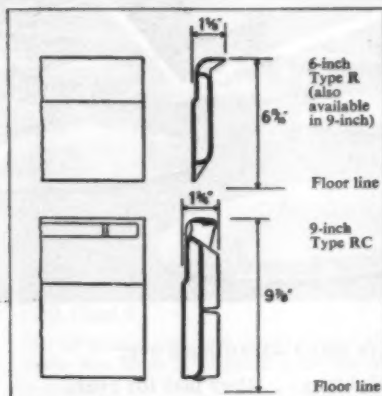
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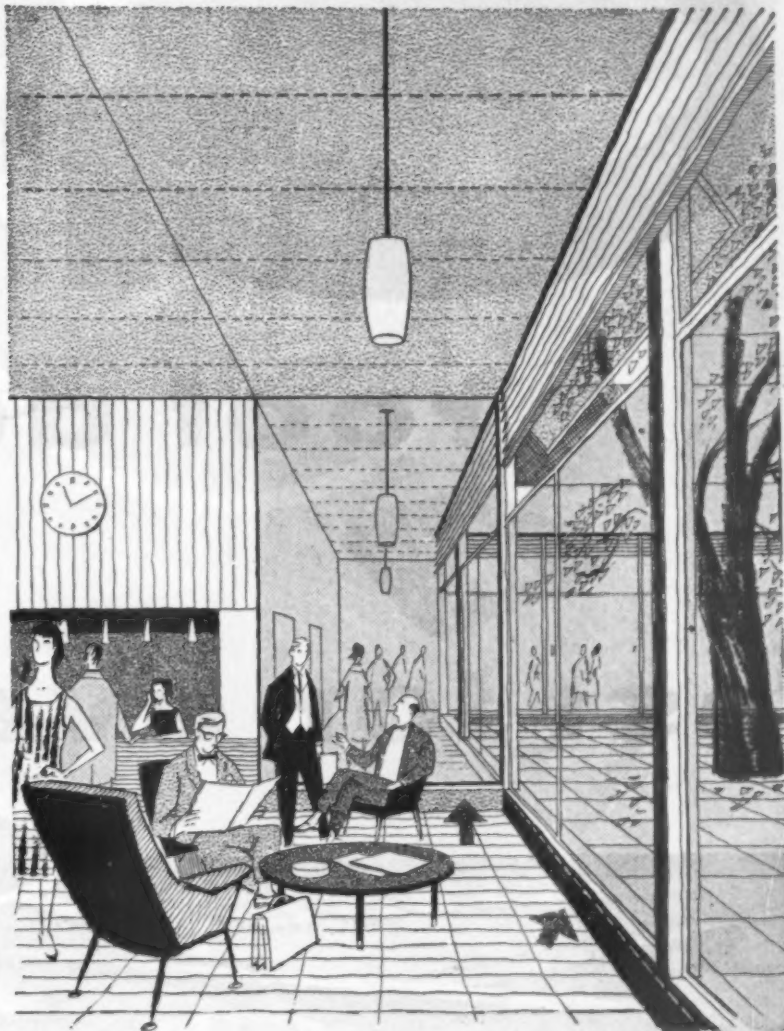
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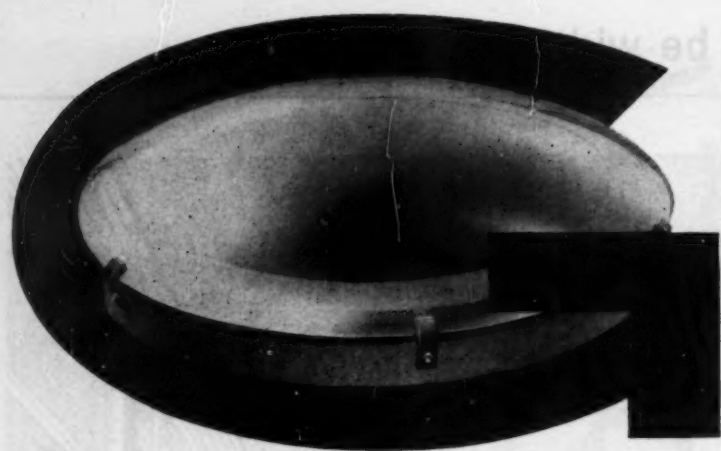
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This heating system takes the form of panels which are used in place of the normal skirting. They avoid local 'hot spots' and distribute the warmth evenly where it is needed, without taking valuable floor or wall space. There are two types. Type R, which is purely radiant and made in panels 6-inches and 9-inches high; and Type RC (radiant-convector) in the 9-inch size only (used in the example illustrated and indicated by arrows). All panels are in 2-ft. and 1-ft. lengths and are made of cast iron, which gives them great resistance to accidental damage. The operations of calculating heat requirements and designing the pipework are in principle no different from those for conventional radiator heating systems.

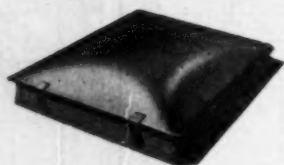
In all cases where the architect needs greater freedom of expression than conventional heating systems allow him, and at the same time has to pay due consideration to costs, the answer is, undoubtedly,

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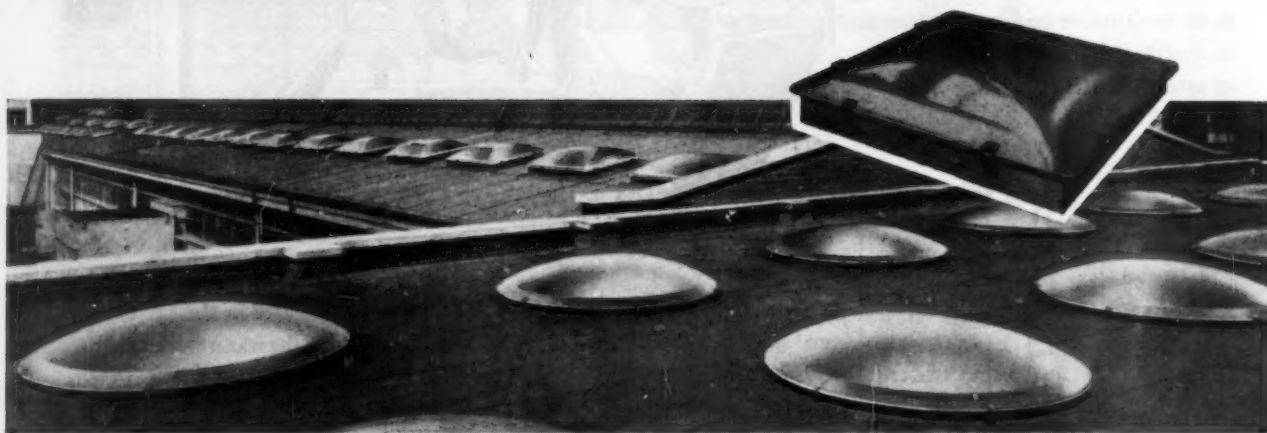


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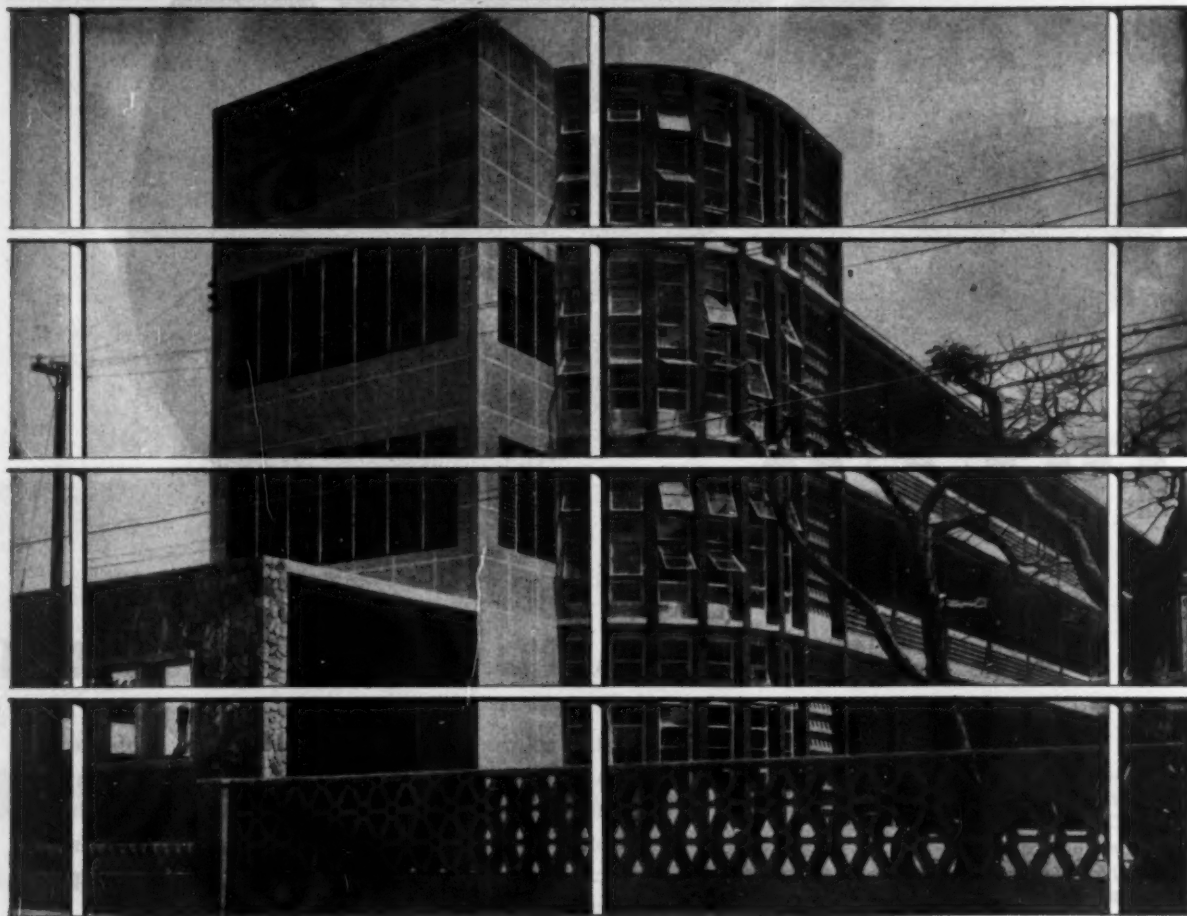
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*Architects: The Ministry of Education, Kingston, Jamaica.*

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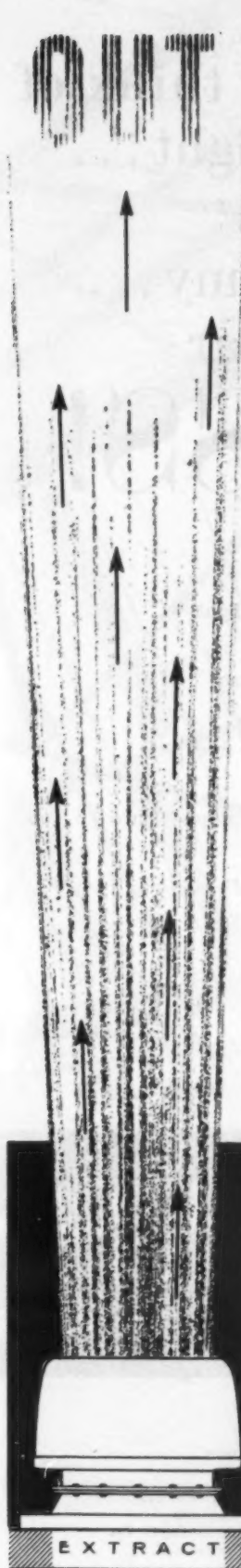
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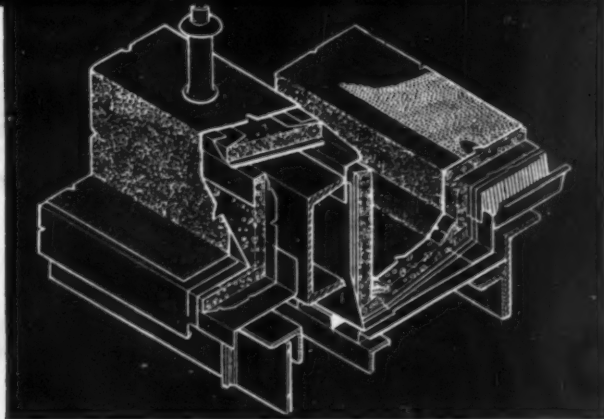
Architects: Farmer & Dark, London

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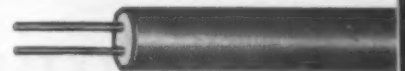
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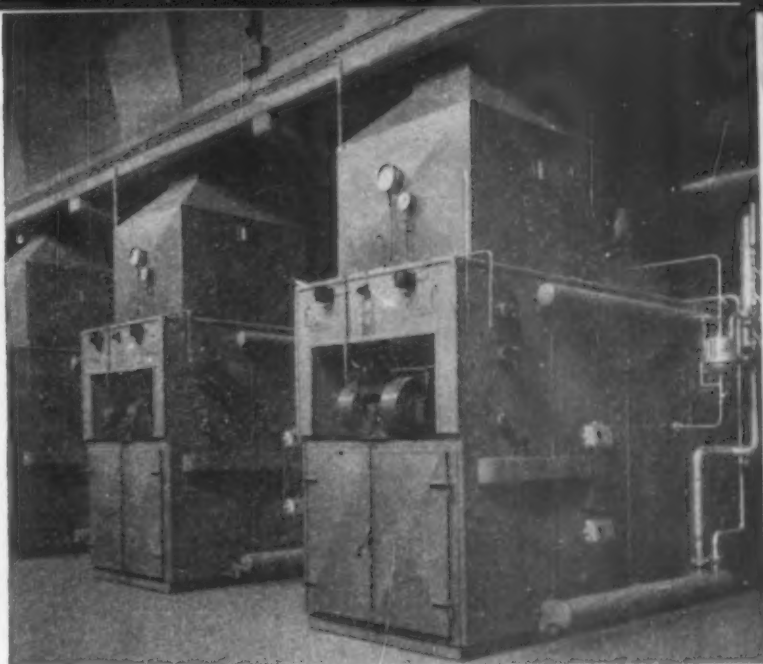
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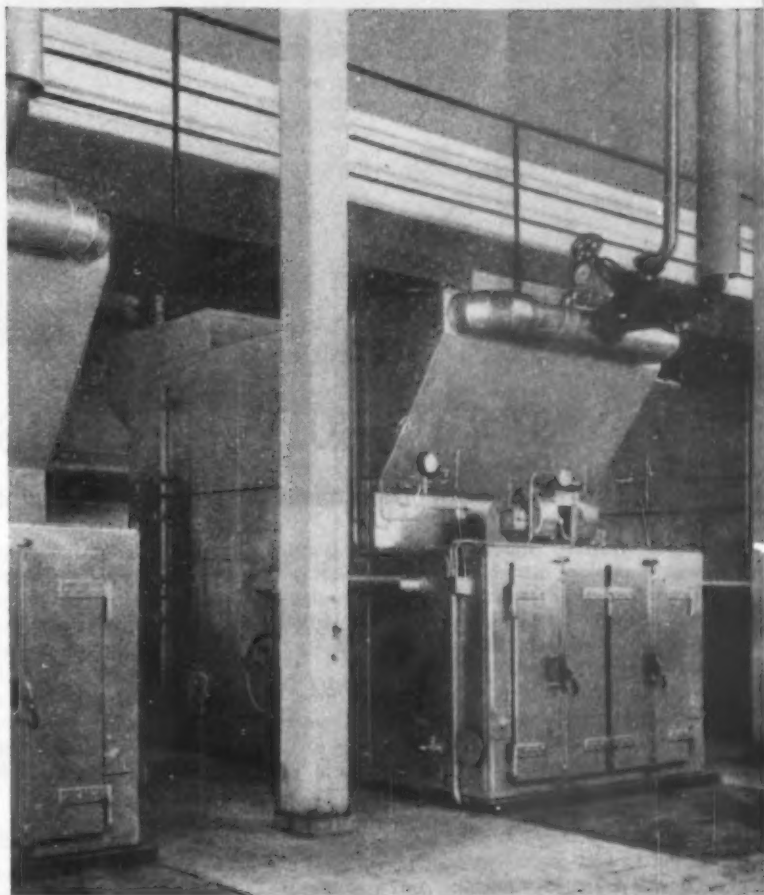
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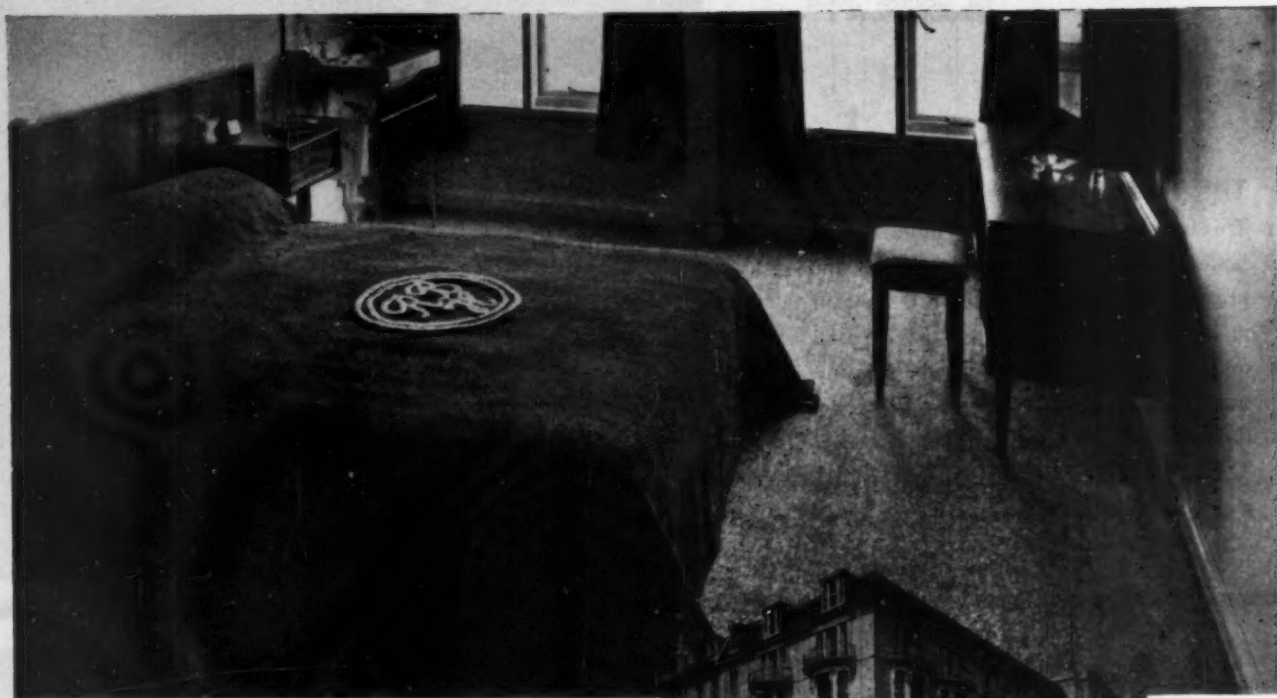
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For this double room with a fine view of the sea, Anne Irwin chose Cyril Lord Standard Carpet in rich Petunia-and-White tweedy-mixture, matched with a Petunia bedspread monogrammed in white, and Petunia "Damask" curtains and stool cover. "I feel so proud when people tell me how lovely everything looks," she says.



THE ROYAL BEACH HOTEL, SOUTHSEA

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"I was so thrilled to hear the Managing Director say how lovely everything is."

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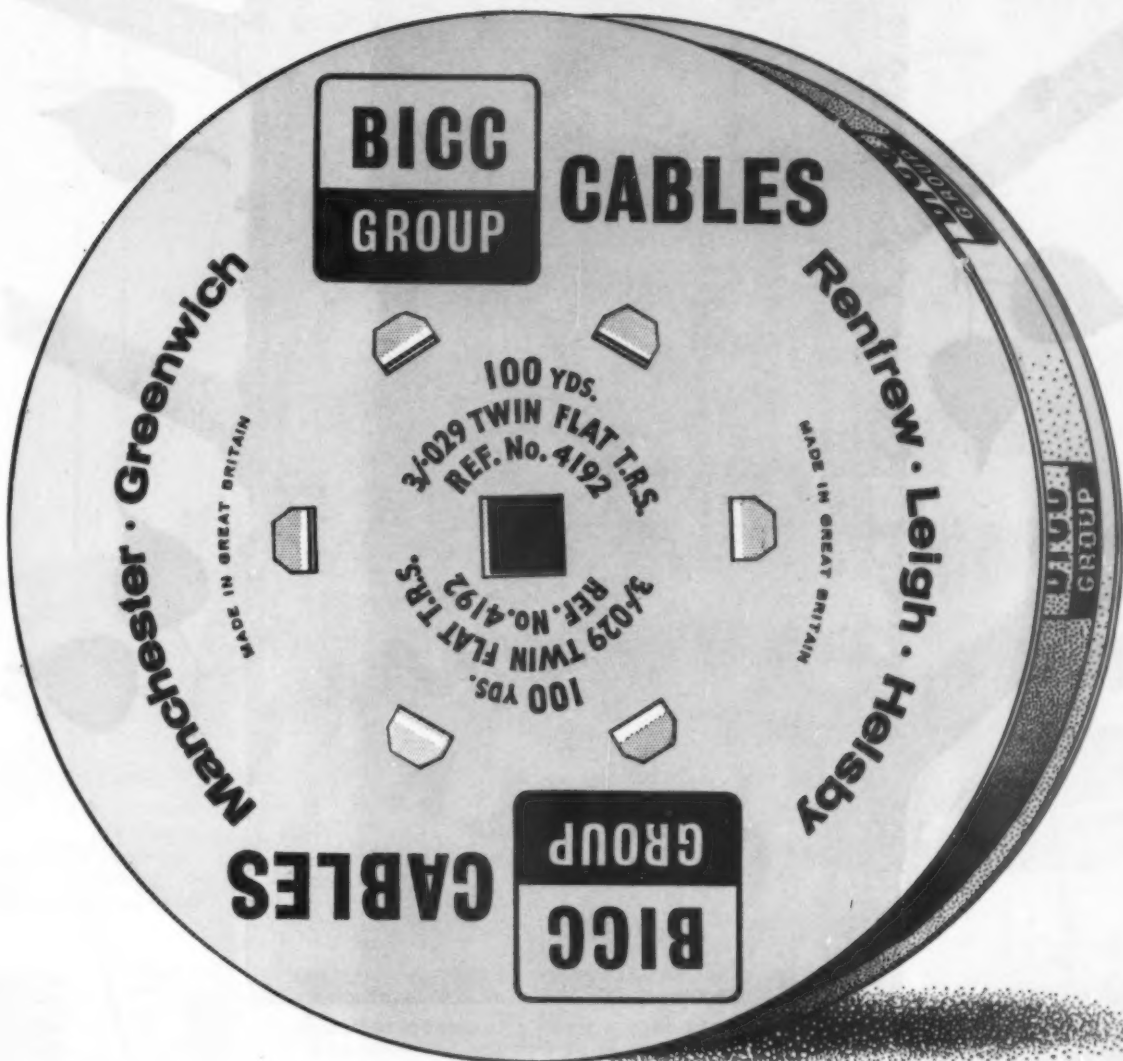
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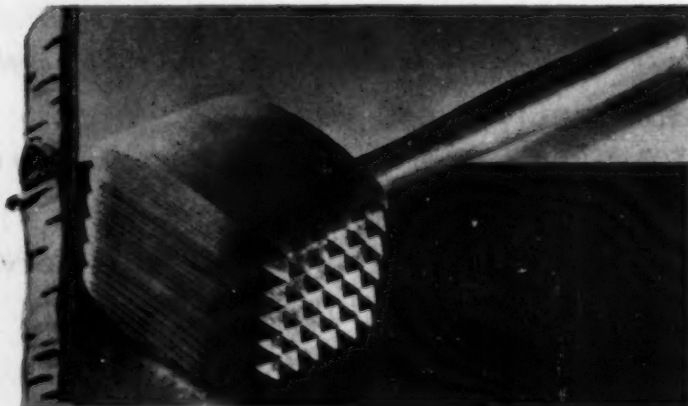
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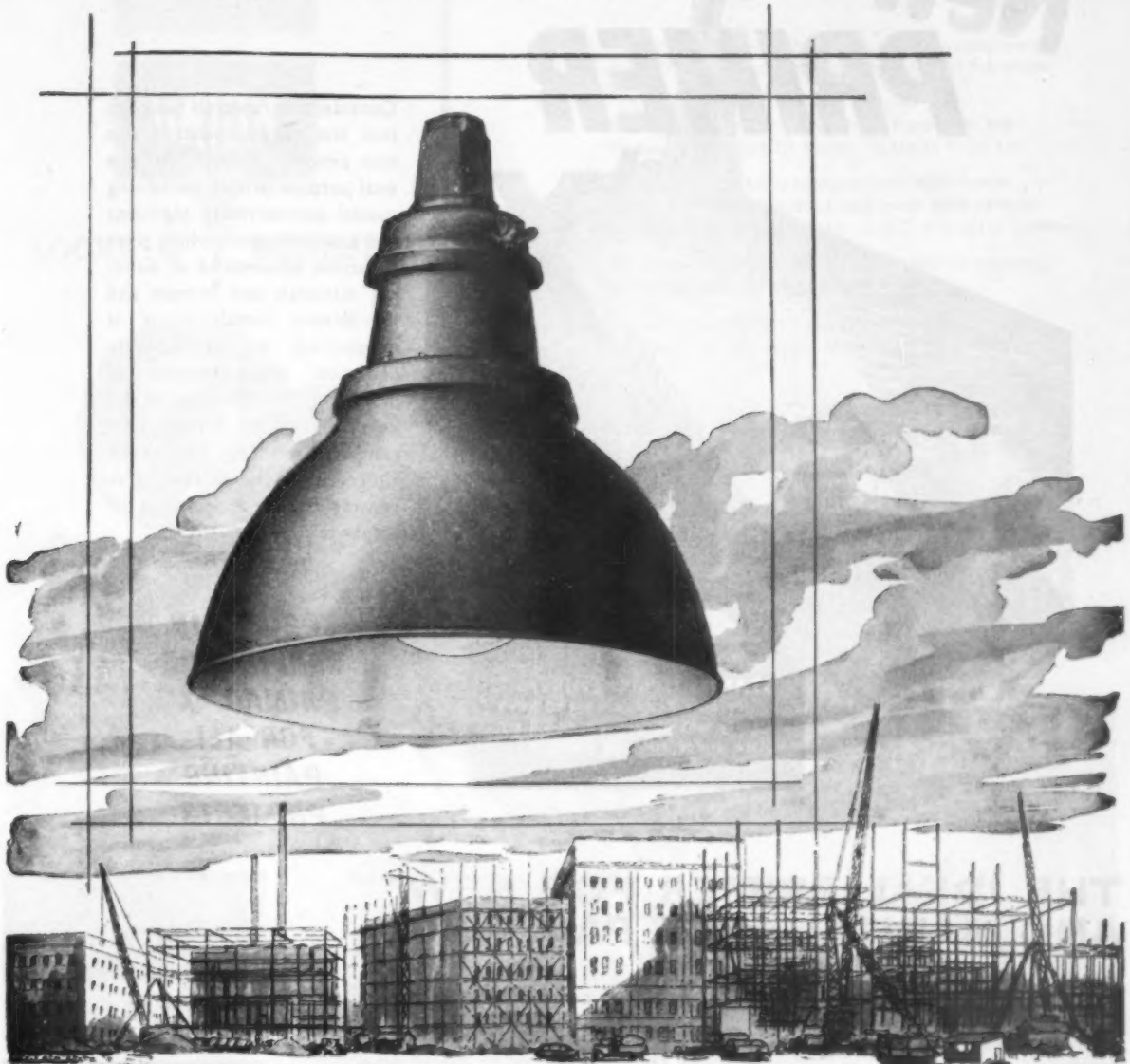
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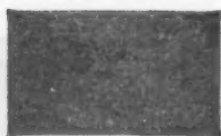


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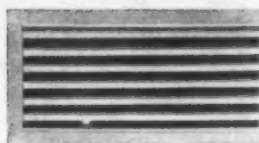
## LINEAR DIFFUSERS by TUTTLE & BAILEY



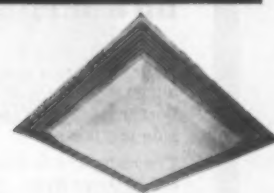
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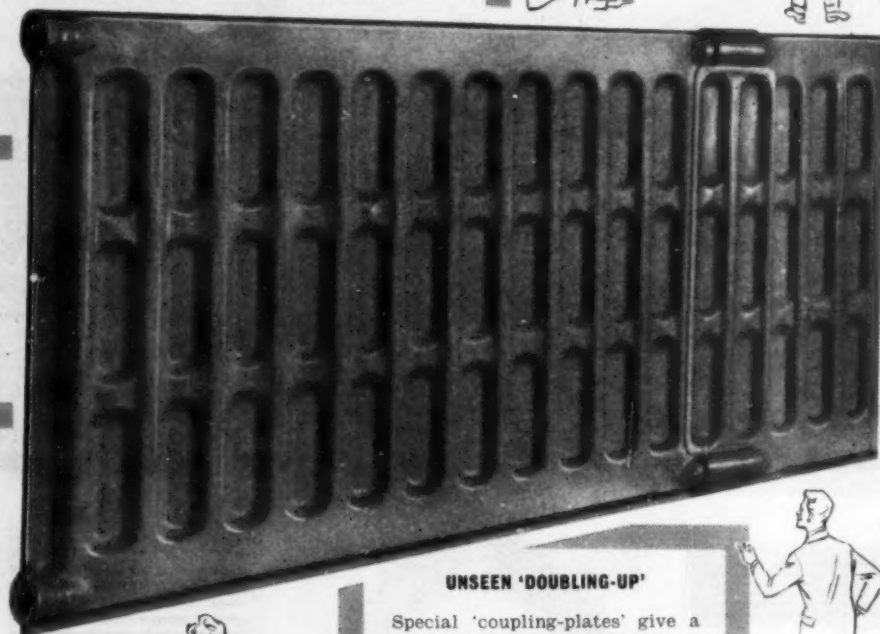
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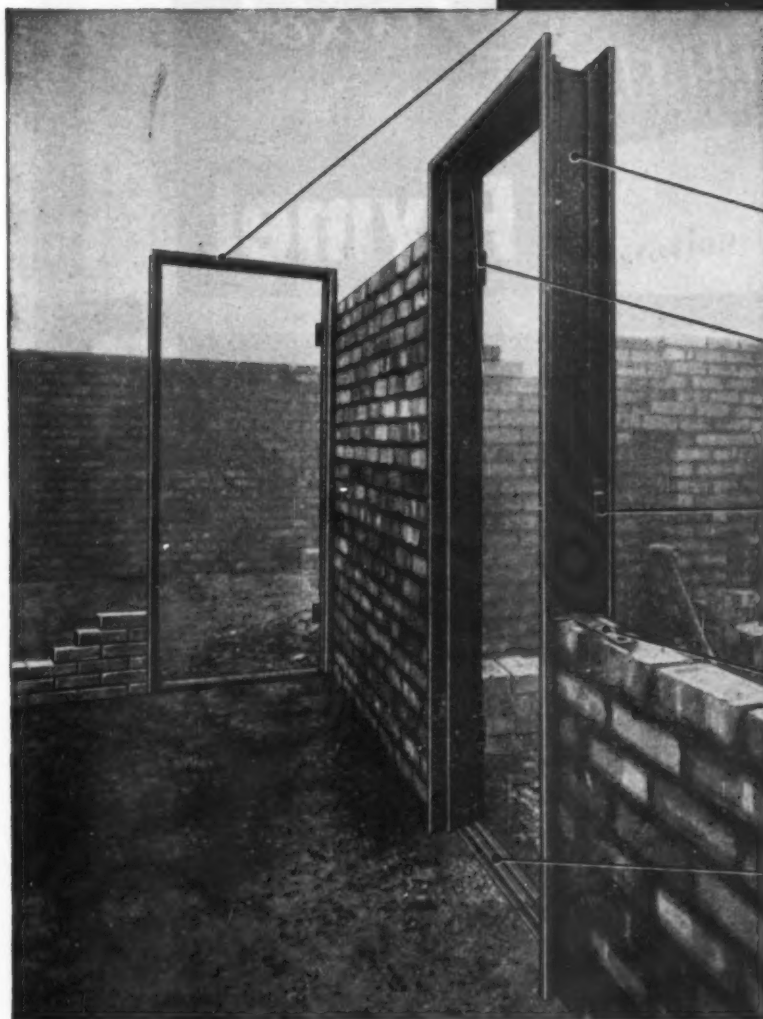
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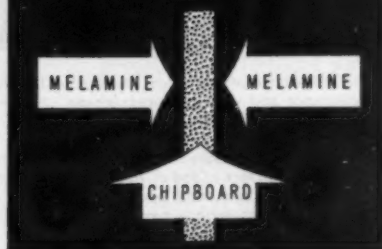
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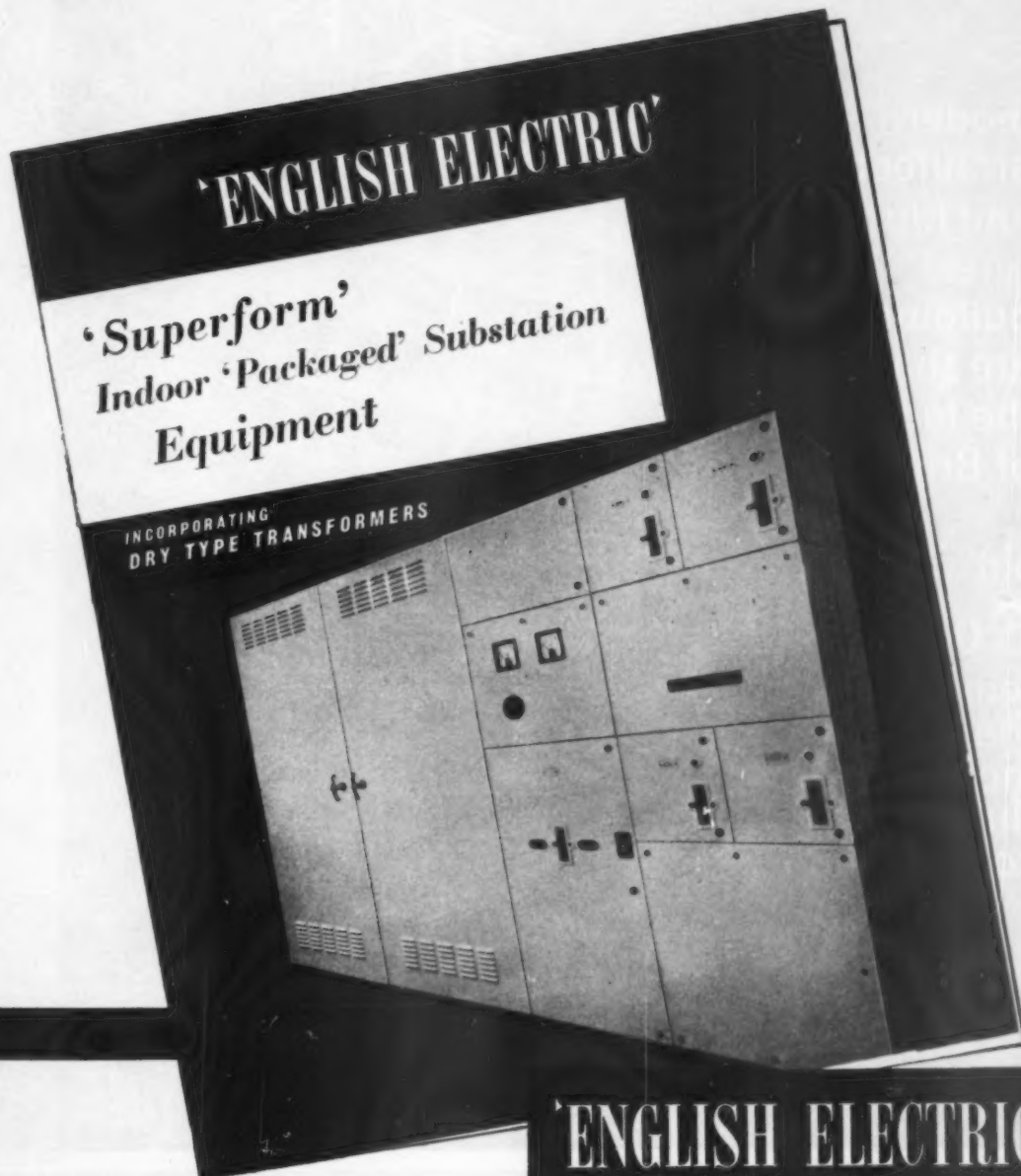
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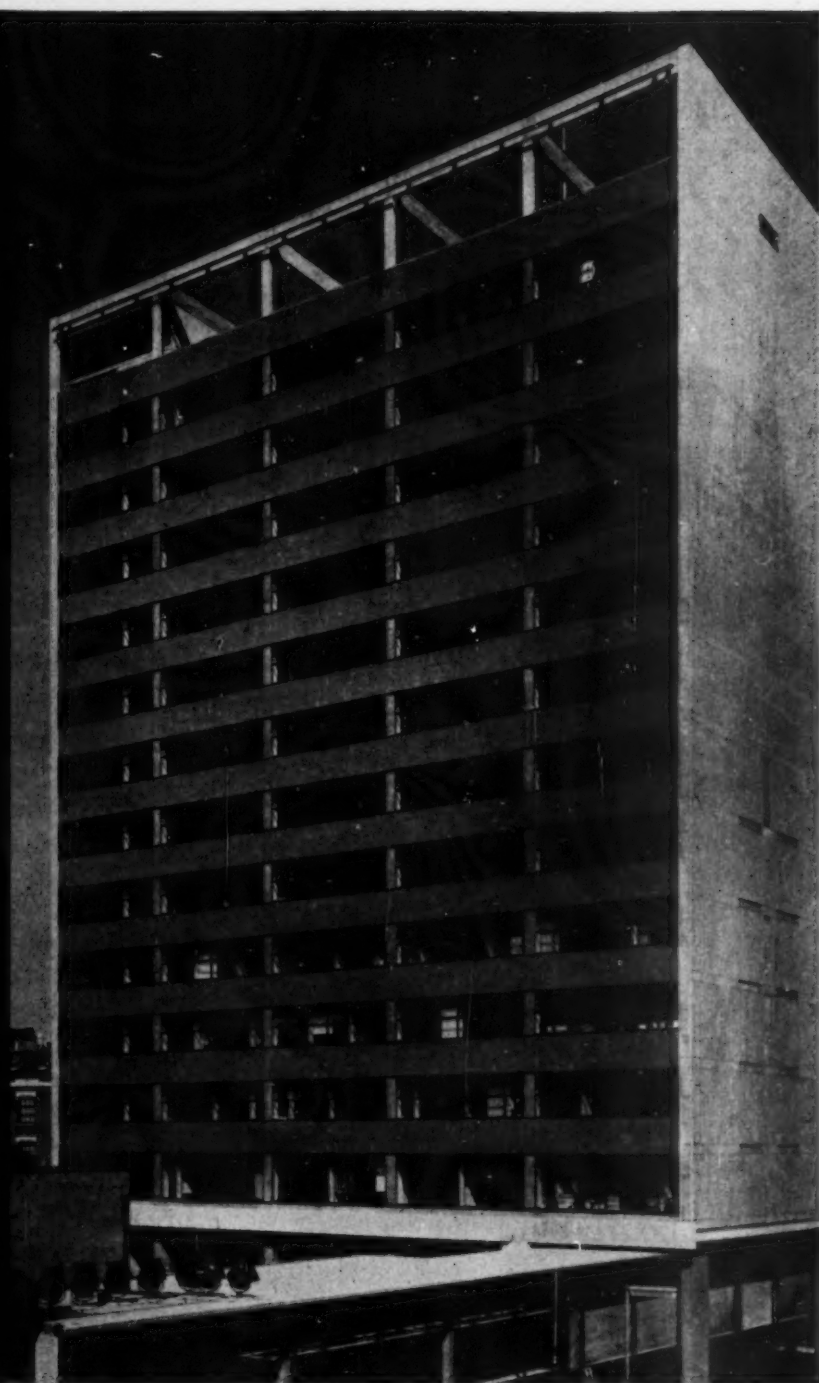
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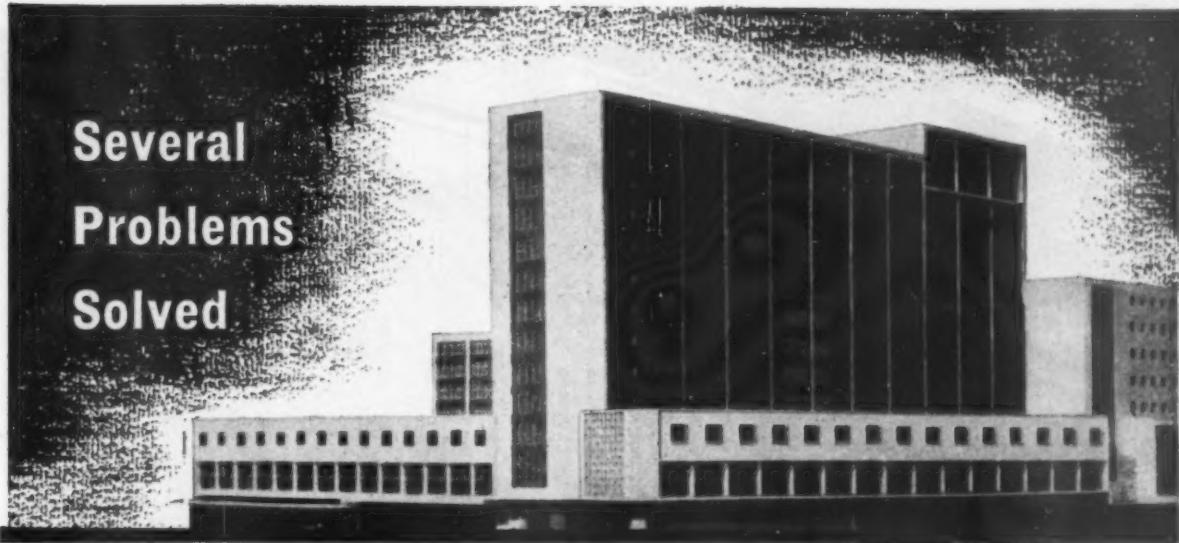
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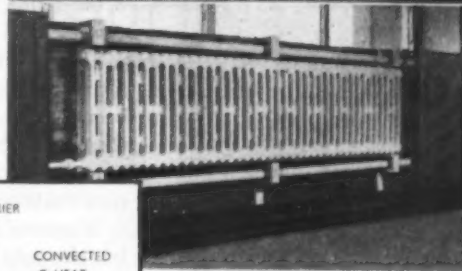
### in Birmingham's Biggest Building

*The Big Top, New Street, Birmingham.  
Architects: Messrs. Cotton, Ballard & Blow.  
Heating Engineers: Couzens & Akers Ltd.*

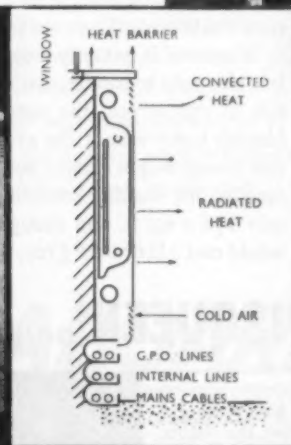
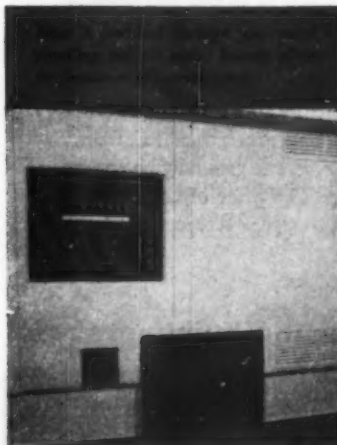
The heating and service trunking system devised for The Big Top is of special interest to all concerned with the design, construction and equipment of new buildings.

