

# THE ARCHITECTS' JOURNAL

APR 25 1951



## Standard contents

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

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

IGE	Institution of Gas Engineers.	17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers.	75, Eaton Place, S.W.1.	Sloane 3158/1601
IIBD	Incorporated Institute of British Decorators.	Drayton House, Gordon Street, W.C.1.	Euston 2450
ILA	Institute of Landscape Architects.	12, Gower Street, W.C.1.	Museum 1783
I of Arb.	Institute of Arbitrators.	35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders.	48, Bedford Square, W.C.1.	Museum 7197/5176
IR	Institute of Refrigeration.	Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects.	47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers.	11, Upper Belgrave Street, S.W.1.	Sloane 7128
IWA	Inland Waterways Association.	11, Gower Street, W.C.1.	Museum 9200
LIDC	Lead Industries Development Council.	Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
LMBA	London Master Builders' Association.	47, Bedford Square, W.C.1.	Museum 3891
MARS	MARS Group (English Branch of CIAM).	Secretary: Gontran Goulden, Building Centre, 9, Conduit Street, W.1.	Mayfair 8641
MOA	Ministry of Agriculture and Fisheries.	55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education.	Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health.	Whitehall, S.W.1.	Whitehall 4300
MOLGP	Ministry of Local Government and Planning.	23, Saville Row, W.1.	Regent 8411
MOLNS	Ministry of Labour and National Service.	8, St. James's Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply.	Shell Mex House, Victoria Embankment, W.C.	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 Asphalte Mine-Owners and Manufacturers Council.	94-98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters.	9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record.	37, Onslow Gardens, S.W.7.	Kensington 8161
NCBMP	National Council of Building Material Producers.	10, Princes Street, S.W.1.	Abbey 5111
NFBTE	National Federation of Building Trades Employers.	82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives.	Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies.	13, Suffolk St., S.W.1.	Whitehall 1693
NHBR	National House Builders Registration Council.	82, New Cavendish Street, W.1.	Langham 4341
NPL	National Physical Laboratory.	Head Office, Teddington.	Molesley 1380
NSA	National Sawmilling Association.	14, New Bridge Street, E.C.4.	City 1476
NSAS	National Smoke Abatement Society.	Chandos House, Buckingham Gate, S.W.1.	Abbey 1359
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.	Whitehall 9936
RIAS	Royal Incorporation of Architects in Scotland.	15, Rutland Square, Edinburgh.	Edinburgh 20396
RIBA	Royal Institute of British Architects.	66, Portland Place, W.1.	Langham 5721
RICS	Royal Institution of Chartered Surveyors.	12, Great George St., S.W.1.	Whitehall 5322/9242
RFAC	Royal Fine Art Commission.	22A, Queen Anne's Gate, 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
RSI	Royal Sanitary Institute.	90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau.	35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers.	Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SCR	Society for Cultural Relations with the USSR.	14, Kensington Square, London, W.8.	Western 1571
SE	Society of Engineers.	17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association.	30, Cornhill, London, E.C.3.	Mansion House 3921
SIA	Structural Insulation Association.	14, Moorgate, London, E.C.2.	Central 4444
SIA	Society of Industrial Artists.	7, Woburn Square, W.C.1.	Langham 1984
SNHTPC	Scottish National Housing.	Town Planning Council.	
SPAB	Society for the Protection of Ancient Buildings.	Hon. Sec., Robert Pollock, Town Clerk, Rutherglen.	
TCPA	Town and Country Planning Association.	55, Great Ormond Street, W.C.1.	Holborn 2646
TDA	Timber Development Association.	75, Cannon Street, E.C.4.	Temple Bar 5006
TGC	The Gas Council.	1, Grosvenor Place, S.W.1.	City 4771
TPI	Town Planning Institute.	18, Ashley Place, S.W.1.	Sloane 4554
TTF	Timber Trades Federation.	69, Cannon Street, E.C.4.	Victoria 8815
WDC	War Damage Commission.	Devonshire House, Mayfair Place, Piccadilly, W.1.	City 4444
WEDA	Welfare Equipment Development Association.	74, Victoria Street, S.W.1.	Mayfair 8866
ZDA	Zinc Development Association.	Lincoln House, Turl Street, Oxford.	Victoria 5783
			Oxford 47988

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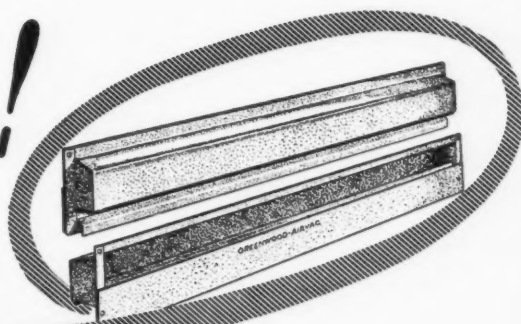
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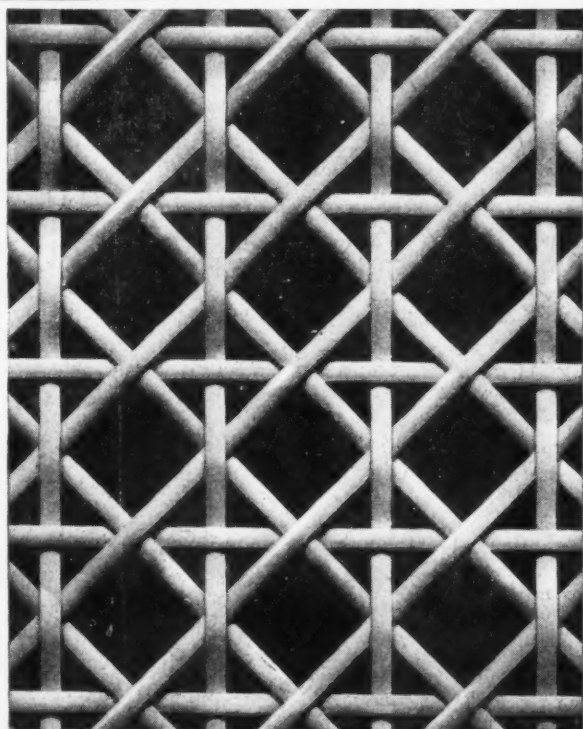


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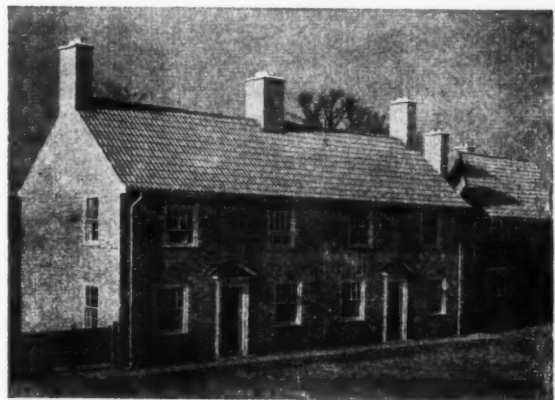
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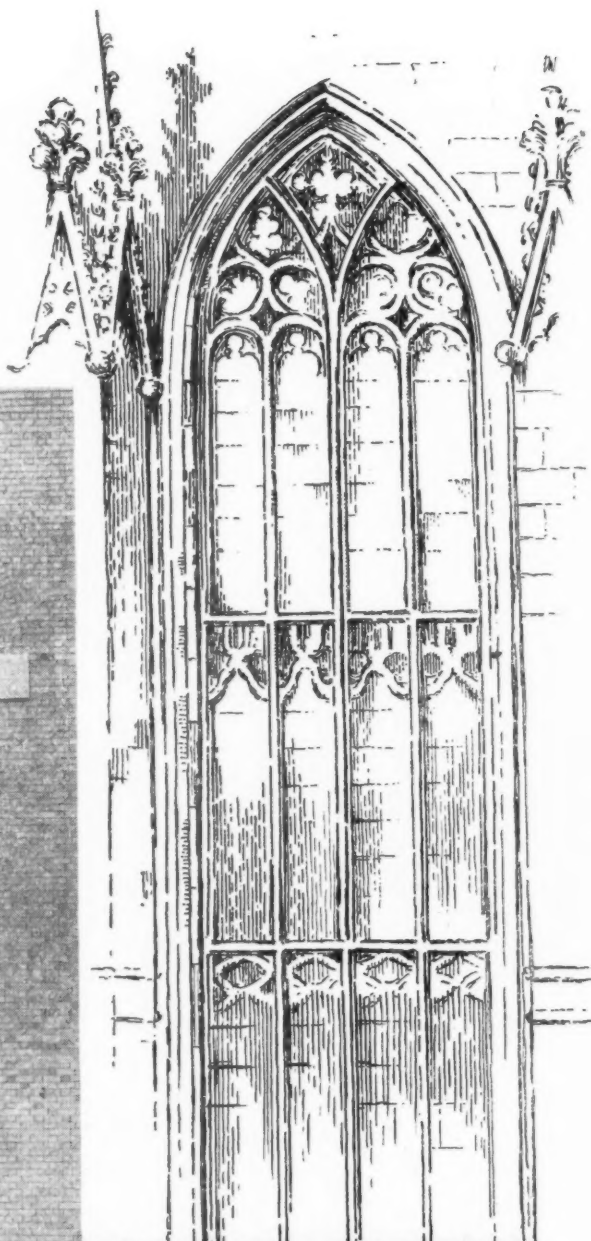
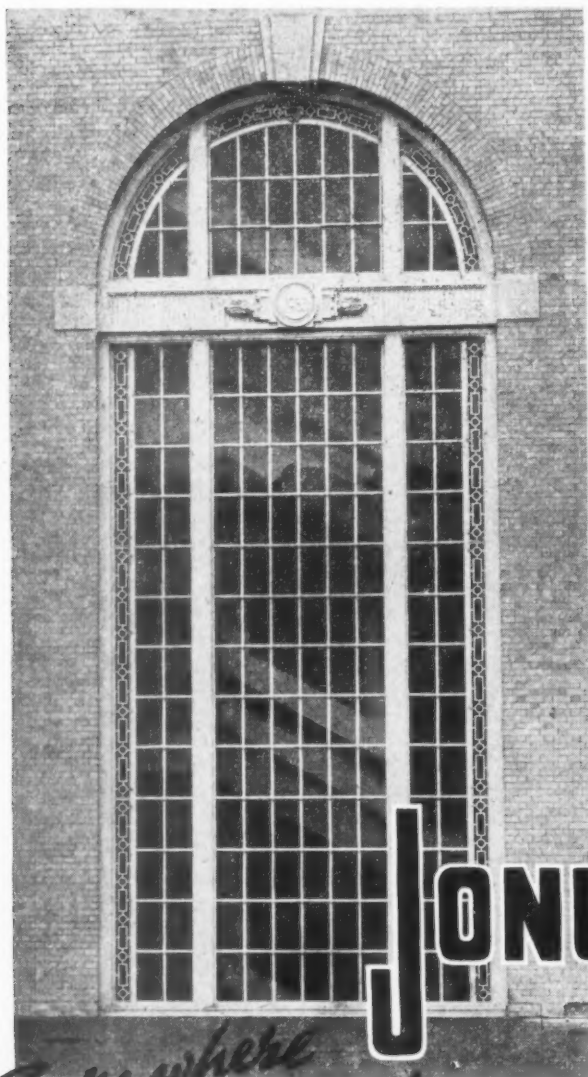
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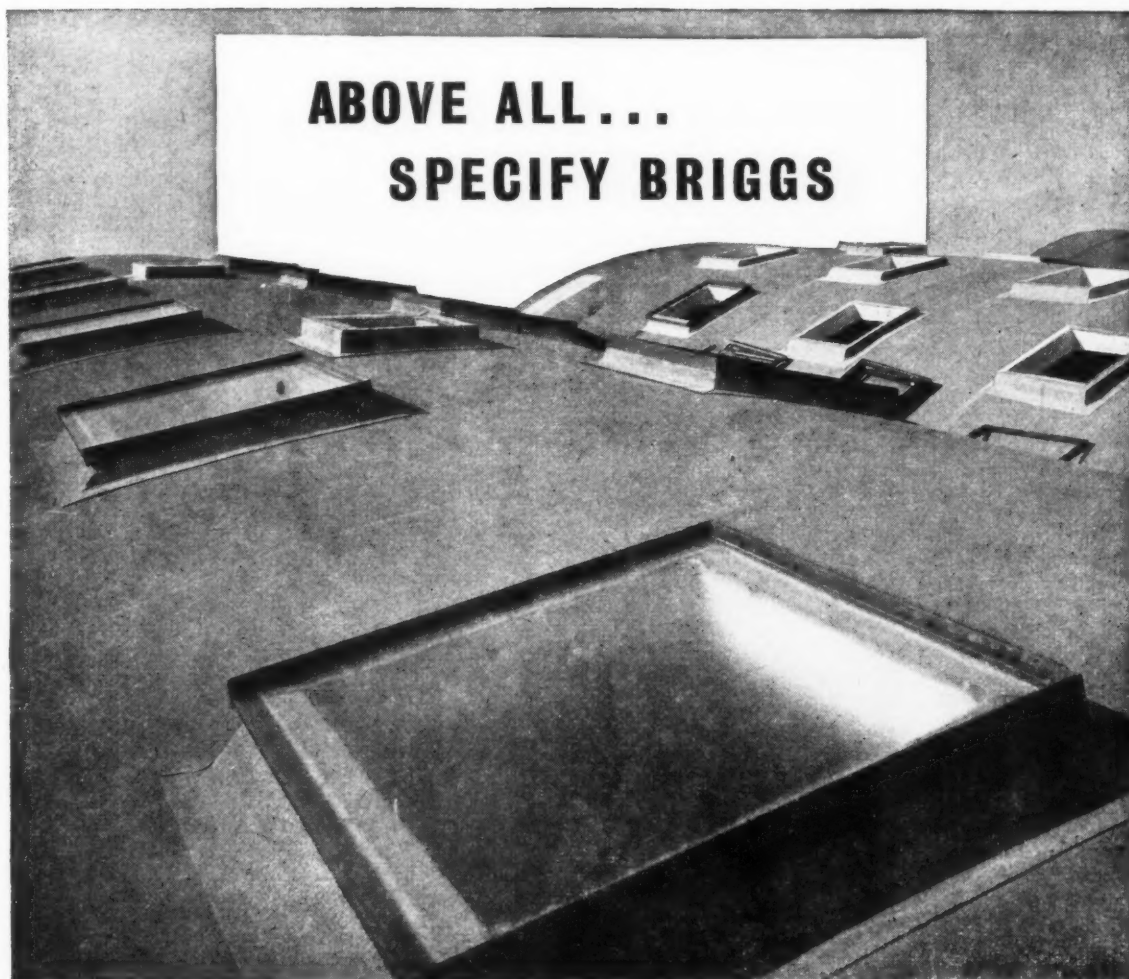
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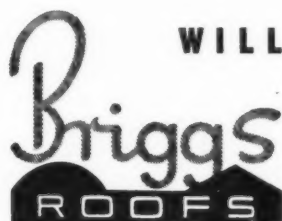


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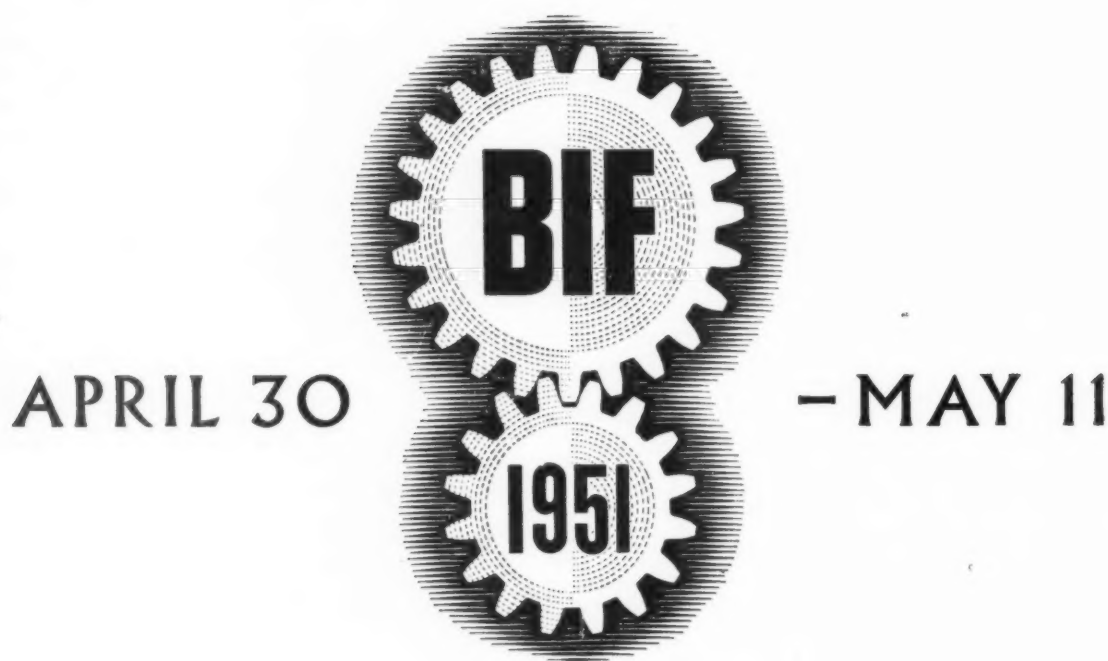


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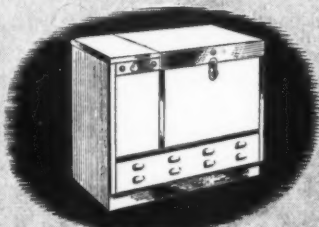
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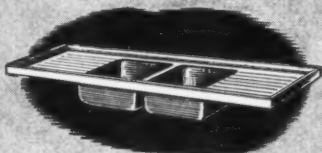
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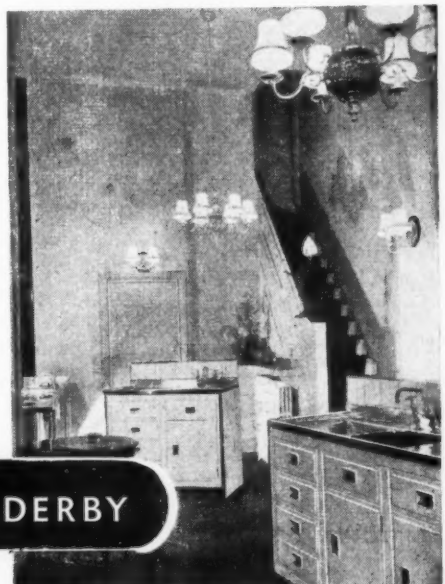
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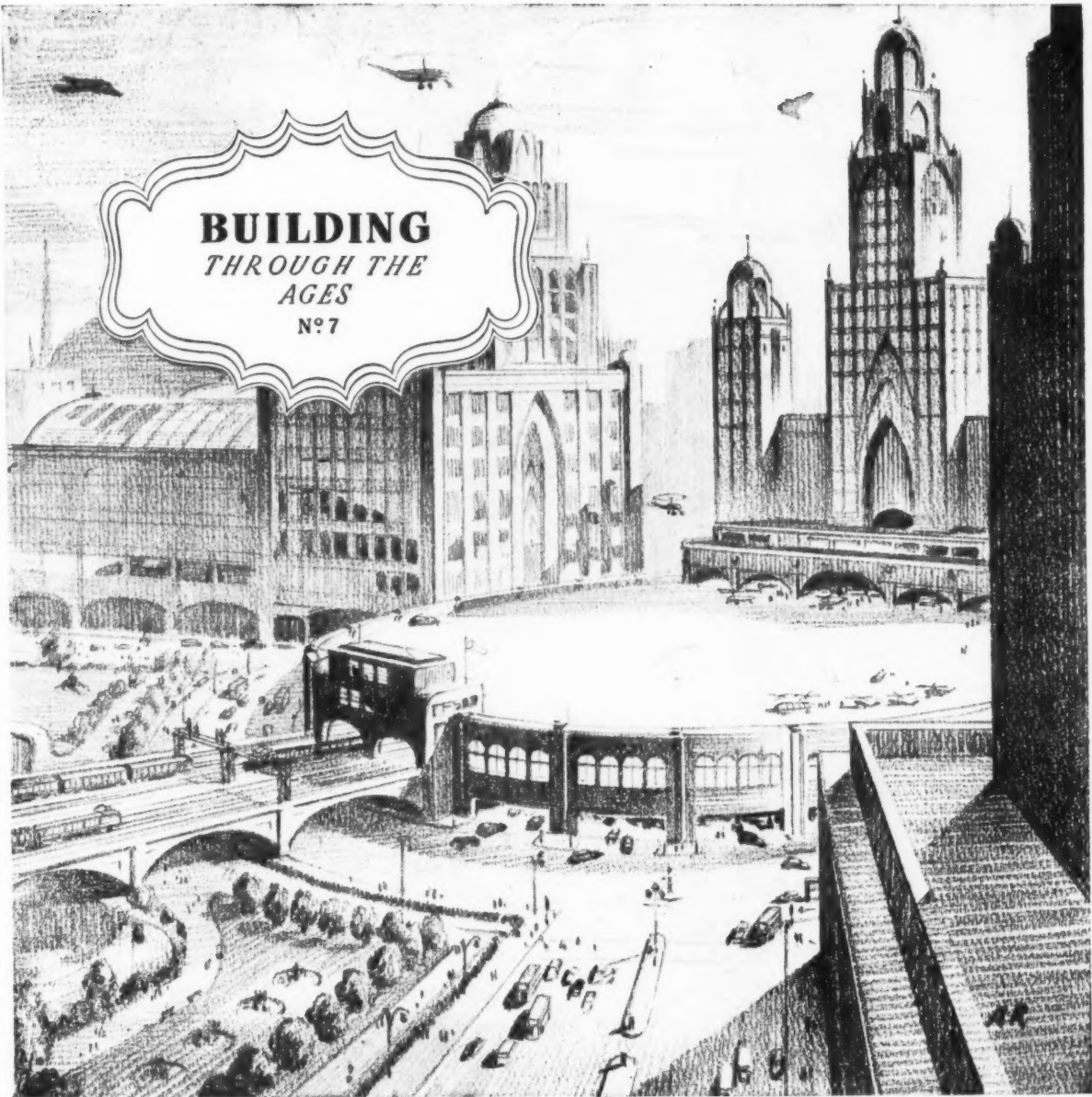
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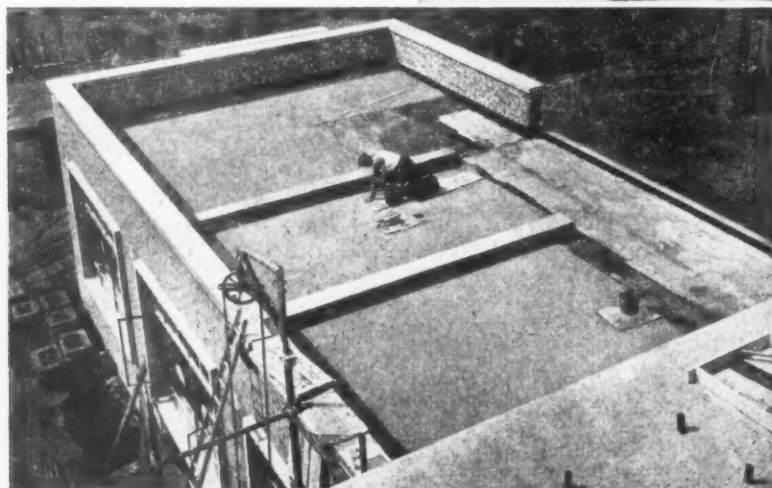
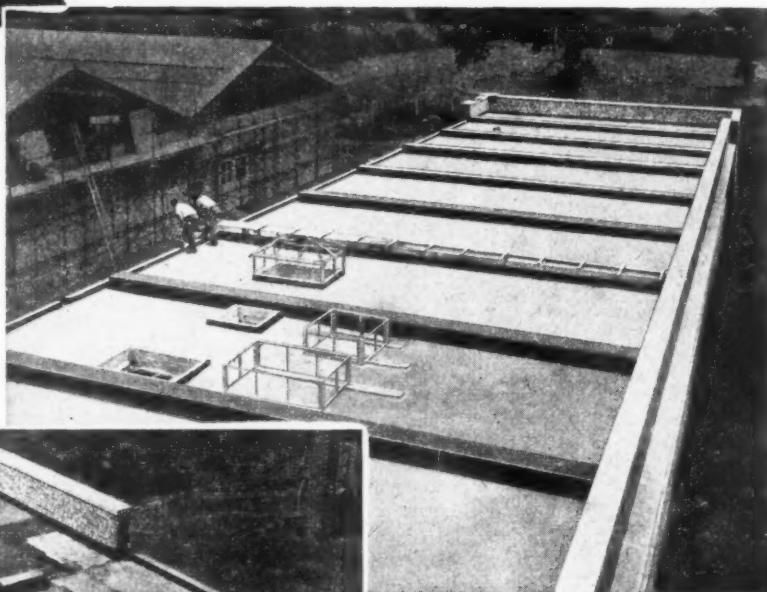
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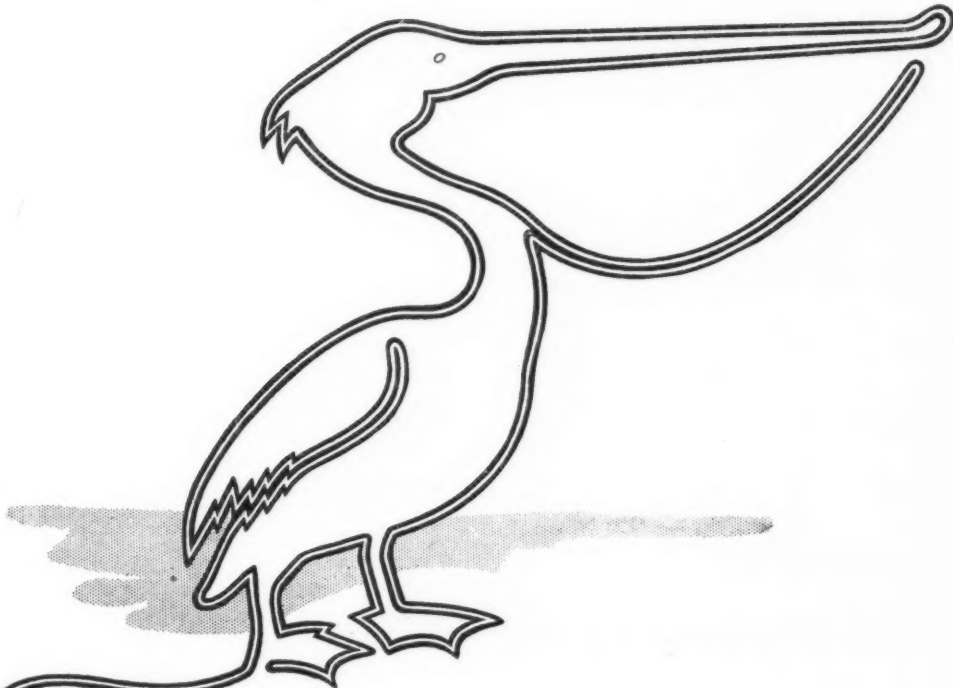