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The foundry at Midland Rollmakers Ltd., Crewe, protected from the weather by a screen of 'Visqueen' building sheet after the demolition of a complete wall to make way for extensions. The sheeting is supported on vertical timbers clipped to the scaffolding.  
Contractor: **Sir Alfred McAlpine & Son Ltd.**  
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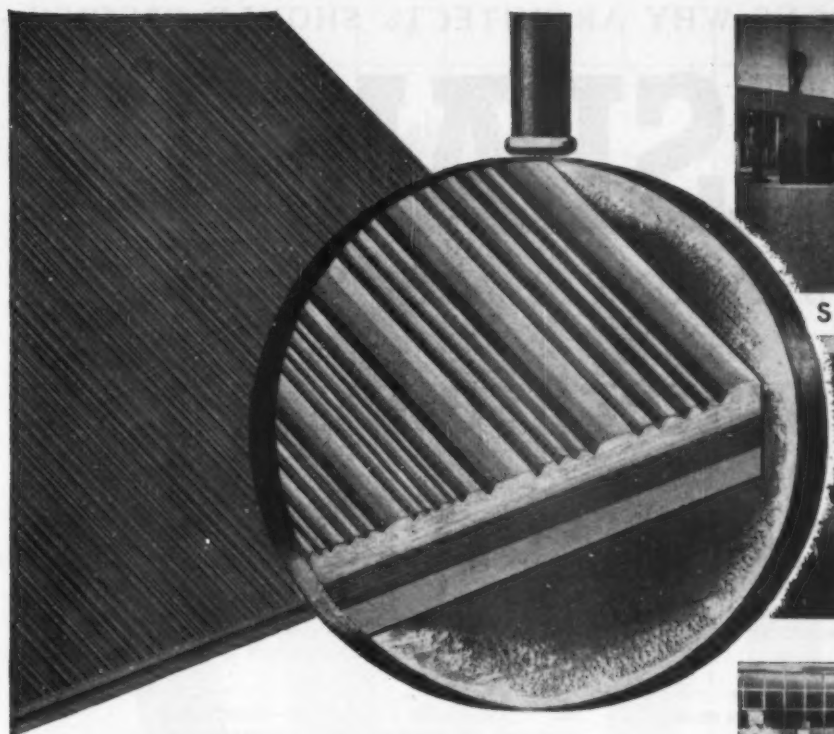
'Visqueen' is not only tough, waterproof and transparent. It is also light to handle, easy to fix and cheap. Because of the size of this screen, the contractors used 'Visqueen' 1000 (double heavy weight) for additional protection. The lighter 500 (heavy weight) grade, however, can generally be recommended for weather screening. The price of this grade is only 1½d a sq. ft. and enough to clad a screen of this size would cost a little over £100.

### **VISQUEEN** polythene building sheet



The outside of the screen showing how the 'Visqueen' was secured by nailing through laths into the timber battens behind. As an added precaution, overlaps in the 'Visqueen' were sealed with bituminous adhesive, and the base of the screen was protected with 8' high plimber board.





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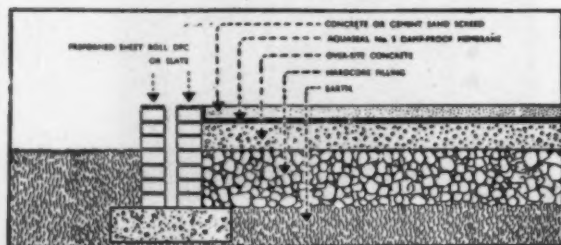
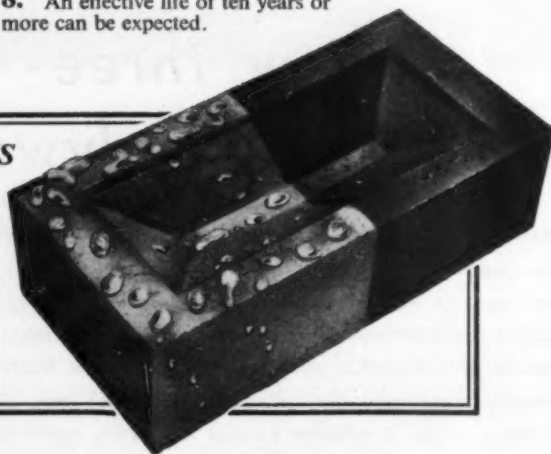
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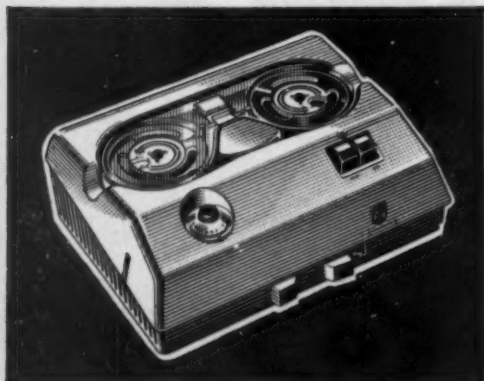
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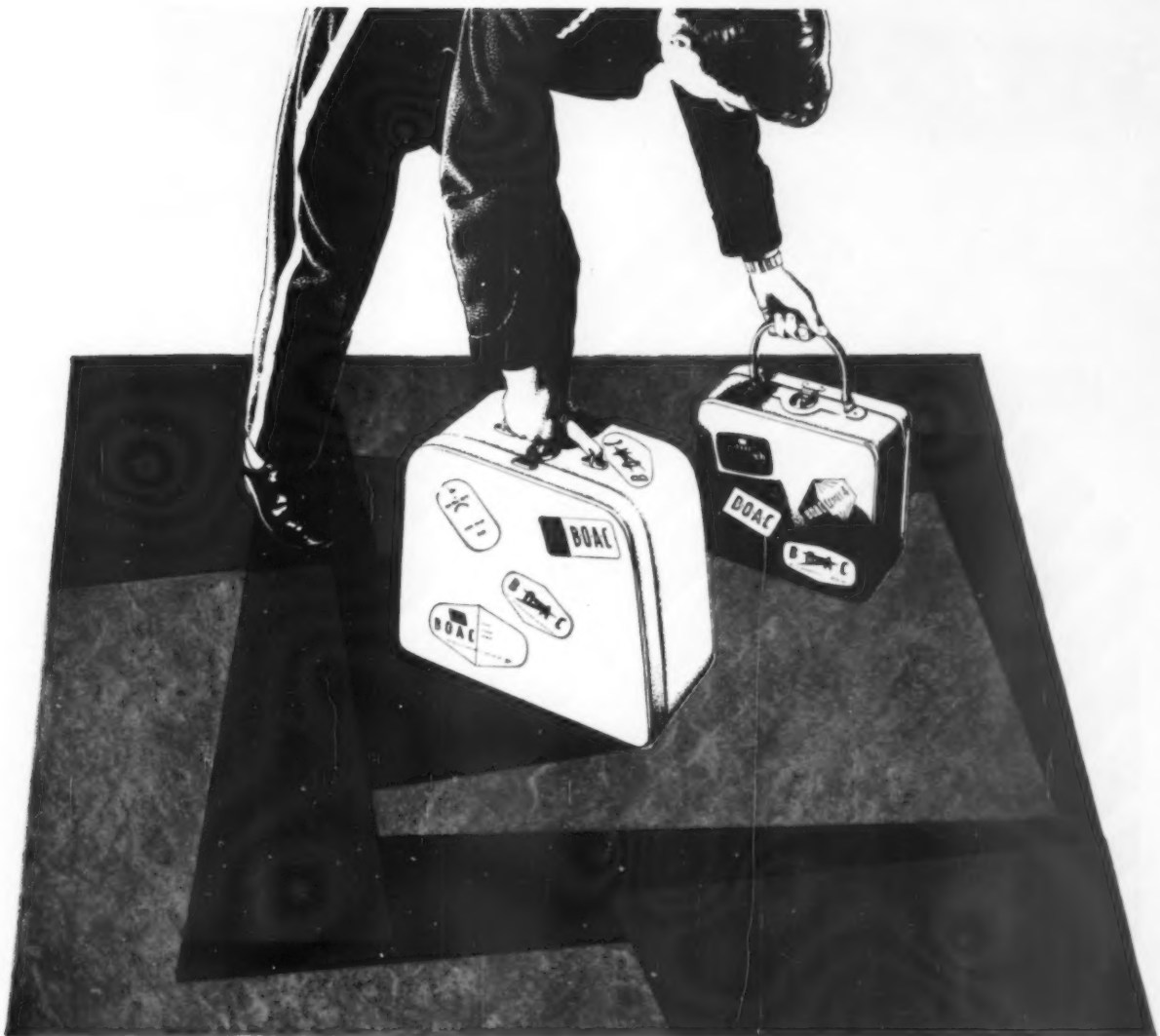
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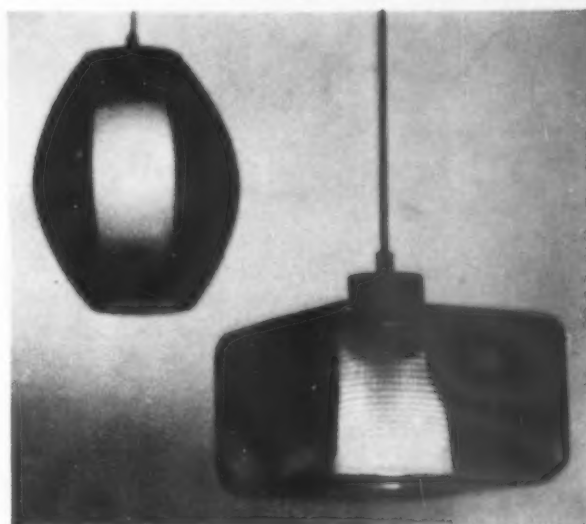
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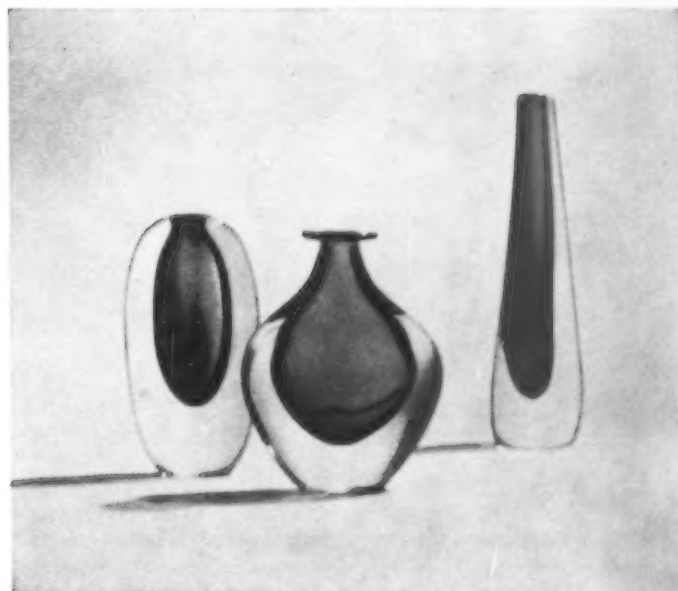
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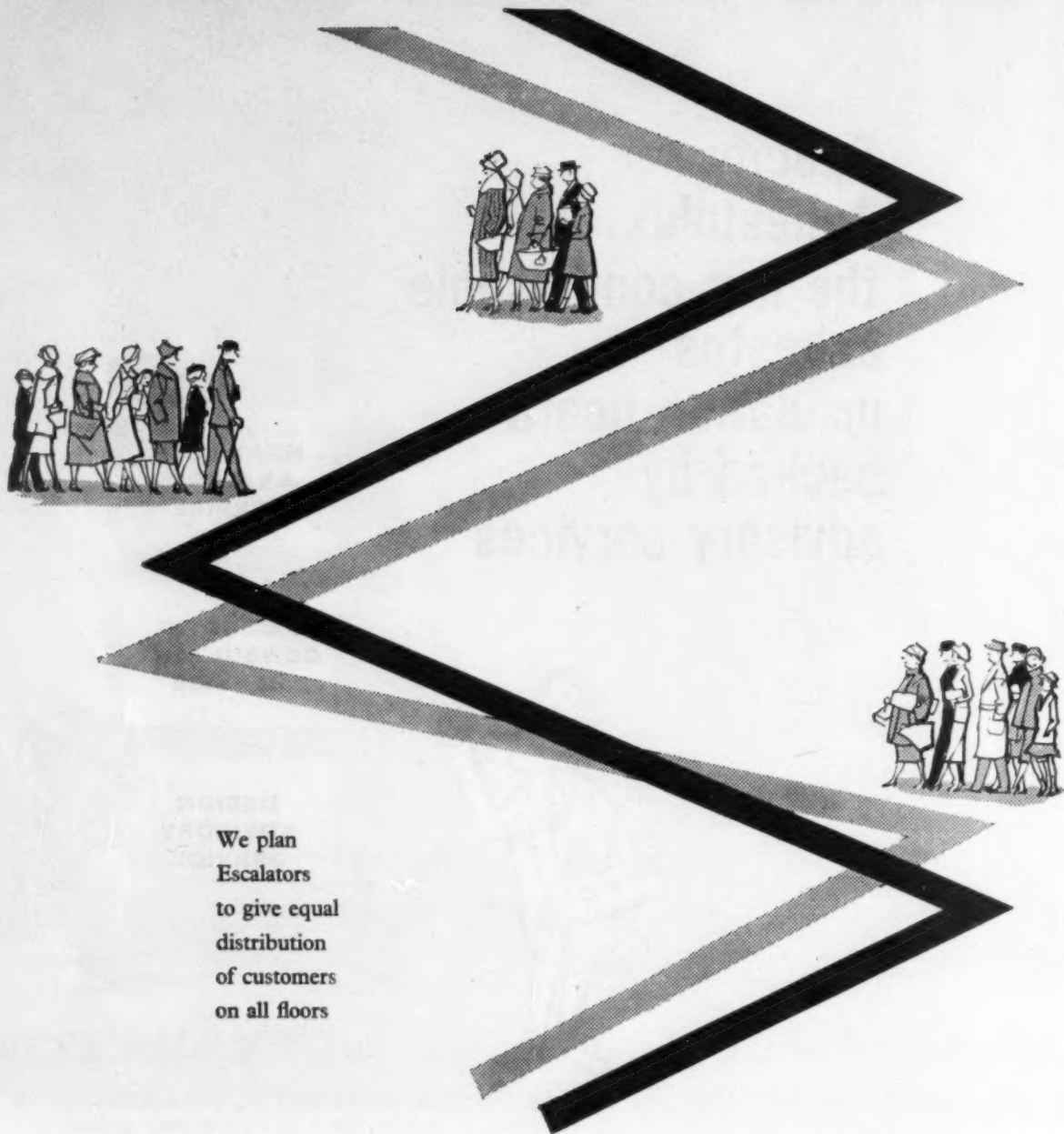


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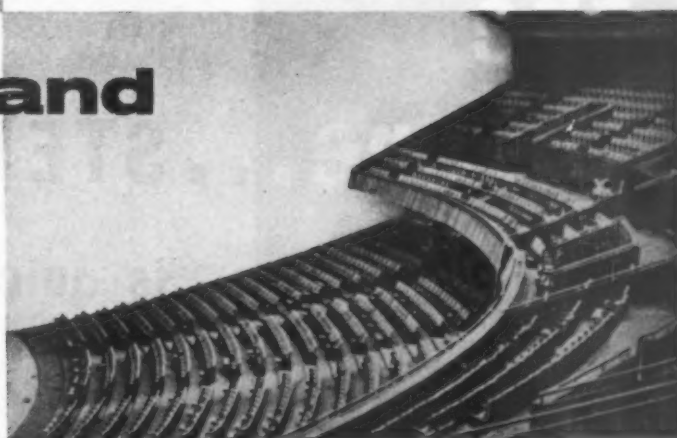
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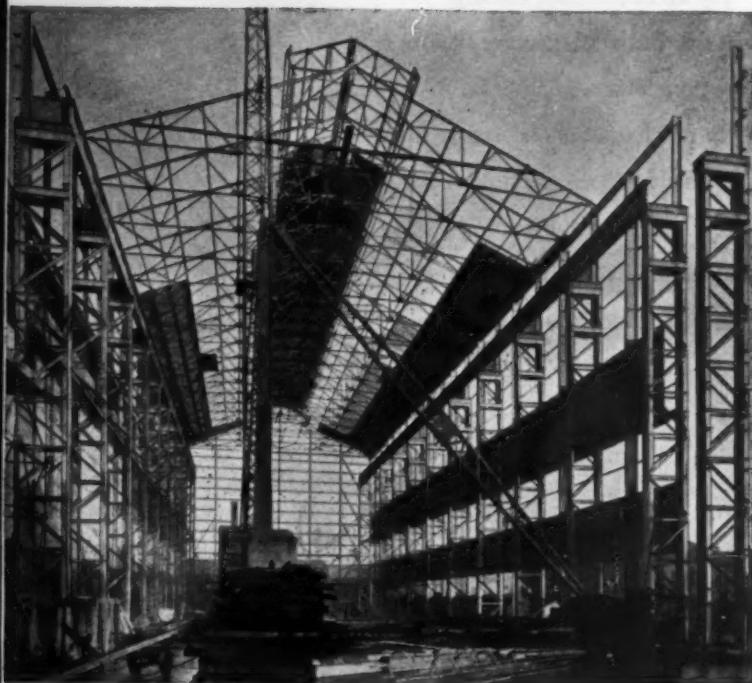


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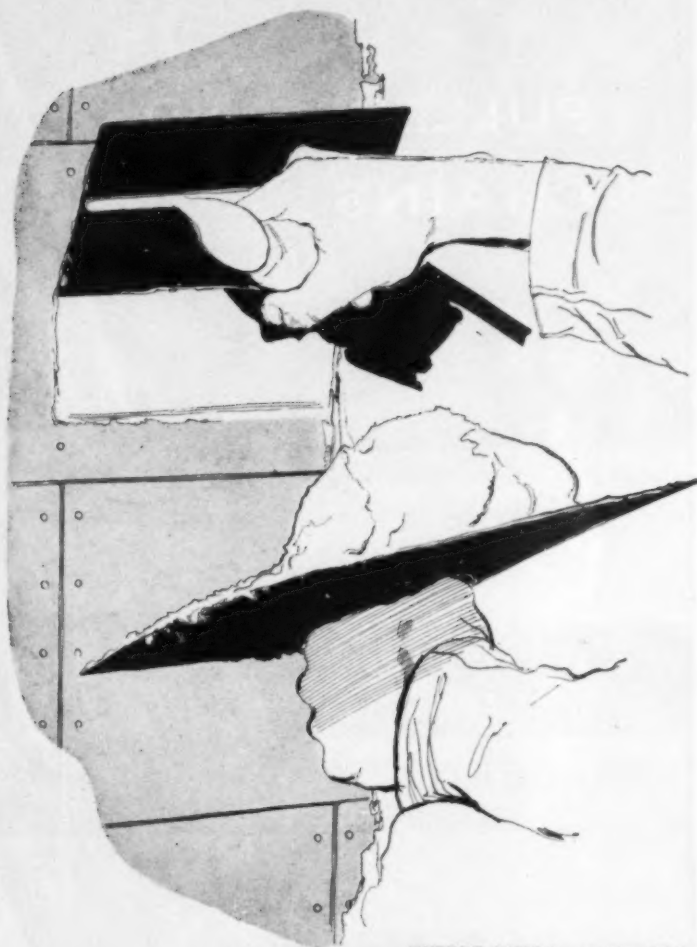
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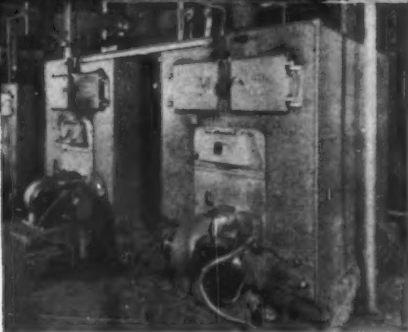
Head Office: Singlewell Road, Gravesend, Kent. Gravesend 4251/4 · Glasgow: Gyproc Wharf, Shieldhall, Glasgow, S.W.1. Govan 2141/3

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LP3



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Photographs by courtesy of West Suffolk Education Committee. County Architect, Mr. J. Creese; Consulting Engineers, J. Roger Preston & Partners.

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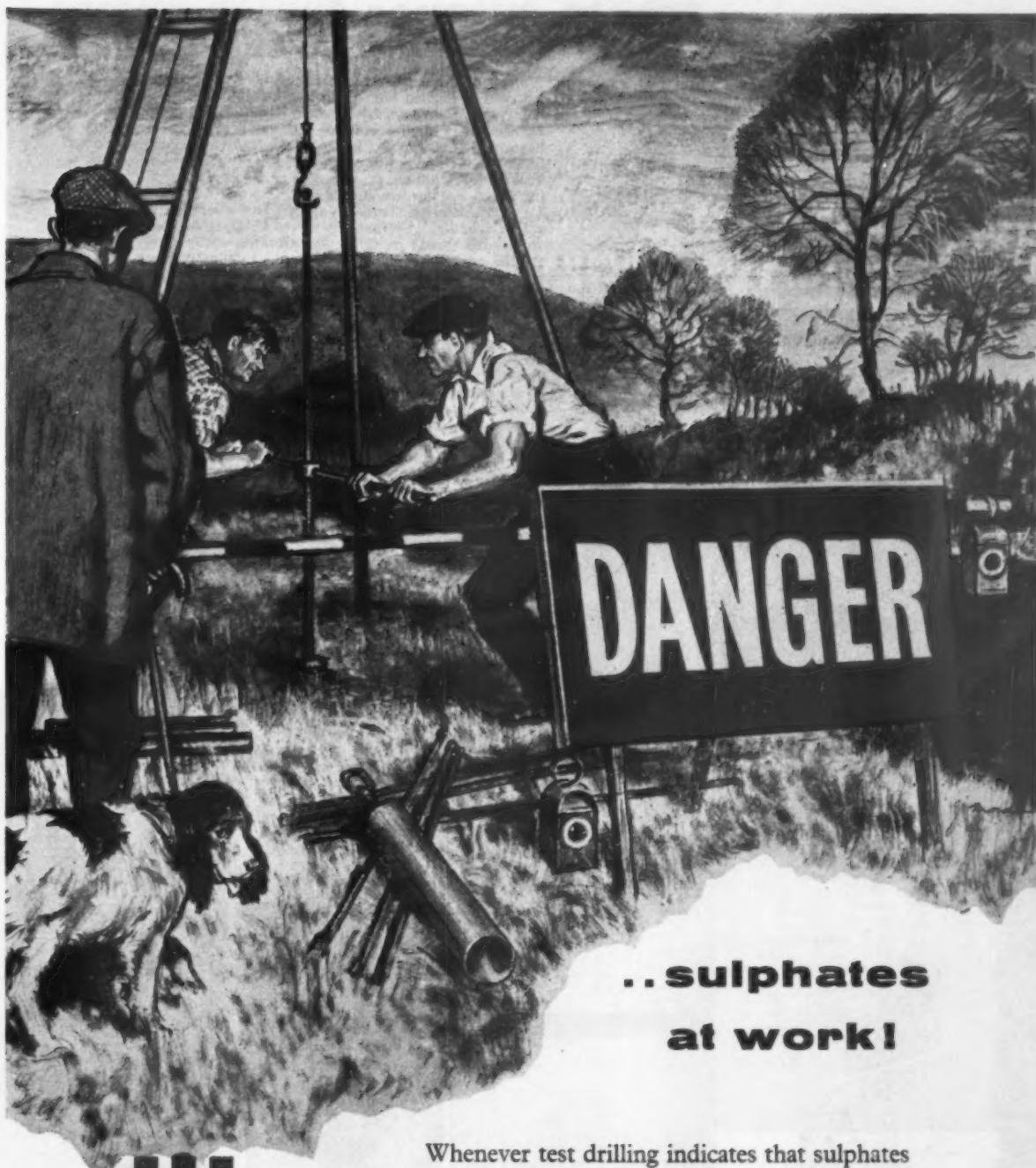
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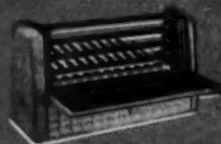
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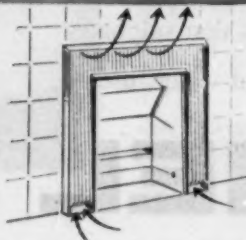
LOW-FRONT



LOW-VIEW



RURAL



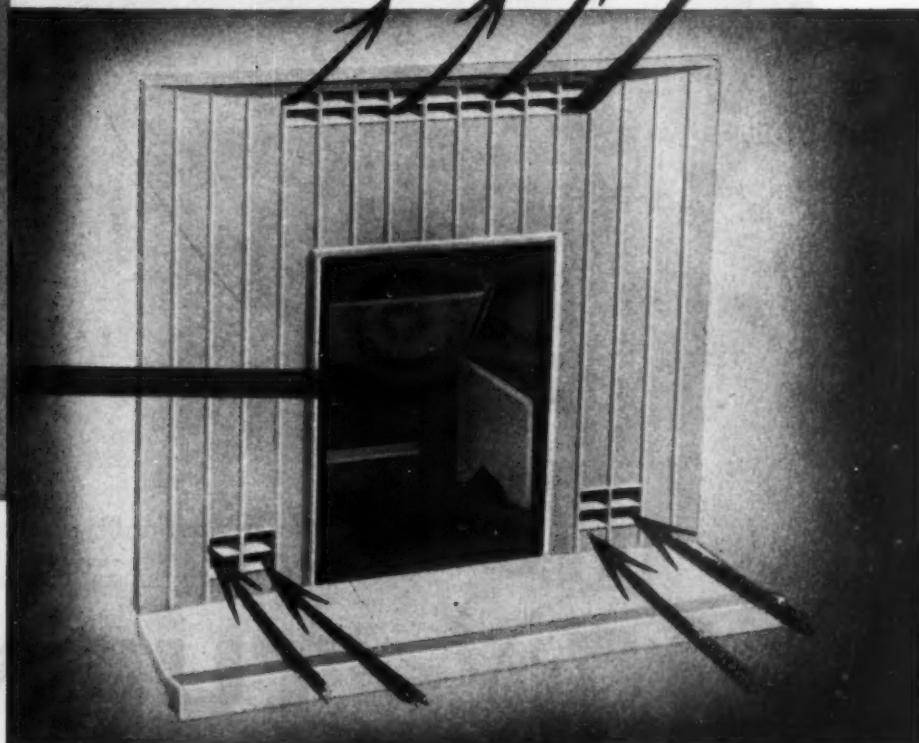
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### SOFONO BOILER No. 1

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### SOFONOMATIC BOILER No. 1 (with Thermostat Control)

*Finish:* Stove enamelled in White, Cream or Blue with Black lower door. Vitreous enamelled Black hob. *Boiler:* Cast iron, circular. *Flue Outlet:* 4". *Fuel Capacity:* 0.65 cu. ft. *Output:* 12,000 B.t.u./hr. continuous with 4 hourly refuelling. *Heating Surface:* 2 sq. ft. *Gas Ignition:* Provision for gas poker entry. *Heat Service:* Domestic hot water—through 25/30 gall. cylinder. Radiator/Towel Rail—10 sq. ft. (incl. piping). *Tappings:* 2—1½" BSP at rear. Side tappings extra. *Dimensions:* Height: 22½". Width: 15". Depth: 15½".

### SOFONOMATIC BOILER No. 2 (with Thermostat Control)

*Finish:* Stove enamelled in various combinations (one or two tone) from White, Powder Blue, Sunshine Yellow, Eau de Nil, all with vitreous enamelled top Black or self coloured. *Boiler:* Welded steel. *Flue Outlet:* 4". *Fuel Capacity:* 0.72 cu. ft. *Output:* 17,000 B.t.u./hr. continuous with

6 hourly refuelling. *Heating Surface:* 2.85 sq. ft. *Gas Ignition:* Provision for gas poker entry. *Heat Service:* (a) Combined system—domestic hot water through 25/30 gall. indirect cylinder. Radiators—40 sq. ft. (incl. piping). (b) Domestic hot water only—through 40/60 gall. cylinder. Radiators only—75 sq. ft. (incl. piping). *Tappings:* 2—1½" BSP each side. One side plugged. *Dimensions:* Height: 26". Width: 17½". Depth: 19".

### SOFONOMATIC BOILER No. 3 (with Thermostat Control)

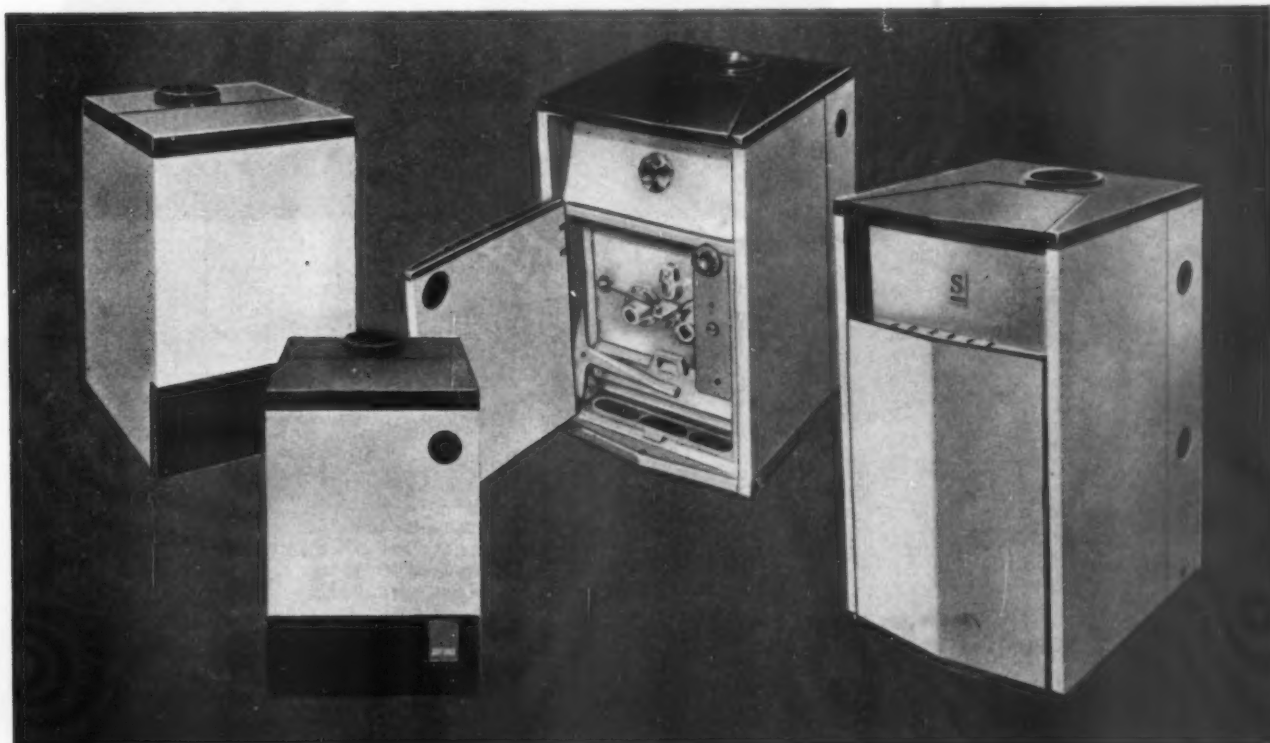
*Finish:* Stove enamelled in various combinations (one or two-tone) from White, Powder Blue, Sunshine Yellow, Eau-de-Nil, all with vitreous enamelled top Black or self-coloured. *Boiler:* Welded steel. *Flue Outlet:* 4". *Fuel Capacity:* 1.1 cu. ft. *Output:* 25,000 B.t.u./hr. continuous with 5 hourly refuelling. *Heating Surface:* 4.2 sq. ft. *Gas Ignition:* Provision for gas poker entry. *Heat Service:* (a) Combined system—hot water through 25/30 gall. indirect cylinder. Radiators—85 sq. ft. (incl. piping). (b) Domestic hot water only—through 40/60 gall. cylinder. Radiators only—150 sq. ft. (incl. piping). *Tappings:* 2—1½" BSP each side. One side plugged. *Dimensions:* Height: 28½". Width: 17½". Depth: 19".

### RECOMMENDED FUELS

While Gas Coke Nos. 2 or 3 are recommended, all these boilers will operate efficiently when using Hard Coke ½"—1", Welsh Dry Steam Coal ½"—2", Phurnacite as supplied, Coalite ½"—1½", Anthracite ½"—1½"



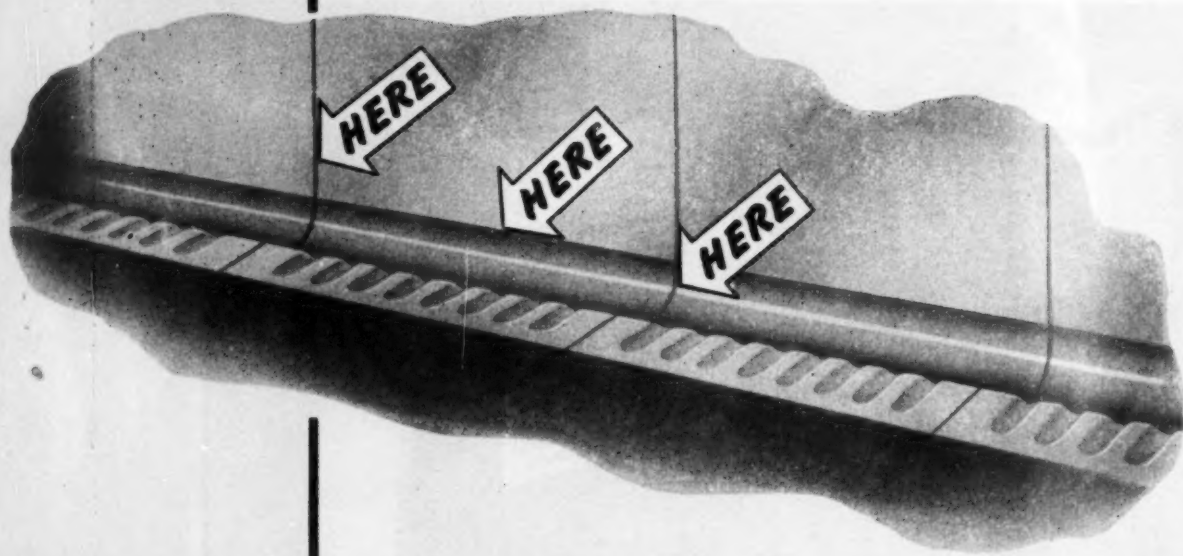
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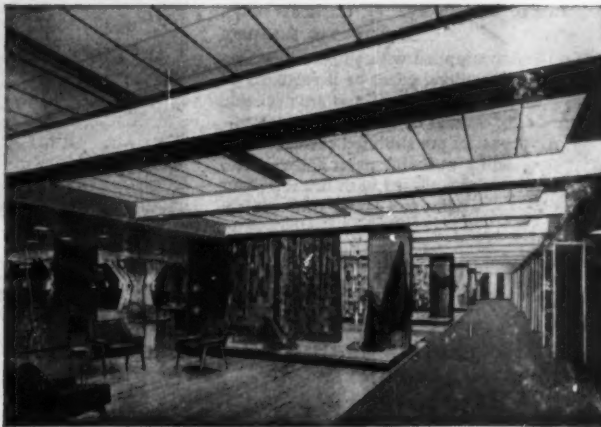
Architects—Slater & Uren F.R.I.B.A.

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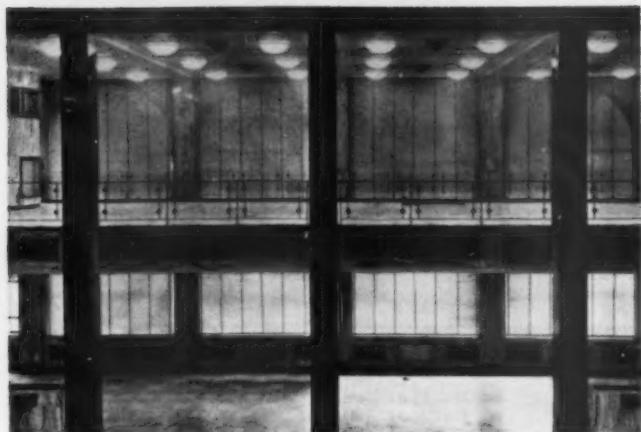
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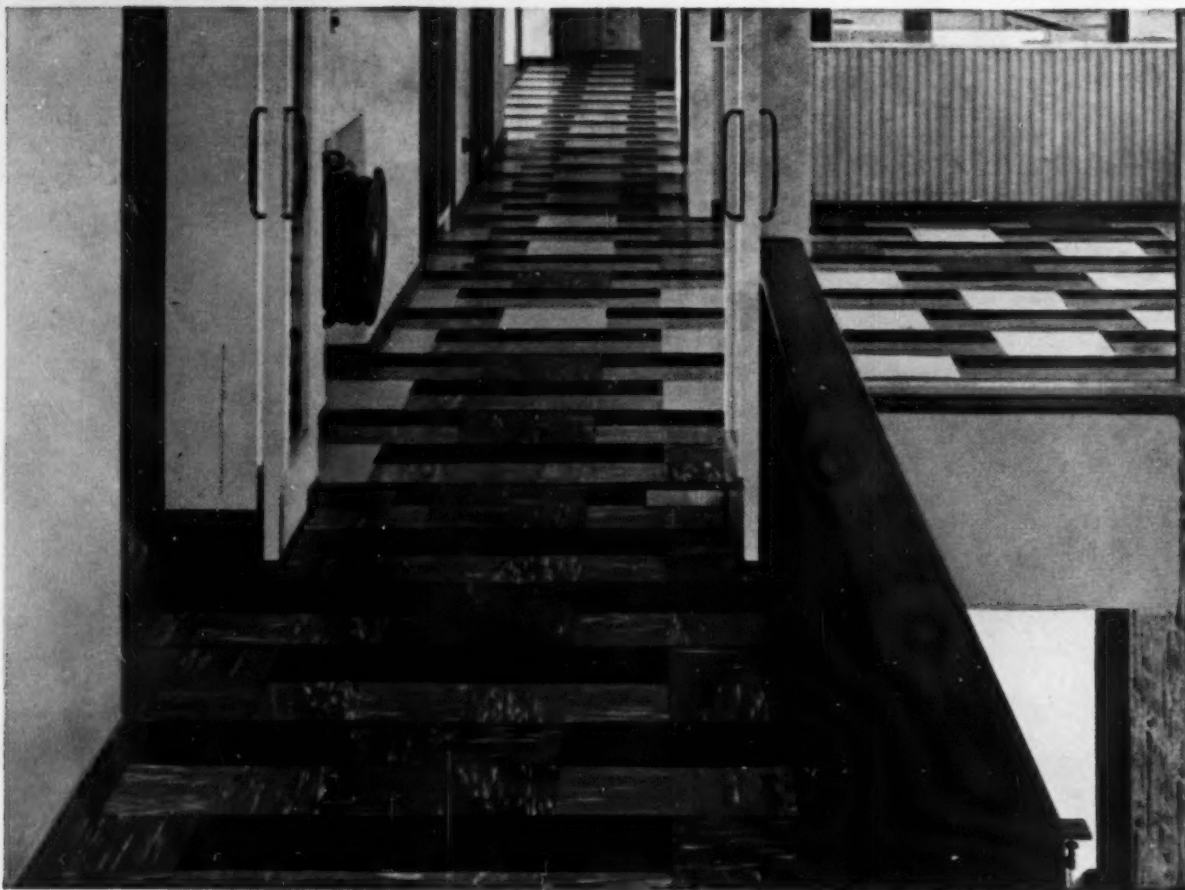
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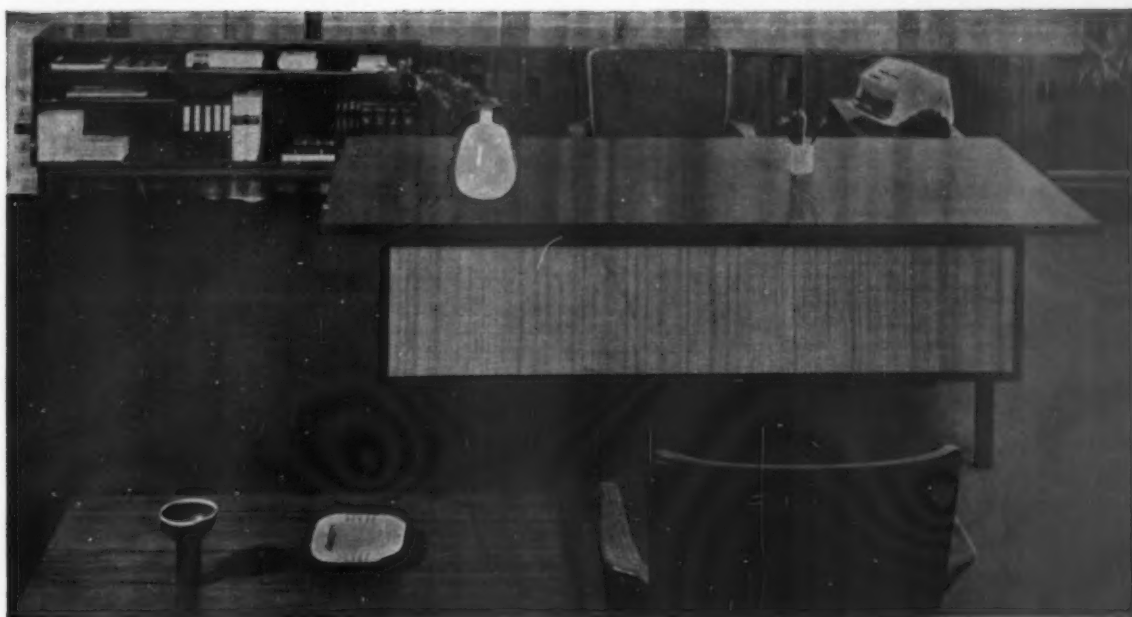
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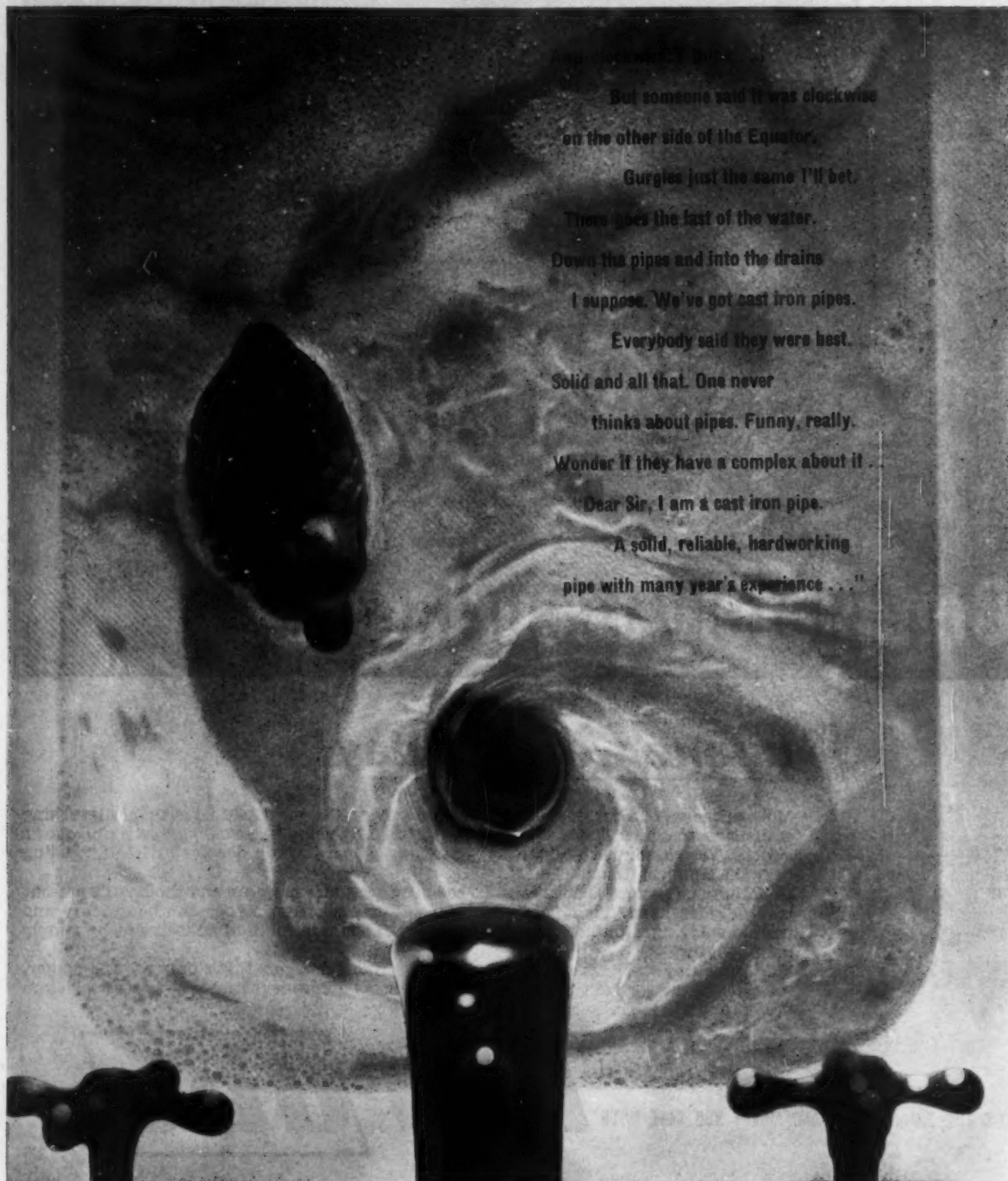
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# COAL

## Coal into energy at Kellogg's Stretford Factory

**Mr. E. Tomlinson,  
Plant Engineer, comments:**

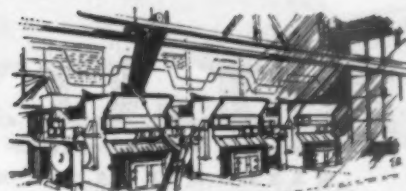
"Our processing plant operates continuously every week from Sunday night until Saturday morning, with an average load of 45,000 lbs. an hour, and intermittent peaks of up to 50,000 lbs. an hour. We have three water tube boilers, all operating on coal. Normal operation is with the largest boiler, fitted with an economiser, which maintains an efficiency of 83%, and one small boiler, without economiser, with an efficiency of 71%. The other small boiler is maintained as a stand-by; this is completely filled with treated water to prohibit corrosion and is available for immediate firing.