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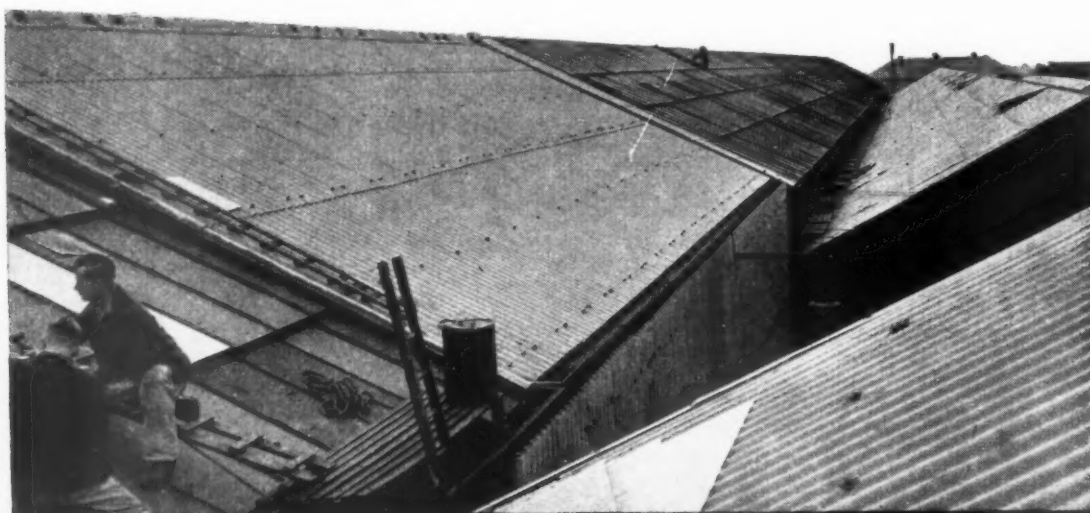
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## STANDARD PRACTICE

Typical of the problems with which architects are constantly being faced is that of balancing such conflicting factors as desirable strength and undesirable dead weight. It was to meet the very real need for a brick which, while retaining adequate strength for normal building purposes, was some 25% lighter in weight that the Phorpres Cellular brick was introduced in 1928. For use with steel construction and in many other cases where it is desirable to save weight, improve heat insulation and increase resistance to moisture penetration, it has become standard practice to specify



*Phorpres bricks are available in a very wide range of standard specials. Particulars of these may be obtained from the Technical and Research Department, who are at your service for information or advice on brickwork problems.*

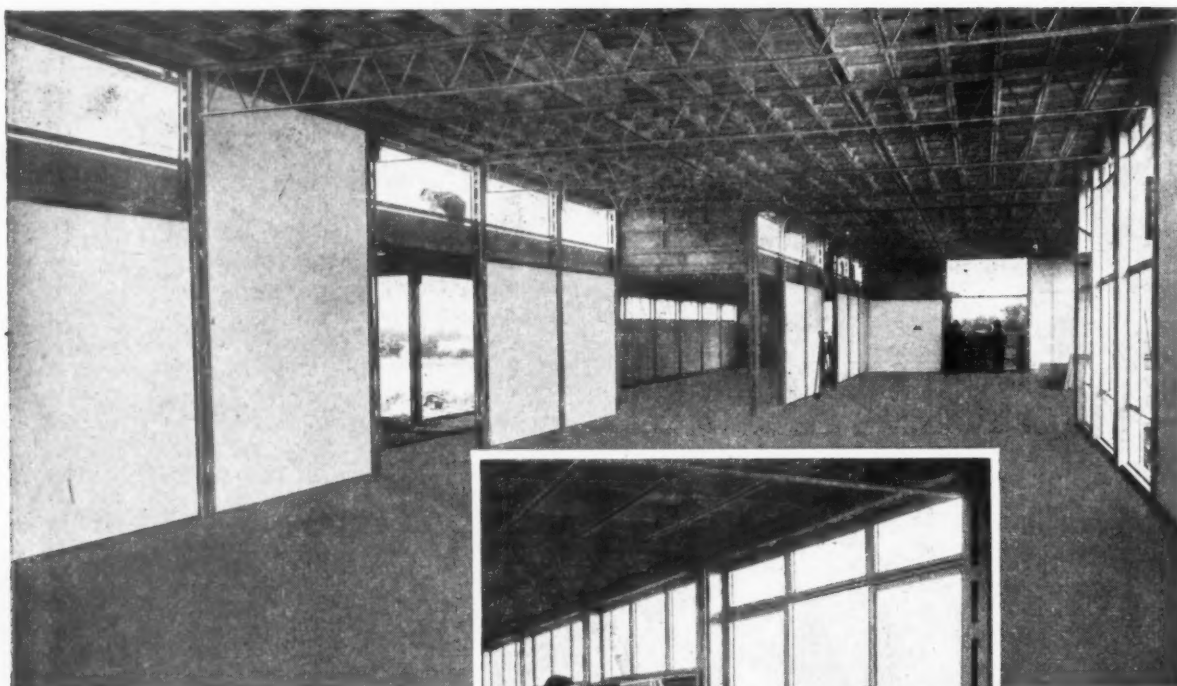
### the PHORPRES cellular brick



#### LONDON BRICK COMPANY LTD

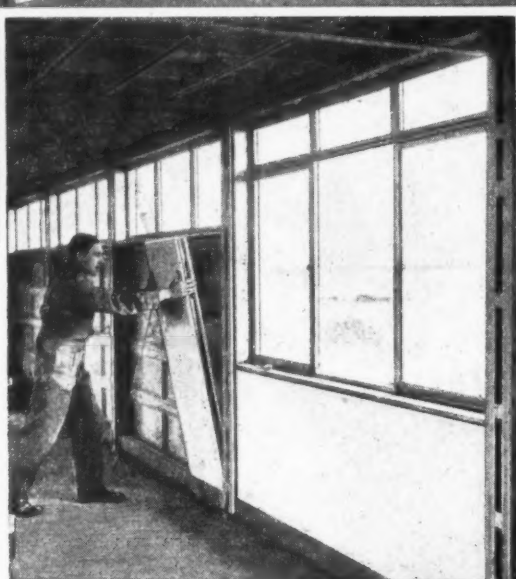
Head Office: AFRICA HOUSE, KINGSWAY, LONDON, W.C.2 Telephone: Holborn 8282. Midland District Office: Prudential Buildings, St. Philip's Place, Birmingham, 3 Telephone: Colmore 4141. South Western District Office: 11 Orchard Street, Bristol, 1 Telephone: Bristol 23004/5. Northern District Office: Gascoigne Street, Boar Lane, Leeds, 1 Telephone: Leeds 20771





# Plastered walls

without



WYKEN CROFT  
PRIMARY SCHOOL,  
COVENTRY

*By Architects'  
Co-operative  
Partnership.*

# site plastering

"Bellrock" fire-resistant panels are pre-formed wall and partition units, manufactured from gypsum plaster. Erected simply with ordinary tools they produce walls and partitions with solid invisible joints, and perfect plaster faces *without* site plastering . . . ready for painting, papering, etc.

Ideal for schools, hospitals, offices, flats, factories, houses, etc. . . . adaptable to any architectural design or to any

type of construction. Easily and speedily erected . . . reduces site man hours . . . effects economies in building costs . . . allows earlier occupation.

"BELLROCK" PANELS have a high load bearing capacity, adequate structural stability, good thermal insulation and are light in weight, thereby reducing structural load. Full room height single lift "Bellrock" panels are available from stock - 8ft.-12ft. high, 2ft. wide and 3in.-7in. thick.

*Building Research Station and National Physical Laboratory test reports, together with further technical information may be obtained on request.*

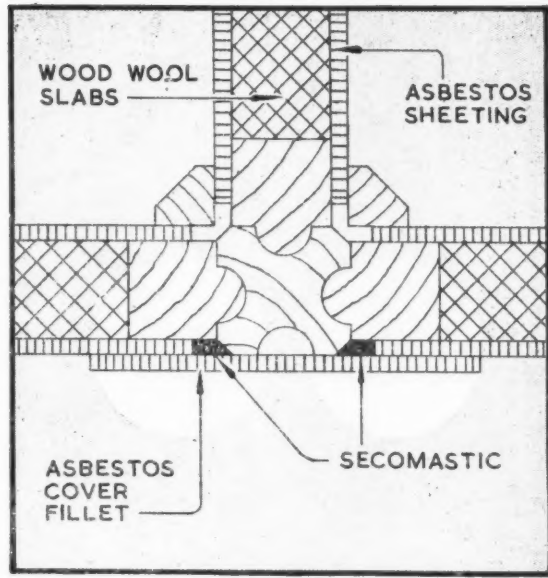
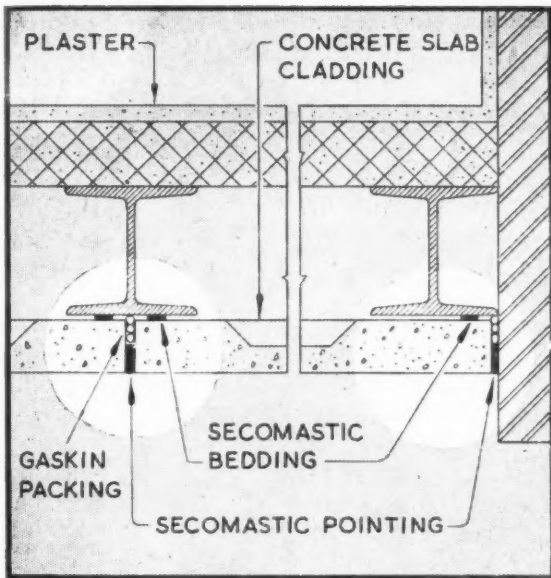
**BUILD WITH**



Bellrock

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## EXPANSION JOINT PROBLEMS

SOLVED BY

# SECOMASTIC

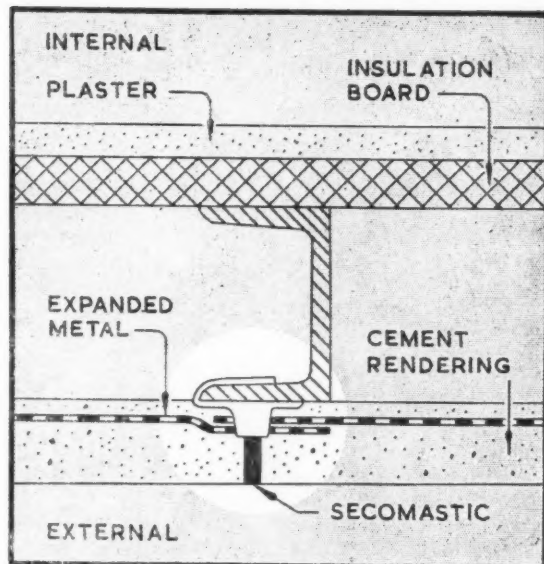
The illustrations show typical examples of the use of SECOMASTIC for expansion joints. In each case the problem was to provide a weatherproof seal whilst at the same time allowing for the normal contraction and expansion of the joint.

SECOMASTIC fulfils this requirement admirably since the movement of the joint is taken up within the body of the mastic which remains in a plastic state, though protected by an outer skin.

There are a great many uses, both in new construction and maintenance work, for which Secomastic has outstanding advantages and a "code of good practice" is gradually being built up whereby the best results can be obtained where joints occur which require sealing.

The problem of efficient and economical application of the mastic is solved by the SECO caulking gun, particularly when used with the SECOMASTIC patented extra-capacity cartridges.

Informative literature will be supplied on request and the SECOMASTIC Technical Staff, who know a great



deal about jointing and sealing problems, will be pleased to advise on specific applications. Please address your enquiries to Architectural Department.

# SECOMASTIC

REGD. JOINT SEALING COMPOUND



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*Catalogues, colourcards and general literature will be sent gladly on request or are obtainable from leading Builders' and Decorators' Merchants.*



*ADVISORY SERVICE BUREAU.*

*This bureau is freely at the disposal of all interested in the selection and application of decorative materials. Technical information and advice are always available.*

**Make Britain *BRIGHTER* with  
ROBBIALAC PAINTS**

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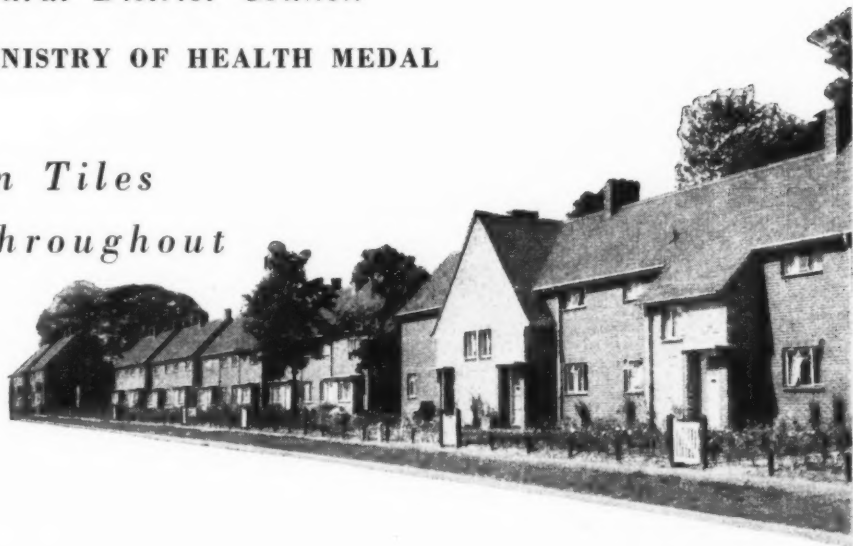


Architect : Peter Dunham, F.R.I.B.A. Contractors : Richardson & Bottoms and Tew Brothers.