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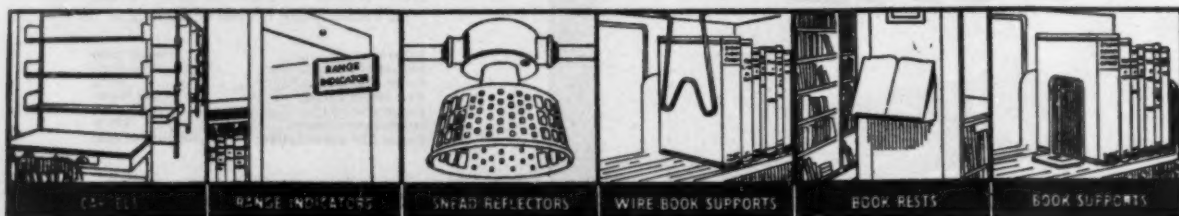


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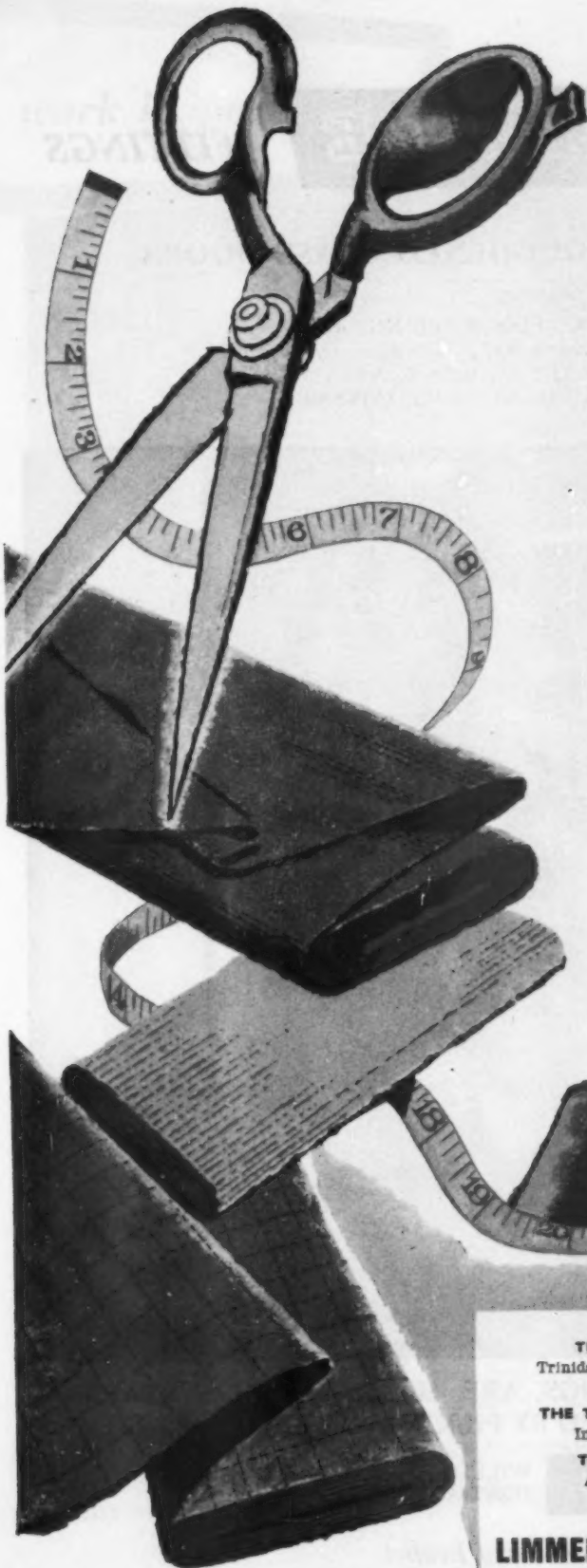
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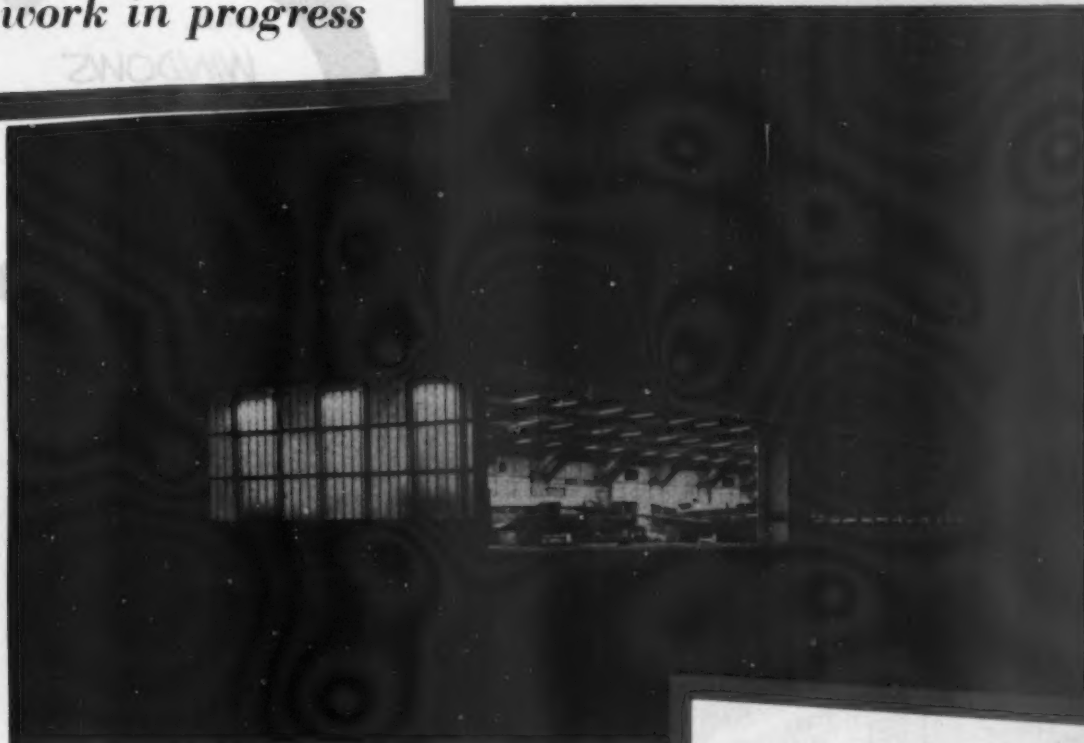
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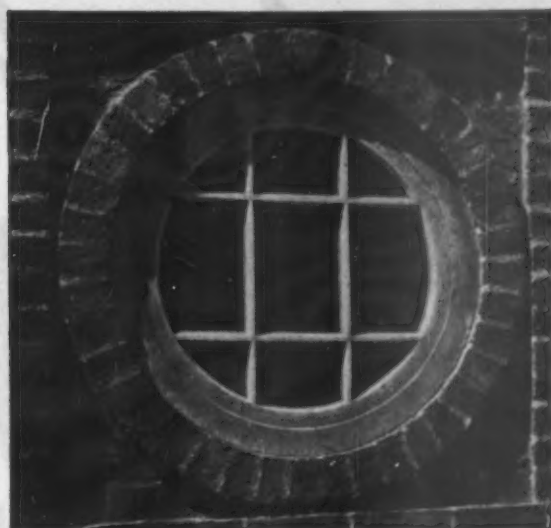
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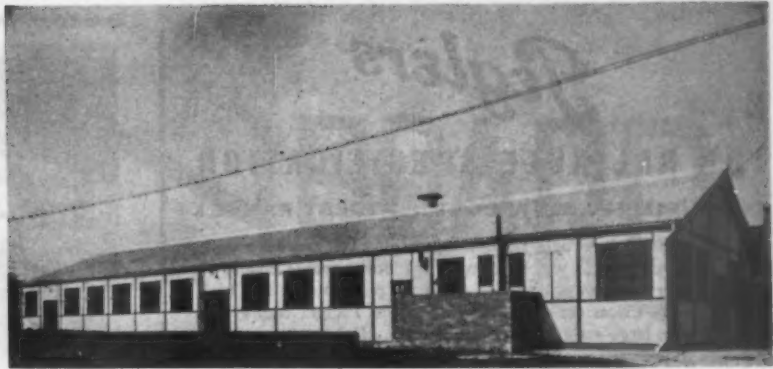
*Hospitals*

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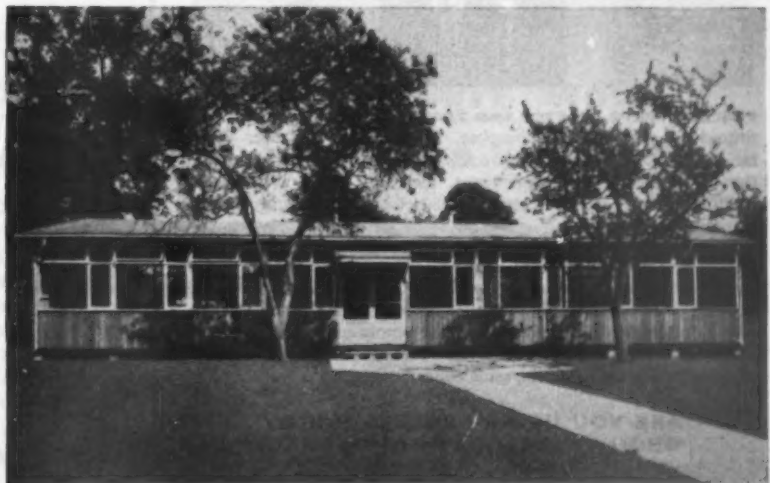
Timber framed Factory Canteen.

Photograph by courtesy of Thomas Harrington Ltd., Hove, Sussex.



Temporary Services Block, 150ft. by 30ft. for Salisbury Cattle Market.

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Classrooms at Fairford Farmor's Secondary Modern School.

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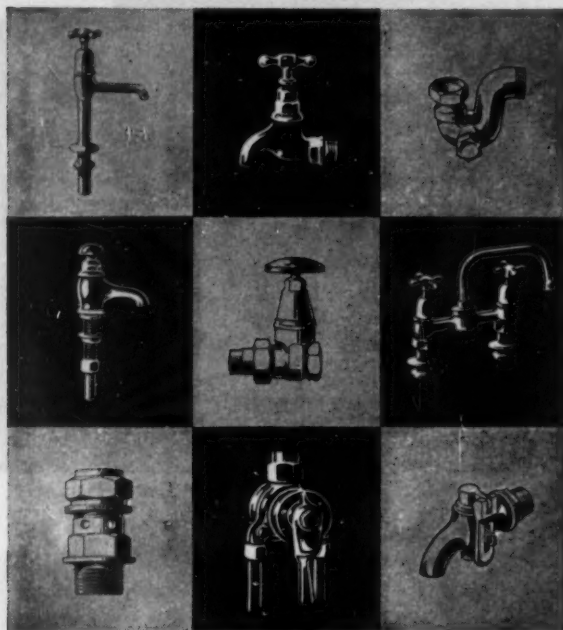
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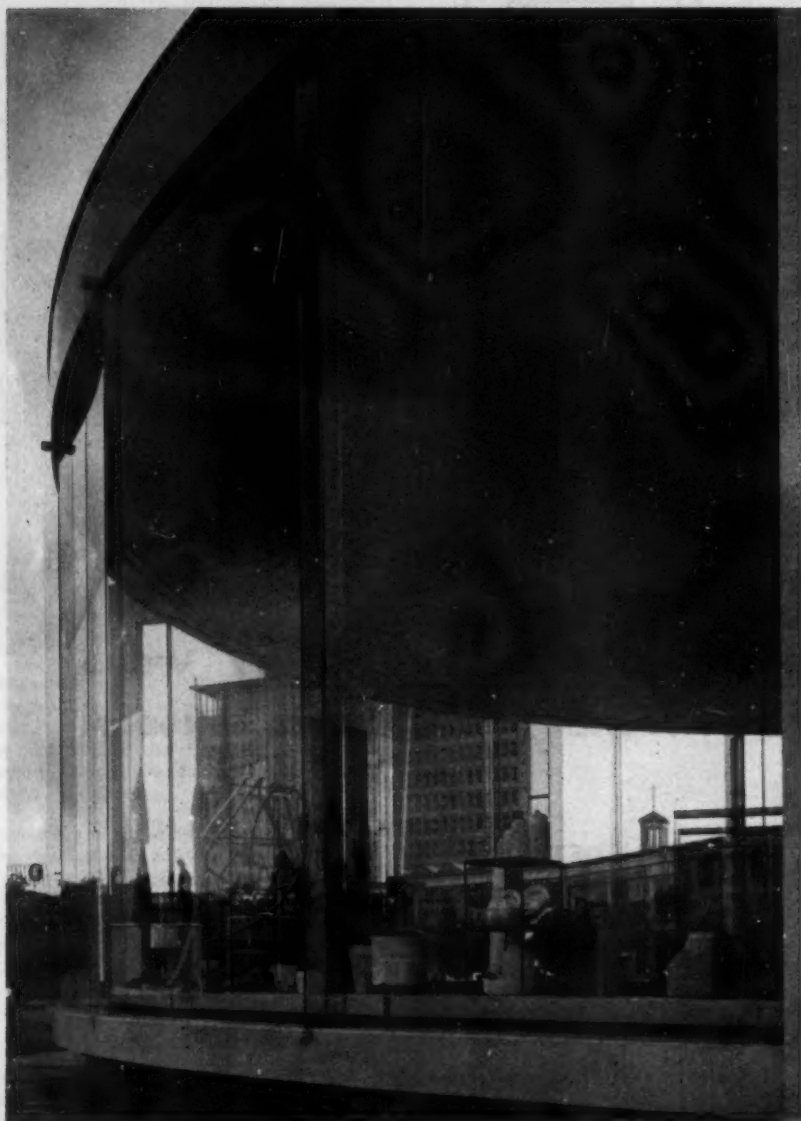
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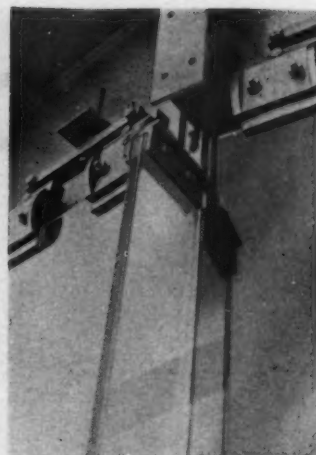


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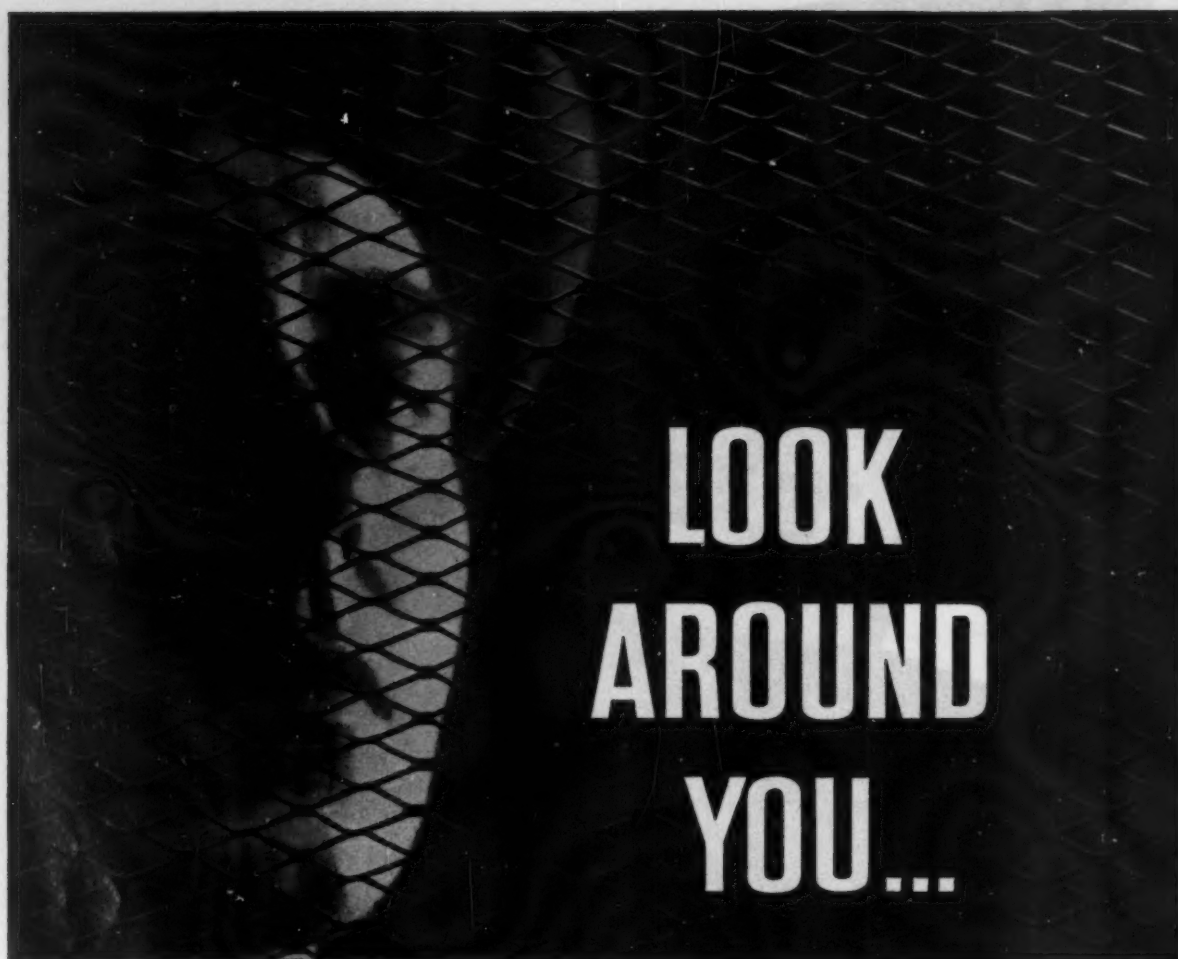
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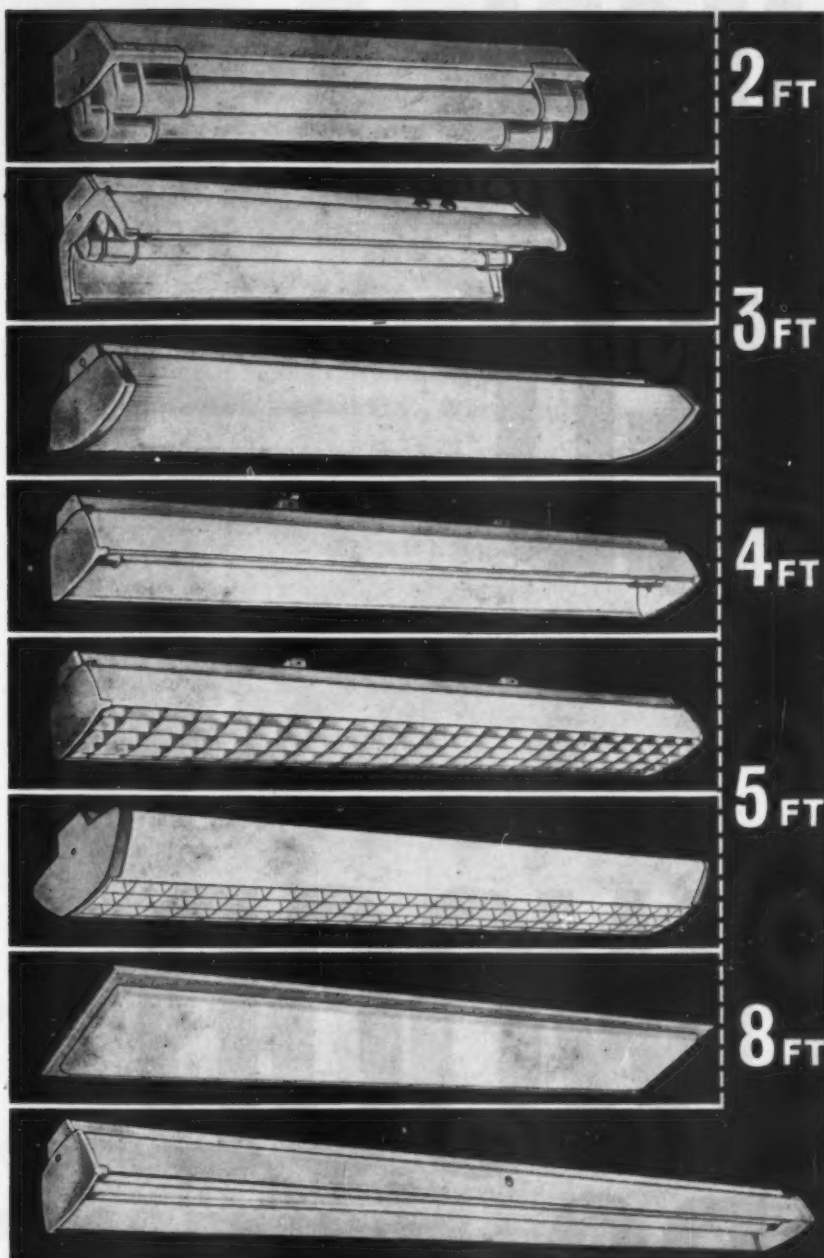
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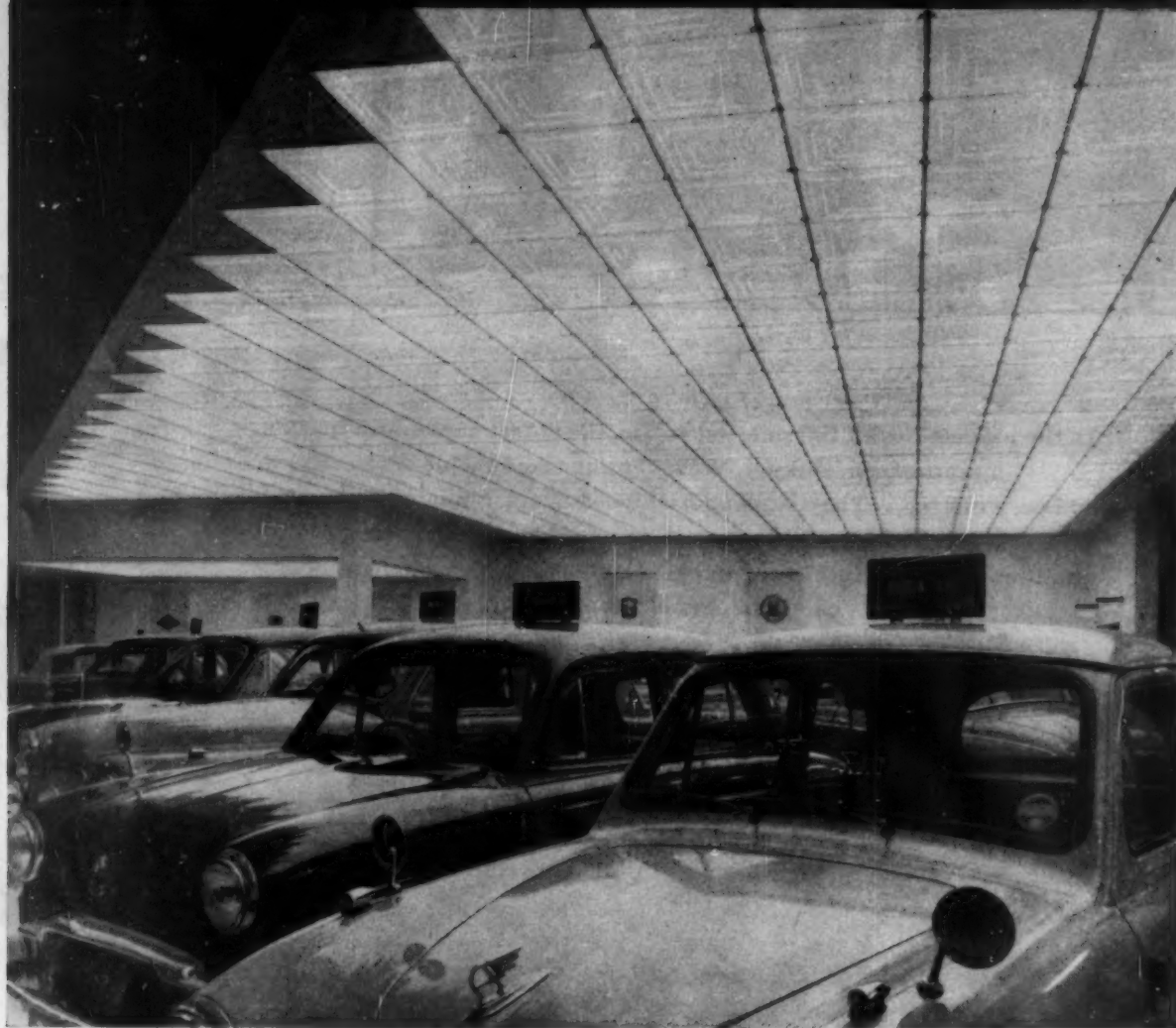
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**The Architects' Journal**

No. 3412. Vol. 132. September 8, 1960

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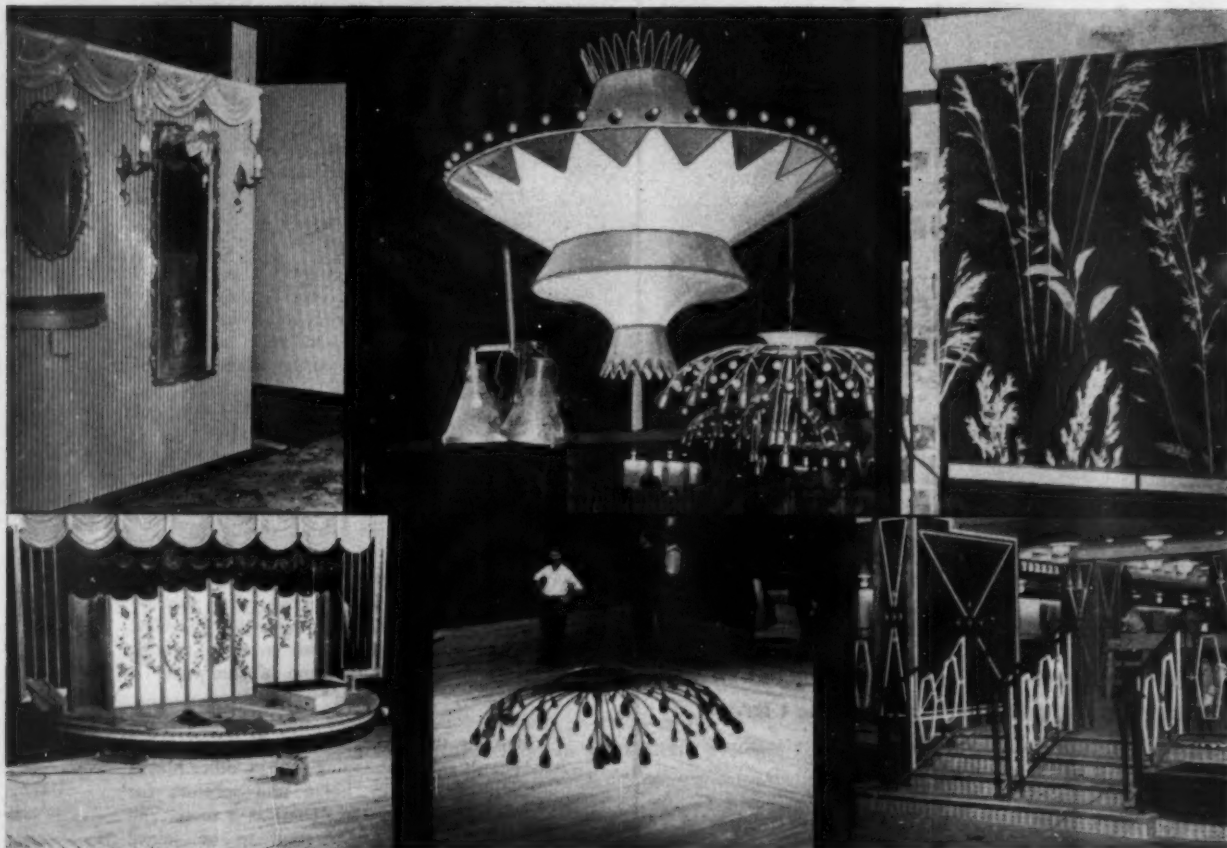
NOT QUITE ARCHITECTURE

### *Letter from Australia—I*

The first thing to notice about Sydney architects is that they don't look like architects. In London, if you stand near the BBC, you can guess with certainty, which of the passers-by is going to turn into 66, Portland Place; but here, they can look like dentists, electric train drivers or brewery officials. Indeed, in this democratic country where you sit *beside* the taxi driver (and talk to him)—anyone can.

It is the same in the offices. Boss and staff call each other Jack or Sid; they all wear white shirts with sleeves rolled up and grey slacks—and you would never guess who was which from the conversation. Even the immigrant Europeans learn to forget the special tones of voice of a class conscious society. When you walk in, the boss is probably on the telephone chaffing a sub-contractor who failed to turn up on the day, in a manner suggesting that this is no uncommon occurrence and it will all come right in the end. For no one worries. "Near enough" is the accepted motto and the desperate strains of English offices are unknown. People do work hard—but sunshine, good living and beaches breed a context of holiday optimism—and of enterprise.

The real estate men and developers are having the time of their lives. Drawing boards sprout shopping centres, office blocks and multi-storey home unit schemes for the thriving suburbs. There is a motel and squash court boom soon to be joined by a bowling alley craze (American inspired) while the fringes of this biggest suburb in the world grows new bungalows by the hundred every week. Building by-laws continue dogmatic and behind the times (the bathroom *must* be at least 37½ sq. ft. and it *must* have a floor gully. . . .). Town Planning control is still rooted in the estate agent ethos (in certain areas shops are dis-



### *Inside out or outside in?*

Coventry's new dance hall—opened last week—with its brightly lit glass entrance tower, will add to the liveliness of the city centre at night. Designed by city architect Arthur Ling, it is part of the shopping precinct and the ballroom, for 2,000 dancers, is poised above two storey shops. Built by the Corporation it has been leased to the Mecca Organisation, whose own architects, Kett & Neve, were responsible

for all interior decorations, such as (1) the powder room (2) ballroom light fitting (3) plastic pampas grass screen (4) bandstand (5) another light fitting (6) the balcony. Mecca undoubtedly knows all about running dance halls, but do we have to give the young quite such a tawdry and confused idea of what constitutes glamour, or such a discordant contrast between the interior and the exterior?

allowed because they would lower the tone . . . ) and tries to cope with high buildings by rule of thumb, set-back formulae. Now and then corruption finds its way to the headlines.

The profession copes with this situation energetically. Design is exuberant rather than sophisticated, borrowing more from America than elsewhere. Office buildings are better than those in the City of London, though hardly adapted to this sometimes tropical, sometimes temperate climate, with its fierce and nearly horizontal western sun, and blanket-like humidity. An economics-minded air conditioning engineer could make his fortune here. Factories are usually good, schools deplorable, new shops and coffee bars would be quite at home in London.

But the profession lacks leadership. It is scattered in state chapters over an immense continent, and so has not the power of unity. But the real lack is the absence of anything comparable to the MOE or LCC, BRS or Nuffield Foundation. And it has no journal of opinion like the *AJ*. Meanwhile, all-in service firms grow and prosper. But economic buoyancy keeps pace—so far—with land and building costs, lack of research, development and cost control.

So much for the private practices; what of the architects themselves? There is no doubt that they live well. Many of them build their own houses on splendid rocky sites looking out over tree-lined bays; with double car port, barbecue courtyard and terrace for outdoor eating. They entertain and are hospitable. Many of them have followed the classic pattern of saving up after graduation for a trip to Europe, work for a year or two in London and then home via America. There is little sign of that inferiority complex—it seems to have been disappearing with extraordinary rapidity in the last five years, with the beginning of 12-, 18- and 20-storey buildings and the integration of continental immigrants. They like the Opera House design, regret the urban sprawl and usually don't have a television. Their only comment on politics is that there are too many politicians (this is statistically true). They talk about the Holden car which is pushing all other makes off the market; about the town plan of Canberra which was designed by a disciple of FLW and is impossible to find your way about in. They are abreast of all enterprises and gossip in this city of two million where everyone knows everyone else. They probably do not read very much and prefer the company of men. Conversation is laconic, good humoured and safely sprinkled with "kidding."

The case of the two London architects whose argument about "architecture" became so heated that the car in which they were travelling crashed, could never happen here.

JOHN CARTER

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\* To preserve freedom of criticism these editors, as leaders in their respective fields, remain anonymous.

## The Editors

### THE MINISTER PASSES THE BUCK

THE land famine provoked uproar all the summer, an echo of which now comes back to us from the MOHLG in the form of Circular No. 37/60. This document tells local planning authorities to get on with their plans and to extend them to cover expected land needs up to 1981. This is all to the good, though it is pretty staggering to learn that some authorities have yet to submit any plan at all, and we would like to know how many of these dilatory committees there are, why they have been so slow, and how they have got away with it.

The Circular goes on to make some valuable suggestions for more intensively using urban land: it urges authorities to seek out and restore derelict land and to redevelop old, low density areas at higher densities (this would be a useful reversal of present policy, whereby almost any area is redeveloped at a lower density than before, as this week's study of density on p. 349 shows) "bearing in mind the demand for more and more houses and flats and the great change in social customs, which no longer favour big houses and gardens"; to convert more large houses into flats, and to explore pieces of land already allocated for other purposes in their plans but still unused and see whether some of these can be reassigned for housing.

All this is sound and could result in a sizeable amount of additional land being discovered in many towns, but then the Minister turns to the Green Belt. "A green belt," says the circular, "is a long term restriction of development in a defined area and it must be matched by adequate provision for balanced and compact development elsewhere." Agreed. But where?

"This means the intensive use to its full capacity of land in the areas contained by the green belt, and the selection of adequate land for development beyond the green belt, avoiding wherever possible the use of good agricultural land . . . the aim should be to encourage employment as well as people to move out from the large cities to places beyond the green belt. Planning authorities should therefore ensure that sufficient land is reserved for future factory and office building, even if there is little demand for land for these purposes at present."



Local authorities will have to co-operate on such schemes and the Ministry offers to arrange regional conferences to "promote co-ordination between planning authorities." Is this the only, or the main responsibility it has?

Once more, it seems, the Minister is trying to put the actual job of planning what this country will be like for future generations to live in and look at, on to the shoulders of the local authorities, and without even providing them with essential information upon which sound planning could be based, apart from a "population projection" on request.

Can a sound national plan for town and country result from such a hodge-podge of local plans? Can local authorities, two by two, do anything to reverse the trend to overpopulation in the south east and decay in the north of our island? Can their discussion of future industries and offices for example be related to the necessary reallocation of industry in the country as a whole? Can they even decide on high densities for their new (and old) urban areas without knowing much more about the future of transport and the roads?

If a good plan is to be made in the next two years for Britain in 1981, we need to know a lot more about a lot of these things, and it is the job of several Ministries to find them out with speed, and base a master plan on the findings. Then when local authorities confer they will have a sketch map of what's wanted, and some hard facts to help fill it in.



#### EDINBURGH'S FUTURE

It's not often the citizens of anywhere get as thoroughly churned up about a question of building policy (as opposed to the demolition of a well-known

building) as the people of Edinburgh now appear to be over their Housing Committee's intention of handing over the city's pre-fab housing sites to contractors for redevelopment.

It is said that nothing can be done about anything in Edinburgh during the Festival, except of course book for the Festival, attend the Festival, discuss the Festival and decide what's wrong with the Festival. Yet on this question of the City's responsibility to develop its own housing sites letters have poured into the *Scotsman* daily since the beginning of August, when the Edinburgh Students' Architecture Group protested against the "shoddy, third-rate building spreading over the city" and urged the Corporation to suspend all development until all proposed schemes had been reviewed by "an architect of national standing."

As a result of their protests the news came out (over the signature of "Dog Watch") that it was proposed to appoint contractors to develop all "prefab-sites", and replace the prefabs with 9,000 flats at a rough cost of

£18,000,000. From then on, laymen and architects have poured letters into the *Scotsman*, which has responded with a series of polemical articles in which Bailie Ingham defends and Moray McLaren attacks the Corporation view of its responsibilities towards preserving and increasing the beauty and decency of Edinburgh.

#### GLASS BLOW

One of the architect's frustrations in the last few months has been the absence of georgian-wired, polished plate glass. Pilkington Bros. Ltd., who are the sole manufacturers of this material in the country, have previously made no statement about this failure, but they now tell the AJ that the trouble began with a strike of ETU workers at St. Helens. They also say they are in similar difficulties with their product "Muroglass," but that they have been able to maintain supplies of almost all other types of glass.

Although the dispute has now been settled, normal supplies will not be resumed for some weeks. In the meantime, Pilkingtons offer the services of their sales staff to help solve problems that may occur. In many cases, of course, it may be possible to specify toughened or armour-plate glass as a substitute, but this is no good if the glazing is intended as a fire break. The alternative of foreign manufacture would not seem very hopeful in the meantime, because Pilkingtons have a large export market. In other words, the shortage is already international.

#### SUPER-CRITICAL REACTIONS?

For those who worry too much about flexibility and demountable partitions let me offer the following anodyne. The advent of nuclear submarines has led the Admiralty to set up a Department of Nuclear Science and Technology at the Royal Naval College, Greenwich, equipped with, among other things, a sub-critical reactor. This does not mean a reactor beneath criticism—it means, as Spaceman Banham doubtless knows—a light-water moderated, natural uranium assembly, using a small but powerful accelerator to produce neutrons. "The Department," writes the Professor in charge, "is situated in one of the historic and beautiful buildings designed by Wren and although this posed some prob-

lems in its internal conversion to nuclear laboratories, the building has been adapted surprisingly well."

#### A GOOD CLIENTELE

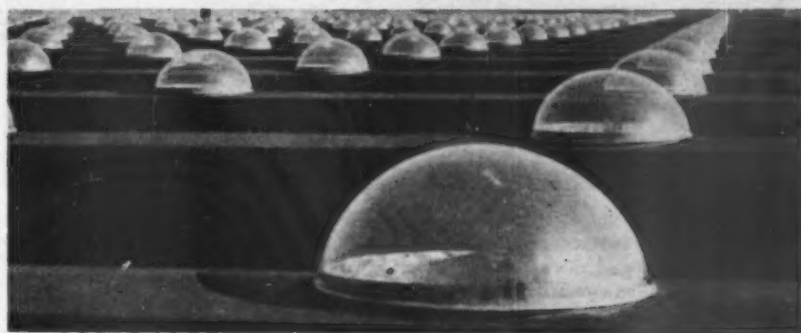
Some people say that Britain's architecture is controlled today by laymen on planning committees—not by the architectural profession. There's some truth in this, though I wonder how much when I look at the hotchpotch of work done in the city of Oxford where, I understand, no post-war scheme has yet been rejected. But what about the things we buy to put into buildings? I wonder how many architects furnish their schemes in a half-hearted way because they don't have access to really good stuff in their local stores? I was talking the other day to the managers and staff of several important provincial stores and I was appalled to realise how much the taste of the public depends on these men. One of the managers referred frequently (and without quotation marks in his voice) to "the masses" for whom he catered. "We have to be careful," he said: "we can't let our buyers fill the store with things they think are well designed if there's a risk of the masses not buying them."

I had the impression that the buyers themselves would be hag-ridden little men without minds of their own. They were anything but. One of them, whose appreciation of good design was enthusiastic but a trifle shaky round the edges, spoke cynically of practically every customer except the architect—for whom he insisted on keeping a special stock of samples. He persistently bought quite a lot of good fabric, glassware and cutlery and he thought he sold it because his department was on the same floor as the "classy" restaurant which attracted people who might not normally shop in the store.

I find it rather disturbing that the architect's furnishing of one or two large-scale jobs can depend on anything so chancy as a store attracting the "right" people to eat on the same floor as the department run by a man of near-taste.

#### OW-OO, AS THE FRENCH SAY

In the bad old days, when the world was under-privileged and August was a



*Neither of these pictures would disturb the RSPCA. The object in each of them could be prised apart without releasing a space-happy rat or dog. The top picture, taken not far from the coast of Great Yarmouth, is by the nautical photographer Ford Jenkins, who has marketed it—inappropriately enough—on the back of a recipe for Indian curry, with a giant box of matches in between. The other might seem to resemble a transparent lighting dome on a tin-girdered American store, which is exactly what it is. The top picture? A cat's-eye in the road.*

dead month, offices closed down and anyone who was anyone went away or at least hid away—as they do in under-privileged places like the Continent and America. But two wars and a depression and a tough strain of puritanism turned August in England into just another working month—until the big bad builders decided to shut up shop. Now, what with paid holidays and school holidays and no builders and absent clients and staff on the blink and all the other benefits of affluence, August is one long frustration. No wonder architects are asking themselves whether it wouldn't be more sensible to close down for much of the month and concentrate the annual chaos, rather than let it drift around from July to September.

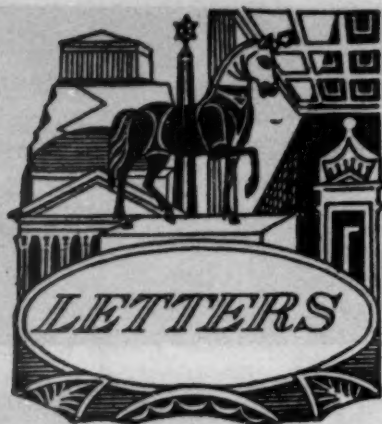
#### A GOON CLIENT TELLS

The top problem picture on this page

was taken by Ford Jenkins who has a reputation not only for his nautical photography, but also for his success as an architect's client. He is one of the few people I know who was able to brief his architects—Tayler and Green—and let them get on with the job. I saw this job again the other day—a much-visited house on Oulton Broad—and it remains, after ten years, a very satisfying small house. I also looked again at the same architects' superb agricultural housing in Norfolk and was glad to hear they are to enter the "spec" world. They are, in fact, doing a scheme at Cambridge for Span, whose consultant architect—Eric Lyons (the man who has fought so many successful battles for good "spec" housing) is farming out some of the firm's work to other suitable architects throughout the country.

ASTRAGAL





Ray Miller

C. B. Taylor

### Garden and House

SIR: It is most important that architects should be aware of the limits to the scope of their profession, and that they should not overlook the role of the landscape architect in environmental design. The RIBA have published a leaflet entitled "Your House—Why You Should Use An Architect", in the text of which the prospective client is advised that in addition to designing the house, his architect would be capable of designing the garden.

This is really an unethical claim to make, as a member of the RIBA does not have the knowledge of horticulture nor of the character of plant material so essential to the design of any garden. Members of the Institute of Landscape Architects are specifically qualified to design small gardens and large landscapes, and they can also advise architects on the right siting of buildings in the landscape—a design problem which few architects are trained to solve. The best way to advise one's client on his garden is to call in a landscape architect.

RAY MILLER

Crawley

### And, Not Or

SIR: I am shocked at ASTRAGAL's suggestion that the Liverpool Cathedral competition designs should be displayed in London in preference to Liverpool. Would he perhaps like the cathedral to be built in London for the benefit of the architectural elite of this country?

C. B. TAYLOR.

Thirsk.

ASTRAGAL made no suggestion that the designs should be displayed in London instead of Liverpool: of course they should be displayed in Liverpool. In addition, however, he considers that they should be on show in central London, for instance at the R.I.B.A., instead of only at a convent in Wimbledon.



MOHLG

### Using Land

Planning authorities have been asked by the MOHLG (Circular 37/60) to secure "the more intensive use of urban land," especially to allocate more land for housing. In towns the circular asks authorities to encourage conversions into flats, review their general standards of density and in dealing with applications for planning permission to "bear in mind the demand for more and more houses and flats and the great change in social customs which no longer favour big houses and gardens."

The circular goes on to invite planning authorities to select adequate land for development beyond their green belts where these have been established or proposed, and says, "the aim should be to encourage employment as well as people to move out from the large cities to places beyond the green belt. Planning authorities should therefore ensure that sufficient land is reserved for future factory and office building, even if there is little demand for land for these purposes at present." This would involve co-operation between planning authorities concerned, and the Ministry proposes that regional conferences be held for this purpose.

In the first section, the circular instructs planning authorities to extend their plans to cover foreseeable land needs to 1981. Plans submitted after 1962 will be expected to cover this period.

The National Federation of Building Trades Employers immediately welcomed the circular and sent out one of its own, underlining a point by the Minister "which recognises that where green belts restrict development planning authorities must make constructive proposals to provide developers with alternative areas where they may build."

TCPA

### Summer School

We are so used to hearing speakers at conferences bemoaning the danger of our

becoming "a nation of watchers instead of doers" that it made an agreeable change to hear Dr. Mark Abrams, on the strength of those unquestionable statistics of his, tell the Town and Country Planning Summer School at St. Andrews last week that "leisure activities outside the home become less and less spectatorial and passive and more concerned with arduous personal achievement; potholing, rock climbing and sailing now occupy the leisure of many who were once content to watch football and cricket matches."

His point was that work is getting easier and leisure more vigorous, in fact "satisfactions formerly sought through leisure are expected in the work situation and work values invade the hours set aside for leisure." And the lesson of all this for town planners was that "satisfactory planning in a prosperous society must provide the consumer with all the advantages of urbanised, industrialised life, all the satisfactions of close family life, and greater opportunities for near-privacy and peer-association in his leisure activities outside the home. In other words, it must be planning for a nation of people who want to live suburban lives in the heart of great metropolitan centres."

"Peer-association" by the way is nothing to do with the gossip columnists.

Basing his thesis on analysing the work and leisure activities of typical families in various age groups, Dr. Abrams described a general pattern of behaviour which most people would recognise as true.

He divides the population into teenagers (15 to 24), who like to spend most of their time outside the home "in the company of their age-peers"; 25 to 34, the "family formation" years, when both parents spend most of their leisure at home, and T.V., gardening and do-it-yourself come into their own; 35 to 44—no more leisure for mothers, as they mostly go out to work, but they are more prosperous and "gardening and do-it-yourself jobs become more ambitious"; 45-64, peak of affluence with children going out to work, and a third of the families in this group now have a car; and the last sad stage, 65 upwards, when "incomes drop sharply . . . leisure multiplies . . . and most women are widows."

To provide the sort of life most people seem to expect in this "affluent society", Dr. Abrams considers that "an average population of 10,000 households contains 3,000 teenagers and this would seem to be the minimum size for a community seeking to provide within its own borders the now customary facilities for teenage leisure."

"Shorter and cheaper" inquiries into disputed planning applications were promised by Lord Craigton, Minister of State at the Scottish Office, when he spoke at the opening of the summer school. The Government, he said, intended to experiment with "streamlined" procedure.

Lord Craigton went on to remark that although planning was now accepted the public image of planners was either of idealists—meaning, one presumes, unpractical people—or of "small-minded, petty-fogging interferers with the rights of man." It was essential that public opinion should



be on the side of the planner, especially now that there was an opportunity to reshape and redevelop the older areas of cities, remodel traffic systems and build new factories in attractive and congenial areas. "There must be plans," he said. "There must be control, but these must be acceptable. Is there a feeling that not enough care is taken to provide opportunities for public opinion to take shape before irrevocable decisions are taken? Ought the developer, for instance, have a statutory duty to tell his neighbours whom his development will affect, what exactly he is up to, and what right should the neighbours have?" Dealing with the problem of high land values, Mr. B. Anstey, a London chartered surveyor, advocated a revised system of land tenure, whereby land, which belongs essentially to the community, should in due course revert to the community after a period when the tenure owner could use it, improve it and profit by the improvement. Length of tenure should be adjusted to meet the needs of genuine planning and the ultimate reversion would give planners security. In the discussion that followed Mr. Anstey denied that he was advocating land nationalisation. Asked to define the difference he said it was a question of "digestion." It would be impossible to deal with the land properly if it all came into public ownership at once, but if it reverted in stages, as owners' years of tenure came to an end, the financial burden would be spread over years.

## RICS

### *Annual Conference*

The need to raise the standard of entry into the professions in general and to the Royal Institution of Chartered Surveyors in particular, and how this could best be done, was the theme of a speech by Mr. A. A. Part, Deputy Secretary at the Ministry of Education, to the R.I.C.S. Annual Conference at Bangor last week.

The professions are vying with each other in improving their plans for education and training, he said, and this was splendid so long as standards were genuinely related to the work of the profession and not raised simply for the sake of "competitive prestige."

"I do not think that any profession can be satisfied for much longer," he said, "with recruiting, as the Institution does at present, 90 per cent of its intake from boys whose general education has not gone beyond G.C.E. Ordinary level.

"I cannot believe that correspondence courses are any longer a satisfactory method for a candidate for professional status and I venture to hope that the Institution will move as soon as possible towards a situation in which they can be abolished.

"It is sometimes said that correspondence courses and evening courses are a good test of character, and professional institutions occasionally point proudly to the number of students who fail as a measure of the institution's success in maintaining its standards. I suggest that there are ways of test-

## CAMBRIDGE

### *Lion Yard Inquiry*



Cambridge County Council have been asked by Mr. Henry Brooke to reconsider their redevelopment plan (above) for Lion Yard, Cambridge, which was the subject of a public inquiry last November, on the ground that the best interests of the planning of Cambridge as a whole should be the main objective of redevelopment in that area. The inspector, Mr. J. Birkett, accepted the argument that the area requires redevelopment, but concluded that the submitted scheme was basically unsound in that it envisaged shop and office expansion, instead of "decongestion of the central area"; that accesses to the proposed underground car park were unsatisfactory and required modification which might alter the plan substantially; that the plan crowded too much development on to the site; and that the boundaries could not be determined until revised proposals were available. As the existing plan would not bear piecemeal alteration he recommended that the whole submission be not approved.

The letter from the Minister says that he

ing character and maintaining professional standards that do not involve such a massive waste of human effort and educational expenditure." He thought that sandwich courses might well suit surveying, and pointed out that these have become increasingly popular since 1956.

Mr. Part went on to commend the L.C.C.'s proposal to establish a College of Architecture and Advanced Building Technologies at Regent Street Polytechnic, commenting "thus for the first time in this country, all the partners in building will be brought together during their education."

Sir John Wolfenden, addressing the conference on "Educating the Future Citizen", seemed so anxious not to "become airborne about education", that he chose to draw a picture "of Cassandra-like gloom", suggesting that "a new sort of snobbery may begin to show itself . . . the objective not so much a white-collar job in an office as a white-coat job in a laboratory." The young, he thought, were enjoying "a seller's market",

considered whether he could modify the scheme rather than reject it entirely, but decided not to do so "because any substantial change would involve rethinking the economic aspects of the scheme entirely afresh." There might be some doubt whether any redevelopment for the area could both be an assured business success and at the same time in the best interests of the planning of Cambridge as a whole, but he felt sure that the second of these objectives must be the main one.

The letter continued: "The road and car parking proposals are a part of the submitted scheme which he views with approval. He does not think more office space should be provided than is there now. If additional shopping space is proposed the Minister would wish to have some evidence that the total amount of shopping in the central area is not likely to be significantly increased as a result."

The Minister has not confirmed a compulsory purchase order which arose from the council's proposals.

which could well be a contributing factor to the restlessness, arrogance and lawlessness of the rising generation. Of the plan to double the University population in the next ten years and multiply the colleges of advanced technology and teachers' training colleges, he admitted, "I wonder sometimes if there really can be all that many more who will qualify for higher education."

## RIVERS

### *Clean River Act*

The Clean Rivers (Estuaries and Tidal Waters) Act, 1960, comes into operation on September 29. A circular from the MOHLG last week calls the attention of river boards and local authorities to the fact that after this date the river boards will decide whether any new discharge of sewage or effluent from industrial buildings may be made into tidal rivers, and, if so, to what extent it must be purified first.



# SPACE & HOUSING





These photographs show housing at four different net densities: top left, 40 p.p.a.; top right, 70 p.p.a.; bottom left 130 p.p.a.; bottom right 200 p.p.a.

People today are very much more space conscious than they were. They are taking, for instance, an increasing interest in buildings and the open space around them. Coupled with the realisation that in a travel sense space can now be spanned quickly on a vast scale, people are also only too keenly aware that the practicability of mass movements on a local scale is rapidly diminishing, and they are becoming aware that town planning and the community at large must not dodge this issue. In this article the authors, both of whom are known to JOURNAL readers, suggest a way how the dual needs of good environment and scope for ease of movement may find a place in the structure of cities.

## a study of environment & density by d. rigby child & jack whittle

After we had finished our series of articles on slum clearance and redevelopment,\* in which we showed some of the many facets of the task facing much of urban Britain, we set out to trace the planning factors which could have a decisive influence on the outcome, in a qualitative sense, of large-scale housing renewal. To aid our investigation, we visited a number of new towns and housing in London and later we made a comparative study of four different housing schemes, ranging from low to high densities, but each of a similar size of population and all built in the last few years.

Our investigation began with the needs of the family: the accommodation within the dwelling and the provision for the family out of doors. In considering housing we realised that the effect of density in housing does not greatly affect the interior of the dwelling but mainly the external environment. In assessing the environment, there are five stages. The first stage is in the dwelling. The second begins on the doorstep and extends to the Housing Group—those dwellings one is conscious of as neighbouring as one stands on the doorstep. After the individual dwelling and the neighbourly housing group, the next stage in the environmental scale is the housing unit. This represents the single housing conception. It is at this stage of the environmental scale that an *urban nucleus* is formed. The urban nucleus may be formed from housing, commerce, industry or civic building or a combination of these. For housing we term this the *local housing unit*. If one takes the full urban spatial scale of dwelling, housing group, local housing unit, neighbourhood, and town, by far the most important factor in the build-up of environment is the quality of the local housing unit. In our view, it is the absence or possession of a clear relationship between these urban nuclei that determines whether a town is simply an urban sprawl or a town with a robust and lively physical character. Within the confines of an urban nucleus, the most important element, we consider, is its relative extent. Our study of the importance of the extent of an area in shaping environment has led us to the view that *the area over which a use is spread as a single unit is as important as the use*.

The main body of this article is devoted to tracing how the study of present methods of applying density standards in terms of its effect on environment has led to the recognition that present methods are grossly inadequate and must be reviewed. The new methods we recommend for the application of density in towns are as follows:

\* Architects' Journal for Sept. 20 and 27, Oct. 4 and 25, 1956.



## A BASIS FOR URBAN STRUCTURE

There should be three measures for controlling densities:

1. The sliding scale for local housing units
2. Town density
3. Town ratio

### 1. A SLIDING SCALE FOR LOCAL HOUSING UNITS relating extent and density

The basic unit for housing development of any substantial size should be the *local housing unit*.

In this *development scale* the area of a local housing unit is limited in extent according to the density of development. This method is opposed to the current idea that numbers of population only is the main factor governing the size of a housing development such as a neighbourhood unit.

To show the full effect of basing the planning of local housing units on a combination of density and extent we have compiled a *local housing scale*.

This scale shows how to assess by the application of the formula set out in Table 1 the maximum extent of local housing units for net densities up to 200 persons per acre. The formula is based on the principle of taking the smallest effective social group (3,500) which is multiplied by a factor (ranging from 1 to 2) related to the net density of the proposed development and divided by the gross density in persons per acre of the locality. This formula has been rather arbitrarily assessed by us and may have to be adjusted after gaining experience in its application.

**Table 1. Extent of Local Housing Units**

Net residential density in persons/acre	Area of local housing unit in acres
200	$3500 \times 2$ gross density in p.p.a.
150	$3500 \times 1.75$ gross density in p.p.a.
100	$3500 \times 1.5$ gross density in p.p.a.
50	$3500 \times 1$ gross density in p.p.a.

For example: The estimate of an area of 200 persons per acre having a gross density of 110 per acre should not exceed  $\frac{3500 \times 2}{110} = 64$  acres.

110

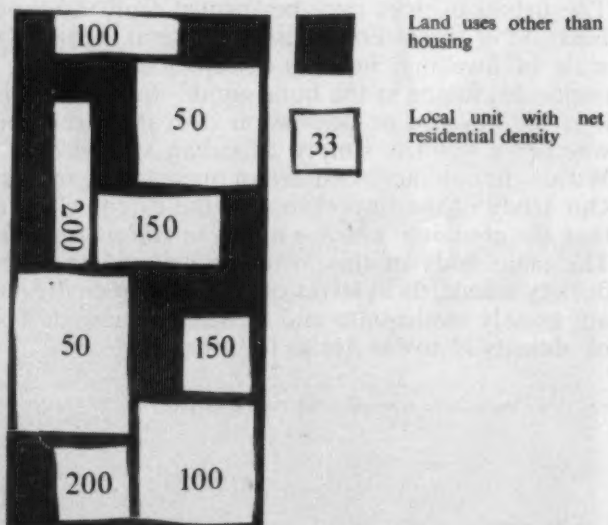
**Table 2. Relationships between Local Housing Units**

where the housing unit has a net residential density of:

150-200 p.p.a.	any adjoining unit should have a <i>lower</i> net density
70-150 p.p.a.	any adjoining unit should have either a <i>higher</i> or <i>lower</i> net density
Up to 70 p.p.a.	any adjoining unit should have a <i>higher</i> net density

Units of similar density should only adjoin where there is different intervening use, topographical feature, or the architectural treatment of each unit is quite different.

A satisfactory urban environment cannot stem only from limiting the extent of any local housing unit. On the positive side, there must be variety in the character of adjoining units. Table 2 above in this housing scale provides a basis for planning the relationships between local housing units. How these relationships could work out in practice is illustrated in the diagram below.



## 2. TOWN DENSITY

Town population

Area of all land within urban fence\* in acres

The primary form of planning control should be *Town Density*. This density is the "all-in" density: it includes all land within the urban fence.

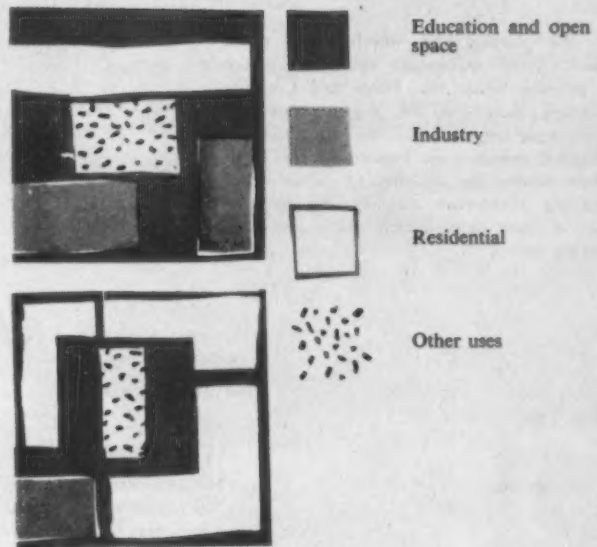
The national range of town density is in the order 7.5 to 30 persons per acre (the usual postwar New Town average density is 12.5 p.p.a.). This average town density should be a datum density against which regional and functional variations can be assessed. Town density is irrespective of the relative land usage within a town.

In this way to maintain the national average town density a town with a great amount of industrial and other land uses must adopt a relatively high residential density in order to accommodate the population.

In reverse, a town with mainly residential land uses can adopt a looser form of development.

The consequences of the application of this town density control are shown, for instance, in the two diagrams.

\* Urban fence: the true boundary, not the administrative boundary, between built-up area and country.



## 3. TOWN RATIO

Green Belt area

Town area

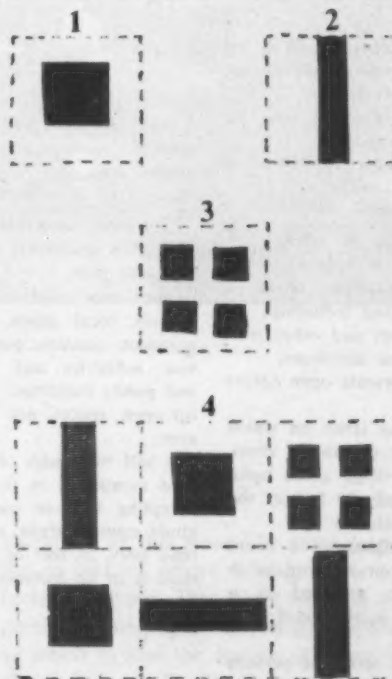
An adequate planning code for any project takes into account the influence of the existing environment on a proposal and vice versa.

In this article, the main pre-occupation is with the local housing unit, but the logical development is that the same method of control should be applied to the relationship between the town and its green belt.

Investigation is needed into the ratio between the town area and green belt area but we suggest that a ratio of *ten green belt acres to one town acre* is wanted. This town ratio should also be on a sliding scale so that there would be a relatively greater green belt for a conurbation than for a small isolated town.

The essence of this approach is that open land in the green belt is looked upon as being complementary to the town and just as essential to the town's existence as the land within the town.

With use of the *town ratio*, the relation between the location of town land and open land becomes simply a matter of planning judgment. A town could be one urban mass surrounded on all sides by open land as shown diagrammatically (1), or alternatively a town could be one thin linear form with open land on each side (2). Alternatively, a town could be a series of compact nuclei, each surrounded by open land (lower right 3). There is no reason why on this basis the urban pattern of a conurbation could not be a very flexible arrangement as below (4).



We turn now to a review of the use of density control as a tool in planning and its effect on environment. We start by describing present practice.

## HOW DENSITY IS USED IN DEVELOPMENT PLANS

In the survey and development plans which local planning authorities have to prepare under the Town and Country Planning Acts 1947/54, the measurement of existing densities and the allocation of proposed densities are important. The table below shows the information which local planning authorities are expected to provide in their development plans and supporting survey:

	Survey	Development plan
County maps Scale: 1 in. = 1 mile	No density reference	No density reference
Town map areas Scale: 6 in. = 1 mile	(a) Net accommodation: density survey (b) Net population density survey (c) Gross population density shown on land use survey	Proposals for gross population densities of areas zoned "primarily for residential use" (definition of area as for gross residential area)
Comprehensive development area map Scale: 25 in. = 1 mile (1 : 2,500)	(a) Net accommodation density survey (b) Floor space index survey where applicable	Proposed net residential density in habitable rooms per acre for residential areas Proposed F.S.I. for shopping, office and warehouse zones

## DEFINITIONS OF TERMS IN CURRENT USE

In the measurement of density and in the provision of density in development, the following definitions apply:

**NET RESIDENTIAL DENSITY** can be expressed in alternative ways:

(a) **Accommodation density** in terms of habitable rooms per acre, i.e.,

$$\frac{\text{net residential area in acres}}{\text{habitable rooms}}$$

The **net residential area** is defined as the area of land actually developed or to be developed as dwellings, and including:

- (i) the sites of the houses and other residential buildings and their curtilages;
- (ii) any small public or private open spaces included in the layout;
- (iii) half the width of any street on which land mentioned in (i) or (ii) above abuts, except that where a curtilage abuts upon a principal traffic road only 20 feet of the width of that road is included.

A **habitable room** is defined as a room normally used for living or sleeping in. A kitchen should only be regarded as a habitable room when it is also used as a living room.

(b) **Population density** in terms of persons per acre, i.e.,

$$\frac{\text{persons}}{\text{net residential area in acres}}$$

**GROSS RESIDENTIAL DENSITY** represents the number of persons per gross residential acre, i.e.,

$$\frac{\text{persons}}{\text{gross residential area in acres}}$$

The gross residential area = the net residential area plus:

- (i) the sites and curtilages of primary schools, local shops, offices and business premises, cinemas, public houses, local service industries and workshops, churches and public buildings;
- (ii) open spaces not included in the net area;
- (iii) half the width of any street on which land mentioned in (i) or (ii) above abuts, excepting that, in survey, where the land abuts upon a trunk or class I or class II road only 20 feet of the width of such a road is to be included.

### OTHER DENSITY MEASUREMENTS

The density of development other than residential development is controlled by three methods. First, floor space index, and second, plot ratio, and thirdly, overall density. These are defined as follows:

**FLOOR SPACE INDEX** =

$$\frac{\text{total floor area of building in square feet}}{\text{gross site area of street block in square feet}}$$

Total floor area = sum of the roofed areas of the building at each floor level, measured over external walls.

Gross site area of street block = area of plot + internal access roads, pedestrian ways, small planted areas mainly used by occupiers of the blocks had half the width of the public streets which form the boundary of the street block.

**PLOT RATIO**

This is the ratio between the **net** area of the plot and the total floor area of the building upon it. The **net** area of plot is the area of the site with its own curtilage.

**OVERALL DENSITY**

This is the population of a town divided by the total acreage of land within its urban fence.



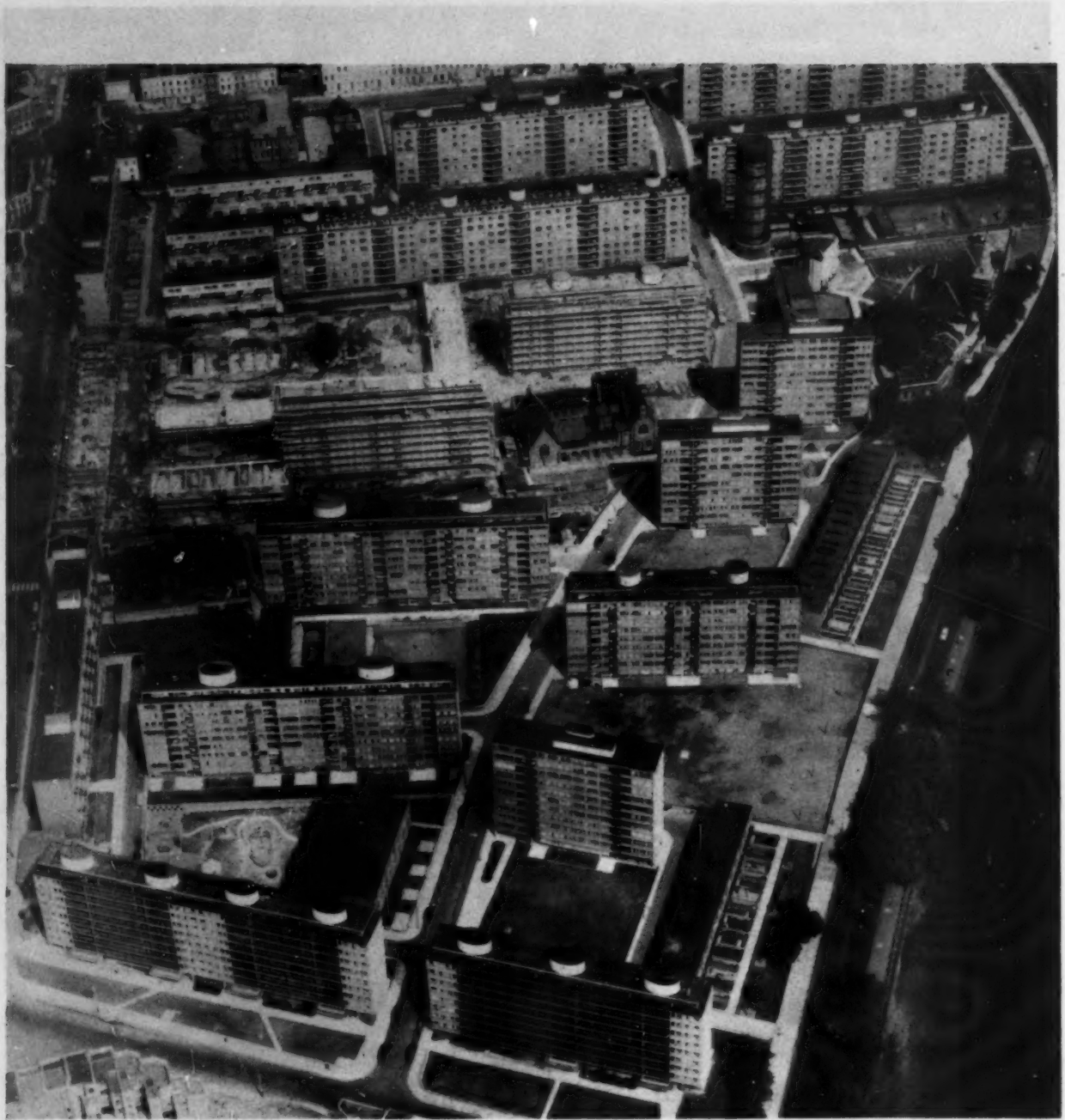
## DENSITY AND THE FAMILY



### DENSITY EXTREMES

As a start to this section of illustrations on density in practice, we have chosen two ways of life at the extremes of density scale to represent basic living conditions normally accepted in this country. The low density view is of a typical middle-income group housing estate, where the net density is probably about 8-12 persons to the acre. It gives without question a perfectly healthy place to live in, with ample light, air, ventilation, reasonable privacy and other

amenities. In this scene, the street begins to take form; and this is perhaps where density starts to have meaning as a factor in layout. This street with its well-wooded and open green surroundings is obviously dominated by the greenery, so much so that the feeling of living in the country is still almost present. But if this estate were to be multiplied, the sense of domesticity would tend to dominate, and the outcome would be neither country, suburb nor town.



The high density view shows a planned housing scheme at a net density of 200 persons to the acre. This still gives adequate light and ventilation (although these are mechanically assisted for internal bathrooms) with a high proportion of the site for open space, thanks to the form of the layout which provides room for children to play. Privacy outside the dwelling is no longer possible, but

living conditions are still satisfactory. This too is some Englishmen's dream home, just as much as the first example undoubtedly has been, and is, for many people. Beyond this density we believe that it is likely that living conditions by the standards which we nationally accept as rational would tend to deteriorate.

## DENSITY AND THE FAMILY

### Inside the Dwelling

In the national housing programme the central government controls overall floor areas in relation to the number of occupants in a dwelling. Internal space standards are not materially affected by density.

Density does tend to influence internal layout, but it is by no means decisive. Possibly the most potent factor in determining the plan of the dwelling is the total amount of external wall (excluding party wall) available; this decreases as density increases. This does not apply to point blocks as opposed to terraces or slabs. One of the characteristics which has emerged out of a search for economic housing at high density is the narrow frontage dwelling which has less natural good light and ventilation than a dwelling with a conventional frontage; the standard of light and ventilation however still remains adequate.

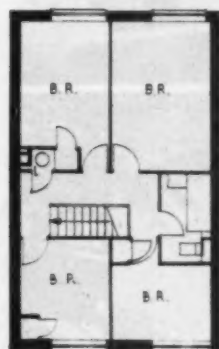
The influence of density is only apparent inside a dwelling by outside sensations such as external sound, smell and sight. Once a person is inside a housing cell, if sealed off from these outside sensations, density is not apparent.

Fundamentally, high density does not detract from living standards inside the home; it may result in the provision of a higher standard of domestic fittings and equipment and the use of modern techniques—in fact it often does. Details, such as open fireplaces or not, are within limits often more affected by general housing policy than by density.

The plans shown below illustrate the standards of internal planning at different densities. For instance:

- 1 is a 2-storey house in a low density area;
- 2 is a flat in a low-medium density development;
- 3 is a three-storey house and
- 4 is a maisonette, both in a high density scheme.

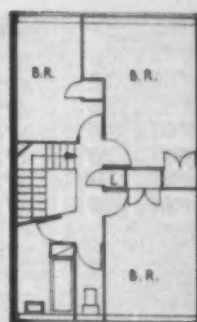
The density of the scheme must influence the type of dwelling used. For densities of under 30 persons per acre it is usual to design with bungalows, detached and semi-detached houses. For densities of 150 persons per acre and over, tall blocks, four-storey maisonettes and three-storey terrace houses are generally used. For the range in between it is becoming common to use a wider combination of types, although it is most unusual for tall blocks to be used at low densities and bungalows at high densities. There are however exceptions to these general observations.



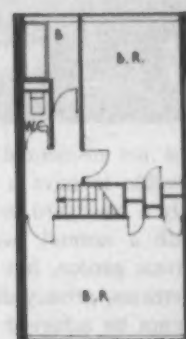
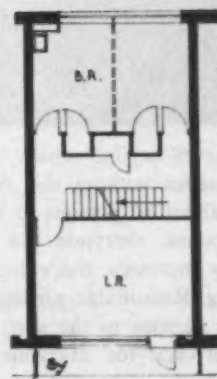
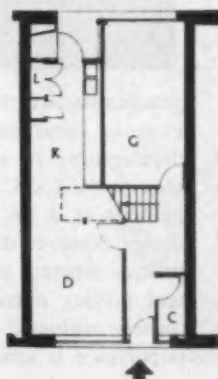
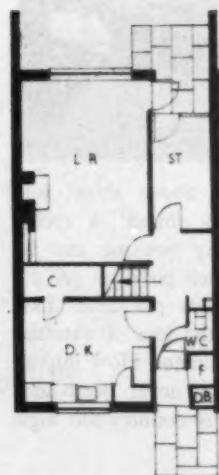
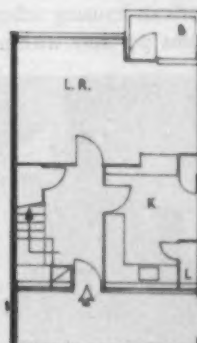
1



2



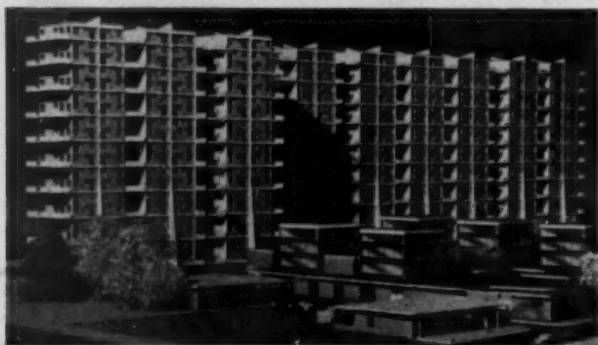
4





### Outside the Dwelling

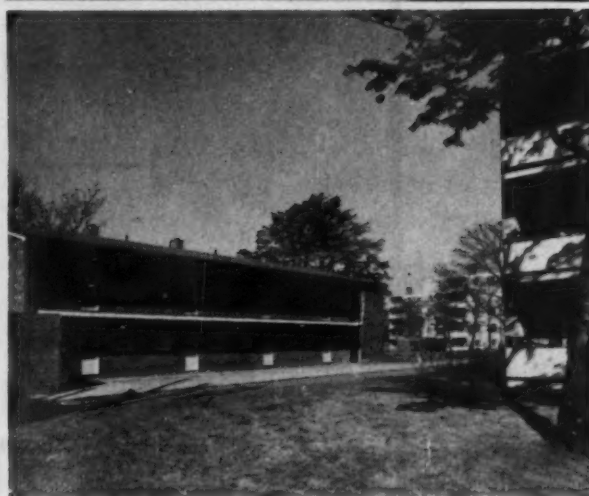
Where density does have a material effect is in private and family living conditions outside the dwelling, *i.e.*, the form of private outdoor space provided, immediately related to the dwellings. A complete home should have some form of private outdoor space attached to it; there is no substitute for it. It can be in the form of a garden or a balcony, provided the latter is large enough. A really adequate balcony is expensive in building costs; but that it can be designed is demonstrated in the Gorbals scheme by Basil Spence (below). Contrast the effect of this design with an



American housing scheme (below) at a density of about 300 persons per acre with no balconies.



The net residential density level beyond which it is not possible to have a private garden without this becoming only a courtyard or patio is about 80 persons to the acre. With a normal two-storey house, everyone can have a private garden, but as density increases, the value of this decreases, privacy disappearing. Reasonable garden privacy cannot be achieved above 30 persons to the acre. For an urban population external privacy for everyone is not



practicable, as the three photographs above show; and even in suburban housing it is rarely found. A recent development in high density two-storey housing can be seen in the L.C.C. prototype layout which provides private gardens at a net density of 120 persons per acre. This design however does not escape from the loss of external privacy inherent in high density development. How important privacy outside the dwelling is has never been adequately evaluated. It may be that in this country too high importance is attached to it.

## THE DENSITY RANGE

Housing development in this country normally is in the net residential density range of 30-200 persons to the acre. For convenience we have divided this range into four groups:

<b>LOW</b>	30-60 persons per acre
<b>LOW-MEDIUM</b>	61-100 persons per acre
<b>MEDIUM-HIGH</b>	101-140 persons per acre
<b>HIGH</b>	141-200 persons per acre

To illustrate this range we show a plan and a photograph of four different schemes, each planned and built within one of these density groups and each with a comparable population.

### KEY

Dwellings in

□ 2 and 3 storey

■ 4 and 5 storey

Scale 0 100 500 ft.








Low



KEY

Dwellings :-

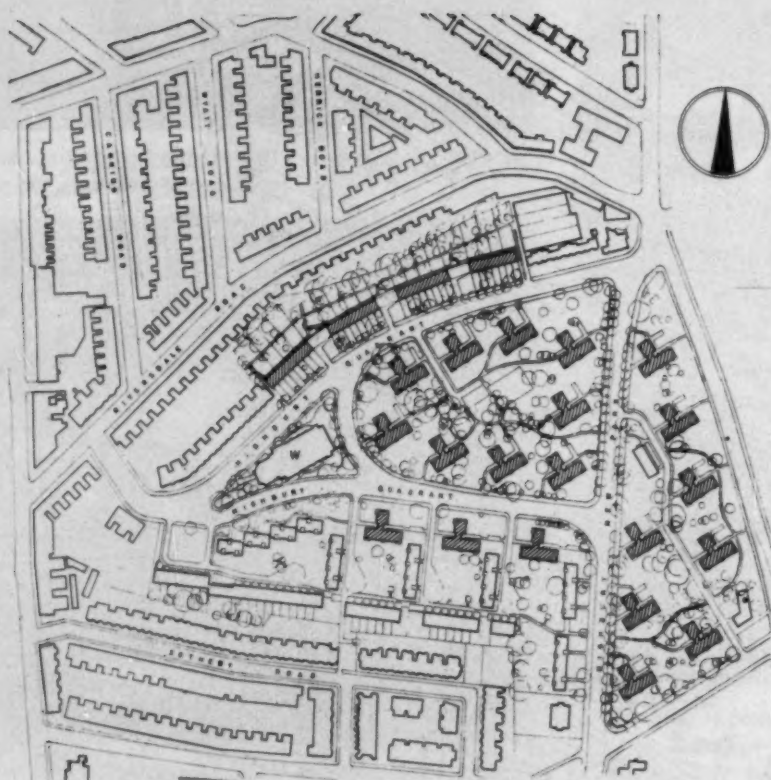
-  2 and 3 storey
-  4 and 5 storey
-  7 storey
-  8 storeys and over

-  Public Buildings :-  
S School  
Sh Shops  
W Church

Scale 0 100 300 ft.



Low-Medium











Medium-High

KEY

Dwellings :-

-  2 and 3 storey
-  4 and 5 storey
-  7 storey
-  8 storeys and over

Public Buildings :-

- S School
- Sh Shops
- W Church

Scale 0 100 500 ft.

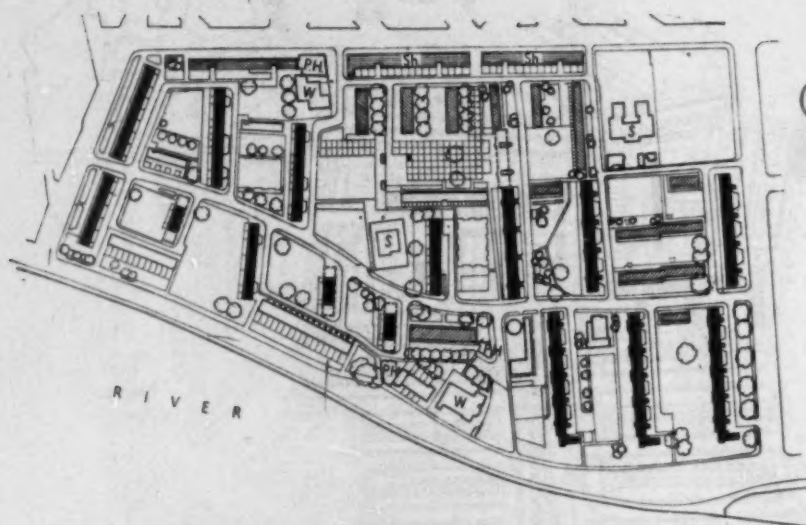




If one compares these four schemes the one fact which stands out is that the obvious difference in character is between the high density scheme and the others. With these, each possesses a sense of space, but this tends to be lost at the high density.