**HOUSING AT HOUGHTON REGIS, BEDS**  
*for the Luton Rural District Council*

**AWARDED THE MINISTRY OF HEALTH MEDAL**  
**(Eastern Region)**

*Marley Plain Tiles*  
*were used throughout*

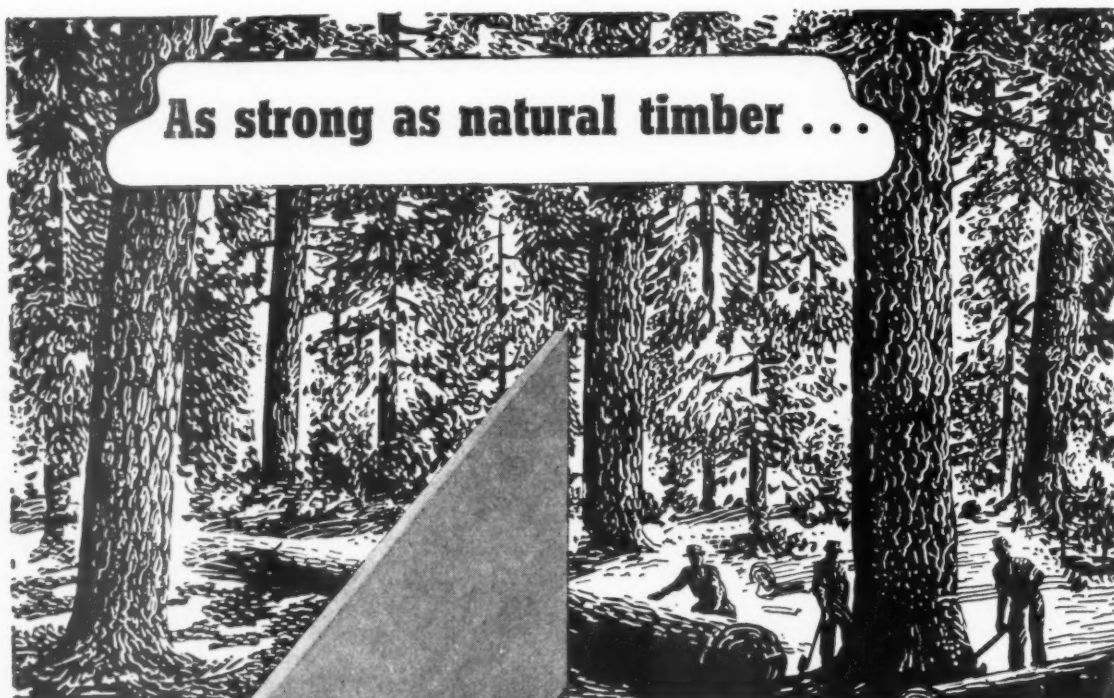


"Not for an age—but for all time"

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Sevenoaks 2251-8

**MARLEY**



**As strong as natural timber . . .**

***...yet these grainless  
fibre Building Boards  
are superior in many ways***

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# SUNDEALA

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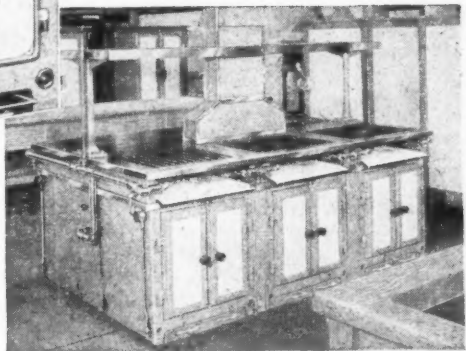
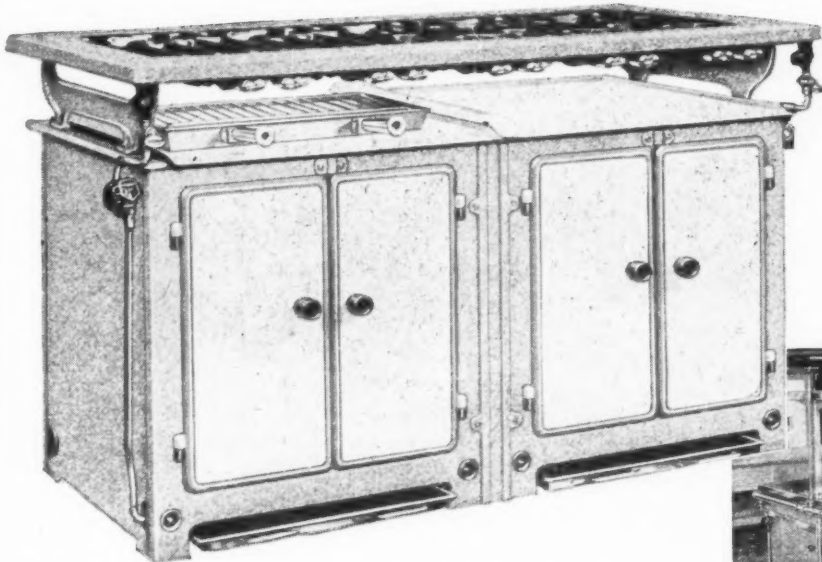
**SUNDEALA BOARD CO. LTD., ALDWYCH HOUSE, LONDON, W.C.2. Tel: CHAncery 8159**

Works: Sunbury-on-Thames, Middlesex.

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*If you have any catering problem, large or small, write to R. & A. Main Ltd. They offer you the benefit of their long experience in the equipping of Kitchens, Canteens, etc. Layouts and estimates of cost will be gladly prepared on request.*



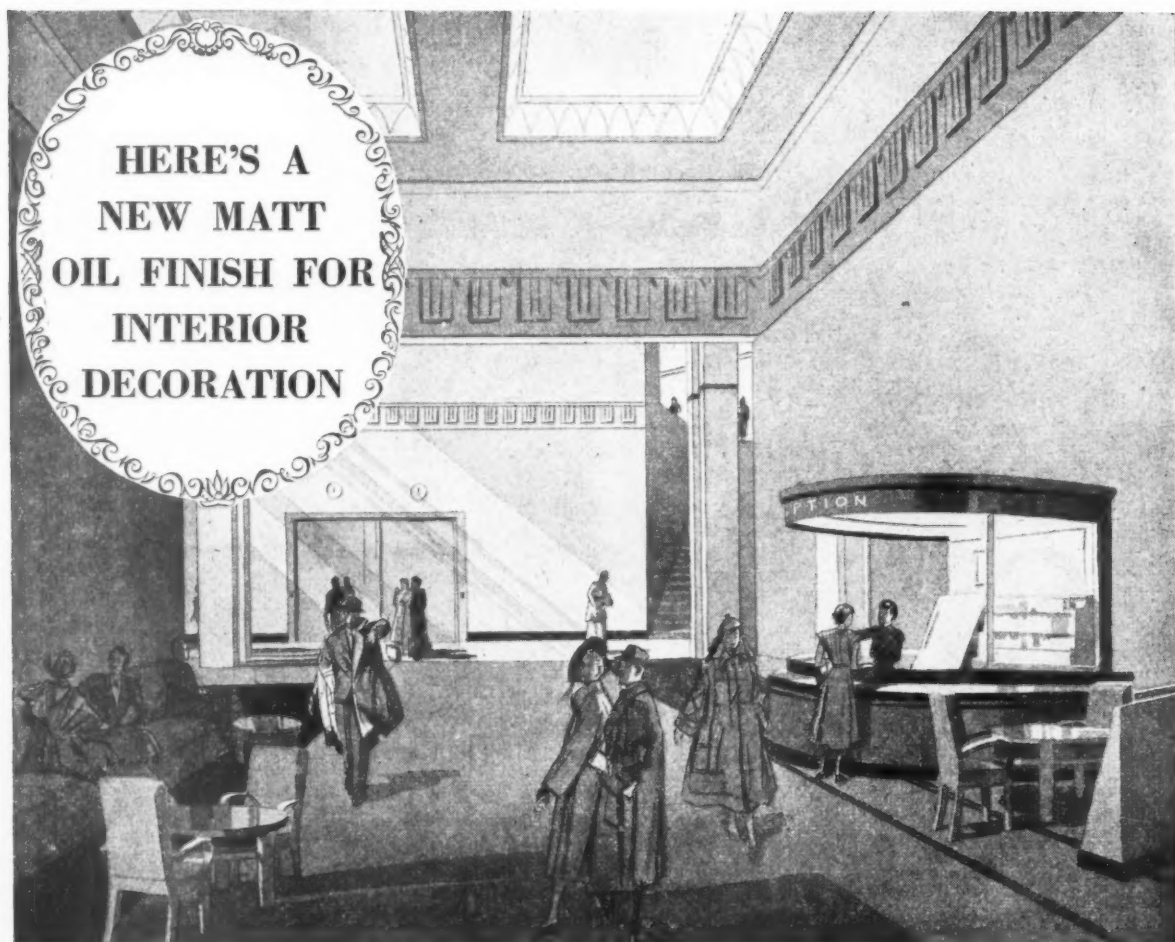
## **COOKING APPARATUS AND KITCHEN EQUIPMENT**

**R. & A. MAIN LIMITED**

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**I**N hotels, flats, private homes and offices; in hospitals, schools, public and factory buildings, MURAC gives a finish to walls that is quickly and economically applied, beautiful to see, easy to clean and *long lasting*!

#### MURAC SUPERSEDES DISTEMPER & WATER PAINT

Here's a matt oil paint as easy to put on as distemper, using a 6" flat wall brush. What a saving in labour costs alone! MURAC dries with a beautiful dull sheen, and its surface is so hard that not only can it be rubbed and scrubbed again and again, but it is also hygienic and impenetrable to dirt. MURAC is long-lasting, won't powder or flake, and comes in eighteen basic colours, easily blended to any shade you could want. It is made in the Brolac works by John Hall & Sons Ltd., who will gladly send you a **free colour scheme booklet** if you will write to them at the address below.

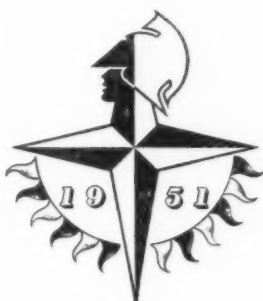


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MATT OIL FINISH FOR WALLS

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*All the seating in*  
**THE ROYAL FESTIVAL HALL**  
*and*  
**THE TELEVISION THEATRE**  
*is equipped with*  
**DUNLOPILLO**  
**CUSHIONING**

Dunlopillo, the original latex foam cushioning, which is now being used all over the world for mattresses and seating of all kinds, has recently been installed in all the seating throughout the new House of Commons.

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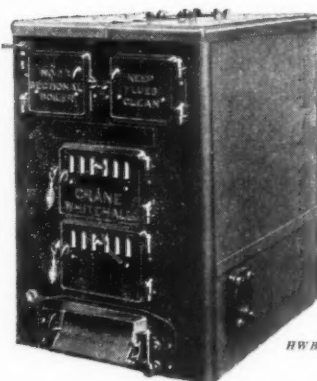
**FOUNDERS OF THE LATEX FOAM INDUSTRY**

1D/D15



## THIS COUNTRY'S CLIMATE CALLS FOR CRANE

Short of emigration, hara kiri, or getting a job as a nightwatchman in front of a brazier—there is precious little to be done about our climate outdoors. But indoors the answer is Crane. Crane equipment for heating is much in demand for public buildings—schools, libraries, hospitals, offices, theatres. Crane boilers and radiators are 'cast iron' for reliability, endurance and economical fuel costs.



### WHITEHALL BOILERS

The Crane Whitehall series of Boilers has these three exclusive features: (a) controlled water travel (b) increased 'ceiling' heating surface (c) restricted area high velocity gas flues. Thus maximum heat units are obtained from the fuel consumed at lowest possible flue outlet temperatures.

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## *That arresting Whiteness*

The snowman himself couldn't have picked a better place—it needs a touch of white to bring life and colour to a sombre setting.

With Snowcrete, the pure white cement, the archi-

tect can highlight individual features of a building or give all four walls the freshness of virgin snow. Snowcrete is also used for producing renderings, facings, terazzo and cast stone of great durability.

# SNOWCRETE

## WHITE PORTLAND CEMENT

Full particulars from: **THE CEMENT MARKETING COMPANY LIMITED**

PORTLAND HOUSE, TOTHILL STREET, LONDON, S.W.1

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THE SOUTH WALES PORTLAND CEMENT & LIME COMPANY LTD., PENARTH, GLAM.





# 'PERSPEX' corrugated ACRYLIC SHEET

Corrugated 'Perspex' is manufactured from unplasticised polymethyl methacrylate, a durable synthetic resin unaffected by prolonged atmospheric exposure. 'Perspex' first became widely known as an aircraft glazing material, for which purpose its high light transmission (92%) combined with toughness, light weight and ease of working made it ideal. In corrugated form, 'Perspex' meets the requirements of architects and builders for an industrial glazing material which can be fitted easily and simply in a corrugated roof without need of additional supporting steelwork, glazing bars or lead flashing.



## NATURAL LIGHTING

Corrugated 'Perspex' may be fitted at any point in the roof or wall surface in exactly the same way and at the same time as the corresponding roofing sheet, to provide just the quality and intensity of lighting required. For general industrial purposes, it is recommended that sheets be fitted singly or in pairs in a regular chequerboard pattern throughout the roof. This method ensures that non-directional and shadowfree lighting of the correct intensity is provided uniformly throughout the working area with the minimum expenditure in glazing material.

**SELLING ARRANGEMENTS:** Sold through Builders' Merchants or Roofing Contractors. For information apply to I.C.I. Sales Offices.

'Perspex' is the registered trade mark of the acrylic sheet manufactured by I.C.I.

**IMPERIAL CHEMICAL INDUSTRIES LTD., LONDON, S.W.1.**



C.P.54

## MAINTENANCE

Under normal conditions Corrugated 'Perspex' requires no maintenance, except for occasional cleaning with water or soap and water, and should last indefinitely.

## DETAILS

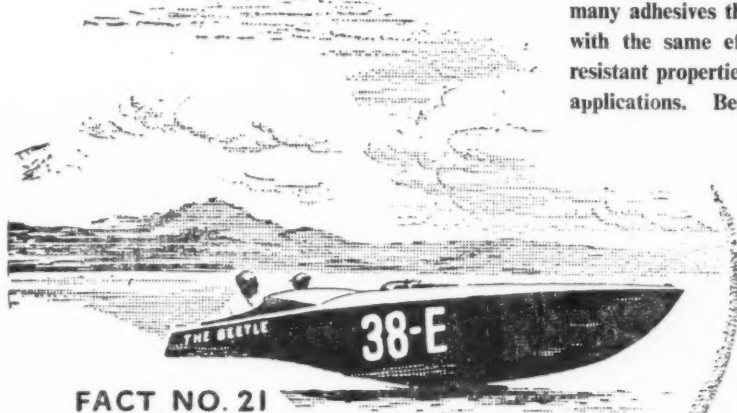
Approximate weight : 0.9 lb. per sq.ft.  
Nominal thickness :  $\frac{1}{8}$  in.  
Standard lengths : 3 ft. to 7 ft. rising by 6 in. increments. Types available in lengths over 7 ft. are indicated below.  
Profile dimensions : These are based on the average make of the corresponding roofing sheets.

The following list gives some of the types of Corrugated 'Perspex' sheets.

C.P. Type No.	Pitch	Max. Length	For use with
260 261 280 281	2 $\frac{1}{2}$ "	120"	Robertson Protected Metal 10 $\frac{1}{2}$ /2 $\frac{1}{2}$ "
309 311 505 518 535 567 568 588 606 705 114	2 $\frac{1}{2}$ " 3" 3" 5" 5 $\frac{1}{4}$ " 5 $\frac{1}{2}$ " 5 $\frac{3}{4}$ " 5 $\frac{3}{4}$ " 6" 7" 11"	120" 120" 90" 84" 84" 120" 120" 120" 84" 84" 60" & 72" only	Standard (3" nominal) asbestos cement 8/3" iron and similar 10/3" iron and similar 5/5" iron Eternit No. 5 asbestos cement Robertson Protected Metal 'V Beam' 'BIGSIX' style asbestos cement New 'BIGSIX' style asbestos cement 'SUPER-SIX' asbestos cement 6" (actual pitch) asbestos cement Eternit No. 7 asbestos cement 'TURNALL' combined sheet
133 153	13 $\frac{1}{2}$ " 15"	96" 96"	'TRAFFORD TILE' asbestos cement 'WATFORD TILE' asbestos cement

# A LITTLE **BEETLE** WORKS FAST

This is the sixth in a series of factual announcements.



## FACT NO. 21

### 70 M.P.H. BEETLE!

So impressed was Mr. P. W. Elkington, Pretoria, with the Beetle Adhesives used throughout in the construction of his 'E' Class racing runabout that he has named it 'The Beetle'. It 'beetles' along at 70 m.p.h. and has won many South African events. A striking tribute to his workmanship and the reliability of the adhesives.

## FACT NO. 23

### YOU RELAX - BEETLE DOESN'T

This strong, comfortable garden chair is made by Harry Barnes (Heywood) Ltd. Beetle Adhesives are used throughout for their durability and water-resistance.



Beetle Adhesive is the modern medium used today in the age-old craft of sticking wood to wood. Although there are many adhesives there is no type which economically combines with the same efficiency the strength, durability and water-resistant properties required in so many different woodworking applications. Beetle Adhesive is available in close-contact and gap-filling forms for use with either hot or cold pressing methods. Write for booklet giving full particulars.

## FACT NO. 22

### THE COMPLETE ADHESIVE

One of our customers, who makes fishing rods as a hobby, writes: "... a friend of mine killed 32 bass on a 9 ft. trout rod in heavy sea water all in three days. ... The rod I made myself with your cement".

## FACT NO. 24

### BEETLE KEEPS THEM ROLLING

Mr. B. W. Millichamp of Gorleston-on-Sea chose Beetle Adhesive for the production of laminated blocks from which are machined wheels for roller skates. Sports goods invariably call for strength, durability and water-resistance of laminated parts.

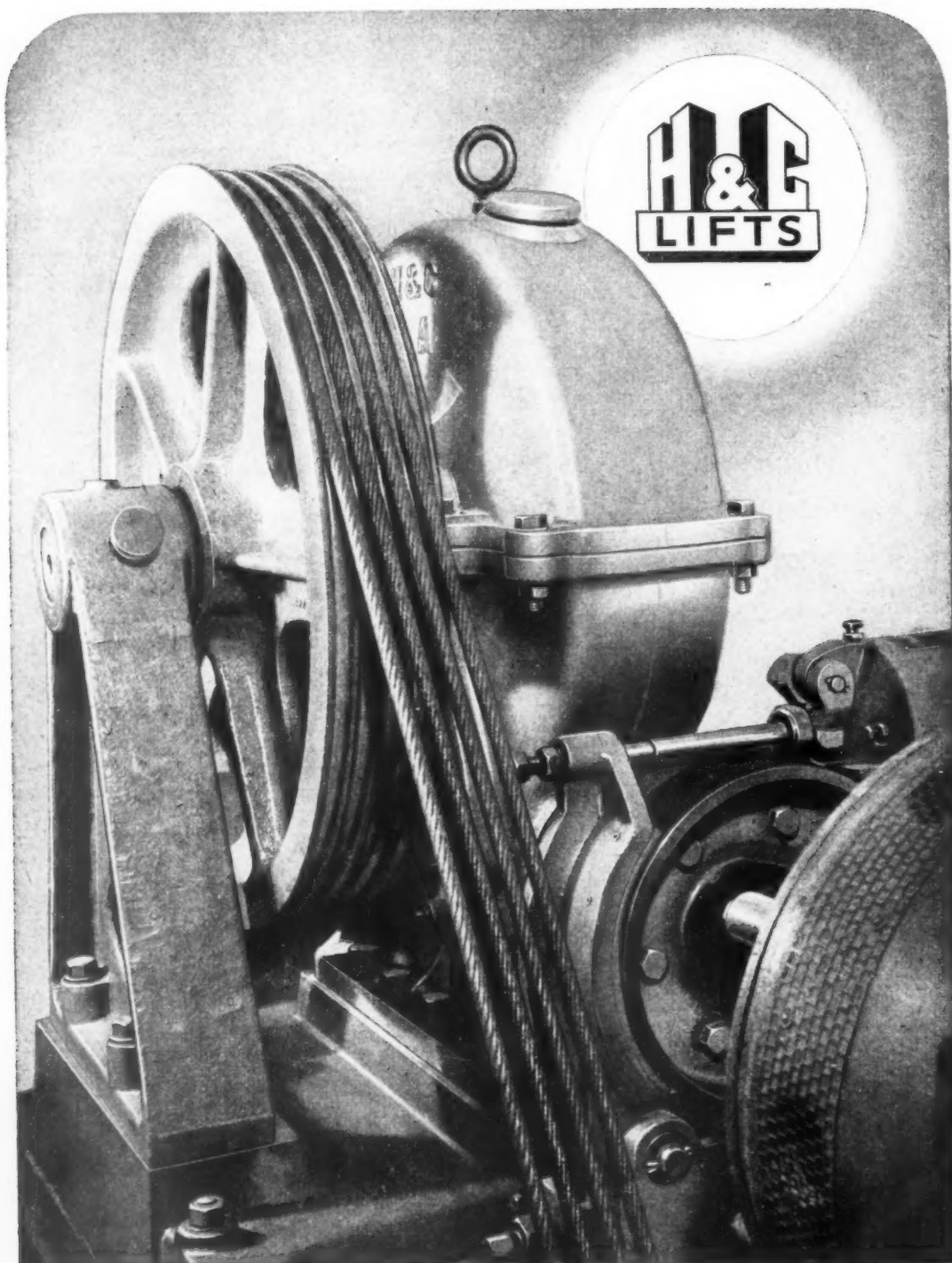


## BEETLE ADHESIVES STRONG, DURABLE, WATER-RESISTANT

Sole Agents in the United Kingdom: BARTER TRADING CORPORATION LTD., 14 Waterloo Place, London, S.W.1

Overseas Distributors: Beetle Bond Ltd., 1 Argyll Street, London, W.1

'BEETLE' is a trade mark registered in Great Britain and in most countries of the world.



*Ample Power with Perfect Control  
is the Keynote of H. & C. LIFTS*

HAMMOND & CHAMPNESS LTD., GNOME HOUSE, BLACKHORSE LANE  
WALTHAMSTOW, LONDON, E.17.      TELEPHONE: LARKSWOOD 1071

# WHITE LEAD PAINT LASTS

... because it expands and contracts with the surface it covers. It wears smoothly and evenly without cracking or flaking, so that when re-painting eventually comes round there is no burning off to be done — thus saving labour and overheads which often account for 80% or more of the total cost.

\* So — for exterior painting (and many interiors) — it's wise to specify —



## \* MAGNET

a hard gloss paint which really gives lasting protection for outside use — for interiors too, especially in moisture and steam-laden atmospheres. Will withstand repeated washing. In 20 colours. A gallon covers 1000 to 1300 sq. ft.

Magnet gives best results when applied over the specially prepared Magnet Undercoating (in 14 colours) and Primer — both based on Lead.



## \* IBEX

for external property maintenance where a normal oil gloss is required... a White Lead Base Oil Paint selected after widespread tests with no less than 81 different paint mixes. Ibex flows smoothly from the brush, covers 1000 to 1200 sq. ft. per gallon and is available in 24 colours including some charming pastel shades.

Recommended as a coat-on-coat paint over appropriate Ibex Lead Primer where necessary.



## \* COOKSON'S CRESCENT

for the severest external conditions; especially valuable for undercoatings. Also suitable inside as, in the craftsman's hands, it is adaptable to a wide variety of effects and finishes. A GENUINE White Lead Paint — pigment composition 100% White Lead — and has a high spreading rate per gallon.

Also available: Cookson's "Crescent" Genuine White Lead/Red Lead Priming Paint ("Genuine Pink Primer") and Cookson's "Crescent" Tinted White Lead Oil Paints.

*All these paints are supplied in the usual trade packages up to 5-gallon drums*



## ASSOCIATED LEAD MANUFACTURERS LTD.

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Export enquiries to: THE ASSOCIATED LEAD MANUFACTURERS' EXPORT CO. LTD., 11, Minorities, London, E.C.3.

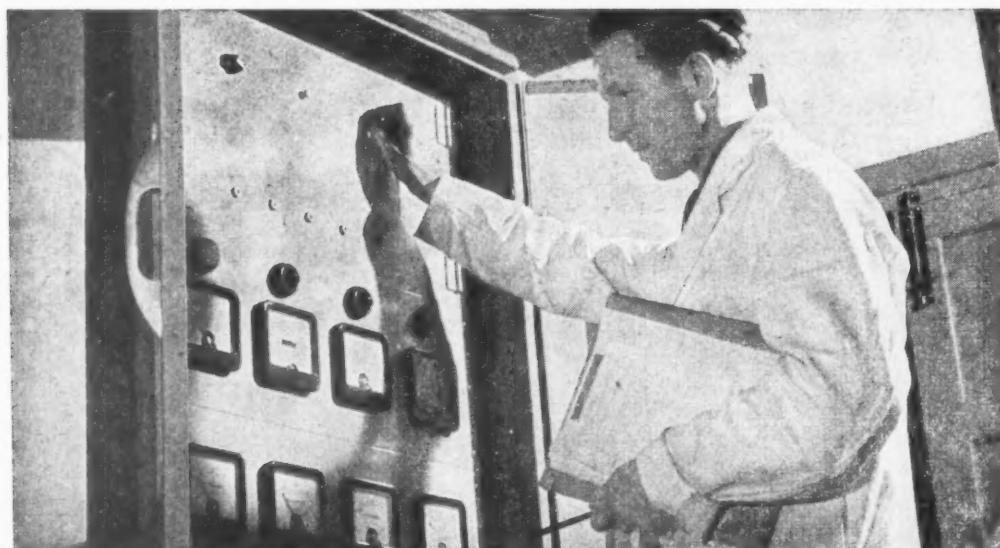


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inspired by service*



SOUND & TELEVISION BY REDIFFUSION FOR THE FESTIVAL OF BRITAIN, 1951

**Maintenance and emergencies**



Every Rediffusion installation is regularly inspected and serviced to reduce breakdown risks to a minimum. Valves are replaced automatically after a fixed number of hours' use and careful check is made of all components.

Should an emergency arise, service engineers are quickly on the spot following a subscriber's summons. So as to be close at hand, maintenance teams operate from each of the many Rediffusion depots situated strategically throughout the country.

Rediffusion provides an important social service to the community. It sustains production through its factory installations . . it entertains the sick in hospitals . . it provides time-saving staff location and paging systems in works and hotels . . and it gives pleasure to hundreds of thousands of listeners in their own homes.

*Sound Service by*  
**R E D I F F U S I O N**

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CENTRAL REDIFFUSION SERVICES LIMITED, CARLTON HOUSE, LOWER REGENT STREET,  
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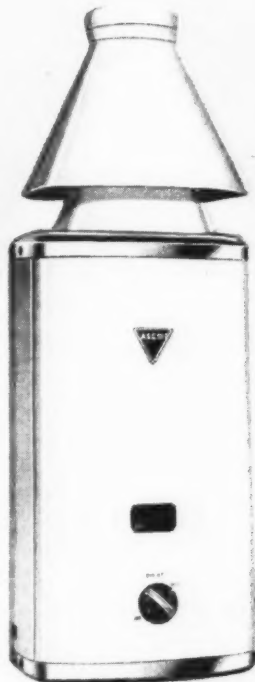




# *The new Ascot 709 Multipoint*

A TECHNICALLY IMPROVED SUCCESSOR TO THE FAMOUS NEA 32/6

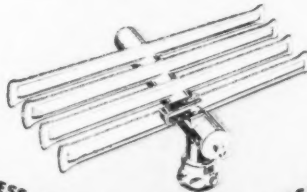
- ★ Built-in gas governor
- ★ Fitted with a completely new thin-flame stainless steel burner
- ★ Wider fin spacing on the new heat exchanger gives more generous flue-ways to obviate choking by deposits
- ★ A redesigned gas section has a single rotary gas control for main and pilot cocks instead of the two horizontal handles



The new stainless steel burner has positive advantages. It is highly resistant to corrosion, so that blockage due to this cause is practically eliminated. The period between essential servicing is thus greatly lengthened, and total expectation of life increased

Stainless steel also gives greater rigidity and strength, which is enhanced in the thin-flame type of burner as there are fewer tubes of larger section.

**LONGER SERVICE LIFE • LESS MAINTENANCE**



THE STAINLESS STEEL BURNER IS EXCLUSIVE TO ASCOT

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*Ascot makes the most of gas*

*perfect shadow line...*



this pamphlet explains  
not only the aesthetic  
but also the many economic  
and technical advantages of ..