The difference between the schemes at the two middle densities is not marked. How much of this lack of difference is due to the relative quality of design and how much to the inherent influence of the density used is not readily apparent. It does seem, however, that, except at extremes of density, either high or low, the design interpretation for an area has a more marked influence on the environment than density itself.

High



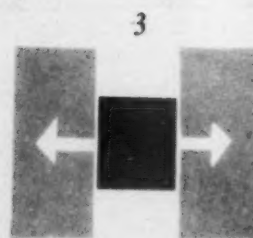
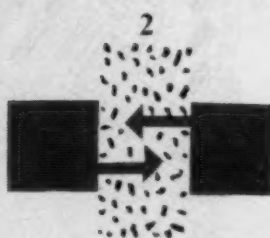
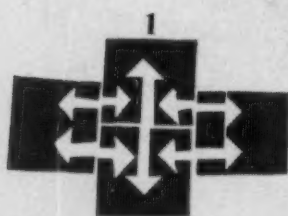
KEY

Dwellings —

- 2 and 3 storey
- 4 and 5 storey
- 7 storey
- 8 storeys and over

- Public Buildings —
- S School
  - Sh Shops
  - W Church

Scale 0 100 500 ft



Compared with large-scale housing developments pre-1939 (below) the layout design in the better type of post-war housing schemes has come a long way. Post-war, there has been a recognition that the factors which should determine the size of a particular development are inadequately known. The commonly accepted basis is the population required to suit the educational structure. We suggest that there are two other factors: the relationships between density, spread and congestion on the one hand, and on the other density, spread and a livable environment.



## DENSITY AND CONGESTION

The relative freedom of movement on foot or in a vehicle is a factor of growing importance. In any area there is a *movement absorbent capacity* and a *movement potential volume*.

A *movement absorbent capacity* is the maximum free movement which can take place in an area.

A *movement potential volume* is the amount of movement created within, and attracted by, an area.

In addition, an area may have to accommodate movement through it to other areas.

Both factors depend upon density of development and type of use.

Movement through an area depends upon its relative position with other areas. This movement can be directed around an area, or under or above it.

If for any area the movement potential volume exceeds the movement absorbent capacity, then congestion will result. This can be eased by making use of adjoining areas, but this may create congestion within them if the movement absorbent capacity and the movement potential volume are already operating in reasonable balance. Thus congestion may spread far beyond its origin.

If, therefore, there is a point in the density scale where congestion within an area itself is inevitable, then the larger the extent of the area at such density, the greater the congestion.

That there is such a point is not in doubt. This point can fluctuate in accordance with design detailing. But if an area of high density designed for a high movement potential volume and high movement absorbent capacity adjoins other areas of a lower movement absorbent capacity,

although of a lower density, congestion may well result in the latter.

It is in our opinion of great importance to establish the economic levels of density and its related movement factors, allied to the extent of the density. As a basis for research, three arrangements for local development units are shown opposite.



1. An arrangement where the larger the extent of high density, the greater the relative movement potential volume, because of the activity within it.

2. High density areas separated by low density units with high movement absorbent capacities may avoid congestion.

3. High density area, adjoining two medium density areas each with relatively low absorbent and high potential volume factors, may be not only congested itself but cause congestion in the adjoining areas.

It may well be that in applying varying densities for different uses, there should be associated with them a permitted movement potential volume. In high density development this might have to be restricted below the full potential and to the assessed movement absorption capacity of the design. It is unlikely that for extensive areas of very high density it is practicable to design for free vehicular movement within it and in the future planning technique may be faced with the problem of controlling movement potential.



## DENSITY AND ENVIRONMENT

In the relationship between density and environment there are two elements, we suggest, which are the key factors. One is the sense of place and the other the relative extent of building mass; but the two are inseparable. One can almost say that the sense of place begins with the relative identity of the individual dwelling: how far it is unique. And at the other extreme, the degree to which it is an anonymous cell: one among many in a rigid geometrical arrangement. From the dwelling, the sense of place extends to the housing group and to the development unit. The more anonymous the dwelling the more important, it seems, that the environment itself takes on a recognisable sense of place.

In the early days of industrial Britain, it is probable that even the early factory workers' cottages built on the outskirts of a village in early nineteenth century were not so relatively unpleasant to live in for, mean as they might be, the surroundings, fields and trees, were satisfactory. It was only when they were built in large numbers that their inherent poverty came into prominence. In more recent times, the real

fault of suburbia has also been its sheer extent. In making this study we made an intensive tour of a variety of new towns and London housing schemes. The impression we had was that the dominating factor was the same in every case—however good the design in detail, *ultimately the dominating factor would be the extent of a particular development*. A comparison of projects at different densities led to the realisation that there appears to be a reasonably constant relationship between density and area over which it is applied, and that this applies to the full density range. If the mathematical structure of mass related to repetition, as it were, overshadows the whim, ability and even genius of a housing project designer, it seemed that there should be some simple formula by which this relationship can be expressed. If this could be found, the architect might gain a new freedom in design.

Our suggestion for this formula is the sliding scale for local housing units mentioned earlier.

In the foregoing pages we have illustrated and briefly described some of the effects of density in practice. In summing up our case for a new approach we begin by looking at the context in which so many people see this difficult subject.

## TAKING STOCK

### The Unending Debate

Density, particularly residential density, is a subject almost continuously debated by planners, both amateur and professional. It creates almost as much "tub-thumping" as politics, and an equal amount of uninformed chatter. Moreover, people talk about density as if it were a moral issue: there are "good" densities and "bad" densities; densities are cruel or iniquitous. Density somehow has gathered to itself a character either benevolent or malevolent, depending upon the philosophy of the critics. We thus have two camps, the low density and the high density: the Welwynites and the Barbicanites. The former sport fine indignation about family life in flats, the latter have lately added another arrow to their quiver—subtopia—and, like all people with a mission, the adherents to both camps are full of righteousness.

The tragedy is that this argument absorbs an enormous amount of energy which could better be devoted to finding a solution to our planning problems. The continual defence and attack of two opposite views obscures the real issue, which is that density itself has no entity, no characteristic, but that its application must depend upon planning considerations in the broadest sense. The dwelling per acre, rooms per acre approach, with a myopic study of one acre of land, has created a mental rigidity about density which, fused with a heady morality, makes a revision of attitudes very difficult.

But this revision must come; it is surely time that differences of opinion were forgotten, that high and low horses were dismounted and put out to grass, and that a common attempt to find a rational planning basis for a satisfactory environment was made.

### Density Conflicts

We wish to make it clear that we consider density an instrument for the control of quantity on a given land area, either in building volume or population.

The present popular general attitude is that the lower the density the better. This attitude seems to be reflected in the proposals of Planning Authorities over the whole of the country. It stems from the distrust of the results of high densities which has developed from the justifiable abhorrence of the industrial slums of the 19th century. The congestion, ill-health and unsatisfactory social conditions characteristic of these slums and factory areas were blamed on to two things, bad sanitation and overcrowding. Sanitation was improved, overcrowding decreased, but many unsatisfactory social conditions still remained. Understandably "high density" was and is in many quarters considered the nigger in the woodpile. That it was so is not yet proved.

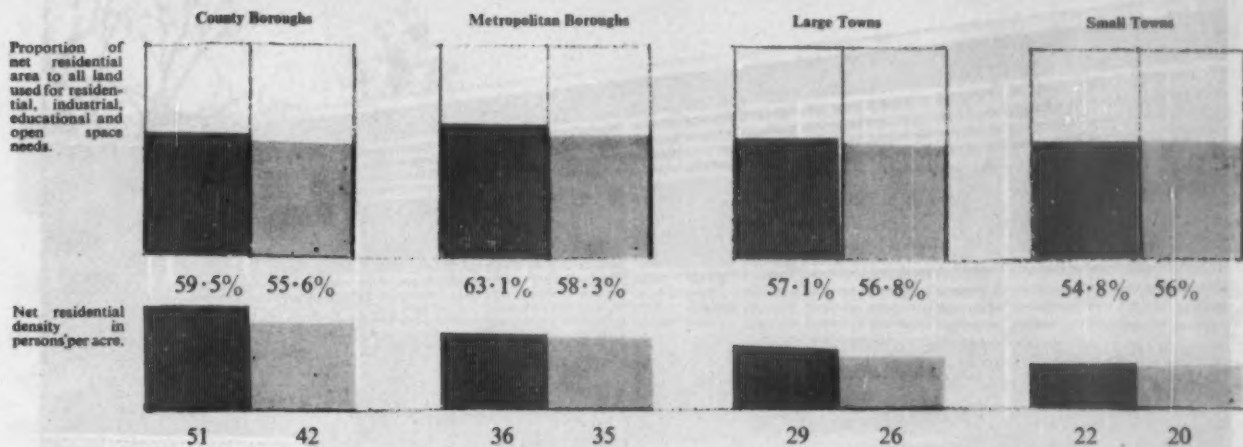
The turn of the century saw the garden city movement. This attributed many virtues to low density, and in some cases inspired first-rate residential development. The acceptance of the standard of density of around 8/12 houses per acre by almost all plans under the 1932 Town Planning Act brought the inevitable reaction from a minority: the "high density return to the city" movement, which, intellectual in its concept, and with virtually no extensive practical examples to illustrate its idea, is still pioneering—but making headway.

### Land Resources

One of the arguments used by this latter group was that this country, small and overcrowded, could not afford the land on which to build dwellings at the low densities accepted, and second that "sprawl" was itself a serious evil.

First let us examine the extent of the acceptance of low density. The Ministry of Housing and Local Government has analysed the Development Plans submitted and states that approximately 500,000 acres of land are required for the total urban needs over the next 20 years. In the more densely populated areas and small towns this increase is accounted for as shown in the diagrams N below:

In these diagrams, the **DARKER** tone represents a proportion of residential land (top) and densities (bottom) of various types of town at the time of the survey, and the **LIGHTER** tone those proposed in their development plans. The trend is towards reducing densities, irrespective of the densities existing at the time of survey. In no case is there a proposal to increase the net residential densities. The interesting fact emerging is that despite a decrease in residential density, the proportion of land required for this type of development also decreases, thus giving a greater proportional increase in the land requirements of industry, education and open space needs.



From these figures, we see that the average net density in built-up areas ranges from 51 to 22 persons per acre, and that residential development accounts for less than half of the urban land uses. The diagrams also illustrate the fact that any increase in residential density would not reduce urban land requirements by the amount which might have been suggested. It is clear that, quite apart from housing, land is required in order to improve facilities for urban life.

The decrease in density proposed by development plans is only very slight and, having regard to the average existing residential densities in these areas, there may be opportunities for the redistribution of population within the present urban development. The general trend is always towards the reduction of residential densities, and even where densities are low, they tend to become lower.

This decrease is having effect on the land required for building, and the influence of this on agricultural resources was discussed by Dr. Wibberley at the Town and Country Planning Association conference in London in 1957. Figures from his paper entitled "Planning and Agriculture" show that although the percentage of the total land area of England and Wales used for urban purposes rose from 5.4 per cent in 1900 to 9.7 per cent in 1950, the effect of this on land used for agriculture and woodland was only a reduction in area from 88.7 per cent to 86.6 per cent. Thus the effect of the development of new urban areas is not as extensive as might be expected.

The demand for land for urban purposes appears to be about 30,000 acres per year. This does not seem prohibitive, provided it is not continued over a prolonged period. It is evident however that while the quantity of land required for urban development may not be excessive, the selection of the type of land to be used for this development is im-

portant. In our view therefore as an argument to increase residential densities, conservation of land on a national basis is not a particularly strong one in itself.

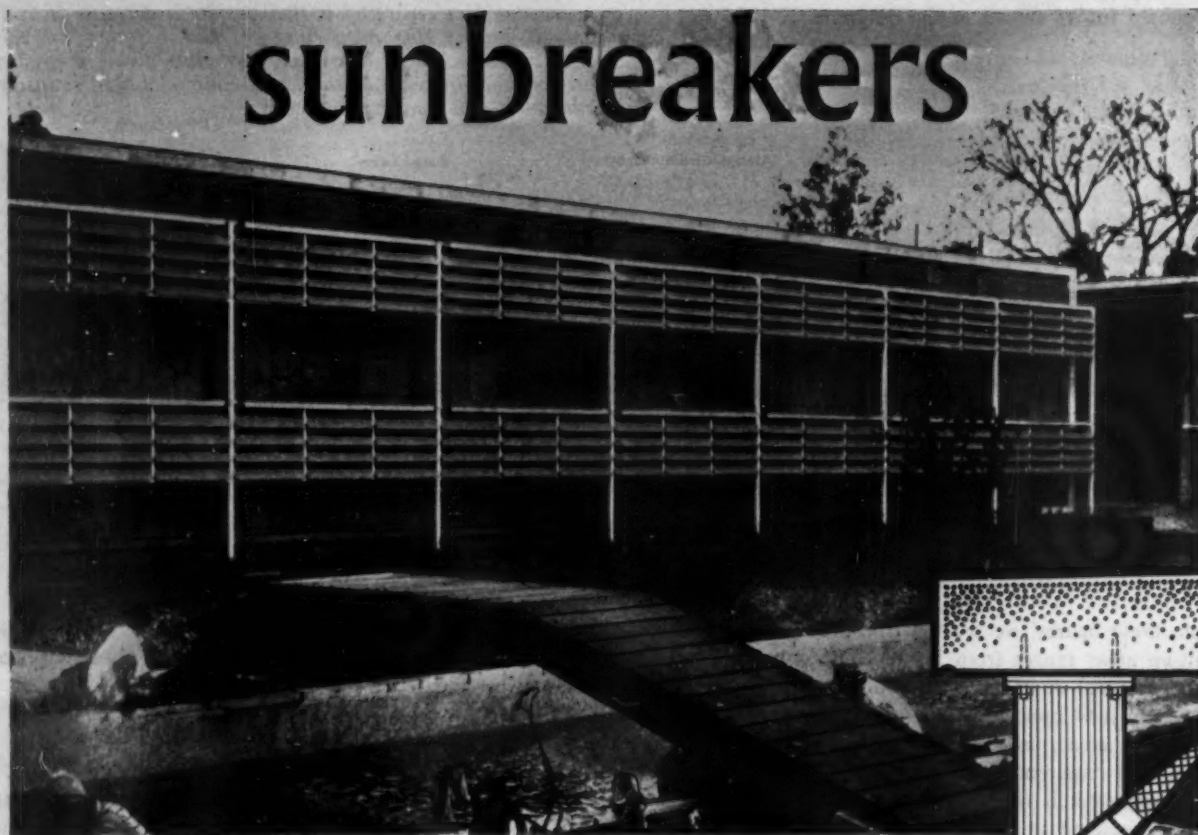
#### The Next Stage

It may be said that present planning technique is based on retaining the good and rejecting the bad in nineteenth century environment. The Garden City movement was the outcome in a railway age of attempts to tackle the sanitary problems of congested cities. The Garden City idea is good in itself, but it must be developed further, for a form developed fifty years ago is not necessarily valid for all time.

The feature of our time is the asset of power of mobility. At present we are probably in a transitional period when we are still caught in the spell of the novelty of the new-found mobility. We may however have to discipline ourselves if the massive requirements of full-scale mobility are not to over-shadow other community assets. Even if such public self-control is achieved it will not diminish the importance of recognising that the asset of mobility is spoilt by urban spread.

It does look as if the pattern for the future should be that emphasis should be put on making our towns into a collection of urban nuclei, each on a comfortable livable scale. Over-large areas of one use, whether industry or commercial for instance, can be as bad as a large sprawl housing; future urban nuclei may well consist of a variety of uses for under modern conditions a return to the earlier tradition of mixed uses is becoming practicable once more. In a further article, we will follow up this review on residential density with a comparable study on how our conclusions on housing can apply to other types of development including multi-use zones.

# HOPE'S aluminium sunbreakers



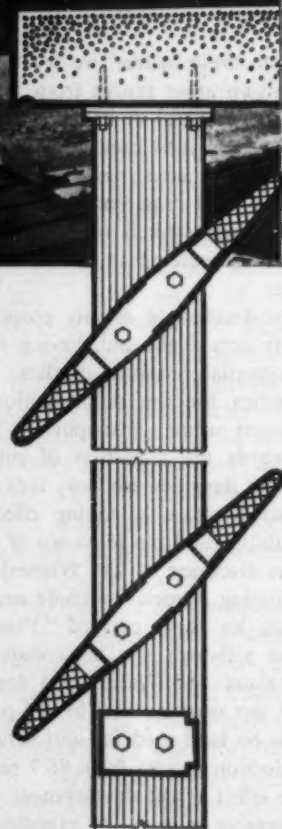
UNITED STATES EMBASSY, DJAKARTA, INDONESIA

*Architects: Raymond and Rado, New York.*

Aluminium sunbreakers in two tiers each 148 feet long are ranged on east and west elevations in a galvanized pressed steel framework 22' 0" high supported on mullions.

Sunbreakers are of aerofoil profile, lined with Fibreglass and set at 45°.

*One of many interesting installations of our metal sunbreakers in the tropics.*



**HOPE'S WINDOWS**  
*The Name Guarantees*



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## THE INDUSTRY

*This week Brian Grant describes laminated rooflights, air convectors, adjustable shelving, and a handbook on double glazing.*

**Rooflights**

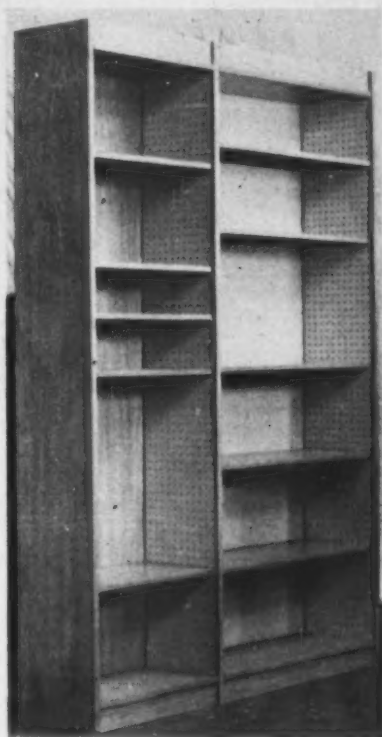
Plylite rooflights are made with a sloping upstand of reinforced plastics and a top light of Plyglass diffusing double glazing with an average U value of 0.7. The flanged upstand ( $U=0.55$ ) is double skinned and is either white or grey internally and black or green externally, no painting being necessary as the material is self-coloured. The glass is laid on a cushioned plastic channel and held in place with stainless steel clips. Standard trimmed opening sizes are 21, 29 and 45 in. square, or 29 by 42 and 29 by 56 in. (Plyglass Ltd., Edinburgh Way, Harlow, Essex.)

**Fan-assisted Convectors**

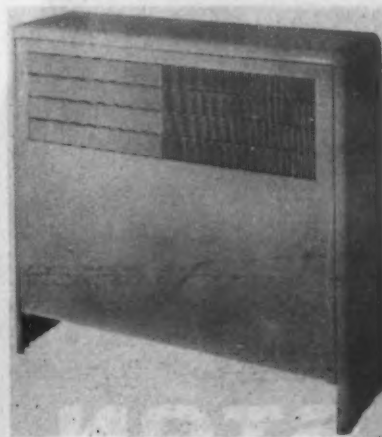
F. H. Biddle has recently announced a range of small Forceflo fan-assisted warm air convectors for use with hot water or steam and with outputs varying from 5,000 to 29,000 B.Th.U. per hour. The heat exchangers are  $\frac{1}{2}$  in. copper tube mould with extended type aluminium fins. Different models have one, two or three circulating fans with two speed motors which can, if required, be thermostatically controlled. Cabinets are stove enamelled and may be freestanding, recessed, or arranged for ceiling mounting, and they can also be adapted for attachment to fresh air inlets. (F. H. Biddle Ltd., 16, Upper Grosvenor Street, London, W.1.)

**Adjustable Shelving**

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Londonia shelving.



F. H. Biddle's Forceflo convector.

in standard heights of 6 and 7 ft. and in bay lengths of 2,  $2\frac{1}{2}$  and 3 ft. Standard shelf depths are 6,  $7\frac{1}{2}$ , 9 and 12 in., but deeper shelves can be made to order, as well as bays of non-standard width to make up any required overall length.

The standard bay has two uprights which are linked by locking shelves at top and bottom and at half height. Top and bottom shelves have a 3-in. return to form a cornice and plinth (see illustration) and the centre shelf is not adjustable. The remaining shelves, generally four, are fully adjustable with brass pegs and ferrules inserted into drillings in the uprights. Backs are 6-mm. plywood or  $\frac{1}{4}$ -in. hardboard or peg-board, and extension bays are added by using one upright, another back and the necessary shelves. Uprights and shelves are  $\frac{1}{2}$ -in. high density particle veneered in various finishes. Modifications such as sliding doors, glass fronts, sloping shelves for the display of magazines or publications, pigeon holes and vertical dividers are also available. (S.D.F. Equipments Ltd. (Londonia Division), Conlan Street, London, W.10.)

**Improved Methods of Glazing**

Pilkingtons have just issued an excellent handbook called *Daylight with Insulation*, by T. A. Markus, A.R.I.B.A. It is a detailed survey of the benefits of double glazing and sets out straightforward methods for calculating heat losses through single, double and multiple glazing, and also deals with sound insulation, daylighting, heat transfer and the prevention of condensation in the air space of double glazing.

The savings to be made by the use of double glazing are considerable and Mr. Markus quotes a factory example where 40,000 square feet of rooflights when double glazed could show an annual saving of £1,030 in fuel bills and reduced size of heating plant. Subtracting the cost of the double glazing (spread over 15 years at 6 per cent) the net annual saving comes out at £413, which seems a worthwhile figure. The handbook is well produced—to A4 size—and it is interesting to note that the fashionable highly glazed cover has a matt patch in the top right hand corner on which it is easy to put an office filing reference. (Pilkington Bros. Ltd., St. Helens, Lancs.)

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*The Vondelpark, Amsterdam.*

## LANDSCAPING THE WORLD: The 7th Congress of the International Federation of Landscape Architects at Amsterdam this summer, reported by F. P. Tindall

The theme of this congress was the *Relationship of Landscape Architecture to allied professions*. It was attended by 197 delegates, from 25 countries, the Dutch, Western German, English and American being the most numerous.

G. A. Jellicoe, the Honorary President, opened the congress and provided its framework in a witty paper entitled *A Table for Eight*. To this table he invited the following: the Philosopher, essential to give guidance to the planners and architects on the quickening evolution of human society; the Town Planner, whose effect on the community can be more beneficial or more devastating than any of the others; the Horticulturist, who provides the scientific basis and the supply of plants; the Engineer, whose works, unless co-ordinated with the others, overwhelm all; the Architect, an artist, concerned primarily with geometry and creating something beyond the realm of natural laws formulated by the scientists; the Landscape Architect, concerned primarily with organic form, who is complementary to the architect; the Sculptor, and finally the Painter.

Only by co-operation could these rise above the limitations of their individual specialisations, and Jellicoe's message was that these

eight professions must be assembled round a single table when any large project is conceived.

Lewis Mumford, as philosopher-planner spoke on *The Social Function of Open Spaces* and in the strongest terms of the need to provide for increased leisure. "If the emancipation from incessant toil is not to become a curse, a whole series of alternatives to the sedatives and anaesthetic of locomotion now being offered, must be created," he said. "The historic aristocracies when not engaged in senseless violence, devoted their energies to the audacious transformation of the whole landscape."

"Nothing less than a whole region, the larger part of which is in a state of natural growth and cultivation, will suffice to meet the needs of our new style recreation, open to the larger part of the population."

He said the most important public task, around every growing urban centre, and far beyond, is to reserve permanent open areas, capable of being maintained for agriculture, horticulture, and related rural industries. These areas must be established in such a fashion as to prevent the coalescence of one urban unit with another.

"Within its metropolitan area, this has been

the notable accomplishment of Stockholm. Though the provision of urban green belts in part meets our new requirements, we must now think not of green belts but of a permanent green matrix, dedicated to rural uses whether it comes under public control or remains in private hands."

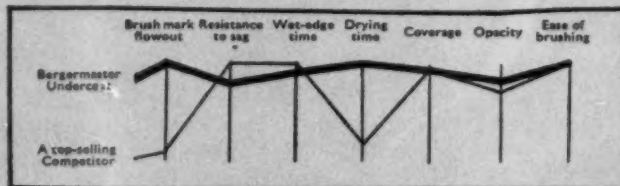
"For weekend recreation, the whole regional landscape has become, in fact, the landscape park." That area is far too large to acquire for park purposes alone; and its upkeep, if solely under state or municipal control, would overburden the largest budget. But by firm legal regulation, the land may be zoned permanently for rural uses in a fashion that will maintain its recreational value, provided both highway system and recreational facilities are planned so as to disperse the transient population of visitors.

"The new task for the landscape architect is to articulate the whole landscape so that every part of it may serve for recreation." Besides helping to stabilise agricultural land uses by zoning, so that it will not, without public authorisation, be used for residential or industrial building, the task of the landscape architect will be to design footpaths, picnicking grounds, pedestrian pleasures along river fronts, beaches, and woodland



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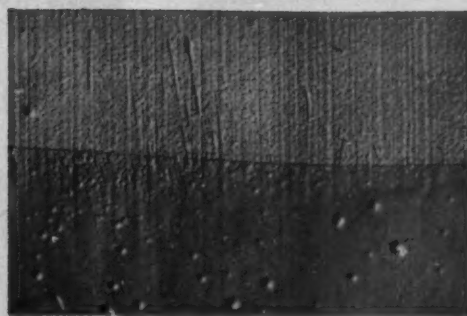
A good one, free consultation and assistance with specification to site. Architects who aim to mix white from two spare Bergermaster blacks can call the Architectural Service Department for a snap judgement on their prospects. Books of divisible colour specimens, specifications and the like are readily available. Supply is now fast and dependable.



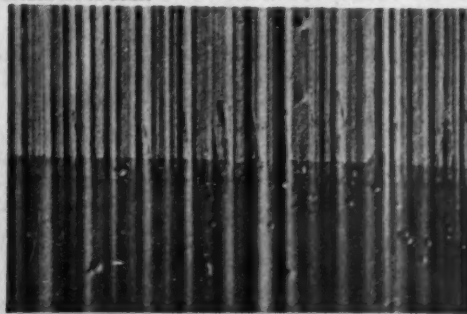
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## LANDSCAPING continued



*Private housing at Berkeley, California, co-ordinated by Lawrence Halprin.*

groves, in such a fashion as to give public access to every part of the rural scene, without undue disturbance to the daily round of life. One must think of continuous strips of public land weaving through the whole landscape and make it usually accessible to both nearby residents and holiday visitors.

"There is the beginning of this new process of using the whole landscape as a recreational facility in the layout of bicycle paths in the Netherlands; and there remains in certain parts of England, as a residue from a quite different era, a system of public footpaths over hill and dale, through field and wood, that needs only to be broadened into somewhat wider strips, no more than twenty or sometimes fifty feet, to provide amply for public needs without encroaching too heavily on agricultural uses."

"If our rational object is to disperse traffic and avoid congestion, we must round out our highway system, not by building more speedways, but by laying out or rehabilitating minor roads designed for just the opposite purpose; namely to tempt him to slow down, to stretch his legs and relax, to spend more time in enjoying the natural beauties near at hand, and less time in trying to reach some more distant point where thousands of other motor cars will converge."

"Our ability to turn the whole regional

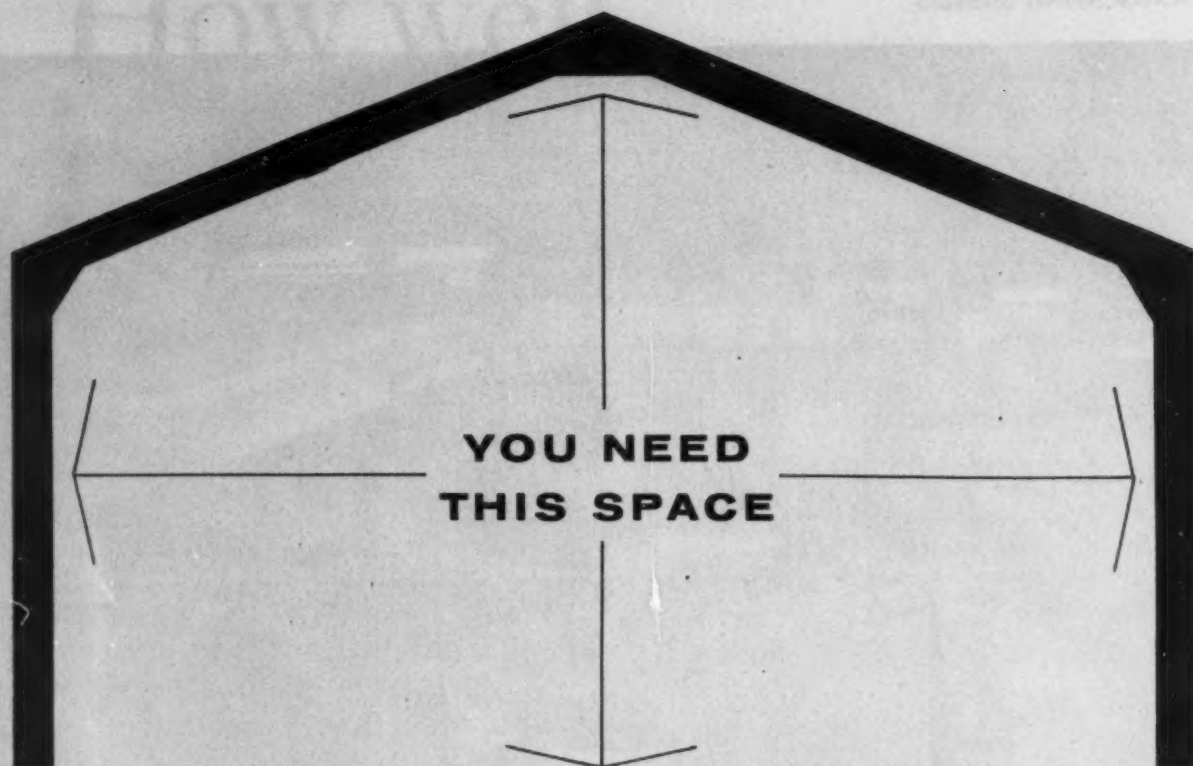
landscape into a collective park, with its recreation facilities dispersed and easy to reach, will be determined by the success of public authorities in making misused or untidy parts of the landscape more attractive, and by setting aside as public recreation grounds a sufficient number of small areas to prevent any congestion or over-use in any particular spot. The government might well offer subsidies to individual farmers and landowners for participating in larger public landscape schemes, as well as by paying outright for widened rights of way and providing the gates and stiles and fences needed to keep the urban visitor within bounds."

Turning to the city itself Mumford said: "The problem of the archetypal suburb today is to trade some of its excessive biological space for social space": that of the congested city is just the opposite, it must introduce into its overbuilt quarters sunlight, fresh air, private gardens, public squares and pedestrian malls, which will both fulfil the social functions of the city and make it as favourable a place as was the older suburb for establishing a permanent home and bringing up children." The first step in making our older cities habitable is to reduce their residential densities, replacing decayed areas now occupied at a density of 200 to 500 persons per acre with housing that will permit parks

and gardens as an integral part of the design, at densities not higher than a hundred, or at most, in quarters for childless people, of 125 persons per acre.

"The one great requirement for open spaces in urban centres is to insulate them from the fumes, the noise, and the distracting movement of motor traffic. All fresh schemes for both open spaces and for traffic, to be worthy of approval, must separate the pedestrian completely from the motor car. In the cities of the future, ribbons of green must run through every quarter, forming a continuous web of garden and mall, widening at the edge of the city into protective green belts, so that landscape and garden will become an integral part of urban no less than regional life." Lawrence Halprin (U.S.A.) whose paper was read for him, and Peter Shephard both stressed the part of the landscape architect as a designer and everyone agreed with Professor Cabral of Portugal that the landscape architect was a separate profession requiring university training. As Peter Shephard put it, landscape architecture is a continuation of architecture by other means.

Halprin listed the attributes that landscape architects can add to projects. "First the conceptualising of open space, within which buildings, roads, walls, even planting, are simply objects within the totality he

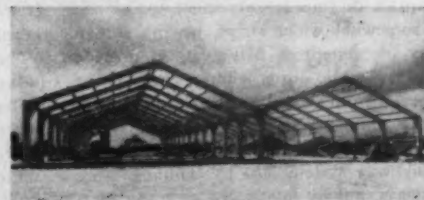


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## LANDSCAPING continued

must consider. Second, the designing of these spaces as meaningful, important and useful, as the medium within which life occurs."

Third, landscape architects see space as non-static, as a medium for motion—as a design in time as well as in space. Fourth, the special sympathy that landscape architects have for the world around them and its ecological relationships, and the rightness of natural elements and configurations. In the increasingly universalised world, architectural regionalism will prove to be a completely romantic fallacy, but the native and natural landscape remains varied. The landscape architect must strive to keep the existing genius of a place and resist the grouping of the world into uniformity with overtones of Hollywood.

Halprin closed his address with these words, "As designers we must make value judgments—our decisions of what is right and wrong for an area on a physical level determine for years to come its form and use. The decision, for example, of where a road centreline goes or how buildings should be grounded on a hillside, or what cuts and levels should be established, are influenced by facts and figures but more importantly be creative design decisions. To these decisions we can bring our best efforts as members of a team only if we are designers prepared to take projects into reality. As designers we start from the basically conservative basis of all biologists—a deep understanding of the value of the existing world around us and its meaning. But as forward-looking designers we also recognise the dynamics of change and the significance that landscape architecture has for guiding and encouraging change. This, in fact, can be our most important contribution to the planning team."

**Mrs. Gerda Collwitzer**, who edits "Garten und Landschaft," described gardens as a particular revealing of man's relationship to his environment. While science makes all things possible, gardens should be concentrates of the surrounding region, enriched by a variety of plants from ecologically related areas. If they are shaped according to natural conditions they will be equally beautiful and expressive whether they are new or old or even run wild—optimum growth is only obtained in an adequate plant community.

**Prof. Kuro Kaneko** of Japan defined landscape architecture as the moulding of nature as a functional space for living, constructed in and to abstract forms with natural materials which keep their fundamental forms as living things.

The congress was happy with this definition and decided to accept the invitation he extended to hold the 1964 Congress in Japan (The 1962 Congress being in Israel). A further contribution from West Germany was made by **Dr. W. Steidle** of Stuttgart. He gave some sound advice on the planting of roads. "In principle the outside of bends should be densely planted and the inside kept open, and on straight stretches smaller groups of plants should alternate

with open views on either side. Views on points or places of interest are vital to make driving less tiring. Planting should be used to indicate how a road continues beyond a crest. Where a road cuts through a wood the most important biological measure is to close the broken edge of the wood, and where the wood ends it is important that cars could be protected from strong gusts of side wind by gradually receding plantations. In order to stop erosion and falling rocks it is most important to cover rock ledges with turf sods and clay banks with brush-wood fascines to hold soil," as shown in the photograph of the Salzburg autobahn (below).



There were two fascinating papers on the creation and designing of new lands by **A. Volker** of the Netherlands and **Arthur Glickson** of Israel who stated that "The planning of a new landscape, where design cannot rely upon the anchorage of determining natural and historic features, must be measured against three criteria:

The cultural landscape should be planned on an ecological basis to ensure a high level of fertility.

The cultural landscape should be planned as an attractive, habitable environment suited to the standard of living required by the modern rural population of an industrialised country.

The cultural landscape should respond to the revolutionary increase in the leisure and transport facilities of the masses, and provide for recreation.

These aims could be realised in practice by:

1. Full consideration of the differences of soil quality and topography in the layout of plots, fields and forests, the crops to be cultivated, the size of farms, the tracing of roads and the shaping of built-up areas.
2. Preservation of untreated stretches of land as "ecological laboratories."
3. Development of wooded or green areas and of water covered areas, to create an ecological balance (especially to keep down pests), and as wind breaks and anti-erosion measures.
4. The planting of forests or green areas to improve physical and social climate and create protected open spaces.
5. Design of roads and treatment of roadsides with regard to the fact that the roadsides are the line of contact between the traveller and the landscape.
6. Reservation of areas as an amenity for temporary visitors.
7. Contrasts between enclosed and open landscapes, giving vistas and points of observation which open a view of the whole

pattern of the man-made landscape.

8. Differentiation of types of farms and cultivation according to their varying distance from the population centres.

9. In general, rational analysis and creative design, aiming at lucidity and wholeness.

Volker showed that while these were not the aims behind the earlier polders, the East Flevoland polder 1957 was following these concepts and delegates later toured the polders, where large areas of reclaimed land were being set aside, and indeed, were already used for recreation.

The Dutch seem to be imbued with two attitudes of mind, and it was everywhere apparent: for they are "A nation that lives building for the future," as the plaque of the great Zuider Zee dyke proclaims and they consider that a project which is not a commercial investment should only be judged by its quality as a permanent investment.

In spite of a great shortage of land, there is no overcrowding: everywhere there are common gardens on the Frankendaal principle; canals dug and planted as park-land; and innumerable urban greens laid out. A new city park of 2,230 acres has been created.

Everywhere there is impressive evidence of a comprehensive town planning programme—involving the preservation of historic buildings, the removal of office and commercial buildings to outer sites, the building of new industrial blocks and working areas, the provision of new roads and railways with integrated junctions, of new housing areas, parks and community buildings.

The landscape design is very thorough and makes good use of evergreen ground cover, using only a limited range of plants.

A good example of their work is the rose garden in the Vondelpark, Amsterdam. The



children's playgrounds here are beautifully detailed and constructed, and the City of Amsterdam employs an architect full-time on these. In the new housing areas it is customary for the front gardens to be designed as a street and laid out by the authorities. It costs 4 shillings per square metre to lay these out and the annual maintenance costs 1s. 2d. a square metre. This is recovered from the householders (about £2 a year) who incidentally find it much more economical than doing it themselves.

The Congress clearly defined the role of the landscape architect and the principles of their approach accepted with unanimity. For the town planner, the disturbing thing is that so few are being trained to take their place at the "tables of eight."



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# BASA

*Monthly supplement*

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## WE AND THEY

Every man is a part of a greater whole, that is, a part of society. Man and society are interdependent. Without man society would cease to exist; without society man would be unable to exist. Society has developed as a framework of behaviour designed so that within its limits man is able to live in harmony and yet which allows the self-realisation of the individual. As a part of society the individual has a responsibility both to himself and to society. He has the responsibility, for example, to acquire, in so far as he is able, the skills necessary for him to take his place as a useful member of society and subsequently to make use of his skills to the benefit of himself and of society.

Some of the basic skills which man learns include the means of communication. He learns to speak, to read and to write: the skills he needs in order to keep in touch with people and events around him. And yet even with the means of keeping in touch how often we seem to prefer to live in a vacuum, each man creating his own peninsula with the least possible link with the mainland. The Englishman's castle symbolises this attitude of mind, each man in his bay-windowed secluded semi, behind hedges, fences and lace curtains.

Just as this applies to individuals so does it all too often apply to groups of people. Sections of society drawn together by similar interests tend to look inwards on themselves and their chosen field of interest to the exclusion of other groups and interests. While at the same time knowledge is so vast today that most men are only capable of becoming proficient in certain aspects of it. Hence we have the need for specialisation. A high standard of efficiency is demanded if one is to keep pace with the twentieth century, which tends to make us even more concentrated in our approach. Added to this we have a situation where specialists are themselves specialising. For example, in the medical profession which is in itself a specialised branch of knowledge there are doctors who specialise in surgery and surgeons who themselves specialise in a particular branch of surgery.

With this background it is unfortunate that architects and architectural students have anyway a tendency towards isolationism. And yet what an impossible situation we should create if we allowed ourselves to lose touch with the people for whom we are designers. As it is there often exists between ourselves and the rest of society a chasm of misunderstanding and indifference.

With particular reference to our own position surely we should gain handsomely by overcoming the barriers between university departments, between different schools of architecture, between ourselves and the rest of the profession, and between ourselves and society. It is up to us to keep ourselves in step with our age so as to supply its needs.

## STUDENT'S VIEW

**Staff-Student Meeting at Leicester**  
 Norman Adams, BASA secretary of the Leicester School of Architecture, sent me the news that his school held their first known staff-student meeting at the end of last summer term. He writes that it was emphasised that the meeting should be run on a completely informal basis—both sides having an equal chance of saying what they thought, about the course as it stands today. There were far too many questions from both staff and students to cover in the time available, but he goes on to say that there was a most informative exchange of views, and for the last half an hour the meeting broke up into smaller groups around members of staff to air more personal grievances. It was found that the staff not only welcomed this meeting, but requested that more of them should be held.

An exchange of views such as this would obviously help to do away with misunderstandings and lead the way to closer co-operation between the staff and students at any school.

## St. George in the East

Nicholas Hawksmoot was the architect of several churches in the East End. Amongst them is the church of St. George in the East. Being a fan of Hawksmoot I recently visited them. St. George's was gutted by fire during the blitz. Only the shell and the tower remain as evidence of N.H.'s robust genius. This is architecture on the grand scale. Block is piled upon block to a great crescendo of noise and power. Recently church restoration and rebuilding has been in the news, so that I was particularly interested to find the work had just begun on the shell of St. George's. The remains of the eighteenth-century church are to be used to house a new community. A community because the former church is now to house a smaller church, a basement parish hall in the old crypt and in each corner of the old nave served by the four original circular staircases there are to be small flats one of which will serve as a rectory. The new parts will all be inside the old and will not detract from the original. It seems to me to be a great idea that will give the old church a new lease of life and



# What all the newest floors are floating on

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provide a centre of life out of the war-time destruction. I think old Nick would be pleased to see his church used in this way.

Other churches by Hawksmoor in the East End include Spitalfields and St. Anne's, Limehouse. The latter is particularly handy to that popular pub "The Prospect of Whitby," which you will find in Wapping High Street. Take a look at the warehouses while you are down that way—this is architecture.

#### Sir Basil Spence Bound for Hollywood?

That star of television and radio, popular on both sides of the Atlantic, has recently blossomed as a film starlet. Sir Basil is featured in one of the "Looking at Life" series of documentaries, a film about the redevelopment of Coventry City Centre since it was devastated during the last war. Sir Basil and the cathedral proved to be beautifully photogenic. Careful production and direction served to disguise much of the rest, while the foliage of the existing trees struggles to cover the stodgy buildings around which they are dotted.

And as the sun sinks slowly in the west we leave the growing collection of contemporary clichés that is Coventry—the leading example of central urban redevelopment in this country. Sometimes I get very depressed.

#### R.I.B.A. Library

The academic quiet of the Bannister-Fletcher Library is temporarily shattered while the library is being extended. Rare and precious books are being moved into the extension so as to make room for more new books. Genuine teak book shelves have been promised as has carpet on the floor. Was it my imagination or did I hear a member pray "Please God, don't let them use the standard RIBA off-brown acne splatter finish on the walls"?