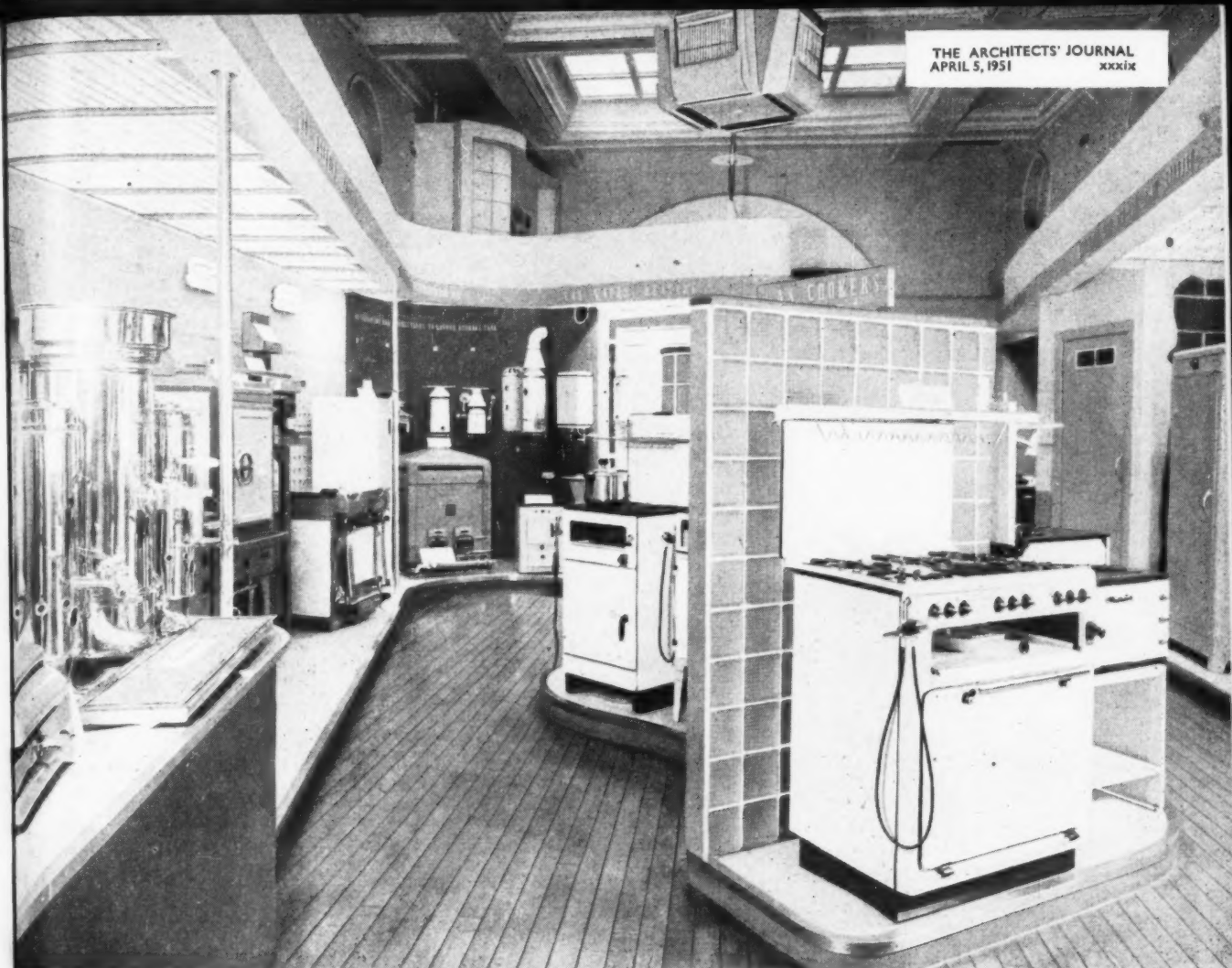
*write for a copy for your files to:*



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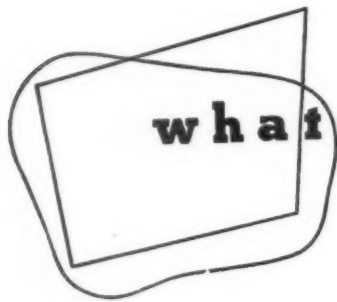
## "GAS in the design for living"

UNDER THIS TITLE The Gas Council maintains, at the London Building Centre, a permanent exhibit the object of which is to provide a convenient centre to which architects, builders and housing authorities may come in order to keep abreast of the latest developments in gas services. The exhibit is largely devoted to the domestic uses of gas and coke, but also deals with large-scale catering equipment and other commercial and industrial appliances. A technical assistant is in attendance to give information and advice, and visits from individuals or organised parties will be welcomed (the latter preferably with prior notice).

*This exhibit is one of many activities by which The Gas Council seeks to promote the development of gas services for cooking, hot water, space heating and refrigeration. In all cases where the use of gas is envisaged early consultation with the local Gas Undertaking is advisable.*

# GAS

ISSUED BY THE GAS COUNCIL • 1 GROSVENOR PLACE, S.W.1 • TELEPHONE: SLOANE 4554



## whatever the shape

Architects know that in this age of transition, rapid changes to the original planning of buildings are often necessary. Steelwork is well adapted to these alterations, and the experience and technical skill of those responsible for BOOTH STEELWORK will be found invaluable in these circumstances.



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Structural Steelwork — Steel  
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Nearly a quarter of a million Radiation 'Siesta' Stoves have gone into new houses since the war. Its wide sanction by the Government is due no doubt, to its high fuel efficiency, which makes it the most economical method of domestic heating. Users appreciate this—but they are also quick to notice the pleasing lines and its fine vitreous enamel finish. The unique feature is the 'disappearing' doors which give a cheerful open fire when required. The stove is easy to control, clean and maintain. The Radiation 'Siesta' Model can be supplied either free-standing or built in; with or without water-heating boiler. Complete details will be gladly supplied. Please address enquiries to the Solid Fuel Division of Radiation Group Sales Ltd.,\* Leeds 12.

\* Co-ordinating the sales organisation of the three factories producing solid fuel appliances controlled by Radiation Ltd.

They are:

Wilsons & Mathiesons Ltd., Leeds 12.

The Eagle Range & Grate Co. Ltd., Aston, Birmingham 6.

The Park Foundry (Belper) Ltd., Belper, Derbyshire.

**SOLID FUEL** *Radiation* **APPLIANCES**

The Radiation Group supplies apparatus of all types covered by the approved list of the Ministry of Fuel and Power

# *Craftsmanship in Brass*

WITH

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More than 50 years of specialised experience have resulted in technical perfection of all their gas fittings and lighting equipment. When your order is supplied by Edgar of Hammersmith, you know you are getting the best.

Flexible Plugs and Sockets, Main Cocks, Union Cocks, Tees, Elbows, etc., etc., made to B.S. Specifications and available in a complete range to meet all requirements. Complete Street Lighting Equipment. Gas, Hot Water and Central Heating Installations. Full details furnished on request.



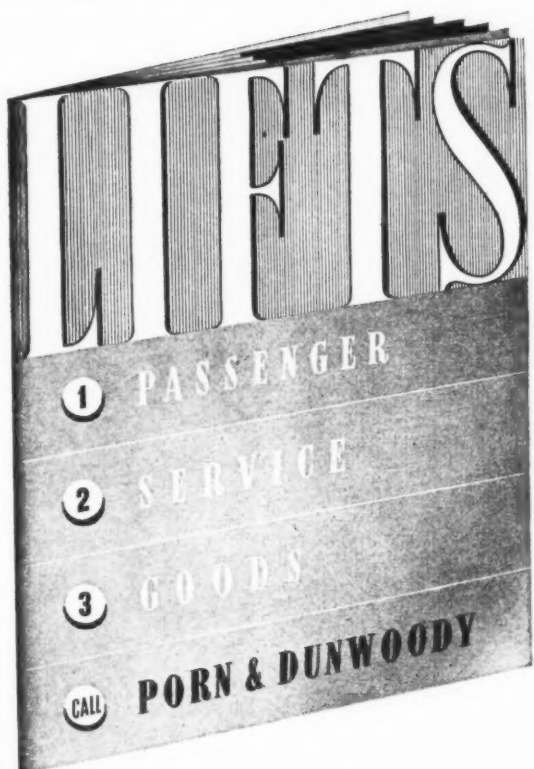
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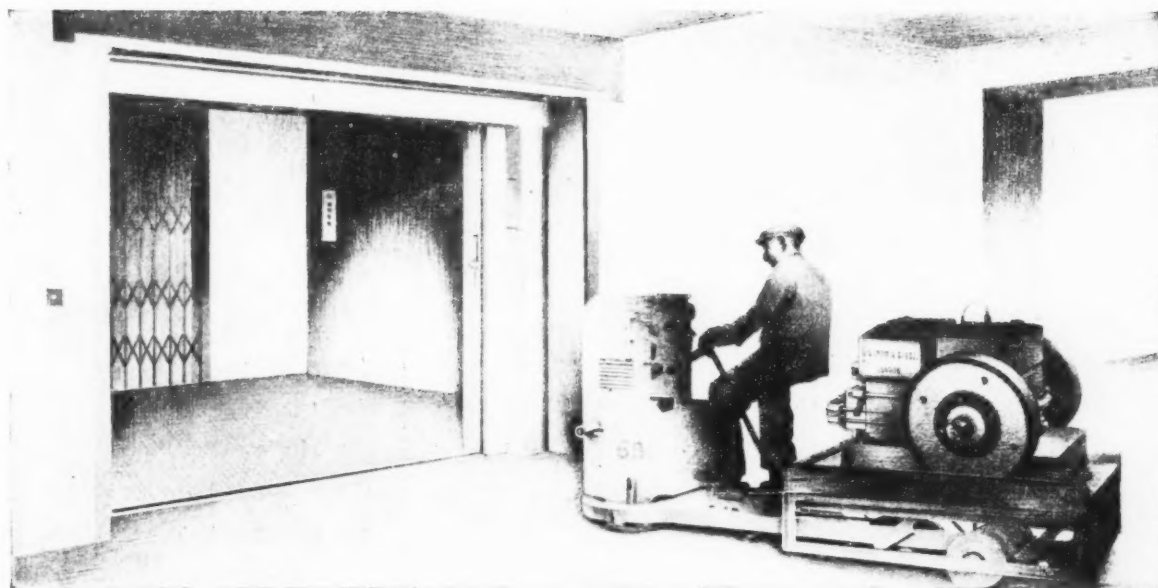
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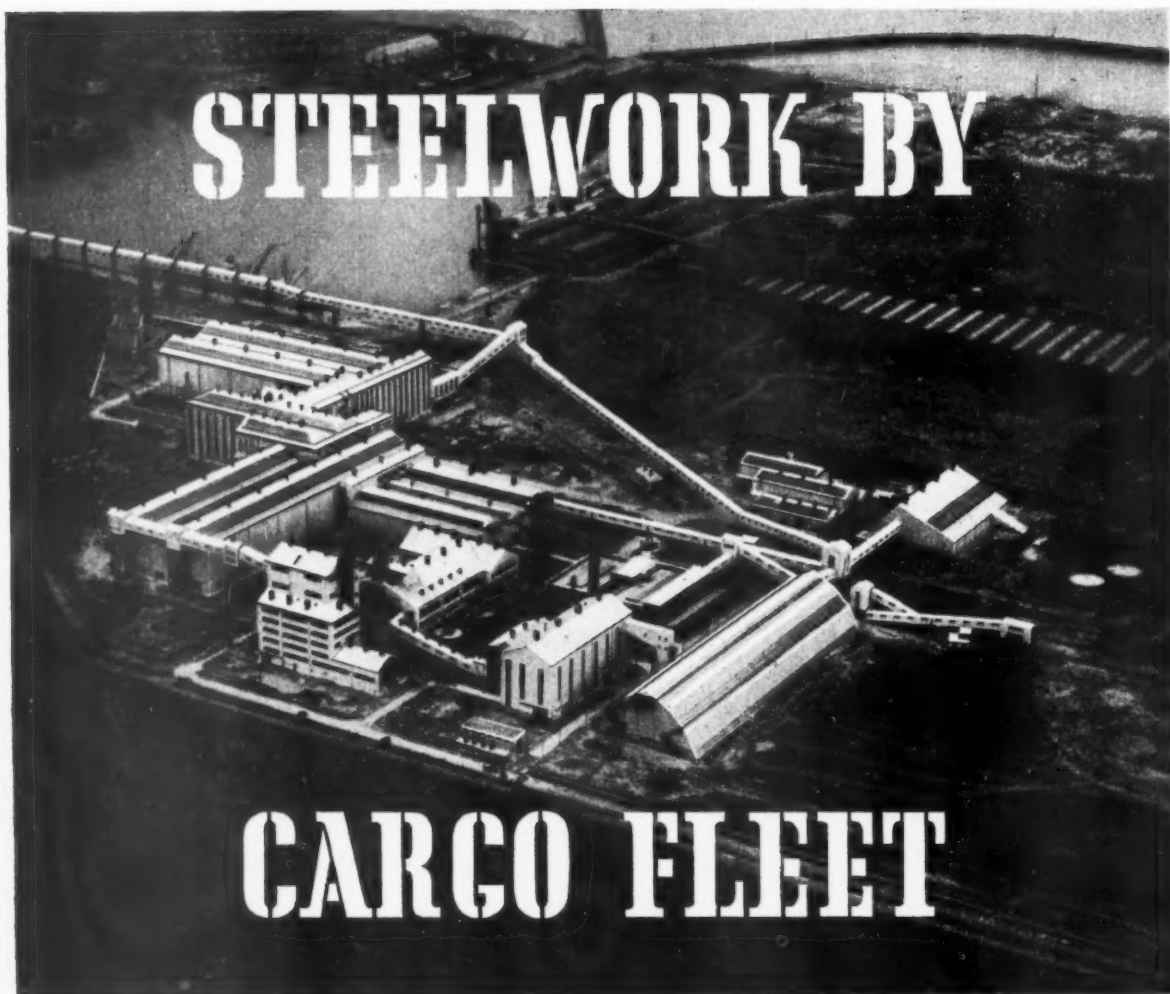


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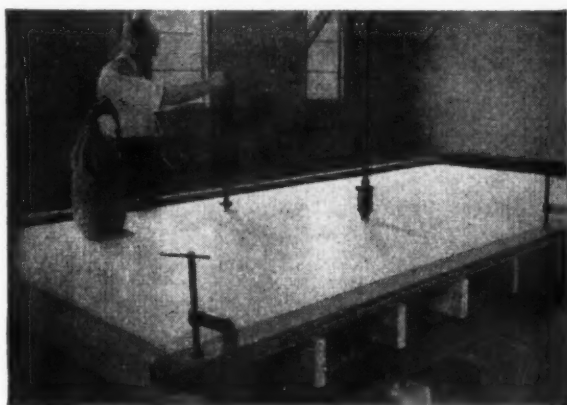


Fig. 1. - Rig and Gear for applying impact tests.

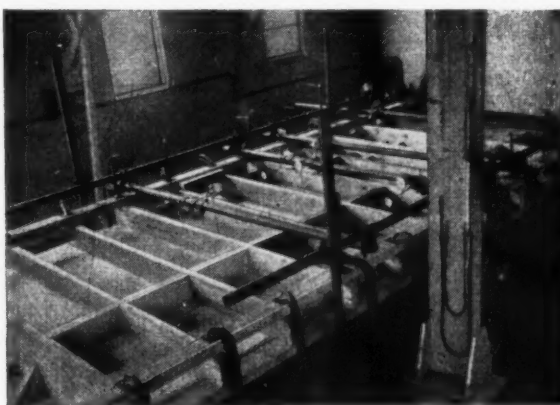


Fig. 2. - Rig for static loading tests. (Floor section is inverted, with captive airbag beneath for loading.)

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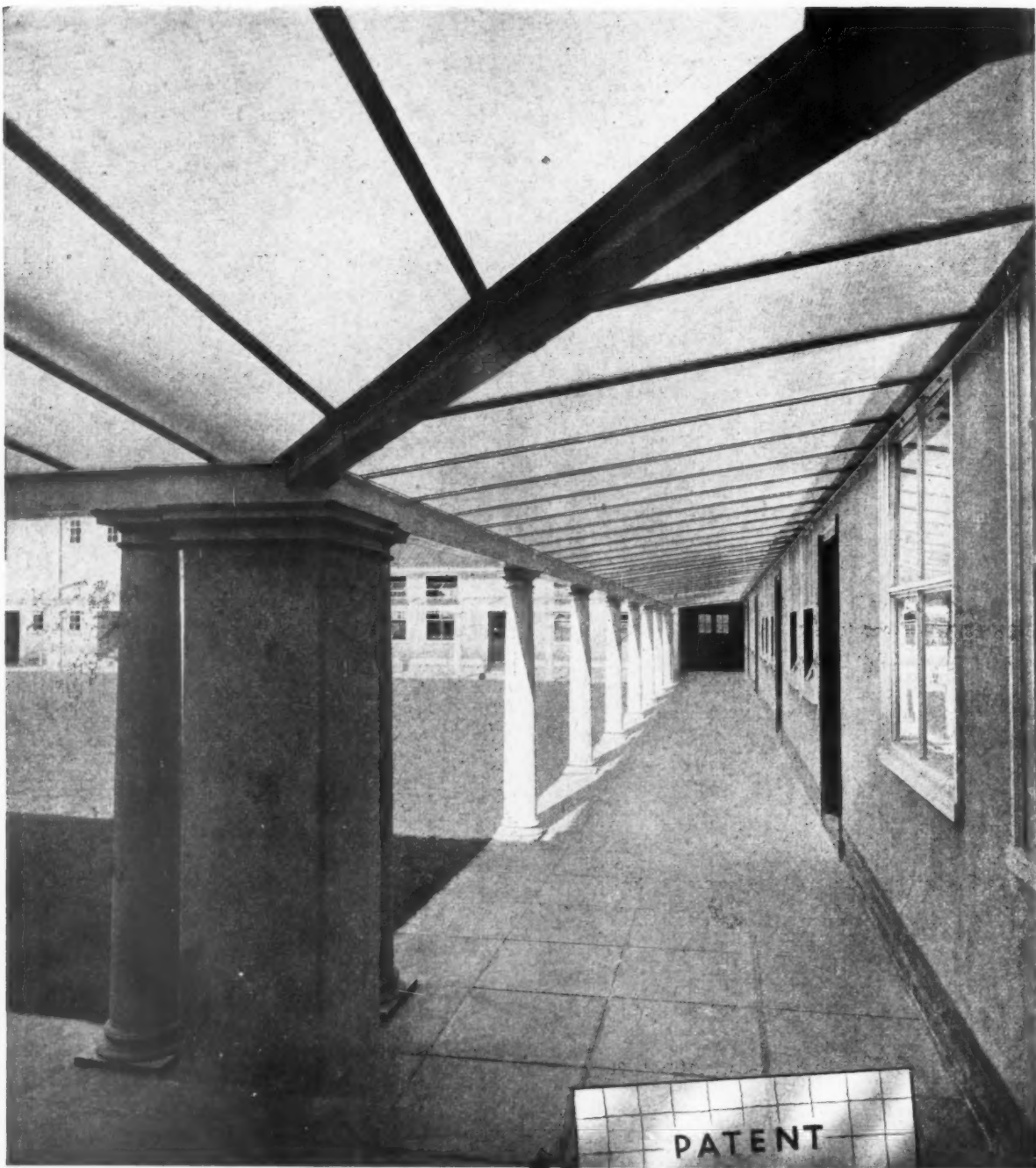


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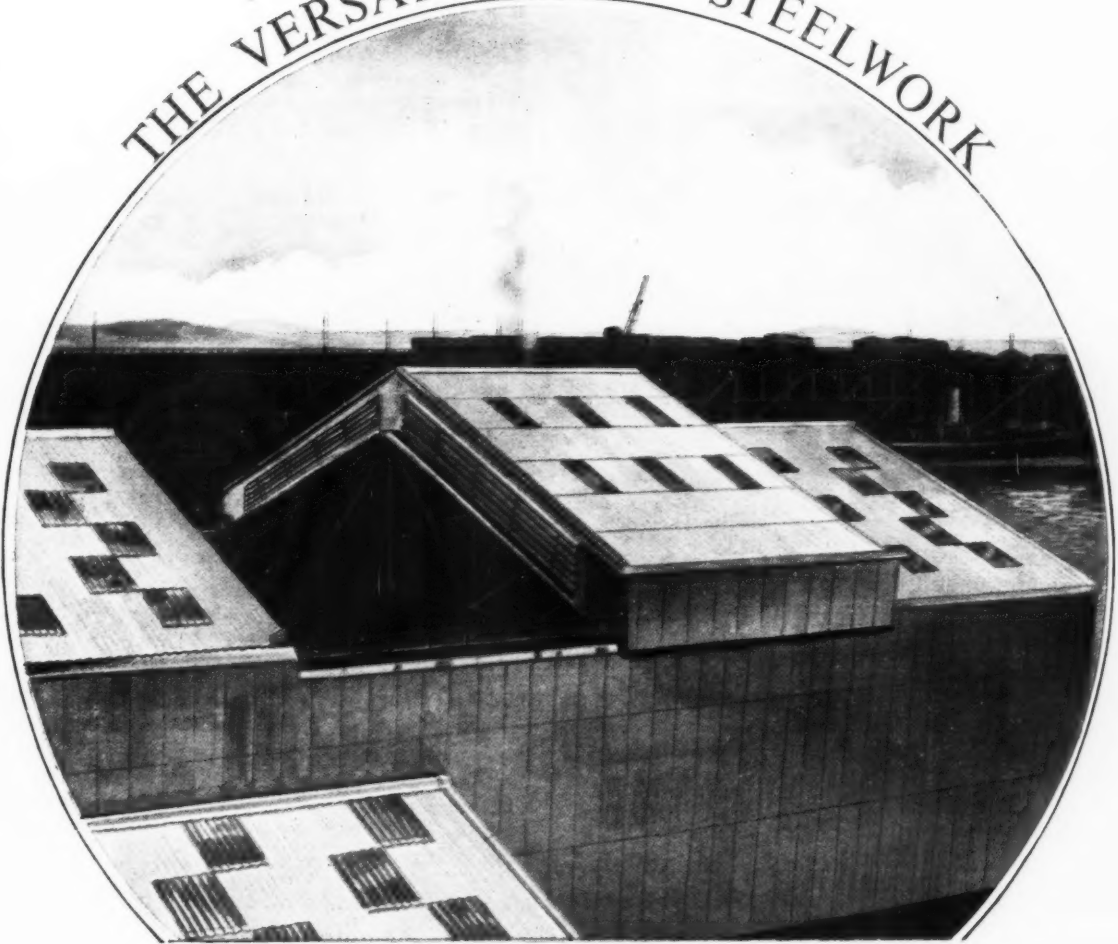
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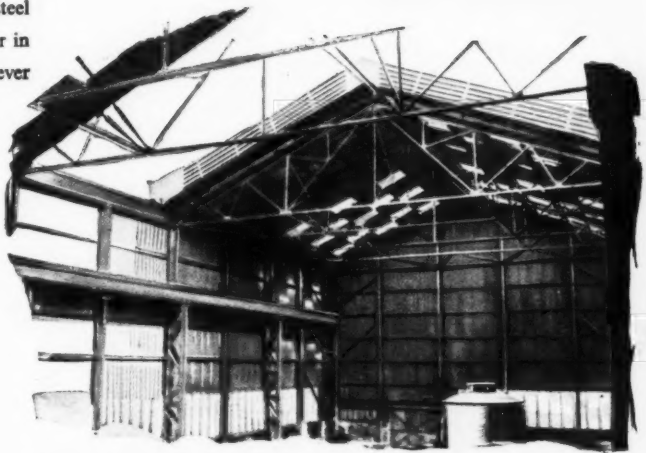
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THE ARCHITECTS' JOURNAL

No. 2927

5 APRIL 1951

VOL 113

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## THE VAUXHALL WAY

"I don't know what foreigners will think of us," said a pert miss in my holiday train; "Battersea Fun Fair indeed—we're not all like that!" I restrained the impulse to tell her what all young girls should most certainly know—that the fair is at the bottom of the garden and that, apart from the clatter of dodgem and roller-coaster, there will be a great deal at Battersea that we should be proud to possess as a permanent feature of the London scene.

\*

And then it occurred to me, as no doubt it has occurred to many readers, that we may benefit considerably in the long run from that extra million pounds which are to be spent on the gardens. It has been suggested that the gardens may be kept open for another year so that some of the money may be re-

covered. Isn't it possible that by 1952 even the most dignified of Battersea's residents will realize that we can ill afford to lose this mid-century Vauxhall? Why close the place at all? The Tivoli, the capital of Copenhagen, has been going strong ever since 1843 on the most valuable site in the town. And, according to reports from those who should know, the efforts of James Gardiner and his aides are likely to be very successful indeed. Their work may well deserve the immortality accorded to Carstensen's gardens.

## THE MORE THE MERRIER

Designers, today, would appear to be warming to their task. Any doubt and hesitancy caused by the old spectres of purity of form and functionalism are being overcome—at least, if one can judge by the CID's exhibition "Hospitality at Home" now on view at the Tea Centre, Regent Street. As the title suggests, anything used in a house from breakfast to bedtime is displayed in a series of room settings. The designers of the exhibition, Roger and Robert Nicholson—and the CID, in their choice of articles to show—have obviously enjoyed themselves. Although most of the furniture and fittings are fairly simple and clear in design, the effect of packing them close together and of surrounding them with richly coloured fabrics and wall papers, potted plants and woven bullrushes is almost Victorian in its jumbled cosy ornateness. The photograph on page 419 of this issue will show you what I mean, and the editors tell me that further photographs will be published shortly.

\*

Such a profusion of choice pieces in close proximity was not only confined to the exhibits on the opening day. A weary, wary ASTRAGAL nearly at the

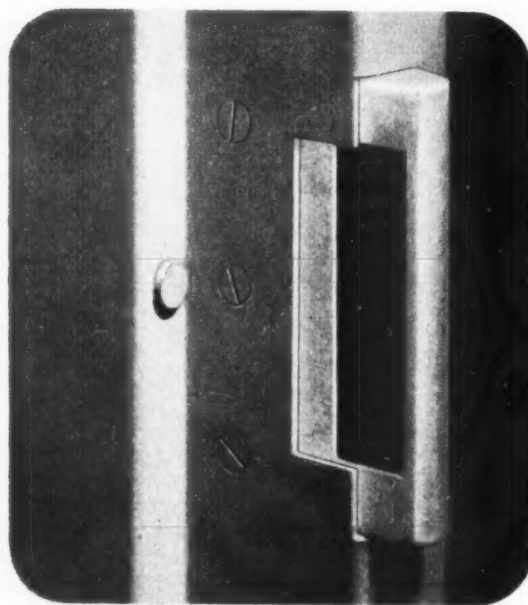
end of a huge queue, which stretched from the front door, up the stairs and all round the exhibition, shuffled inch by inch past a succession of close-up views of intriguing objects, his eyes blinkered by the padded, manly shoulders of near-Edwardian-cut clothes which mark, of course, the successful designer of today as surely as home-spun marked him yesterday. Gerald (FOB) Barry, no doubt tired of measuring the water level in Battersea Gardens (Peter's solution in Kensington Gardens was thrushes' nests, you'll remember) was there to open the exhibition and most of the familiar names out of the designing top-drawer were there to hear him.