#### Picasso Exhibition

The Tate is a popular place at the moment as people flock in to see the exhibition of over two hundred paintings by Picasso. I had to queue for half an hour before I was able to get in and once in was able for the most part only to see the back of the necks of other viewers. Sweat, people, and more sweat.

#### Outlet 2

I received a copy of the Bartlett Students' Magazine, and would like to offer my congratulations to those responsible for this venture. An interesting magazine in spite of limited production techniques.

#### RIBA Journal

Students often feel out of touch with the body of the profession. Might it not be a good idea if the Journal were made available to Probationers? Magazines are one of the ways in which we can keep informed.

*There are ten places left for the conference. Anyone interested should write to the Permanent Secretary, The Building Centre, Store Street, W.C.1.*

## SECOND BASA CONFERENCE ON ARCHITECTURAL EDUCATION to be held at BALLIOL COLLEGE, OXFORD 5 p.m. September 19 – 5 p.m. September 21, 1960



**Objective:** to examine the process of architectural education in relation to—general education, school facilities, the architect in practice, and architecture as a service; as a means of developing a design attitude.

If we are to create towns and buildings worthy of today, we must raise our standards of architecture. The only effective way of achieving higher standards is by educational reform. Students, educationists and the profession must work together to find an educational formula which will answer present-day needs. This is the object of the series of conferences organised by BASA of which the Oxford Conference is the second.

For the first time members of the profession have been invited to participate as Associate Members of BASA. They will contribute by giving papers and taking part in the discussions at the Conference and subsequently helping in BASA research.

The first Conference, held at Bristol, considered architectural education as a process of analysis, synthesis and production. It underlined basic weaknesses of analytical thoroughness and a general failure to equip the student with the right tools to use in the development of a design approach.

#### PROGRAMME

This Conference will begin with an analysis of the Bristol Conference by A. Malczewski, of Edinburgh University School of Architecture. In this way continuity will be maintained between the two.

This will be followed by the three principal papers

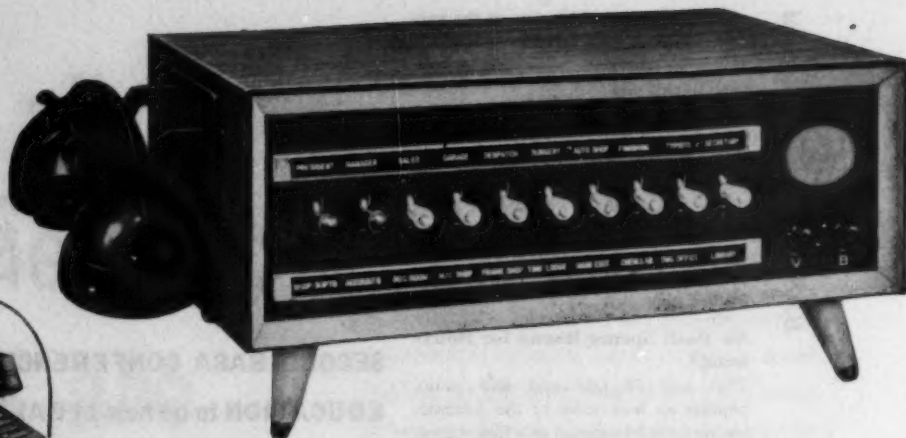
*The General Theory of Education*, by J. H. Burrows, B.Sc., of the London University Dept. of Extra Mural Studies.

*Architectural Education, with particular reference to the Technical Aspects*, by James Gowan, A.R.I.B.A.

*An Overall View of the Architect's Training*, by Professor Sir Leslie Martin, Ph.D., A.R.I.B.A.

The papers to the full conference will conclude with one on *The Historical Background of Architectural Education*, by Michael Cassidy of the Bartlett and Rodney Mace of the Regent Street Polytechnic. Thus a complete picture will be built which will be the background against which the more detailed

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studies will be made.

The papers to be given to the discussion groups:

*Trends in Architectural Practice*, by Kenneth Campbell, A.R.I.B.A.

*Trends in the Building Industry*, by Bruce Martin, A.R.I.B.A.

*Architects' Responsibilities*, by Mrs. Ruth Glass, of the Centre for Urban Studies, University College, London.

*Wider Aspects of Education*, by Christopher Musson, Cardiff School of Architecture, and Tony Monk, Bartlett,

past secretary of BASA.

*Examinations*, by Jeremy Mackay-Lewis, Liverpool, Past President of BASA, and Norman Adams and Kenneth Shone, Leicester School of Architects.

*Teaching Methods*, by Paul Ritter, M.C.D., B.A.R.C.H., A.R.I.B.A., A.M.P.T.I., and H. D. L. Williams, of the Plymouth School of Architecture.

These papers, some of which have been duplicated to obtain a greater range of opinion, are not so much intended to

give the answers to the problems they examine, which in some cases would be impossible as the subjects are too vast, but to underline the problems and suggest ways by which they can be further studied and related to the syllabus. Each discussion group will prepare a short report concluding with recommendations on future research and action for the consideration of the full conference. Thus an effective policy will be worked out for educational reform.

HILARY CHAMBERS, *President*

## EDUCATION:

### WHAT IS

### REQUIRED?

by W. L. Stuart

Mr. Stuart, who took his Diploma in Architecture at the Dundee School and studied Town Planning at Edinburgh, is now Fifth Year Studio Master at Leicester, where he is also the Lecturer in charge of Post-Graduate Studies.

Before he entered teaching he worked on schools, central areas and development work in local government, central department and private offices. Currently Mr. Stuart is working in practice on a R. C. Church group and school for Leicester in association with Edwards, Branson and Edwards, Leicester. I'd like to take this opportunity to thank Mr. Stuart for the article and say how much I am looking forward to hearing him speak at the Oxford Conference.—Editor.

The following article is prompted by two circumstances which at this stage appear fundamental to the continued development of BASA:

1. BASA is in danger of losing itself in the labyrinth of architectural education. Other agencies are equally involved, in particular the practising architect and the architect in teaching, but as these are taking no corporate action BASA is finding itself overloaded by burdens of research which are beyond its capacity.

2. All recent discussions on education, including BASA's, have been concerned with the requirements of entry to the educational system without any specific statement of what the system is intended to produce. The Oxford Conference in 1958 was something which most people regarded as a promise of great things to come, not only because an investigation of architectural education was overdue but also because the conference was a high level one. Unfortunately after two years the only results appear to be a number of tags—almost slogans now—which are bandied about here and there with varying degrees of apathy: two "A" level entry, 2-tier profession, post-graduate study, etc. Even if these subjects are of importance, even if the problems they raise are resolved, it does not follow that automatically a contribution will be made to the real subject matter of teaching, nor that the end product will be satisfactory, and this surely is the kernel of education. It is a relief therefore to observe that BASA has at last overcome its obsession with the word "society" as though some mystique were attached to it and has moved on to a potentially constructive phase in which subjects, teaching methods, etc., are to be investigated. But just how constructive can this phase be, and can BASA do it alone?

structure phase in which subjects, teaching methods, etc., are to be investigated. But just how constructive can this phase be, and can BASA do it alone?

### The Problem

Over a number of years the author has made a point of asking principals what they consider to be the most important attribute which they demand of the architect straight from college. The following three examples are *bona fide* replies by well-known architects. The quotations are verbatim:

"... he must be able to write a letter. ..."

"... he must have awareness. ..."

"... able to do working drawings, 'designers' are ten a penny. ..."

Some men answer that they prefer those who have been away from college long enough to have forgotten all that they learnt there. All very understandable, human nature being what it is, but at the same time bewildering to those involved in education, because at least two questions are raised which are worth a little consideration:

(a) What is expected by the profession of the college-trained architect?

(b) Who is responsible for deciding what is expected of him?

The energies of those concerned with education over the past two years have been directed more towards a reorganisation of the framework than towards a reappraisal of the content of the subject, and un-

doubtedly this work is very necessary and the results valuable (always assuming that there will eventually be results in terms of decision and action). Apparently BASA accepts that the framework is of secondary importance and that the time has now come to think about the meat on the skeleton. Very admirable except that such action seems rather like feeding an assembly line without knowing whether the intended result is to be a tank or a teapot. *A definition of the end product of the educational system is the nettle which no one is prepared to grasp.* No lead has been given by the R.I.B.A., the schools, BASA or anyone else, nor are there indications that any work is being done towards providing such a lead.

It may be argued that diversification is desirable and made possible by the autonomy of the schools, and indeed the Oxford Conference indicated that such trends are to be encouraged. Nevertheless, there is a basic task which all architects must be able to do for which their training must equip them and until this basic task is clarified there must be a limit to what can be achieved from isolated discussions on the content of teaching. (Incidentally it would be of interest to know how many schools have a 5-year programme designed in detail to fulfil a specified aim, and of value to compare the reasons which justify those aims.)

No inference should be drawn that the research proposed by BASA is considered to have no value. On the contrary it is reassuring to know that one organisation at least is concerned about the real aspects of the education problem. It is merely a question of whether these aspects can best be studied in this fractionised way.

### The architect in practice

In any deliberations on architectural education one of the constant omissions is an evaluation of the indifference, apathy and in some cases hostility of practising architects to the subject of education. Architects do not admit to these criticisms and consequently lip service is paid to the subject but just how many architects ever go near a school of architecture—even when a talk or exhibition has been arranged—or how many architects have any idea what is covered by the syllabus of their local school or architecture?

The reasons for this state of affairs are easy to understand if it is remembered that the origins of architectural education in this country lie in the time of master-and-lad professionalism when the lad provided the labour and the master in return provided his

instruction. Among its many attributes this system also had the great merit of creating a standard of sincere mutual interest and responsibility between the qualified and unqualified and as a corollary there was no wide gap to be bridged upon qualification as there is today. By encouraging the growth of schools of architecture the profession has created a situation in which practising architects not only do not participate in education but consider it to be something quite out of their field, something for which other people are responsible and therefore something which they can objectively praise, slam or be apathetic about. In many instances the indifference of architects to the student body is only exceeded by the extent of their complaints, usually made as though the matter were outside their sphere of activity and responsibility. In brief the structure of the profession has changed from one in which the architect in practice was actively engaged in education to one in which he actively disengages himself. Consequently we now have the ludicrous situation of two sections of the profession firmly entrenched in their respective zones and segregated by a barrier of paper diplomas.

A *rapprochement* is obviously necessary and it could very easily be achieved through the nearly moribund Allied Societies. The latter are dying, their *raison d'être* having no longer any validity, but since education originally was one of the affairs of the local societies it seems not unreasonable to expect that it could become so again. Obviously some cohesion and consistency would be essential but this is no great problem, and who knows, such a mission might be sufficient to revivify the societies.

It may be argued that the opinions of the practising architect are made known through various RIBA committees, but it is not true to say that these are really representative. These committees often consist of men who are already knowledgeable and making their single contributions to education. The knowledge to be sought lies with the mass of the profession. It is merely a matter of digging it out.

In addition to a general policy of gathering information and using it to formulate a contribution to discussions on education it is essential that every individual principal accepts that when a student leaves college his education is only beginning and that it is the responsibility of the profession to pick up where the schools left off. By the same token students also must accept this fact. (The present financial situation does not help matters; students leaving college are being paid salaries which they are clearly unable to substantiate

and employers very rightly feel aggrieved. Perhaps this situation might also be resolved as the outcome of a *rapprochement*.)

### The architect in teaching

After making allowances for the "refugees from practice" and the "shattering revelations" of the Cardiff questionnaire, let it be conceded that within the schools of architecture there must be a great deal of knowledge and experience which if co-ordinated could make a contribution to the reorganisation of architectural education. That no effort at co-ordination has been made by teaching members is a matter of great regret and the plain fact is that there is no mechanism whereby those in teaching can pool resources or even exchange ideas.

The schools plod away in their own ivory towers getting more and more remote from each other and, in some instances, remote from the practice of the subject for which they are trying to educate students. Until this year the M.o.E. has held an annual conference for teachers in architecture the main benefit from which was that it brought teachers together. Formally these courses lasted three days, were composed of 9 or 10 sessions each on different subjects (obviously of limited value, since it was impossible to summarise conclusions) and the contents of the course were not allowed to be made public. Not the most productive type of meeting but a point of contact none the less.

More recently there have been courses in specialist subjects for teachers but these are somewhat suspect. After all, what can really be gained formally or informally from a 1 or 2 day course on subjects like Cost or Heating & Vent.? What is required is an exhaustive inquiry by the teaching members of the profession similar to that which is being attempted by BASA. An inquiry which will attempt:

- (a) A definition of the end product of the educational system.
- (b) A reappraisal of existing subjects in terms of (a).
- (c) An examination of teaching methods in terms of (a) and (b).

It goes without saying that standards of entry must be improved, that logic and dispassionate thinking must be increased, that a methodological approach as compared with a computational one must be investigated, that costs, management, services and so on are all subjects to be more expertly integrated, etc. etc. But what of the sticky subjects—Theory, History, Aesthetics? Here is a field ripe for reappraisal, a field

in which the schools must already be rich in experience.

Clearly the time has come when these subjects cease to be taught in isolation. All three are part of the same subject and must be taught as one subject, a compound of interdependent sociological and technological facts. How this can best be done is another matter but until some reliable method of co-ordination is evolved the improvements being made elsewhere in the curricula can only serve to increase the present unbalance of real architectural understanding. This is a field of study beyond BASA and the practising architect. Several people in teaching are already working along new lines and many more have ideas; these resources should be increased and deepened by an organised and regular exchange of knowledge.

### Summary

1. Despite the Oxford Conference the RIBA has produced nothing very much with infinite caution.
2. BASA having got rid of its hot air, is now tackling the real subject and therefore facing a gigantic task.
3. The mass of architects are pretending that there is no problem in education—apart from the product of the schools.
4. The teaching members are doing nothing to disprove the Cardiff findings that they don't know their art from their elbow.

### Conclusions

1. The present method of reorganising architectural education from the intake level upwards is useless. The profession must state clearly what it requires of its educational system and the latter be organised to satisfy this requirement, not vice versa.
2. BASA might do well to reconsider its position to ensure that it is not moving into fields of study which ought to be investigated by other agencies.
3. Architectural education is a matter of concern to several agencies of which only the RIBA and BASA are taking action. The former unavoidably moves slowly owing to its reliance on a feed back of information from many sources, and BASA has limited sources of reference.
4. Architectural education cannot be reorganised constructively without the latent knowledge of the architect in practice and of the architect in teaching.
5. Taking the long view BASA and the RIBA might consider how this latent knowledge can be gathered quickly, and, most important of all, how it can be centralised, collated, and implemented.



BASA monthly supplement

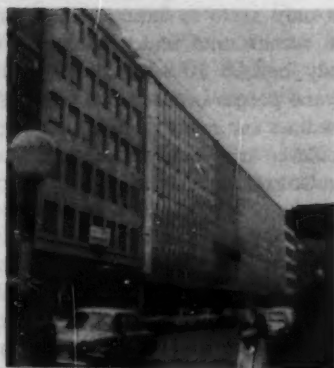


**Woolworth House, Marylebone; English Electric, Strand.** Here are a couple of cheesy ones to start with. Woolworth House looks like something out of one of the afternoon television programmes—lace curtains and window boxes, etc. English Electric have chosen a hefty wedge of mouse trap. "Let's all go down the Strand?"



**Shell, South Bank.** I could not resist this subtopian nightmare; variations on the bus stop and lamp post theme. In the background Shell have wrapped themselves around the Festival Hall. When will they learn that a repetition of the same window in this formless way breeds a monotonous domestic scale about as satisfactory as the suburban semi-detached estate?

## SOME RECENT BUILDINGS IN LONDON

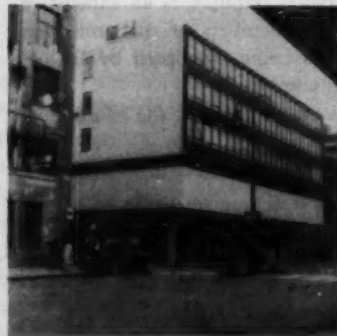


*Woolworth House*, R. Seifert & Associates.  
*English Electric*, Adams, Holden & Pearson.  
*Sanderson's*, Slater and Uren.  
*Castrol House*, Gollins, Melvin, Ward.  
*Peter Robinson's*, Denys Lasdun.  
*Shell House*, Easton & Robertson.  
*State House*, Trehearne & Norman Preston & Partners.  
*Thorn House*, Basil Spence & Partners.



**Sandersons, Berner Street; Castrol House, Marylebone.** This photograph shows Sanderson's Show Rooms in just about the worst possible way. The curtain wall looks everlasting and monotonous. Go and see this building though if you get the chance. An inner court floods light into a courtyard beneath the building which contains pleasant fountains, trees and mosaics. Especially effective on a hot dusty day in town. Inside there are many interesting spatial effects. It's a pity this interest doesn't show through the facade though.

I like Castrol House very much. Cleanly detailed it stands very impressively on the Marylebone Road, with enough of the inside showing to relieve the regularity of the curtain walling.



**Peter Robinson's Store, Strand.** This I like very much. It seems in scale with the street. It is cleanly detailed and neatly defines the shop from the offices above. This seems to radiate quiet confidence to me.

**State House, Holborn; Thorn House, St. Martin's Lane.** State House seems to me to lack the efficiency and confidence of Peter Robinson's. It is crude in appearance and is, I think, awkwardly proportioned. It does make use of the ground floor in the same way as Sanderson's but without the same liveliness.

I've heard Thorn House criticised for the way it stands out but I like this bold approach and the contrast which there is between Thorn and the streaky bacon in front.

working detail

LIGHTING: 22

LIGHT FITTINGS: THEATRE IN DUBLIN

*Michael Scott, architect (material supplied by Martin Reynolds)*

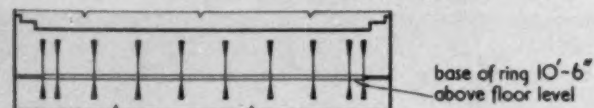
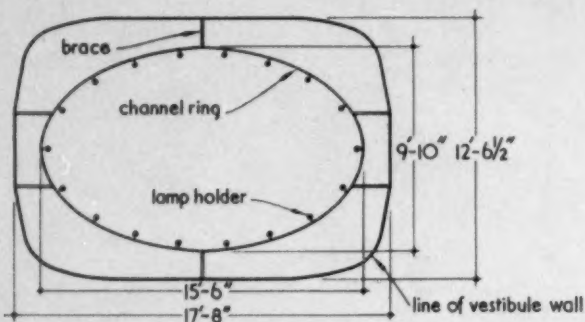
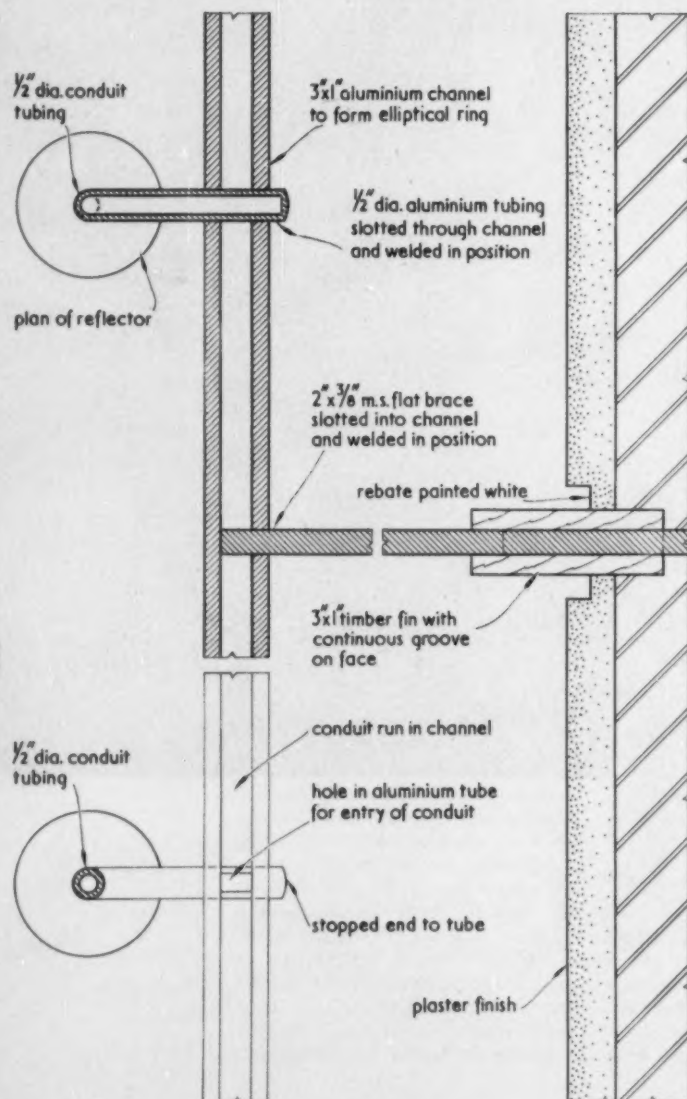
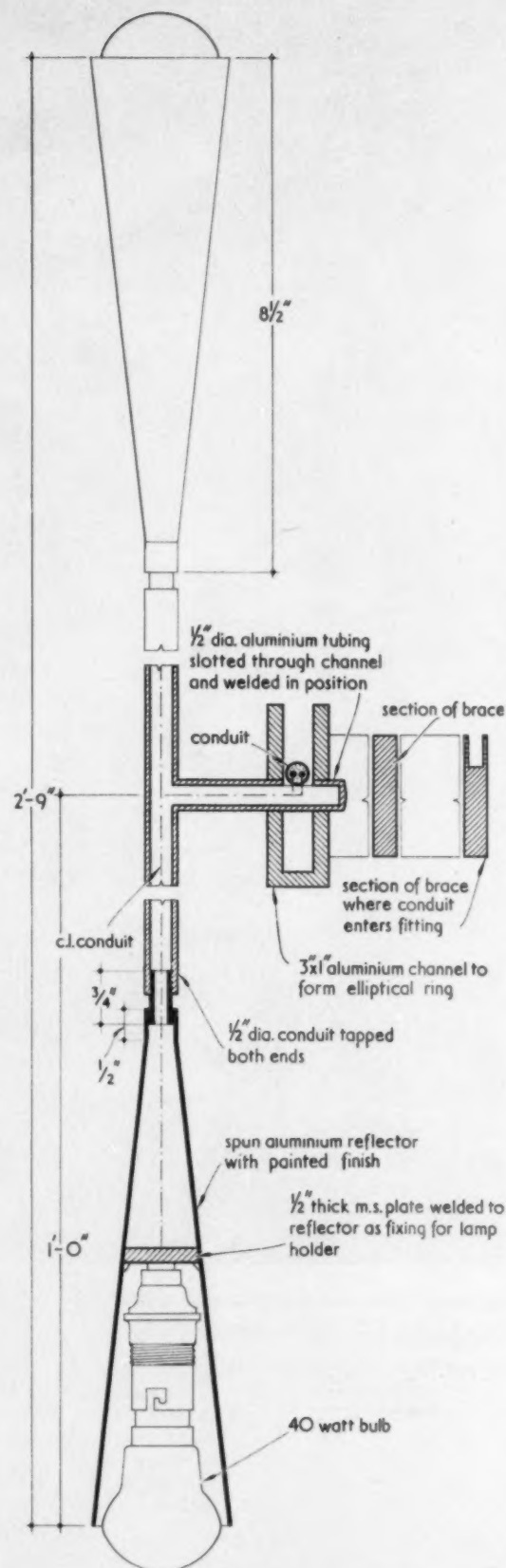


*An example of decorative lighting in which the mild steel elliptical ring, apart from supporting the fittings themselves, plays an important visual role.*

## working detail

## LIGHT FITTINGS: THEATRE IN DUBLIN

Michael Scott, architect (material supplied by Martin Reynolds)

ELEVATION. scale  $\frac{1}{8}''=1'-0''$ REFLECTED PLAN. scale  $\frac{1}{8}''=1'-0''$ SECTIONAL PLAN AND PLAN. scale  $\frac{3}{8}''$  full sizeSECTION AND ELEVATION. scale  $\frac{3}{8}''$  full size



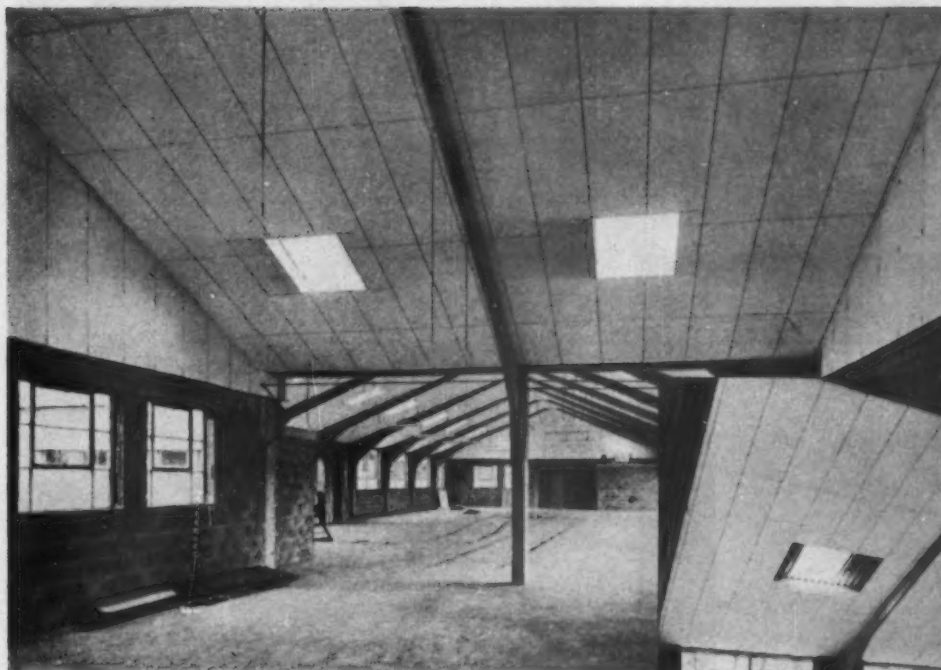
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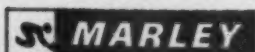


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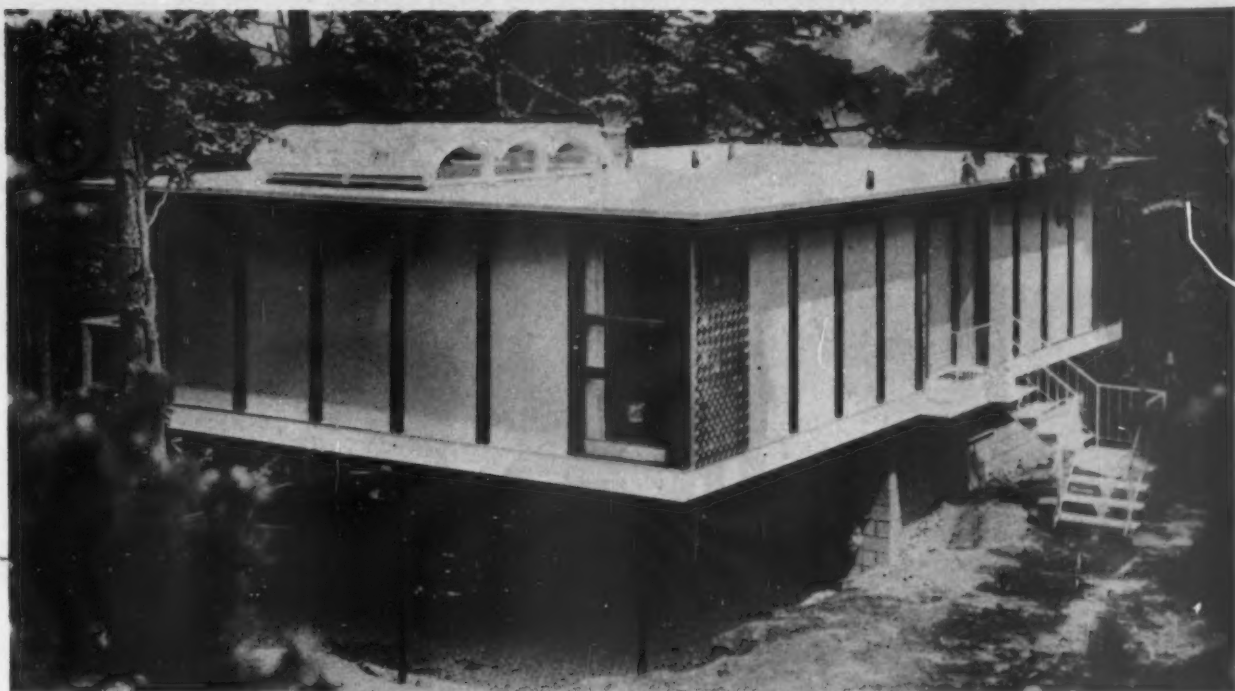
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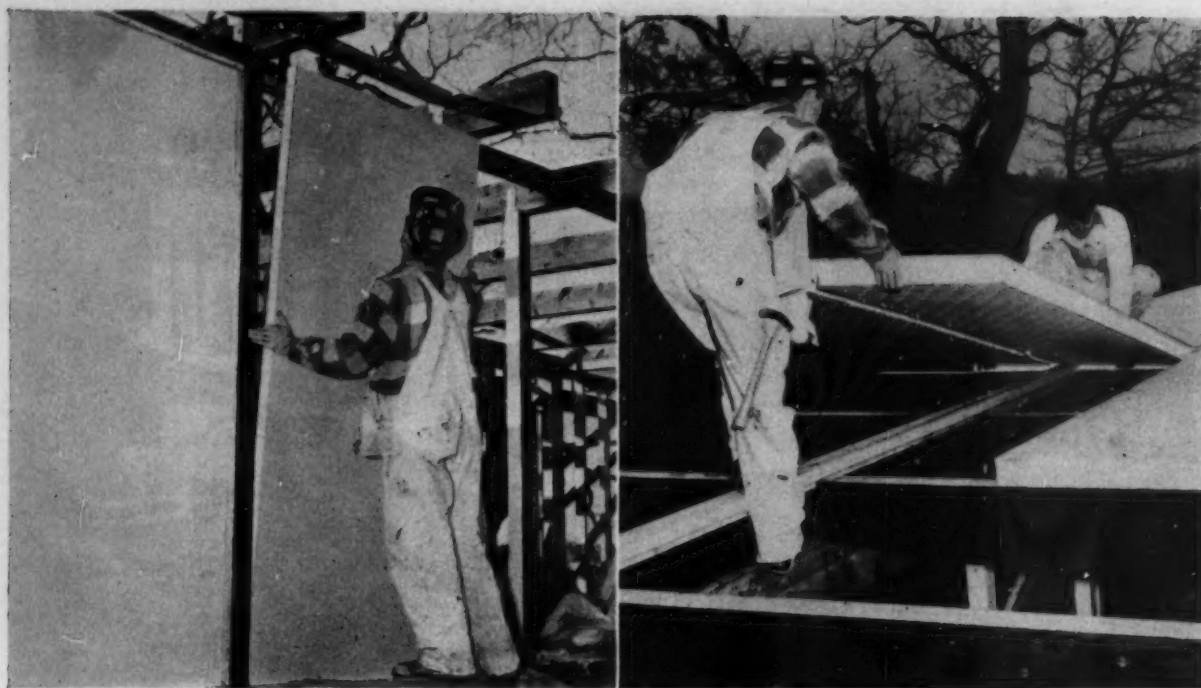
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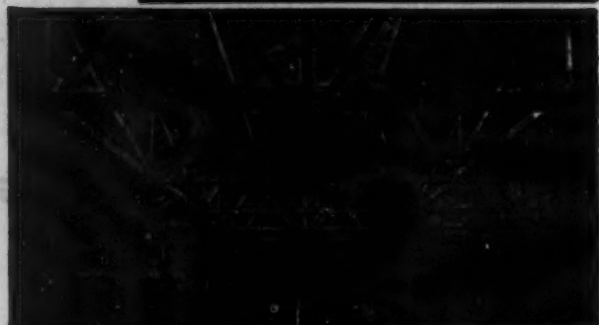
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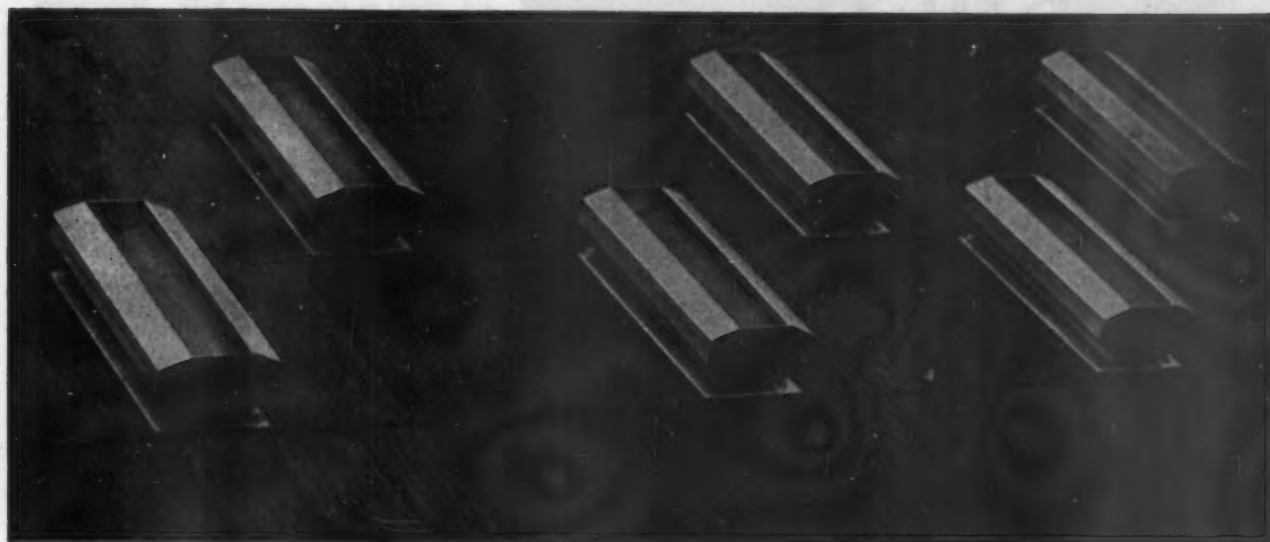
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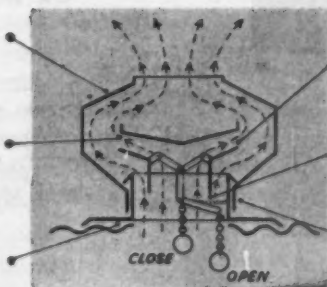
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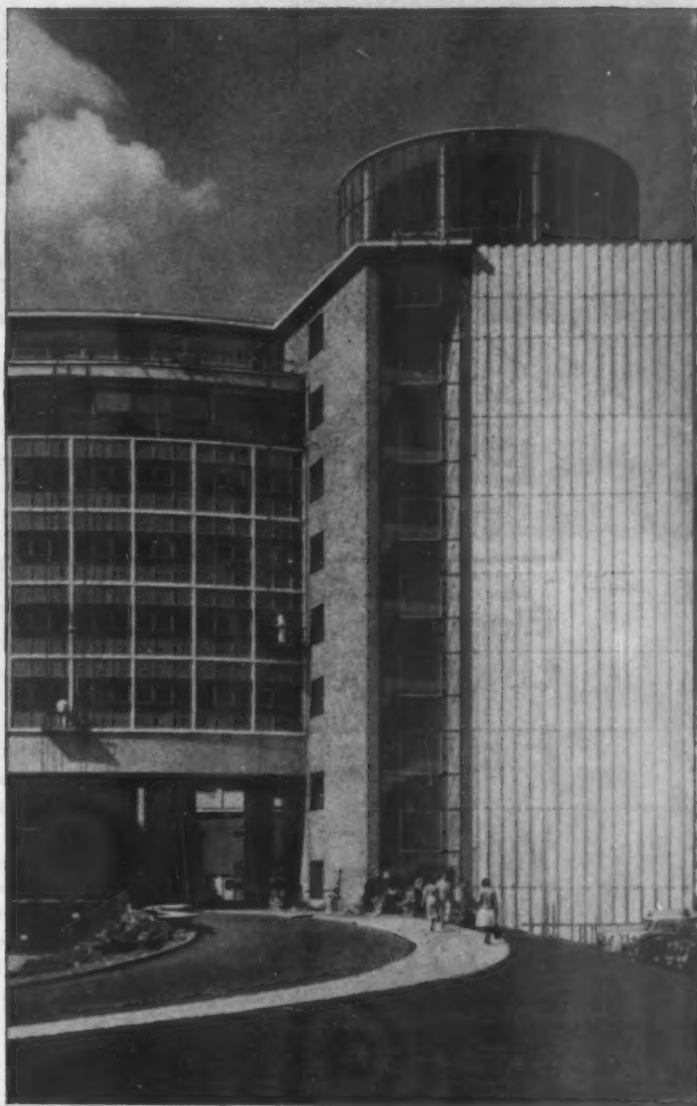
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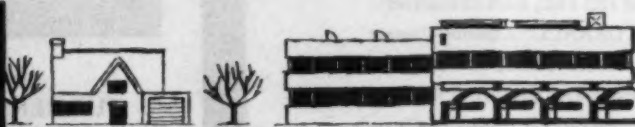
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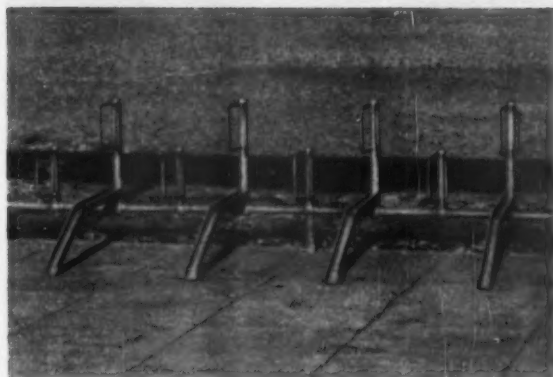


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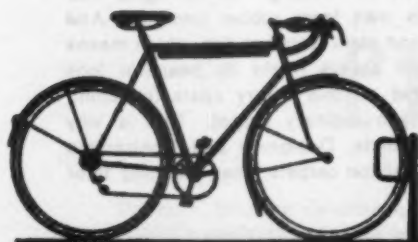
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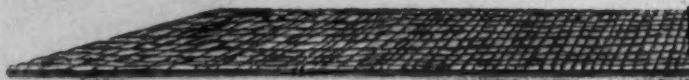
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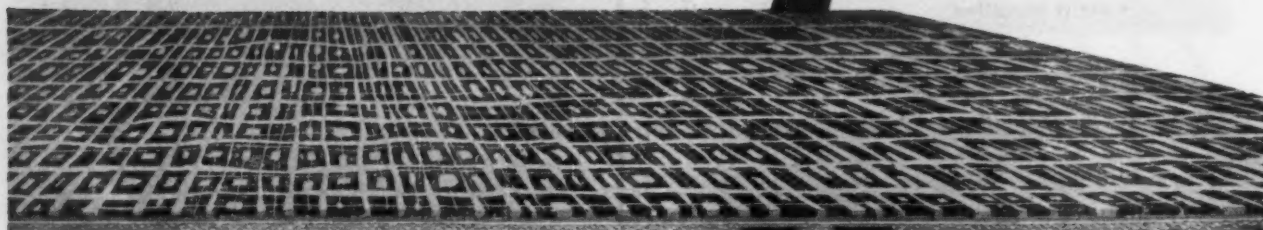
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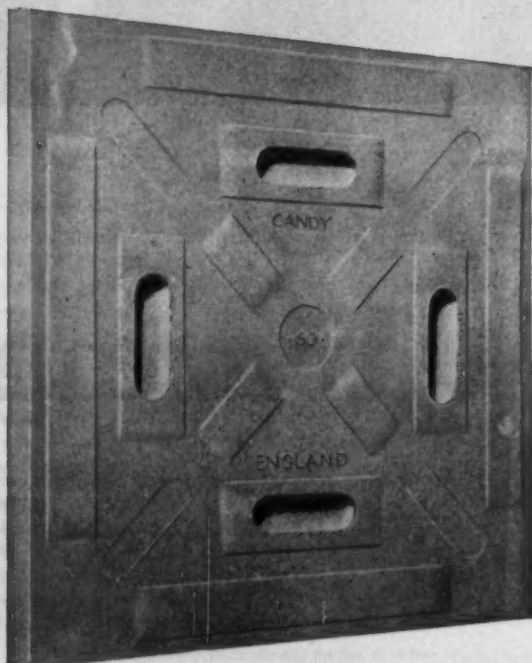
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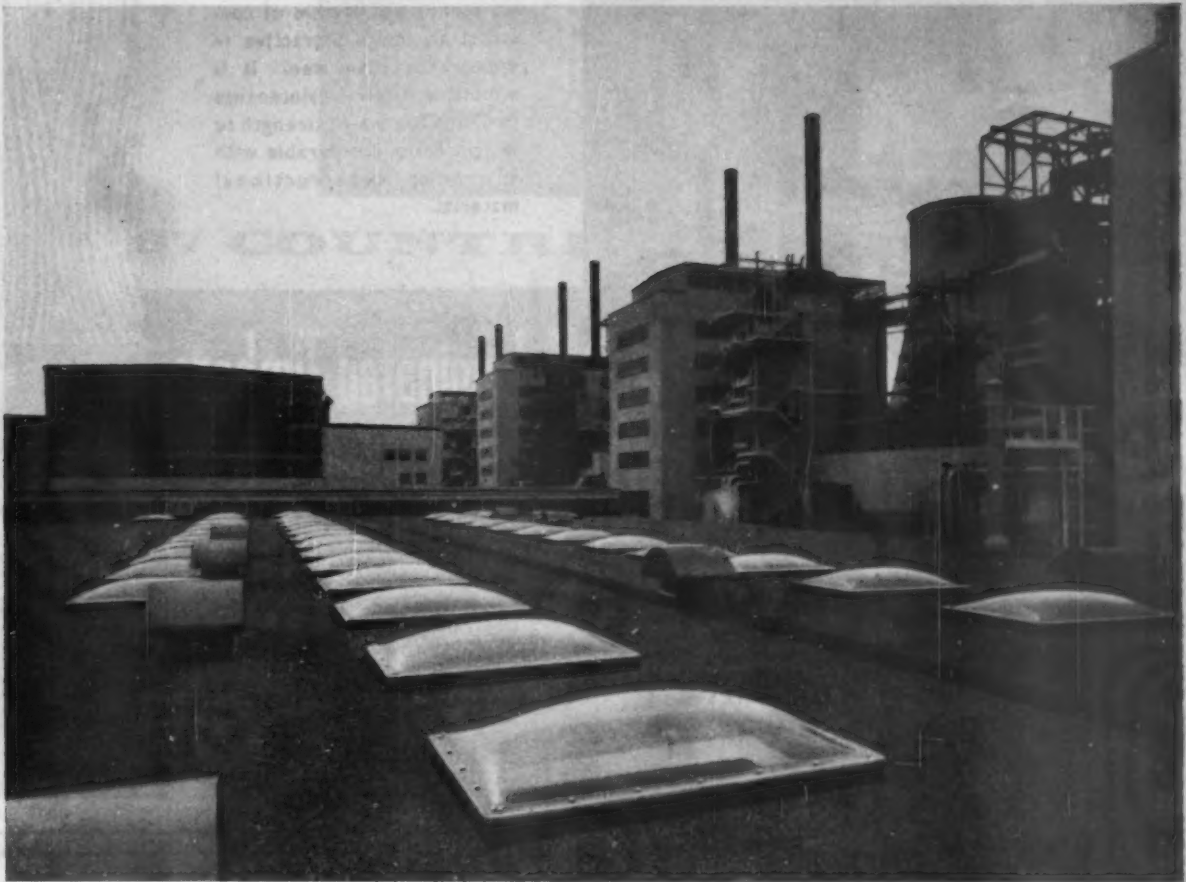
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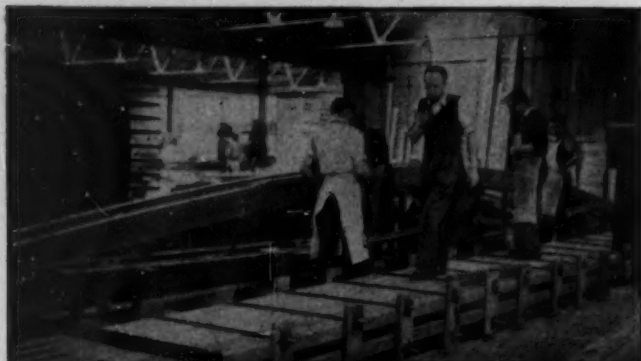
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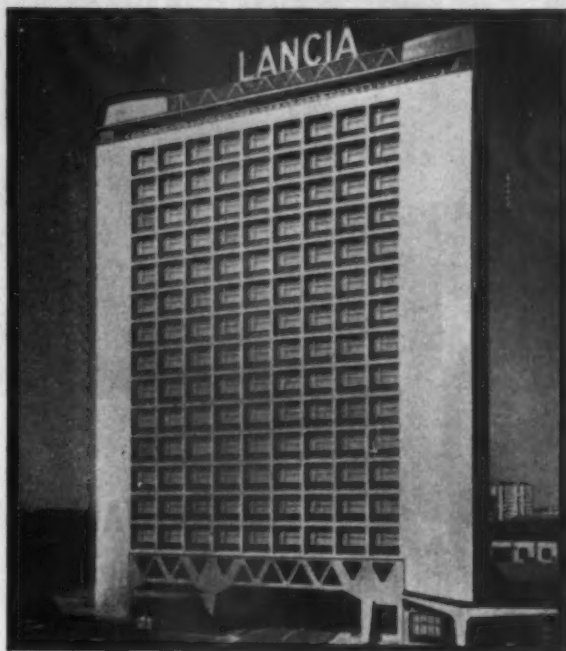


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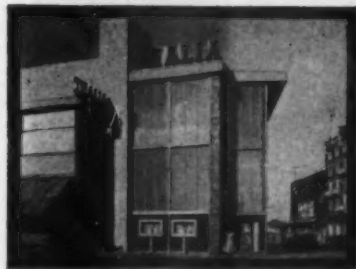
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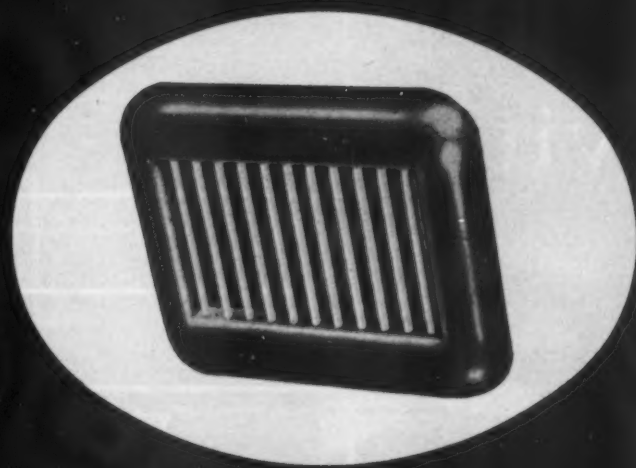
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AP 47



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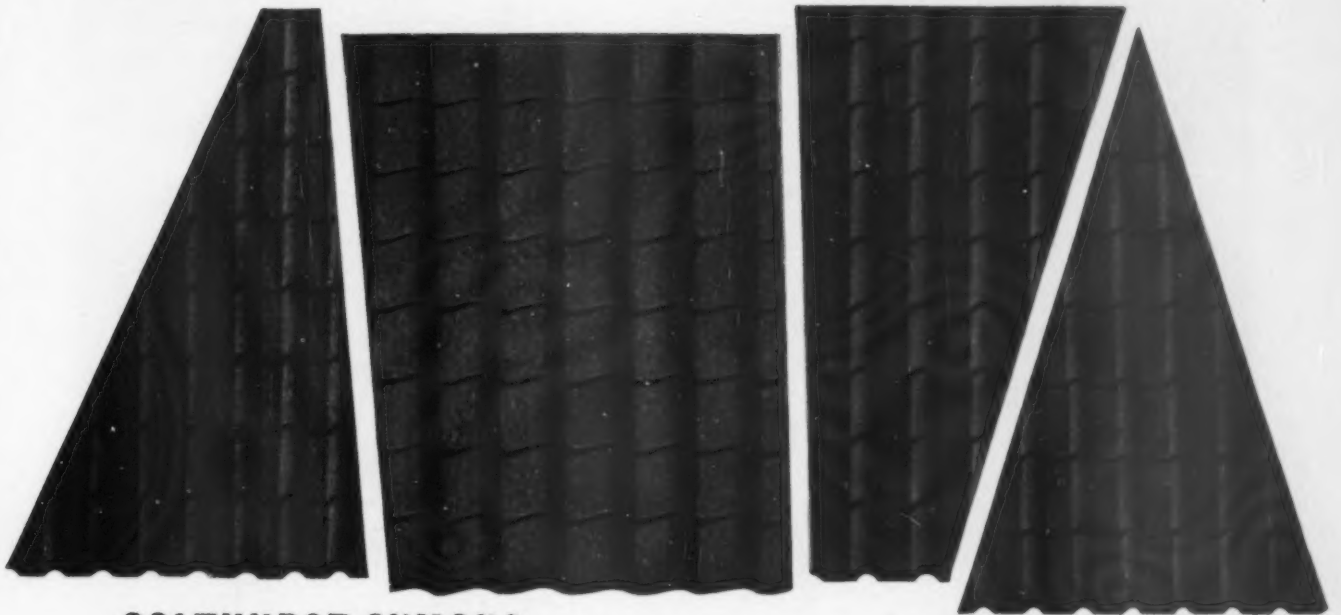
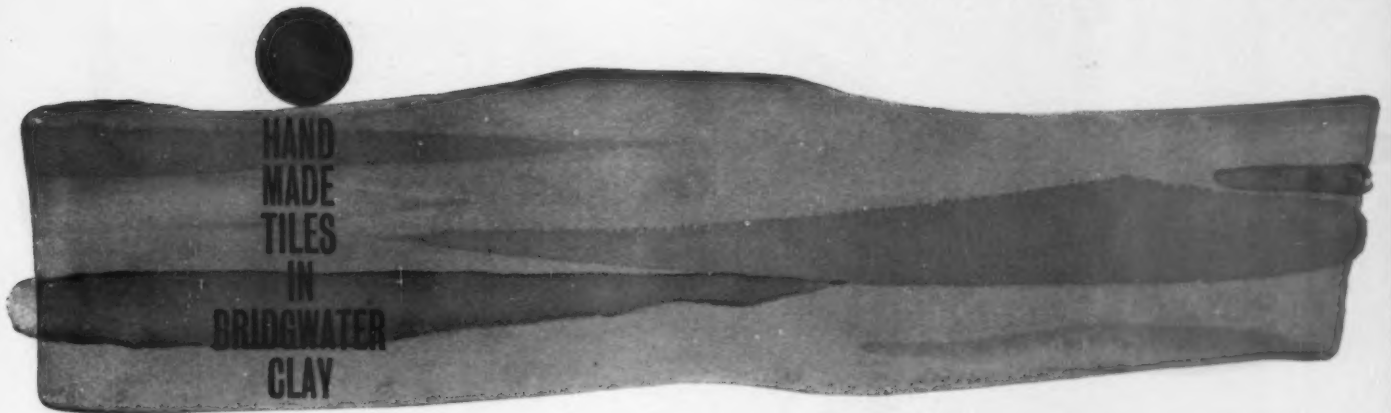
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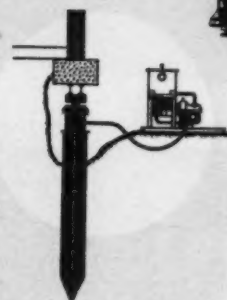
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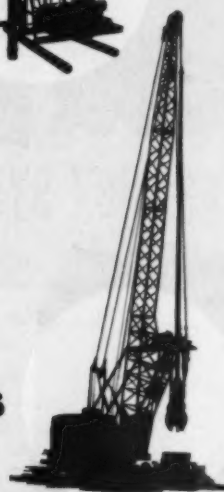
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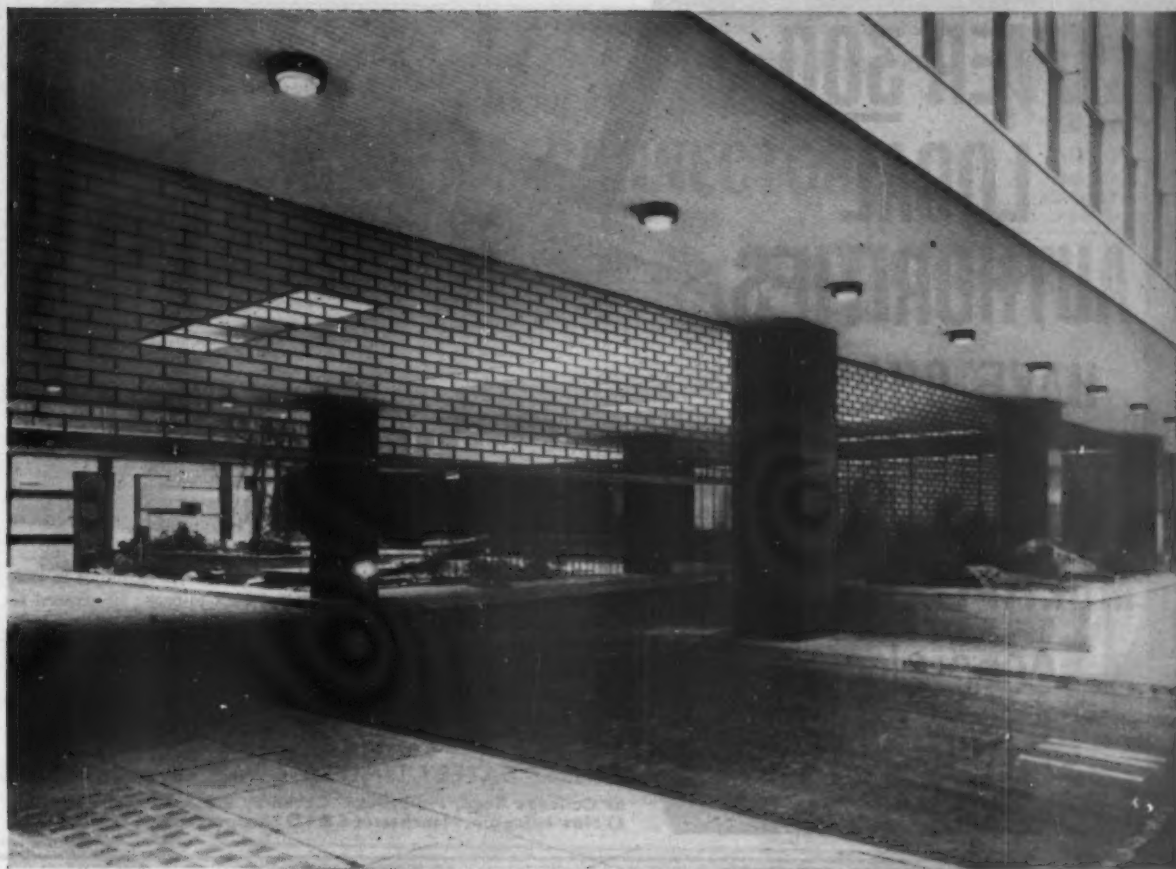
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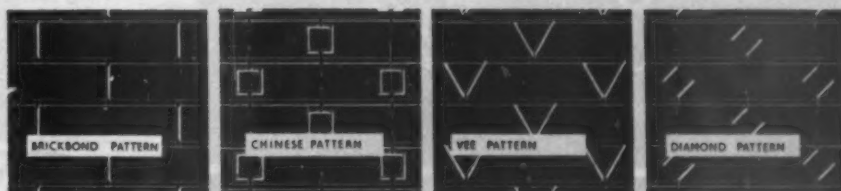
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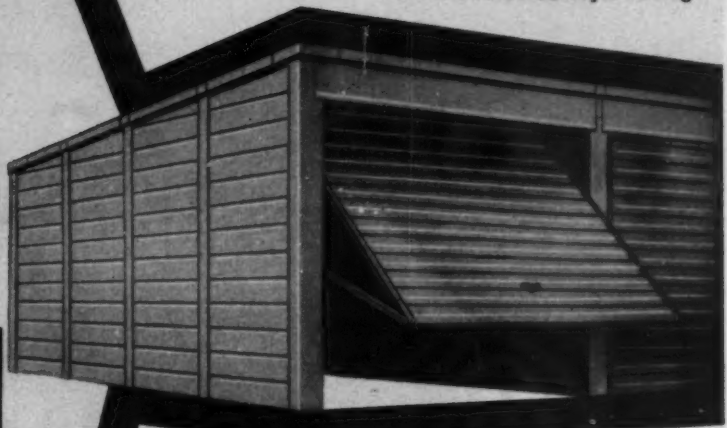


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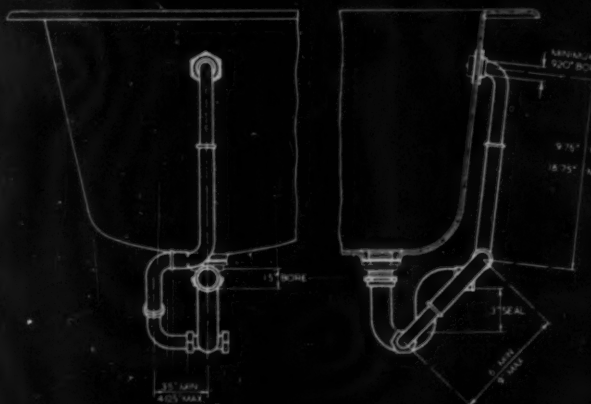
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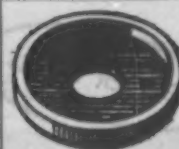
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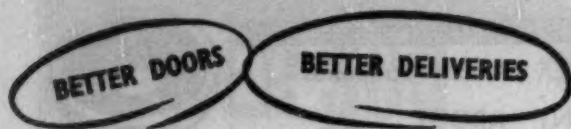
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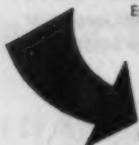
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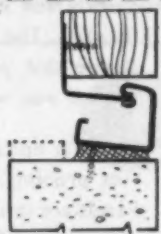
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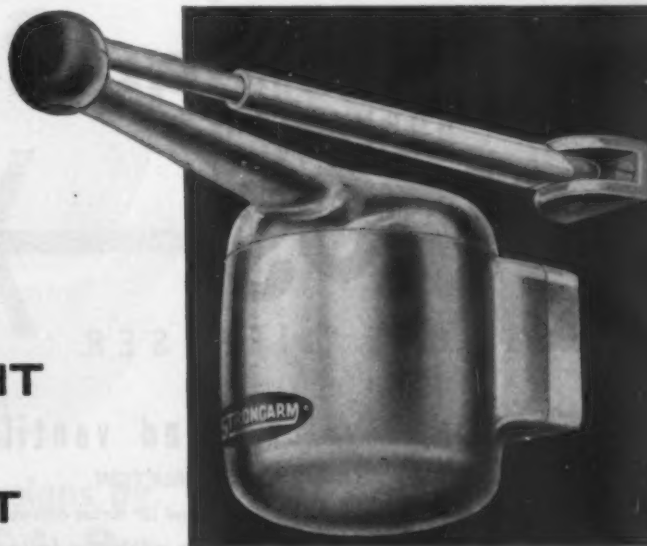
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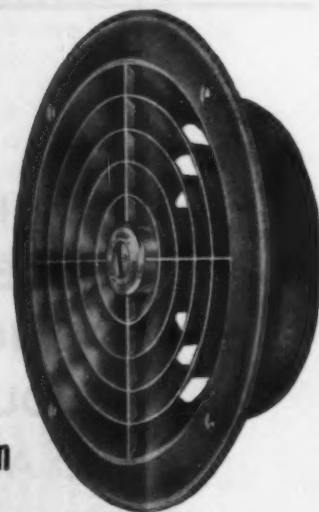
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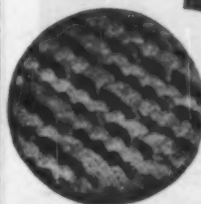
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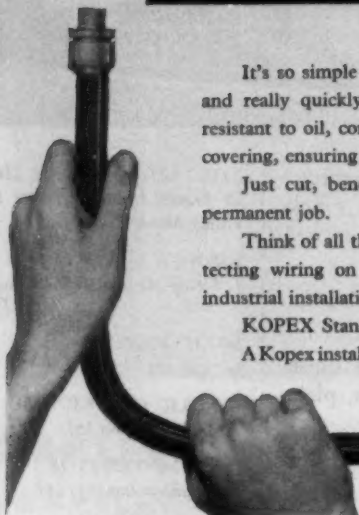
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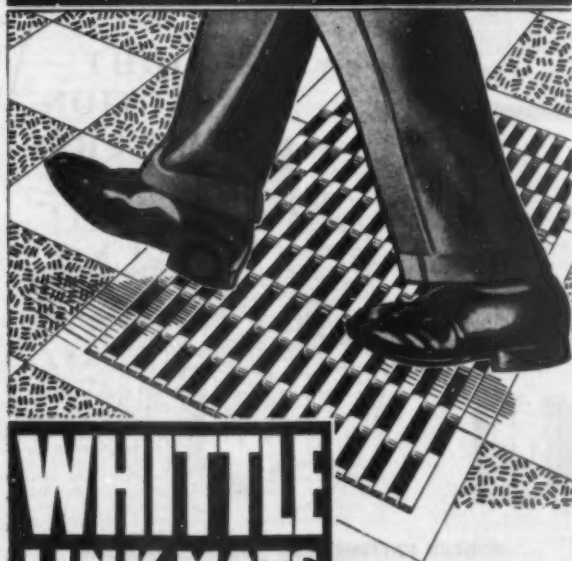
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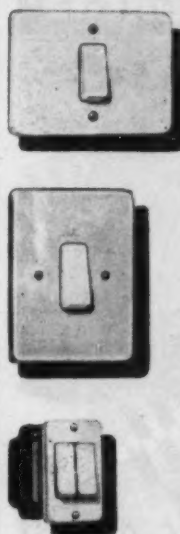
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## CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advertisement Manager, "The Architects' Journal," 9, 11, and 13, Queen Anne's Gate, Westminster, S.W.1, and should reach there by first post, 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.

AIR-MAIL SERVICE available on request. In response to requests from a number of Overseas subscribers for air-mail delivery of Public and Official Appointment details and Other Appointments Vacant, we have been pleased to arrange that cuttings of all such classified advertisements appearing in the A.J., shall be despatched by air-mail on Wednesday of each week (one day prior to A.J. publication date). The cost of this special service to Overseas subscribers will be for four weeks (1s. 3d. for each additional week) and prepayment should be sent by subscribers wishing to take advantage of this service. The charge we are making represents only the actual cost of the postage involved.

## Public and Official Announcements

36s. per inch; each additional line 3s.

LONDON COUNTY COUNCIL  
ARCHITECTS' DEPARTMENT

Vacancies for ARCHITECT/PLANNERS. Tasks include three-dimensional planning in Comprehensive Development Areas and all other important areas of new development throughout London, including those associated with road improvements. Up to £1,250 according to experience and qualifications. Forms and particulars from Hubert Bennett, F.R.I.B.A., Architect to the Council (EK/AJ/1790/9a), County Hall, S.E.1.

3190

## WARWICKSHIRE COUNTY COUNCIL

## ARCHITECTS' DEPARTMENT

(a) DEPUTY GROUP ARCHITECTS (Two) Grade A.P.T. IV-V (£1,065-£1,375). Applications are invited from qualified and experienced architects for these posts, which are for the groups handling projects for the Council's education building programme.

In each case the post is one of responsibility requiring a high degree of initiative and design ability in up-to-date forms of construction, use of materials, control of costs, job planning and organisation.

The successful applicant will also be expected to deputise generally for the group architect.

(b) ARCHITECTS SPECIAL GRADE (£785-£1,070).

Applications are invited from architects who have passed Parts I and II of the R.I.B.A. final or special examination or their equivalent at one of the recognised schools of architecture. The successful applicants will work in groups on large projects, and an opportunity will be given to men with enthusiasm and ability to design and carry out projects under a group architect.

(c) ARCHITECTURAL ASSISTANTS (Grade A.P.T. II (£765-£880)).

Vacancies exist for assistants who are up to Intermediate R.I.B.A. standard and who require experience in a variety of interesting projects.

The commencing salary can be within the grade according to ability and experience. Five-day week worked. The Council have schemes for the payment of removal expenses and a lodging allowance to married officers.

Application forms and full conditions applicable to the appointments can be obtained from Eric Davies, F.R.I.B.A., A.M.T.P.I., County Architect, Shire Hall, Warwick.

L. EDGAR STEPHENS,

Clerk of the Council.

Shire Hall,  
Warwick.  
July, 1960.

3006

## BOROUGH OF STRATFORD-UPON-AVON

ARCHITECTURAL ASSISTANT, A.P.T. II/III. Applications are invited for the above appointment on the staff of the Borough Engineer & Surveyor at a salary in accordance with Grade A.P.T. II/III £765-£1,065, commencing at a point to be determined according to qualifications and experience.

Preference will be given to candidates with previous local government experience who have passed the Intermediate examination of the R.I.B.A. and previous Planning experience would be an advantage.

The Council will, if necessary, be prepared to consider the provision of housing accommodation. Conditions of appointment and forms of application may be obtained from the undersigned to whom completed forms should be returned by not later than September 19, 1960.

P. C. SMART, M.I.C.E., M.I.Mun.E.,

Borough Engineer and Surveyor.

Municipal Offices,  
Stratford-upon-Avon.

August 22, 1960.

2943

## BOROUGH OF EALING

DRAUGHTSMAN for Civil Engineering work. Miscellaneous Grade IV, £630-£690 inclusive of London weighting.

Full particulars and application forms obtainable from the Borough Surveyor, Town Hall, Ealing, W.5.

Closing date 19th September, 1960.

E. J. COPE-BROWN,

Town Clerk

3408

## COUNTY BOROUGH OF PRESTON

## APPOINTMENT OF

(a) SENIOR ARCHITECT (Salary A.P.T.V.

£1,230-£1,375).

(b) ASSISTANT ARCHITECT (Salary Special

Grade £785-£1,070).

(c) ASSISTANT ARCHITECT (Salary A.P.T.II.

£765-£880).

Applications are invited for the above-mentioned appointments in the Borough Surveyor's Department. Candidates for (a) and (b) must be Registered Architects and Corporate members of the R.I.B.A., and for appointment (c) preferably should have passed the Intermediate Examination R.I.B.A.

The programme of works is large and varied and the appointments afford opportunities for good experience, particularly in educational buildings.

The National Scheme of Conditions of Service and Local Superannuation Acts apply, and the successful applicants will be required to pass a medical examination.

Forms of Application can be obtained from the undersigned, to whom they must be returned, completed, not later than Tuesday, 27th September.

W. E. E. LOOKLEY,

Town Clerk.

3038

## PORTSMOUTH COLLEGE OF ART

Principal: W. J. L. GARDON, A.R.C.A.

Applications are invited for the post of STUDIO MASTER AND LECTURER in the School of Architecture. Preference will be given to applicants who have been trained in a Recognised School of Architecture, are Associates of the Royal Institute of British Architects, and have at least three years' post-academic practical experience.

The salary will be in accordance with the Burnham Technical Scale for Lecturers, viz., £1,370-£35-£1,550.

Further particulars and forms of applications, which should be returned as soon as possible, may be obtained from the Registrar, College of Art, Hyde Park Road, Portsmouth.

3090

## LONDON ELECTRICITY BOARD

## ARCHITECTURAL STAFF

Applications are invited for the following positions in the Board's Construction Branch at Lenco House, Stamford Street, S.E.1.

ARCHITECTURAL ASSISTANTS: Salary within range £940-£1,065 p.a. inclusive. Applicants should be studying for, or have passed, the Intermediate Examination of the R.I.B.A., be capable draughtsmen and have had several years' experience in an architectural office.

ARCHITECTURAL DRAUGHTSMAN: Salary within range £755-£855 p.a. inclusive. Applicants should be neat draughtsmen and preferably have had several years' experience in an architect's office.

Application form obtainable from Personnel Officer, 46, New Broad Street, E.C.2, to be returned completed within 14 days of the publication date of this notice. Please quote ref. PER/V/2997/A.

3097

NEWCASTLE REGIONAL HOSPITAL BOARD  
EXPANSION OF ARCHITECTURAL DEPARTMENT

P. H. KNIGHTON, M.B.E., A.R.I.B.A.,

## REGIONAL ARCHITECT

Arising from the number of major projects (totalling about £14m.) to be carried out in the Newcastle Region as part of the Hospital Expansion Programme, the Board intends to add considerably to its Architectural Department in Newcastle.

The work is of a high-class and varied nature and offers ample opportunity for gaining experience in both highly specialised hospital structures and many types of ancillary general and domestic buildings. Possession of hospital experience is not essential. The work will involve all stages from sketch plans to supervision of construction and a car mileage allowance will be paid.

Applications are invited for the following (superannuable) posts:—

SENIOR ASSISTANT ARCHITECTS (£1,300 x £50 (5)-£1,600).

Applicants should be registered architects and have had experience of the design and construction of hospital work is desirable but not essential.

ASSISTANT ARCHITECTS (£905 x £35 (1) x £45 (6) x £50 (2)-£1,310).

Applicants should have passed the R.I.B.A. Final Examination. For registered architects increments can be given above the bottom of the grade in accordance with relevant practical experience since qualifying.

ARCHITECTURAL ASSISTANTS (£525 x £30 (8) x £35 (1)-£900).

Intermediate R.I.B.A. and preferably some practical experience.

ARCHITECTURAL DRAUGHTSMEN (£475 x £25 (6) x £30 (2)-£685).

Applicants should have had three years' previous experience in an architect's drawing office and be neat and quick draughtsmen.

Evening study facilities are available at King's College of Durham University in Newcastle.

Applications should give details of professional training, qualifications, experience and posts held, present salary and any other relevant information, should be accompanied by the names of three architectural referees and should reach the Secretary to the Board, Benfield Road, Newcastle upon Tyne, 6, not later than the 14th September, 1960. Canvassing will disqualify.

3012

## MIDDLESEX COUNTY COUNCIL

ASSISTANT ARCHITECTS—Salary range

£830-£1,255. Commencing salaries will be

assessed according to ability and experience. The department has in hand an interesting programme of works which will be designed under the direction of Mr. Whitfield Lewis, F.R.I.B.A., County Architect. Organisation is on a group basis and full scope will be given to Architects who show marked design ability.

Good career prospects can be expected. Prescribed conditions.

Application forms from the County Architect, 1, Queen Anne's Gate Buildings, Dartmouth Street, S.W.1, returnable by 3rd October. (Quote R.365 A.J.)

3058

## BOROUGH OF LUTON

Applications are invited for the following appointments:—

(a) SENIOR ASSISTANT ARCHITECTS

A.P.T.IV/V (£1,065-£1,375).

(b) SENIOR ASSISTANT ARCHITECTS

A.P.T.IV (£1,065-£1,320).

(c) ARCHITECTURAL ASSISTANTS

A.P.T.I (Special) (£610-£1,070).

(d) BUILDING MAINTENANCE SURVEYOR

A.P.T.II (£765-£880).

Applicants for (a) and (b) must be Chartered Architects and the commencing salaries will be dependent on qualifications and experience.

Under (c) the Council will consider applications from candidates who have completed professional training but have not passed their final examinations. The grades within the range at which appointments will be made will depend on qualifications and experience.

For post (d) good practical knowledge essential of all aspects of the building trade, particularly maintenance of public buildings, schools and housing. Duties include preparation of estimates, specifications and the supervision and inspection of works in progress. An essential user car allowance will be paid.

Consideration will be given to the provision of housing accommodation and payment of reasonable removal expenses for all appointments.

Luton is a rapidly developing borough with a large and varied programme of capital works in hand or projected which offers exceptional opportunities of gaining experience.

Further particulars and forms of application may be obtained from The Borough Architect, Town Hall, Luton, by whom applications should be received not later than 17th September, 1960.

2964

## CAMBORNE-REDRUTH URBAN DISTRICT

## COUNCIL

## APPOINTMENT OF SENIOR ASSISTANT

## ARCHITECT/SURVEYOR (A.P.T. IV)

Applications are invited for the above appointment in the Engineer and Surveyor's Department at a salary in accordance with Grade A.P.T. IV (£1,065-£1,320).

Applicants must be Registered Architects or Chartered Surveyors, and have had considerable experience in housing and general building works. The duties attached to the appointment will include the preparation of drawings, specifications and bills of quantities, and general supervision of works carried out by contract and by direct labour.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937-53, to the National Joint Council's Scheme of Conditions of Service, and is terminable upon the expiration of one month's notice in writing by either side.

Consideration will be given to the provision of housing accommodation, if required.

Applications, stating age, details of qualifications and experience, together with the names and addresses of two persons to whom reference may be made, should be received by the undersigned not later than the 17th September, 1960.

The successful applicant will be required to pass a medical examination to be carried out by this Council's Medical Officer of Health.

Canvassing, either directly or indirectly, will be a disqualification, and applicants must disclose their relationship to any member or senior officer of the Council.

S. C. WILSON,

Clerk of the Council.

Council Offices,

Camborne,

Cornwall.

24th August, 1960.

3112

SOUTH WEST METROPOLITAN REGIONAL  
HOSPITAL BOARD

Applications are invited for the under-mentioned appointments:—

(i) ASSISTANT ARCHITECT.

Must be an Associate Member of the R.I.B.A.

(ii) ASSISTANT LAND SURVEYOR.

Must be Corporate Member of the Royal Institute of Chartered Surveyors, have sound practical experience of the surveying of land and buildings and be familiar with the Town and Country Planning Act and Building Bye-laws.

The commencing salary for each post will be within the salary range £905 x £35 (1) x £45 (6) x £50 (2)-£1,310 p.a. plus London weighting allowance of £40-£50 p.a.

Application forms may be obtained from the undersigned at 49, Eastbourne Terrace, London, W.2, and must be completed and returned by 17th September, 1960.

E. G. BRAITHWAITE,

Secretary.

3102



**SOUTH WEST METROPOLITAN REGIONAL  
HOSPITAL BOARD**

**REGIONAL ARCHITECT'S DEPARTMENT  
APPOINTMENT OF  
ASSISTANT REGIONAL ARCHITECT**

Applications are invited from Registered Architects who have passed the requisite examinations, for the second vacancy of Assistant Regional Architect in the Board's Regional Architect's Department, at a salary scale of £1,225 x £75 (2) x £100 (2) to £2,175 p.a., plus £50 London weighting allowance.

Applicants must have had considerable experience in the management of design teams engaged on major and medium sized projects and previous hospital experience though advantageous, is not essential.

The Board have a large programme of interesting projects at all stages, and the person appointed will be expected to undertake major responsibility in the planning and execution of this programme, and should possess design ability of a high order.

Applications including age, present and previous appointments and the names of three referees should be addressed to the undersigned at the Board's Headquarters at 40, Eastbourne Terrace, London, W.2, and should be received not later than September 24th.

**E. G. BRAITHWAITE,**  
Secretary.  
3101

**AIR MINISTRY Works Design Branch** requires in LONDON and PROVINCES ARCHITECTURAL ASSISTANTS with adequate training and drawing office experience. O.N.C. (Building) an advantage. Work includes site layouts, sketch plans, working drawings and details for variety of technical and domestic buildings in permanent and semi-permanent construction. Financial assistance and time off given for recognised courses of study. Promotion and pension prospects. Five-day week with 13 days paid leave per year initially. Overseas tours for which special allowances granted. Salary: in LONDON ranges from £580 (age 25) to £900 p.a. for men; from £673 to £868 p.a. for women; somewhat lower in PROVINCES. Commencing salary dependent on age, qual. and exp. Applicants, who must be natural born British subjects, should write to AIR MINISTRY, W.G.d., Lacon House, Theobald's Road, London, W.C.1, or apply to any Employment Exchange quoting Kings Cross 891 giving age, details of training, qual., full particulars of former posts held and copies of any testimonials. Candidates selected will normally be interviewed in London and certain expenses reimbursed. 1988

**EAST SUFFOLK COUNTY COUNCIL  
APPOINTMENT OF CHIEF QUANTITY  
SURVEYOR**

(J.N.C. Grade B, £1,255 to £1,485)

The Council invite applications from persons holding the appropriate professional qualifications, for the post of Chief Quantity Surveyor in the County Architect's Department.

The starting salary will be fixed according to qualifications and experience; removal expenses and a settling-in grant of £25 will be paid in approved cases and the appointment will be subject to the Superannuation Acts.

The person appointed will be required to take charge of the Quantity Surveying section in the department and he will be directly responsible to the County Architect. The duties include the estimation of costs, the preparation of Bills of Quantities for some of the Council's capital building projects, the measurement of variations, valuations for interim payments and the settlement of final accounts.

Applications stating age, qualifications and experience, together with the names of two referees, must be delivered to the County Architect, Mr. E. J. Cundliffe, A.R.I.B.A., County Hall, Ipswich, by Wednesday, the 21st September, 1960.

3100

**COUNTY COUNCIL OF NORTHUMBERLAND  
COUNTY ARCHITECT'S DEPARTMENT**

Vacancies exist on the permanent staff of this Department for ASSISTANT ARCHITECTS.

Applicants who have passed (a) the R.I.B.A. Final or (b) the Intermediate Examination are required in connection with the County Council's Building Programme. The programme which is of considerable size and importance provides work of a varied and interesting nature in various parts of the County of Northumberland and gives scope in the field of modern design and building construction.

Salary according to qualifications and experience will be on either A.P.T. Special Grade £765-£1,970 per annum for fully qualified Architects or on a scale not exceeding £680 per annum, with the prospect of promotion to higher grades within the Department on qualifying.

The appointments will be subject to the provisions of the Local Government Superannuation Acts and successful candidates will be required to pass a medical examination.

Forms of application can be obtained on request and should be submitted to the undersigned at the address stated below not later than ten days from the date of this advertisement.

**C. C. BROWN,**  
County Architect.

30/32, Great North Road,  
Newcastle-upon-Tyne, 2.

3081

**INVESTIGATOR (ARCHITECTURAL): ROYAL COMMISSION ON ANCIENT AND HISTORICAL MONUMENTS OF SCOTLAND.** Pensionable post in Edinburgh for man or woman at least 22 and under 35 on 1st August, 1960 (with extension for regular Forces service and Overseas Civil Service). Candidates should normally have a degree in architecture or have achieved A.R.I.B.A., but others with qualifications and experience of special value may be considered. Experience of descriptive writing and interest in history of architecture an advantage. Selection by interview in Edinburgh. Salary scale (men) £635-£1,123 (under review). Starting salary may be above minimum. After an appropriate qualifying period promotion to Senior Investigator (salary scale £1,210-£1,600) may be expected. Write Civil Service Commission, Burlington Gardens, London, W.1, for application form quoting 5197/60. Closing date 5th October, 1960. 3071

**THE UNIVERSITY OF SHEFFIELD**

Planning Officer: H. R. Johnson, B.A., A.R.I.B.A. ASSISTANT ARCHITECT required for Planning Office, which is supervising a new building programme costing about £5 million. The work will be varied and interesting and will provide excellent experience for a young and capable man. Commencing salary according to experience within scale £900 x £50-£1,300 with family allowance of £50 per ch. d. and superannuation benefits. Apply by letter to the Burnar, The University, Sheffield, 10, giving names of two persons to whom reference may be made, before 20th September. Envelope should be marked "Assistant Architect-Planning Office." 3056

**GLASGOW CORPORATION  
ASSISTANT ARCHITECTS  
TOWN PLANNERS  
QUANTITY SURVEYORS**

The Architectural and Planning Department of the Corporation of the City of Glasgow has vacancies for a number of qualified Assistants in the above professions.

The Department has in hand a large, varied and interesting programme of works including comprehensive redevelopment, multi-storey flats, schools and civic buildings. The work will provide scope for personal initiative in the preparation of designs and details of schemes upon which construction work will follow.

The salary scale for these Assistantships is up to £1,385 with placing according to experience.

Form of application may be obtained from the Principal Administrative Officer, 20 Trongate, Glasgow, C.1.

**A. G. JURY,**  
City Architect and Planning Officer.  
1938

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## CITY OF BIRMINGHAM

## PARKS DEPARTMENT

## APPOINTMENT OF DRAUGHTSMAN

Applications are invited for the post of Draughtsman. The appointment is permanent, superannuable and subject to a medical examination.

Candidates should be able to work up drawings from sketch plans, prepare specifications, schedule of work, and supervise small contracts.

Salary ranges: Unqualified Draughtsman £445-£795 per annum and Qualified Draughtsman £630-£980 per annum. Commencing salary will be in accordance with experience and, where applicable, qualifications.

Applications, stating age, qualifications and experience, together with the names of two referees, should reach the undersigned by the 24th September, 1960.

Canvassing disqualifies.

G. E. E. ROSS,  
General Manager.

Parks Department,  
Civic Centre,  
Birmingham, 1. 3093

## COUNTY BOROUGH OF SOUTH SHIELDS

## CHIEF ASSISTANT ARCHITECT

Applications are invited for the position of CHIEF ASSISTANT ARCHITECT to work under the general direction of the Borough Engineer.

Applicants should be well qualified in Architectural design, control of contracts and supervision of professional staff. Remuneration will be in accordance with Scale "C" (£1,385-£1,620) and housing accommodation will be made available to the successful applicant.

Application forms are obtainable from the Borough Engineer, Town Hall, South Shields and should be returned to him not later than 10 a.m. on Tuesday, 4th October, 1960.

R. S. YOUNG,  
Town Clerk.

Town Hall,  
South Shields. 3065

## GLAMORGAN COUNTY COUNCIL

Applications are invited from qualified persons with considerable experience in the particular technical field for the following permanent appointments in the COUNTY ARCHITECT'S DEPARTMENT:-

- SENIOR ASSISTANT ARCHITECT: Grade B (£1,315-£1,485).
- SENIOR ASSISTANT QUANTITY SURVEYOR: APT.V (£1,220-£1,375).
- SENIOR ASSISTANT HEATING ENGINEER: APT.V (£1,220-£1,375).
- SENIOR ASSISTANT ELECTRICAL ENGINEER: APT.V (£1,220-£1,375).
- ASSISTANT ARCHITECTS: APT.III/IV (£880-£1,220).

The commencing salary may be above the minimum of the grade and a temporary lodging allowance will be paid in certain circumstances. Application, giving details of age, training, qualifications and experience, together with the names of two referees, to the COUNTY ARCHITECT, COUNTY HALL, CARDIFF, by 26th September, 1960.

RICHARD JOHN,  
Clerk of the County Council. 3124

## BOROUGH OF TAUNTON

## ARCHITECTS DEPARTMENT

Applications are invited for the following appointments in the Borough Architect's Department.

- ASSISTANT ARCHITECTS Grade APT IV (£1,065-£1,220 p.a.).
- ASSISTANT ARCHITECTS Special Grade (£765-£1,070 p.a.).
- ARCHITECTURAL ASSISTANT Grade APT II-III (£765-£980-£1,065 p.a.).
- ARCHITECTURAL DRAUGHTSMAN General Division (£210-£295 p.a.).
- QUANTITY SURVEYING ASSISTANT General Division-Clerical Division Grade I (£210-£295-£370 p.a.).

Superannuable posts subject to medical examination, and to National Conditions of Service. Applications stating age, present position and salary, qualifications, experience and names of two referees to be sent to C. Bacon, F.R.I.B.A., Borough Architect, Flook House, Station Road, Taunton, by Tuesday, 20th September, 1960.

K. A. HORNE,  
Town Clerk. 3123

## HARLOW DEVELOPMENT CORPORATION

Architect/Planner: Frederick Gibberd, C.B.E., F.R.I.B.A., M.T.P.I.  
Executive/Architect: Victor Hamnett, B.Sc., A.R.I.B.A., A.M.T.P.I.

## STAFF VACANCIES

Vacancies occur within the following grades for staff to work on industrial buildings, housing, theatre, offices, shops and similar programme of work in the town of Harlow:-

- ARCHITECT, APT. VI, £1,165-£1,390.
- ARCHITECT, APT. V, £1,220-£1,375.
- ASSISTANT ARCHITECT, APT. IV, £1,065-£1,220.
- ASSISTANT ARCHITECT, APT. III, £880-£1,065.
- ARCHITECTURAL ASSISTANT, APT. II, £765-£980.

A.R.I.B.A. required for Grade III upwards. Housing available.

Applications with full details to be sent within 10 days, to the General Manager, Terling, Harlow, Essex. 3057

## COUNTY BOROUGH OF ST. HELENS

## BOROUGH ENGINEER &amp; SURVEYOR'S

## DEPARTMENT

Applications are invited for the following appointments in the Architectural Section of the Department.

- CHIEF ASSISTANT ARCHITECT—Scale A (£1,275/£1,420).
- PRINCIPAL ASSISTANT ARCHITECT—Grade A.P.T.V. (£1,220/£1,375).
- ASSISTANT ARCHITECT—Grade A.P.T. IV (£1,065/£1,220).

Applicants for appointment (A) should be corporate members of the R.I.B.A. with experience in design and construction of public buildings, redevelopment schemes, large scale housing development and the supervision of staff under the control of the Chief Architect.

Applicants for appointments (B) and (C) should be qualified Architects with good experience in general Municipal Development. The Council operates a 5-day working week.

The appointments will be terminable by one month's notice and will be subject to the Local Government Superannuation Acts, Medical Examination and N.J.C. Conditions of Service.

Applications stating age, qualifications, present and past appointments and details of experience, naming two referees and clearly indicating the post applied for must be forwarded to the undersigned not later than Tuesday, September 27th, 1960.

Applicants must reveal relationship to any member or senior officer of the Council.

Canvassing will disqualify.

M. WARD, M.I.Mun.E., M.T.P.I.,  
A.M.I.Struct.E.,  
Borough Engineer & Surveyor.

Town Hall,  
ST. HELENS. 3116

## BOROUGH OF SLOUGH

## APPOINTMENT OF ASSISTANT ARCHITECTS—GRADE A.P.T. IV (£1,065-£1,220 per annum) and JUNIOR ARCHITECTURAL ASSISTANT—GRADE A.P.T. II (£765-£980 per annum).

These vacancies arise in consequence of the Council's approval of a MAJOR PROGRAMME OF BUILDING WORKS, including, in addition to normal housing development, 12-storey blocks of flats, factories, shops, and buildings for parks and other municipal functions.

The appointments will be for the duration of the programme, which it is estimated will be completed in 24 years. The appointments on Grade A.P.T. IV are suited to fully qualified architects who are particularly interested in the application of original thought to the design of buildings for a variety of functions and to whom contemporary architectural design appeals. The junior appointment is particularly suited to students who have passed the intermediate examination and wish to extend their experience in a progressive town, and facilities for part-time release will be arranged for the successful applicant who is pursuing a recognised course of architectural study.

A FIVE-DAY WEEK IS IN OPERATION AND HOUSING ACCOMMODATION will be provided for married candidates, if required.

Persons interested in these appointments are invited to write to the Borough Engineer, Town Hall, Slough, Bucks., giving brief details of their qualifications and experience. He will be pleased to send them details of the programme of design work, together with information which would be of particular interest to those not familiar with Slough in regard to the Department, the town and its surroundings. 3068

## CITY OF SALFORD

FIRM TENDERS ARE INVITED for the ERECTION OF A HEALTH CLINIC at LOWER KERSAL, SALFORD. Plans and General Conditions may be inspected at the offices of the Architects—Messrs. Cruickshank & Seward, Royal London House, 136, Deansgate, Manchester. Specification, Bills of Materials and form of tender (which will be available on the 24th October, 1960) obtainable from the Architects on payment of a deposit of £3 3s. (Three guineas) which will be returnable on the submission of a bona-fide tender not subsequently withdrawn. Tenders are to be addressed to the Town Clerk, Town Hall, Salford, 3, endorsed "Health Clinic—Kersal" so as to be received not later than 10.00 a.m. on Monday, 14th November, 1960. The Corporation is not bound to accept the lowest or any tender.

R. RIBBLESDALE THORNTON,  
Town Clerk. 3067

## LEEDS REGIONAL HOSPITAL BOARD

## SENIOR ASSISTANT ARCHITECT

Applications are invited for the above appointment. Salary scale £1,300-£1,600 (5) - to £1,600 per annum. A new entrant to the National Health Service would commence at the minimum of the scale.

Candidates must be registered architects, associate members of the R.I.B.A. and must possess good all round ability and have had experience of running contracts valued at £100,000 or more. An appreciation of contemporary design is essential and the person appointed will be required to lead a small team of junior architects.

The Board's offices are in pleasant surroundings and an excellent canteen is available on the premises.

Applications stating age, qualifications and experience together with the names and addresses of two referees to the Secretary, Park Parade, Harrogate, by 19th September, 1960. 3083

## LIVERPOOL REGIONAL HOSPITAL BOARD

## ASSISTANT ARCHITECT

## and ASSISTANT BUILDING SURVEYOR

Salary £296 p.a. to £1,310 p.a.

## STARTING SALARY SUBJECT TO AGE AND/OR EXPERIENCE

Applications invited for the above permanent pensionable appointments on the staff of the Regional Architect, T. Noel Mitchell, B.Arch., F.R.I.B.A. Architects should be Registered Architects having passed the requisite examinations. Surveyors must hold Corporate Membership of the Royal Institution of Chartered Surveyors and have had experience in detailing and setting out of buildings, roads and services, and in land surveying, levelling and contouring.

Applications stating post applied for, age, qualifications, present post and salary, previous appointments and names and addresses of three referees (two technical) to me at 55, Castle Street, Liverpool, 2, by 27th September, 1960.

VINCENT COLLINGS,  
Secretary to the Board. 3113

## BASILDON DEVELOPMENT CORPORATION

## DEPARTMENT OF ARCHITECTURE AND PLANNING

Young ARCHITECTS required by Chief Architect/Planner to join groups engaged on major Town Centre, Industrial and Housing development. The Town is less than half way towards its ultimate development as the largest new town, and excellent opportunity exists.

Superannuable posts are available within the range of £880-£1,485.

A house or flat can be available. Please reply immediately to the General Manager, Basildon Development Corporation, Gifford House, Basildon, Essex, stating age, training, qualifications, experience and salary required. 3066

## NORTHAMPTON RURAL DISTRICT COUNCIL

## ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment. Salary in accordance with Grade A.P.T. Division scale £610 + £30 (4) x £35 to a maximum of £765 per annum.

Applicants should have passed the R.I.B.A. intermediate examination or its equivalent and have had a sound general experience.

The appointment will be subject to the Local Government Superannuation Acts, the National Conditions of Service, a satisfactory medical examination and to one month's notice, in writing, on either side.

Applications, in candidates' own handwriting, stating age, endorsed "Architectural Assistant" with personal details and details of experience and qualifications, together with names of two referees, to be sent to the undersigned by Saturday, the 24th September, 1960.

Canvassing, directly or indirectly, will be a disqualification.

CLIFFORD E. JONES,  
Clerk of the Council.

Council Offices,  
1, Cheyne Walk,  
Northampton.

1st September, 1960. 3138

## BOROUGH OF BEDFORD

## APPOINTMENT OF

## (a) ASSISTANT ARCHITECT

A.P.T. II £765-£980.

## (b) ASSISTANT QUANTITY SURVEYOR

A.P.T. I £610-£765.

(a) Preference will be given to applicants who have passed the intermediate examination of the R.I.B.A. The point of entry within the grade being determined by experience and/or further qualifications.

(b) Preference will be given to applicants who have passed the intermediate examination of the R.I.C.S. or I.Q.S., or are preparing to take one of these examinations in the near future.

The Council has in hand a building programme including Schools, Multi-Storey flats, Shops and Public Offices.

The Council is prepared to assist in the provision of Housing accommodation in post (a) and will refund removal expenses in the case of each post.

Forms of application and particulars of the appointment may be obtained from the undersigned by whom applications should be received not later than Tuesday, 20th September, 1960.

F. W. DAWKES, Esq.,  
Borough Engineer and Surveyor.

Newnham House,  
Horne Lane,  
BEDFORD. 3082

## COUNTY BOROUGH OF DUDLEY

## BOROUGH ARCHITECT'S DEPARTMENT

## ASSISTANT ARCHITECT

Applications are invited for the above post. Salary: A.P.T. Grade III to IV (£880-£1,065-£1,220), commencing according to qualifications and experience. Superannuable, subject to medical examination.

Applicants must be A.R.I.B.A. Applicants stating age, qualifications and experience, details of training, present and previous appointments with salaries, together with the names and addresses of two referees, must reach me by Monday, 19th September, 1960.

P. B. WADSWORTH,  
Town Clerk.

Council House,  
DUDLEY.

Worce. 3140  
1st September, 1960.

**SOUTH WEST METROPOLITAN REGIONAL  
HOSPITAL BOARD  
REGIONAL ARCHITECT'S DEPARTMENT  
APPOINTMENT OF  
ASSISTANT REGIONAL ARCHITECT**

Applications are invited from Registered Architects who have passed the requisite examinations, for the second vacancy of Assistant Regional Architect in the Board's Regional Architect's Department, at a salary scale of £1,825 x £76 (2) x £109 (2) to £2,175 p.a., plus £56 London weighting allowance.

Applicants must have had considerable experience in the management of design teams engaged on major and medium sized projects and previous hospital experience though advantageous, is not essential.

The Board have a large programme of interesting projects at all stages, and the person appointed will be expected to undertake major responsibility in the planning and execution of this programme, and should possess design ability of a high order.

Applications including age, present and previous appointments and the names of three referees should be addressed to the undersigned at the Board's Headquarters at 40, Eastbourne Terrace, London, W.2, and should be received not later than September 24th.

**E. G. BRAITHWAITE,**  
Secretary.  
3181

**AIR MINISTRY Works Design Branch** requires in LONDON and PROVINCES ARCHITECTURAL ASSISTANTS with adequate training and drawing office experience. O.N.C. (Building) an advantage. Work includes site layouts, sketch plans, working drawings and details for variety of technical and domestic buildings in permanent and semi-permanent construction. Financial assistance and time off given for recognised courses of study. Promotion and pension prospects. Five-day week with 15 days paid leave per year initially. Overseas tours for which special allowances granted. Salary: in LONDON ranges from £680 (age 25) to £900 p.a. for men; from £673 to £668 p.a. for women; somewhat lower in PROVINCES. Commencing salary dependent on age, quals. and exp. Applicants, who must be natural born British subjects, should write to AIR MINISTRY, W.G.D., Lecon House, Theobald's Road, London, W.C.1. or apply to any Employment Exchange quoting Kings Cross 891 giving age, details of training, quals., full particulars of former posts held and copies of any testimonials. Candidates selected will normally be interviewed in London and certain expenses reimbursed. 1988

**EAST SUFFOLK COUNTY COUNCIL  
APPOINTMENT OF CHIEF QUANTITY  
SURVEYOR**

(J.N.C. Grade B, £1,265 to £1,485)

The Council invite applications from persons holding the appropriate professional qualifications, for the post of Chief Quantity Surveyor in the County Architect's Department.

The starting salary will be fixed according to qualifications and experience; removal expenses and a settling-in grant of £25 will be paid in approved cases and the appointment will be subject to the Superannuation Act.

The person appointed will be required to take charge of the Quantity Surveying section in the department and he will be directly responsible to the County Architect. The duties include the estimation of costs, the preparation of Bills of Materials for some of the Council's capital building projects, the measurement of variations, valuations for interim payments and the settlement of final accounts.

Applications stating age, qualifications and experience, together with the names of two referees, must be delivered to the County Architect, Mr. E. J. Cundliffe, A.R.I.B.A., County Hall, Ipswich, by Wednesday, the 21st September, 1960. 3100

**COUNTY COUNCIL OF NORTHUMBERLAND  
COUNTY ARCHITECT'S DEPARTMENT**

Vacancies exist on the permanent staff of this Department for ASSISTANT ARCHITECTS. Applicants who have passed (a) the R.I.B.A. Final or (b) the Intermediate Examination are required in connection with the County Council's Building Programme. The programme which is of considerable size and importance provides work of a varied and interesting nature in various parts of the County of Northumberland and gives scope in the field of modern design and building construction.

Salary according to qualifications and experience will be on either A.P.T. Special Grade £765-£1,070 per annum for fully qualified Architects or on a scale not exceeding £880 per annum, with the prospect of promotion to higher grades within the Department on qualifying.

The appointments will be subject to the provisions of the Local Government Superannuation Acts and successful candidates will be required to pass a medical examination.

Forms of application can be obtained on request and should be submitted to the undersigned at the address stated below not later than ten days from the date of this advertisement.

**C. C. BROWN,**  
County Architect.

30/32, Great North Road,  
Newcastle-upon-Tyne, 2.

3081

**INVESTIGATOR (ARCHITECTURAL): ROYAL COMMISSION ON ANCIENT AND HISTORICAL MONUMENTS OF SCOTLAND.** Pensionable post in Edinburgh for man or woman at least 22 and under 35 on 1st August, 1960 (with extension for regular Forces service and Overseas Civil Service). Candidates should normally have a degree in architecture or have achieved A.R.I.B.A., but others with qualifications and experience of special value may be considered. Experience of descriptive writing and interest in history of architecture an advantage. Selection by interview in Edinburgh. Salary scale (men) £635-£1,120 (under review). Starting salary may be above minimum. After an appropriate qualifying period promotion to Senior Investigator (salary scale £1,215-£1,600) may be expected. Write Civil Service Commission, Burlington Gardens, London, W.1. for application form quoting 5197/60. Closing date 5th October, 1960. 3071

**THE UNIVERSITY OF SHEFFIELD**

Planning Officer: H. R. Johnson, B.A., A.R.I.B.A. ASSISTANT ARCHITECT required for Planning Office, which is supervising a new building programme costing about £5 million. The work will be varied and interesting and will provide excellent experience for a young and capable man. Commencing salary according to experience within scale £900 x £50-£1,300 with family allowance of £50 per child, and superannuation benefits. Apply by letter to the Bursar, The University, Sheffield, 10, giving names of the persons to whom reference may be made, before 20th September. Envelopes should be marked "Assistant Architect-Planning Office." 3056

**GLASGOW CORPORATION  
ASSISTANT ARCHITECTS  
TOWN PLANNERS  
QUANTITY SURVEYORS**

The Architectural and Planning Department of the Corporation of the City of Glasgow has vacancies for a number of qualified Assistants in the above professions.

The Department has in hand a large, varied and interesting programme of works including comprehensive redevelopment, multi-storey flats, schools and civic buildings. The work will provide scope for personal initiative in the preparation of designs and details of schemes upon which construction work will follow.

The salary scale for these Assistantships is up to £1,385 with placing according to experience. Form of application may be obtained from the Principal Administrative Officer, 20 Trongate, Glasgow, C.1.

**A. G. JURY,**  
City Architect and Planning Officer.  
1938

# "SHEBA" COMPLETE BUILDINGS

## THE STANDARD BUILDING TO MEET YOUR EXACT REQUIREMENTS

SHEBA complete buildings can be supplied and erected anywhere in the United Kingdom. Foundations and builders work may be executed by your Contractor or, alternatively, we will undertake full responsibility. Advantages of Sheba Buildings which incorporate solid joist "Burton-Span" Portal Frames, are any height to eaves and any span from 20ft. to 120ft. Single Valley Stanchions. Suitable for crane gantries.

## YOUR SPACE IS VALUABLE- WE MAKE THE MOST OF IT.



*Shepley Booth & Associates Ltd.*

Head Office: GRANVILLE HOUSE, 2 TETTERHALL RD., WOLVERHAMPTON  
Telephone: WOLVERHAMPTON 27246  
Cables: SHEBA, WOLVERHAMPTON.



**CITY OF BIRMINGHAM**

**PARKS DEPARTMENT**  
**APPOINTMENT OF DRAUGHTSMAN**  
Applications are invited for the post of Draughtsman. The appointment is permanent, superannuable and subject to a medical examination.

Candidates should be able to work up drawings from sketch plans, prepare specifications, schedule of work, and supervise small contracts.

**Salary range:**  
Unqualified Draughtsman £445-£796 per annum and Qualified Draughtsman £630-£880 per annum. Commencing salary will be in accordance with experience and, where applicable, qualifications.

Applications, stating age, qualifications and experience, together with the names of two referees, should reach the undersigned by the 24th September, 1960.

Canvassing disqualifies.

G. E. E. ROSS,  
General Manager.

Parks Department,  
Civic Centre,  
Birmingham, 1. 3693

**COUNTY BOROUGH OF SOUTH SHIELDS**  
**CHIEF ASSISTANT ARCHITECT**

Applications are invited for the position of CHIEF ASSISTANT ARCHITECT to work under the general direction of the Borough Engineer.

Applicants should be well qualified in Architectural design, control of contracts and supervision of professional staff. Remuneration will be in accordance with Scale "C" (£1,385-£1,620) and housing accommodation will be made available to the successful applicant.

Application forms are obtainable from the Borough Engineer, Town Hall, South Shields and should be returned to him not later than 10 a.m. on Tuesday, 4th October, 1960.

R. S. YOUNG,  
Town Clerk.

Town Hall,  
South Shields 3665

**GLAMORGAN COUNTY COUNCIL**

Applications are invited from qualified persons with considerable experience in the particular technical field for the following permanent appointments in the COUNTY ARCHITECT'S DEPARTMENT:—

- (a) SENIOR ASSISTANT ARCHITECT: Grade B (£1,315-£1,465).
- (b) SENIOR ASSISTANT QUANTITY SURVEYOR: A.P.T.V. (£1,220-£1,375).
- (c) SENIOR ASSISTANT HEATING ENGINEER: A.P.T.V. (£1,220-£1,375).
- (d) SENIOR ASSISTANT ELECTRICAL ENGINEER: A.P.T.V. (£1,220-£1,375).
- (e) ASSISTANT ARCHITECTS: A.P.T.III/IV (£880-£1,220).

The commencing salary may be above the minimum of the grade and a temporary lodging allowance will be paid in certain circumstances. Application, giving details of age, training, qualifications and experience, together with the names of two referees, to the COUNTY ARCHITECT, COUNTY HALL, CARDIFF, by 26th September, 1960.

RICHARD JOHN,  
Clerk of the County Council.

**BOROUGH OF TAUNTON**  
**ARCHITECT'S DEPARTMENT**

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

- 1. ASSISTANT ARCHITECTS Grade APT IV (£1,065-£1,220 p.a.).
- 2. ASSISTANT ARCHITECTS Special Grade (£765-£1,070 p.a.).
- 3. ARCHITECTURAL ASSISTANT Grade APT II-III (£765-£880-£1,065 p.a.).
- 4. ARCHITECTURAL DRAUGHTSMAN General Division (£210-£595 p.a.).
- 5. QUANTITY SURVEYING ASSISTANT General Division-Clerical Division Grade I (£210-£595-£870 p.a.).

Superannuable posts subject to medical examination, and to National Conditions of Service. Applications stating age, present position and salary, qualifications, experience and names of two referees to be sent to C. Bacon, F.R.I.B.A., Borough Architect, Flook House, Station Road, Taunton, by Tuesday, 20th September, 1960.

K. A. HORNE,  
Town Clerk.

**HARLOW DEVELOPMENT CORPORATION**  
Architect/Planner: Frederick Glibberd, C.B.E., F.R.I.B.A., M.T.P.I.  
Executive/Architect: Victor Hammett, B.Sc., A.R.I.B.A. M.T.P.I.

**STAFF VACANCIES**

Vacancies occur within the following grades for staff to work on industrial buildings, housing, theatre, offices, shops and similar programme of work in the town of Harlow:—

- ARCHITECT, APT. VI, £1,165-£1,396.
- ARCHITECT, APT. V, £1,220-£1,375.
- ASSISTANT ARCHITECT, APT. IV, £1,065-£1,220.
- ASSISTANT ARCHITECT, APT. III, £880-£1,065.
- ARCHITECTURAL ASSISTANT, APT. II, £765-£880.

A.R.I.B.A. required for Grade III upwards. Housing available.

Applications with full details to be sent within 10 days to the General Manager, Terlinas, Harlow, Essex. 3057

**COUNTY BOROUGH OF ST. HELENS**  
**BOROUGH ENGINEER & SURVEYOR'S**  
**DEPARTMENT**

Applications are invited for the following appointments in the Architectural Section of the Department:

- (A) CHIEF ASSISTANT ARCHITECT—Scale A (£1,375-£1,420).
- (B) PRINCIPAL ASSISTANT ARCHITECT—Grade A.P.T.V. (£1,220-£1,375).
- (C) ASSISTANT ARCHITECT—Grade A.P.T. IV (£1,065-£1,220).

Applicants for appointment (A) should be corporate members of the R.I.B.A. with experience in design and construction of public buildings, redevelopment schemes, large scale housing development and the supervision of staff under the control of the Chief Architect.

Applicants for appointments (B) and (C) should be qualified Architects with good experience in general Municipal Development. The Council operates a 5-day working week.

The appointments will be terminable by one month's notice and will be subject to the Local Government Superannuation Acts, Medical Examination and N.J.C. Conditions of Service.

Applications stating age, qualifications, present and past appointments and details of experience, naming two referees and clearly indicating the post applied for must be forwarded to the undersigned not later than Tuesday, September 27th, 1960.

Applicants must reveal relationship to any member or senior officer of the Council. Canvassing will disqualify.

M. WARD, M.T.P.I., M.T.P.I.,  
Borough Engineer & Surveyor.

Town Hall,  
ST. HELENS. 3116

**BOROUGH OF SLOUGH**  
**APPOINTMENT OF ASSISTANT ARCHITECTS—GRADE A.P.T. IV (£1,065-£1,220 per annum) and JUNIOR ARCHITECTURAL ASSISTANT—GRADE A.P.T. II (£765-£880 per annum).**

These vacancies arise in consequence of the Council's approval of MAJOR PROGRAMME OF BUILDING WORKS, including, in addition to normal housing development, 12-storey blocks of flats, factories, shops, and buildings for parks and other municipal functions.

The appointments will be for the duration of the programme, which is estimated will be completed in 3-4 years. The appointments on Grade A.P.T. IV are suited to fully qualified architects who are particularly interested in the application of original thought to the design of buildings for a variety of functions and to whom contemporary architectural design appeals. The junior appointment is particularly suited to students who have passed the intermediate examination and wish to extend their experience in a progressive town, and facilities for part-time release will be arranged for the successful applicant who is pursuing a recognised course of architectural study.

A FIVE-DAY WEEK IS IN OPERATION AND HOUSING ACCOMMODATION will be provided for married candidates, if required.

Persons interested in these appointments are invited to write to the Borough Engineer, Town Hall, Slough, Bucks., giving brief details of their qualifications and experience. He will be pleased to send them details of the programme of design work, together with information which would be of particular interest to those not familiar with Slough in regard to the Department, the town and its surroundings. 3068

**CITY OF SALFORD**

**FIRM TENDERS ARE INVITED** for the ERECTION OF A HEALTH CLINIC at LOWER KERSAL, SALFORD. Plans and General Conditions may be inspected at the office of Architects—Messrs. Cruickshank & Seward, Royal London House, 195, Deansgate, Manchester. Specification, Bills of Quantities and form of tender (which will be available on the 24th October, 1960) obtainable from the Architects on payment of a deposit of £3 5s. (Three guineas) which will be returnable on the submission of a bona-fide tender not subsequently withdrawn. Tenders are to be addressed to the Town Clerk, Town Hall, Salford, 3, endorsed "Health Clinic—Kersal" so as to be received not later than 10.00 a.m. on Monday, 14th November, 1960. The Corporation is not bound to accept the lowest or any tender.

R. RIBBLEDAL THORNTON,  
Town Clerk.

**LEEDS REGIONAL HOSPITAL BOARD**  
**SENIOR ASSISTANT ARCHITECT**

Applications are invited for the above appointment. Salary scale £1,300 + 60 (5) — to £1,600 per annum. A new entrant to the National Health Service would commence at the minimum of the scale.

Candidates must be registered architects, associate members of the R.I.B.A. and must possess good all round ability and have had experience of running contracts valued at £100,000 or more. An appreciation of contemporary design is essential and the person appointed will be required to lead a small team of junior architects.

The Board's offices are in pleasant surroundings and an excellent canteen is available on the premises.

Applications stating age, qualifications and experience together with the names and addresses of two referees to the Secretary, Park Parade, Harrogate, by 19th September, 1960. 3083

**LIVERPOOL REGIONAL HOSPITAL BOARD**  
**ASSISTANT ARCHITECT**

and  
**ASSISTANT BUILDING SURVEYOR**  
Salary £906 p.a. to £1,310 p.a.  
**STARTING SALARY SUBJECT TO AGE AND/OR EXPERIENCE**

Applications invited for the above permanent pensionable appointments on the staff of the Regional Architect, T. Noel Mitchell, B.Arch., F.R.I.B.A. Architects should be Registered Architects having passed the requisite examinations. Surveyors must hold Corporate Membership of the Royal Institution of Chartered Surveyors and have had experience in detailing and setting out of buildings, roads and services, and in land surveying, levelling and contouring.

Applications stating post applied for, age, qualifications, present post, salary, previous appointments and names and addresses of three referees (two technical) to me at 55, Castle Street, Liverpool, 2, by 27th September, 1960.

VINCENT COLLINGS,  
Secretary to the Board.

**BASILDON DEVELOPMENT CORPORATION**  
**DEPARTMENT OF ARCHITECTURE AND PLANNING**

Young ARCHITECTS required by Chief Architect/Planner to join groups engaged on major Town Centre, Industrial and Housing development. The Town is less than half way towards its ultimate development as the largest new town, and excellent opportunity exists. Superannuable posts are available within the range of £880-£1,465.

A house or flat can be available. Please apply immediately to the General Manager, Basildon Development Corporation, Gifford House, Basildon, Essex, stating age, training, qualifications, experience and salary required. 3665

**NORTHAMPTON RURAL DISTRICT COUNCIL**  
**ARCHITECTURAL ASSISTANT**

Applications are invited for the above appointment. Salary in accordance with Grade A.P.T. Division scale £610 + £30 (4) + £35 to a maximum of £765 per annum.

Applicants should have passed the R.I.B.A. intermediate examination or its equivalent and have had a sound general experience.

The appointment will be subject to the Local Government Superannuation Acts, the National Conditions of Service, a satisfactory medical examination and to one month's notice, in writing, on either side.

Applications, in candidates' own handwriting, stating age, endorsed "Architectural Assistant" with personal details and details of experience and qualifications, together with names of two referees, to be sent to the undersigned by Saturday, the 24th September, 1960.

Canvassing, directly or indirectly, will be a disqualification.

CLIFFORD E. JONES,  
Clerk of the Council.

Council Offices,  
1, Cheyne Walk,  
Northampton.  
1st September, 1960. 3138

**BOROUGH OF BEDFORD**  
**APPOINTMENT OF**

- (a) ASSISTANT ARCHITECT  
A.P.T. II £765-£880.
- (b) ASSISTANT QUANTITY SURVEYOR  
A.P.T. I £610-£765.

(a) Preference will be given to applicants who have passed the intermediate examination of the R.I.B.A. The point of entry within the grade being determined by experience and/or further qualifications.

(b) Preference will be given to applicants who have passed the intermediate examination of the R.I.C.S. or I.Q.S., or are preparing to take one of these examinations in the near future.

The Council has in hand a building programme including Schools, Multi-Storey Flats, Shops and Public Offices.

The Council is prepared to assist in the provision of Housing accommodation in post (a) and will refund removal expenses in the case of each post.

Forms of application and particulars of the appointment may be obtained from the undersigned by whom applications should be received not later than Tuesday, 29th September, 1960.

F. W. DAWKES, Esq.,  
Borough Engineer and Surveyor.

Newnham House,  
Horne Lane,  
BEDFORD. 3082

**COUNTY BOROUGH OF DUDLEY**  
**BOROUGH ARCHITECT'S DEPARTMENT**  
**ASSISTANT ARCHITECT**

Applications are invited for the above post. Salary: A.P.T. Grade III to IV (£880-£1,065-£1,220), commencing according to qualifications and experience, Superannuable, subject to medical examination.

Applicants must be A.R.I.B.A. Applications stating age, qualifications and experience, details of training, present and previous appointments with salaries, together with the names and addresses of two referees, must reach me by Monday, 19th September, 1960.

P. B. WADSWORTH,  
Town Clerk.

Council House,  
DUDLEY,  
Worcs.  
1st September, 1960. 3148



**COUNTY BOROUGH OF BLACKBURN**  
CENTRAL AREA RE-DEVELOPMENT  
In connection with this scheme applications are invited for the following post:  
**SENIOR ARCHITECTURAL ASSISTANT.**  
Grade Scale "A" £1,255 to £1,430.  
Candidates must have the necessary qualifications and experience relative to the Grade. Housing accommodation will be available if required.  
Application forms (from the Borough Engineer, Town Hall, Blackburn) are to be returned by September 29th.

FRANK SQUIRES,  
Town Clerk.  
3137

**GLAMORGAN COUNTY COUNCIL**  
Vacancies occur for TRAINEES in town and country planning, at a Salary on A.P.T. I (£610-£765 p.a.).  
Applicants, who should be University Graduates in Engineering, Architecture, Estate Management or Geography, will be given the opportunity of training and experience in all aspects of county planning, and be required to attend a part-time course in Town and Country Planning at the Welsh School of Architecture, Cardiff, with a view to obtaining a professional qualification in town planning.  
Applications, together with names of two referees, to the County Planning Officer, County Hall, Cardiff. Not later than 15th September.

RICHARD JOHN,  
Clerk of the County Council.  
3127

**BOROUGH OF ENFIELD**  
BOROUGH ENGINEER & SURVEYOR'S DEPARTMENT  
(Non-County Borough in the County of Middlesex Population—109,700; Area—12,400 acres)

**AMENDED ADVERTISEMENT**  
Applications are invited, from suitably qualified persons, for the following permanent appointments:—  
(1) ASSISTANT ARCHITECT—A.P.T. IV—£1,065-£1,220 plus London Weighting.  
(2) ARCHITECTURAL ASSISTANTS (2 No.)—A.P.T.III—£980-£1,065 plus London Weighting.  
(3) ARCHITECTURAL ASSISTANT—A.P.T.II—£765-£880 plus London Weighting.  
(4) JUNIOR ARCHITECTURAL ASSISTANT—A.P.T.I—£610-£765 plus London Weighting.  
The commencing salary will be fixed at points within the Scale commensurate with qualifications and experience.  
There is a large varied programme of work, including the redevelopment of Clearance Areas and other areas scheduled for Comprehensive Development.  
HOUSING ACCOMMODATION may be made available in appropriate cases. The Council is also prepared to consider 100% advances to successful applicants for house purchase within the Borough.  
Saturday mornings are normally free from duty. Application forms, obtainable from H. D. Peake, M.Sc.(Eng.), M.I.C.E., Borough Engineer & Surveyor, 7 Little Park Gardens, Enfield, Middlesex, must be delivered to the undersigned not later than MONDAY, 26th SEPTEMBER, 1960.

CYRIL E. C. R. PLATTEN,  
Town Clerk.  
3128

Public Offices,  
Gentlemen's Row,  
Enfield, Middx.

**COVENTRY**  
Enthusiastic Imaginative Architects required in Central Area Division. Programme includes Multi-Storey commercial and residential development and swimming baths. Salary within NJC Scale 'B' £1,305-£1,485.  
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3121

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HOME COUNTIES REGION  
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and interesting nature

**LEADING ARCHITECTURAL ASSISTANTS**  
Applicants must have achieved inter-R.I.B.A. standard, have good design ability and knowledge of modern building construction, and be capable of exercising leadership and supervision coupled with high quality individual work.  
Salary range £930-£1,085 p.a. Starting salary will normally be £930 p.a. but may be higher for applicants with exceptional experience and qualifications.

**ARCHITECTURAL ASSISTANTS**  
of inter-R.I.B.A. standard with keen, modern outlook.  
Salary range £660 (age 21) to £930 p.a.  
Starting pay according to age and/or qualifications.

**GENERAL:** Salary ranges slightly less for women but parity achieved 1961. 5-day week. 3½ weeks' leave per annum. Good prospects of promotion and permanency. Non-contributory pension scheme.

**APPLICATIONS:** Stating age, training and experience to R. P. Mills, A.R.I.B.A., Superintending Architect, Ministry of Works, Whiteknights, Reading. 3061

**BOROUGH OF SCARBOROUGH**  
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT

Applications are invited for the post of ARCHITECTURAL ASSISTANT, Grade APT.II (£765-£880). Applicants should have passed the Intermediate R.I.B.A. Examination or its equivalent at one of the recognised schools of Architecture. The appointment is subject to the provisions of the Local Government Superannuation Acts, 1937/1953, and to the passing of a medical examination, and will be terminable by one month's notice on either side. In appropriate cases the Council will assist in the provision of housing accommodation.

Applications in envelopes endorsed "Architectural Assistant" stating age, present and previous appointments, training, qualifications and experience, together with the names of two referees, must be delivered to the undersigned not later than the 26th September, 1960.

V. FORSHAW,  
Borough Engineer and Surveyor.  
Town Hall,  
SCARBOROUGH. 3130

**COUNTY BOROUGH OF EAST HAM**  
BOROUGH ENGINEER'S DEPARTMENT  
Applications are invited for the following temporary appointment:—

**SENIOR ASSISTANT ARCHITECT—**  
GRADE IV £1,065-£1,220.  
London Weighting is paid in addition, and a salary in excess of the minimum may be paid according to qualifications and experience. The appointment is for work on a new Technical College and is expected to be for a period of not less than 1 year.  
Further details of application forms returnable by 16th September, 1960, from the Town Clerk, Town Hall, East Ham, E.6.

**BOROUGH OF COLCHESTER**  
APPOINTMENT OF BOROUGH ARCHITECT  
Applications are invited for the above appointment. The salary will be £1,655 x £70 (2) and £65 (2) to £1,225 per annum and the terms and conditions of the J.N.C. for Chief Officers of Local Authorities will apply. Car allowance. Further particulars may be obtained from the undersigned. Closing date 16th September.

N. CATCHPOLE,  
Town Clerk.  
Town Hall,  
Colchester.  
August, 1960. 3099

**BOROUGH OF WORTHING**  
APPOINTMENT OF SENIOR ASSISTANT ARCHITECT

Applications are invited for the appointment of an Assistant Architect in the Borough Engineer's Department on the Special Grade of salaries, i.e., £786-£1,070, commencing salary according to experience.

Candidates must have passed the Final Examination of the R.I.B.A. or its equivalent at a recognised school of architecture, and must have had at least five years' experience including the period spent on theoretical training.

The appointment will be subject to the National Scheme of Conditions of Service of Local Government Officers, to the provisions of the Local Government Superannuation Acts, and to the successful candidate passing satisfactorily a medical examination. The appointment will be terminable by one month's notice on either side.

Applications, stating age, qualifications, experience, present and past appointments, with dates, and accompanied by copies of two recent testimonials, should be submitted to the Borough Engineer & Surveyor, Town Hall, Worthing, not later than the 19th September, 1960.

ERNEST G. TOWNSEND,  
Town Clerk.  
3136

**QUANTITY SURVEYING ASSISTANTS**  
GRADE III required by AIR MINISTRY in the PROVINCES. Duties include abstracting and billing, site measurement and preparation of estimates. Candidates must hold O.N.C. (Building or Builders Quantities) or equiv. and have good experience under Quantity Surveyor or Building Contractor. Knowledge W.D. Schedule an advantage. Financial assistance and time off given for recognised courses of study. Promotion and pension prospects. 5-day week with 13 days' paid leave a year initially. Overseas tours for which special allowances granted.

Salary ranges from £770 (at age 26) to £925. Commencing salary dependent upon age, qual. and exp. Applicants, who must be natural born British subjects, should write stating age, qual. and previous appointments including type of work done, to Manager, (P.E.2), Ministry of Labour, Professional and Executive Register, Atlantic House, Farringdon Street, London, E.C.4. No original testimonials should be sent. Candidates selected will normally be interviewed in London and certain expenses reimbursed. Only applicants selected for interview will be advised.

3084  
**MIDLOTHIAN COUNTY COUNCIL** require  
(a) ASSISTANT ARCHITECT: qualified, preferably with experience of school and/or housing work. Salary Scale £795-£1,075. (b) ASSISTANT ARCHITECTS. £605-£990. (c) ASSISTANT QUANTITY SURVEYOR. £605-£665. (d) APPRENTICE QUANTITY SURVEYOR. £210-£600. Placing according to experience.

Applications specifying post desired and stating age, qualifications, training and experience, with names of two referees, to County Clerk, County Buildings, George Bridge, Edinburgh, 1, by Monday, 12th September, 1960. 3060

**BOROUGH OF CHESTERFIELD**  
Applications are invited for two ASSISTANT QUANTITY SURVEYORS within Grades APT. I & II £610-£880. The commencing salaries will depend on qualifications and experience.  
Housing accommodation will be provided if required and a car allowance is available for one post.

Applications stating age, qualifications and experience with the names of two referees should be received by the Borough Engineer, Town Hall, Chesterfield, not later than Monday, 26th September, 1960.

RICHARD CLEGG,  
Town Clerk.  
3115

**SALOP COUNTY ARCHITECT'S DEPARTMENT**

Applications are invited from qualified Architects for the post of SENIOR ASSISTANT ARCHITECT. Salary grade up to £1,220 p.a. N.J.C. Conditions. Five-day week. A disturbance allowance or weekly separation allowance will be payable to a married man taking up the appointment. Conditions of service and application forms obtainable from Ralph Crowe, A.A.Dipl., A.R.I.B.A., A.M.T.P.I., County Architect, Column House, London Road, Shrewsbury. Closing date 24th September, 1960. 3111

**AIR MINISTRY** require JUNIOR WORKERS UP in Quantities Division in London. Must be fully experienced and competent to Work Up entire Bills of Quantities. Candidates must hold O.N.C. or C. & G. (Quantities) or equiv. technical qual. Financial assistance and time off given for recognised courses of study. Promotion and pension prospects. 5-day week with 18 days' paid leave a year initially.

Salary ranges from £320 (at age 26) to £975. Applicants, who must be natural born British subjects, should write stating age, qual. and exp. to the Manager (PE.1234), Ministry of Labour, Professional and Executive Register, Atlantic House, Farringdon Street, London, E.C.4. No original testimonials should be sent. 3085

**MIDLANDS ELECTRICITY BOARD**  
ARCHITECTURAL DRAUGHTSMAN required on the Chief Engineer's staff at Board Headquarters.

Duties will involve (under supervision) site surveys, preparation of site layouts, sketch plans, detail and working drawings for office blocks, stores, workshops, garages and Service Centre buildings. Intermediate R.I.B.A. an advantage.

Salary £990/£1,015 per annum (N.J.B. Schedule 'B' Grade 13EX). Superannuable.  
Apply, by letter, within 14 days, stating age, experience, present salary and position to the Secretary, Midlands Electricity Board, Mucklow Hill, Halesowen, Nr. Birmingham.

F. W. CATER,  
Secretary.  
3135

**METROPOLITAN BOROUGH OF FULHAM**  
JUNIOR ASSISTANT QUANTITY SURVEYOR  
BOROUGH ARCHITECT'S AND HOUSING DEPARTMENT

Salary within range £510 to £1,070 plus £15/£45 London weighting, according to age. Candidates will start in the lowest grade, subject to annual increments and advancement on passing professional examinations. Opportunity given for site measurement and junior taking-off. Experience required in working up and abstracting, and preference given to probationers of an approved professional body.

Details from Town Clerk, Town Hall, Fulham, S.W.6. Closing date 19th September, 1960. 3118

**ARCHITECT** required by the National Coal Board in Edinburgh. Salary within the scale £915 to £1,125 per annum. Applicants must be Associate Members of the R.I.B.A. (or, if not yet qualified, may be appointed in the first place as Architectural Assistants in a salary scale £595 to £850). Applications, stating age, education, qualifications, experience, present post, and salary, to Staff Department, National Coal Board, 3, Eglinton Crescent, Edinburgh, 2. 3159

**DUMFRIES COUNTY COUNCIL**  
ARCHITECTURAL ASSISTANT

Applications are invited for the post of Architectural Assistant in the County Architect's Department. Requisite qualification, A.R.I.B.A. Salary £900 x £35 to £1,075 per annum. In addition £120 per annum and a mileage allowance in respect of use of car when authorised is payable. The post is superannuated and the successful applicant may, if appropriate, avail himself of the Council's Car Purchase Scheme. Rented Council house may also be made available. Local Government experience not essential. Applications, stating age, qualifications and experience, with names and addresses of not more than three referees, to be lodged with the undersigned by 19th September, 1960.

LESLIE T. CARNEGIE,  
County Clerk.

County Buildings,  
Dumfries.  
2nd September, 1960. 3152

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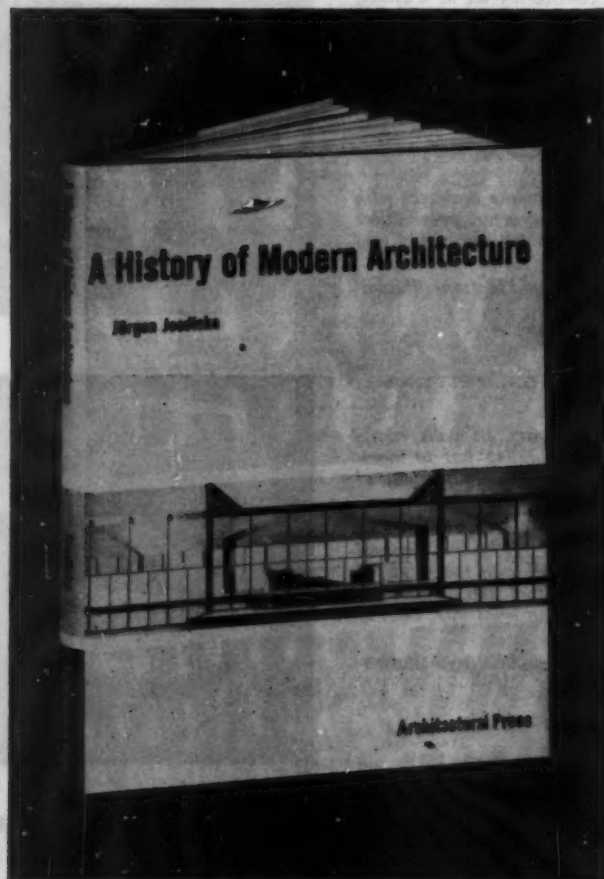
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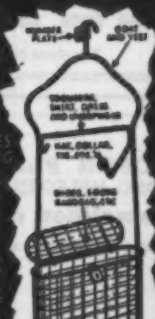
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Plus Gas Co., Ltd., The	154	0725
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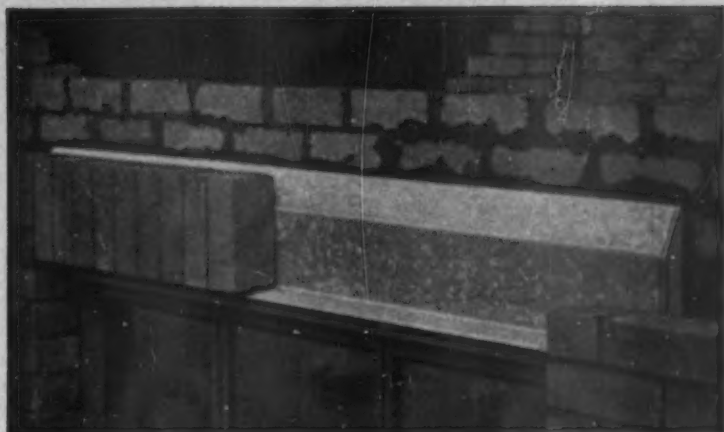
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