## ARCHITECT AND EDUCATOR

As architects are usually lecturing their own profession it is a change to hear one lecturing the client. S. Johnson-Marshall, architect for MOE, spoke last week to some of his clients—the teachers and educational authorities at the Easter Conference of the NUT (reported elsewhere in the JOURNAL). One point he made, which is well worth repeating here, was that, with the difficult times now almost upon us, architects must concentrate on making a better use of space in schools if standards are to be kept up. Less space must be made to do more, so to speak, and (and this is the keypoint) the architect cannot achieve this satisfactorily by himself. He must design in the closest collaboration with the educator who is setting the teaching policy of the school. In other words, planning ingenuity is inadequate if it does not fit in with the way a school is run. So, for the umpteenth time, the moral is: get together, and keep together. Obvious, you say? Then go and look at schools being designed and built today (by well-known architects) which, to be frank, are still little more

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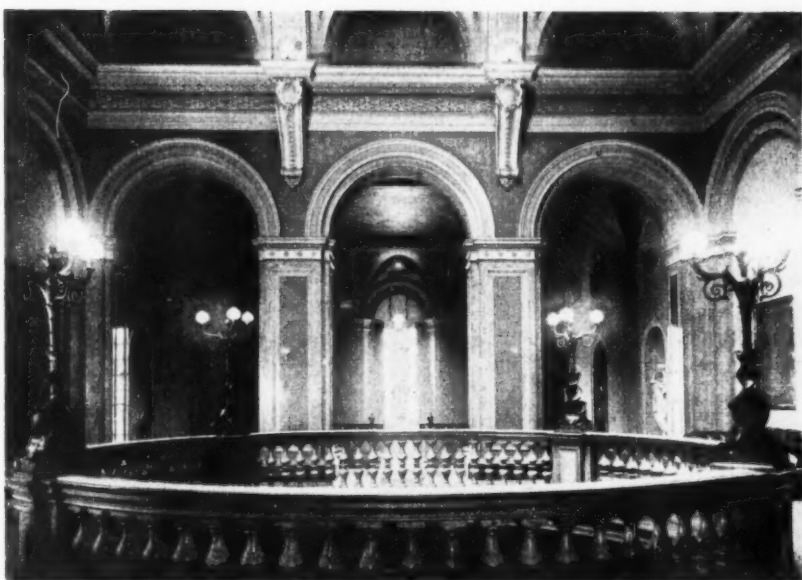
than expensive educational straight-jackets.

#### NON-POLITIC

I hear that the Conservative Club, in St. James's Street, designed by Smirke and Basevi in 1845, is to undergo internal alterations to the tune of £25,000. While agreeing that the internal planning is far from perfect, I am surprised that a licence can so readily be obtained for altering a building which looks as solid and comfortable as its name would suggest. What is more, the alterations entail the removal of the great marble staircase, which occupies, with its double return flights, a volume of space equal to the large central hall with its rotunda over.

Now I allow that this staircase may be draughty and—by our niggling utilitarian standards—wasteful of space. Still, there are not so many monumental staircases on this scale in England that we can afford to destroy this one out of hand. Wasn't this, I asked, a case in which the legal machinery for preserving buildings of architectural or historic interest should have been set in motion? The answer, it would appear, is that in the MOTCP lists of such buildings the Conservative Club is classified as a Grade III building, and authority is not really concerned about preserving Grade III buildings.

Of course the Conservative Club isn't a masterpiece; the balancing of the entrance by a bay window on the street front is a shameful and shocking expedient. But if you have ever looked through an MOTCP provisional list of buildings of architectural or historic interest relating to a place that you know, you will be aware that worse architecture often finds itself in Grade II—so long as it is pre-Victorian. My own view is that it was a great mistake to adopt the system of triple grading. On the one hand we have a relatively small number of buildings that no-one—except in some cases their owners—would want to see destroyed; on the other we have a very large number that have some claim to preservation—or at least to fair trial when the question of their destruction arises. Here are two grades; I can see no advantage in having a third, unless it be what is euphemistically known as administrative convenience.



*The rotunda over the central hall of the Conservative Club, looking towards the staircase. See note on the left and photo on page 414.*

#### NON-FLUORESCENT TATTERS

Regret, expressed recently in these pages, that there was no time for a discussion on lighting problems after the last Science Board talk at the RIBA, has prompted a friend to tell me to look for such controversy nearer home. Apparently a member of the Architectural Press, outside the editorial office, who, nevertheless, helps to provide quite a sizeable proportion of the JOURNAL, very enterprisingly arranged and took the chair at an informal meeting between a few practising architects, an architectural expert on lighting, and some of the designers and manufacturers of fluorescent lighting. The point of the discussion was to discover when and how fluorescent lighting should be used, and to what extent its use was abused by both architect and manufacturer. In a very friendly fashion, I am told, strong criticisms were passed, and even accepted, by both sides. The discussion was, of course, off the record and over beer; circumstances which no doubt helped both sides to understand the other man's point of view. I hope to hear of more such meetings on other subjects. The creation of mutual trust between designer-user and designer-manufacturer cannot do harm. But I would give a lot to have an ear at the keyhole.

#### COMPETITIONS PLEASE

I see in the civil estimates that the sum of £50,000 is to be provided during

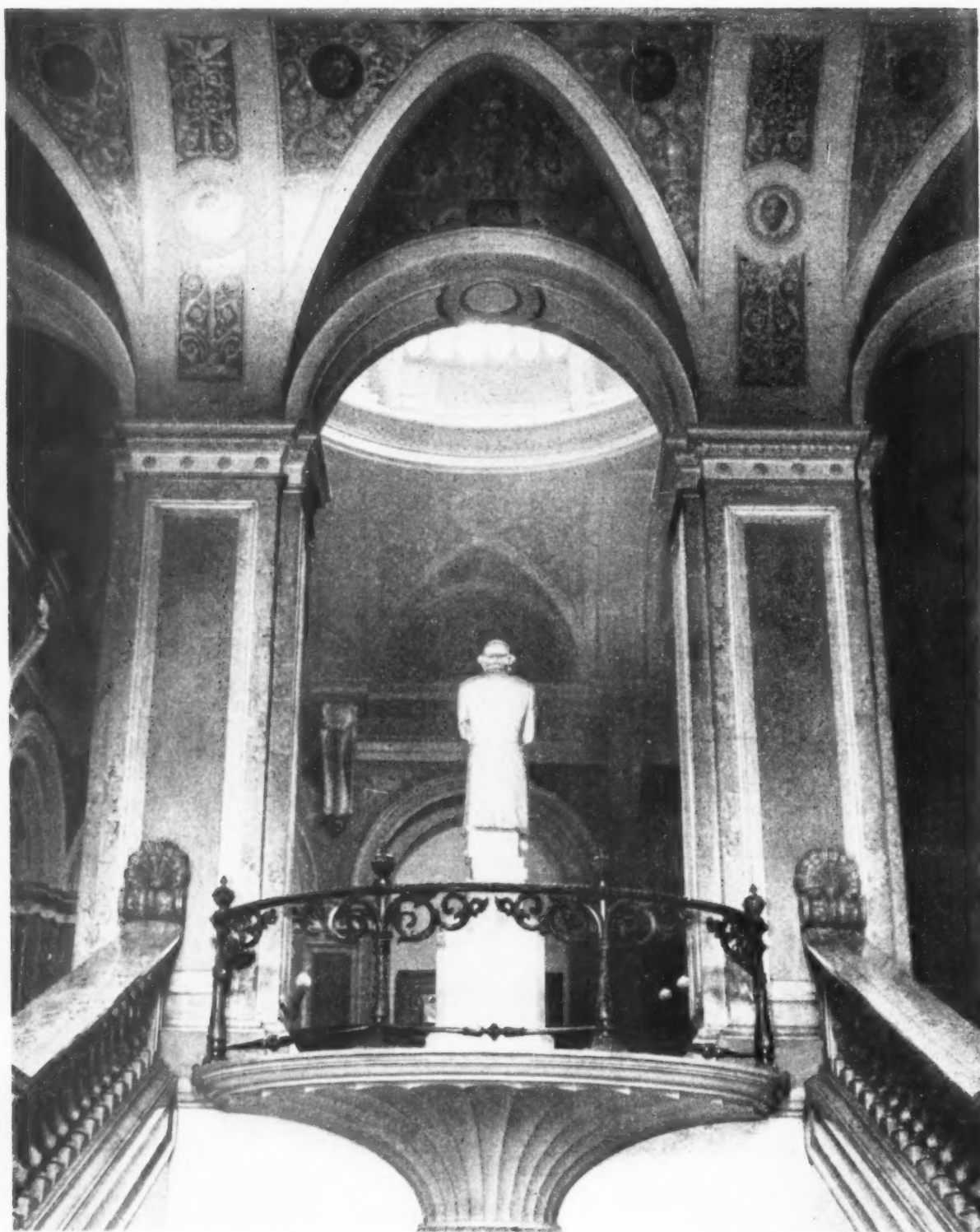
1951-52 as the first instalment of a provisional allocation of £2,000,000 for the acquisition of a site for a new British Museum library. The site proposed is on the south side of Great Russell Street, opposite the present Museum. So far no plans have been prepared for the new building. And as it will probably be several years before the library is built, there should be plenty of time for the organization of a public competition for the scheme.

Also scheduled for extension is the Science Museum at South Kensington. (Apparently the work here will be in the hands of the MOW.) It is suggested that future development will be to the west of Exhibition Road. Here again there seems to be an opportunity for the organization of a competition which might encourage the development of the art of designing great public buildings.

#### GI BRIDLES

I liked the story of the GI Master Sergeant who was paying nine guineas a week for a three-roomed flat in Hampton, Middlesex, and made an appeal to a Rent Tribunal. He could amply afford this rent, he said, but was it, he asked, a fair one? The chairman of the Tribunal looked the place over and reduced the rent to five and a half guineas a week. I am pleased that an American citizen living in this country feels himself





## Radical Changes

The quietly dominating statue whose expressive back meets the eyes of those who climb the double return flights of the main staircase of the Conservative Club, in St. James' Street, is, appropriately, that of Disraeli. It overlooks the massive rotunda, above the main central hall, and punctuates the flow of space between the rotunda and

massive volume of the stairs. This monumental design, by the architects Basevi and Smirke in 1845, is to be considerably altered by the removal of the stairs, which will in future occupy only about one third of the present space, and is the subject of comment, and further illustration, by ASTRAGAL on page 413.

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sufficiently part of the community to appreciate, and to make use of, the machinery that runs it. If more GPs, however large their incomes, were to ask the question: "Is it a fair price?" the heart of the average British citizen would be gladdened and the British spiv would be put in his place.

#### INVITATIONS WANTED

Which brings me to another American story. O'Neil Ford, the Texas architect, who has been experimenting with a system of casting floor slabs on the ground and then hoisting them up into position (see the last New Year number of the AJ), writes that he was pleased to see his first building illustrated in the AJ. Since then this system has been applied to housing, a rural school and a knitting mill. Mr. Ford says he is coming across to Denmark this spring and would "make a stop in England," if people here would be interested in seeing coloured slides and photographs of the lift-slab system.

\*

I gather from the tentative enquiries made by a colleague that none of the more august official bodies appear to be interested, the reason being, of course, that most official meetings have already been fixed for the year. It does, however, seem unfortunate that there are no facilities anywhere in London for laying on quickly an informal talk. Here is a man who has been experimenting with one of the most revolutionary building techniques of the day and no one in the country can have the opportunity of chatting with him and discussing the pros and cons of the system.

\*

But I had forgotten. There are, of course, the students. The Birmingham and Edinburgh architectural schools have both said that they would be pleased to see Mr. Ford if he decides to come. Are there any other schools which would like to avail themselves of this chance of meeting one of the few pioneers in new building techniques? Or would those local architectural associations not exclusively concerned with local antiquities and art be able to spare an evening? If so, write and let me know and I will pass the invitation on.

ASTRAGAL

## The Editors

### ARCHITECTURE AND EDUCATION

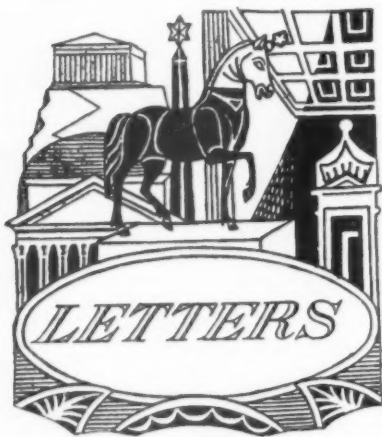
IT is always of interest to hear an architect talking to his client. When the architect is the chief architect of a Ministry, and the client one of the two most powerful and important clients in the country, it becomes very big news indeed. On pages 418-423 of this issue we publish a paper read by S. Johnson-Marshall, the chief architect of the MOE, to a meeting of members and officials of Local Education Authorities at the Easter Conference of the National Union of Teachers. In this instance, of course, Mr. Johnson-Marshall cannot be described precisely as an architect, but rather as an official spokesman for architects, and neither do the members of the Local Education Authorities precisely represent the client, for they are, in their turn, acting, in part, on behalf of the children they teach.

Nevertheless, the picture which can be drawn from the facts presented in Mr. Johnson-Marshall's talk is one which has never been seen before in its fully realized state. Here we have an architectural department in a Ministry which has had first-hand experience in post-war school building (led by an architect whose reputation as a designer of schools is second to none) and who are working jointly with educational administrators. They are making very full use of the Building Research Station and are issuing, from time to time, bulletins which indicate briefly the synthesis of the latest ideas and facts which affect the school building programme. They are aware of problems of economics to an extent not commonly found in architectural spheres. As Mr. Johnson-Marshall says "we try to use our knowledge to influence those who control our capital investment so that their edicts make practical sense." They have been told, on the one hand, the capital expenditure allowed annually, and, on the other hand, they know approximately the number of schools which are required to be built each year. In addition, they are working to a plan which allows the organization of building commitments for a period of three to four years. It is not, therefore, surprising that, in addressing the conference of teachers, Mr. Johnson-Marshall should say: "This gives you a potential authority that is almost unique in the history of building."

For these can be seen to be the first tentative steps in nation-wide architectural planning on a large scale. A tremendous responsibility for the future of architecture, with all the newly-acquired sociological implications of the term, now rests in the hands of a remarkably small group of people. Their indirect influence, not just amongst architects, but on the children who will grow up and be, in part, moulded by the atmosphere and environment which the new schools will create, is potentially enormous.

Bearing these very considerable responsibilities in mind, and realizing that we have in the present MOE the frail beginnings of that comprehensive form of planning framework which

can lead to a real freedom of design, today, for the individual architect with initiative, it well behoves all JOURNAL readers, when studying Mr. Johnson-Marshall's paper, to read it with a view to seeing, firstly, what fresh opportunities and ideas it offers and, secondly, on what aspects the architectural department of the MOE can be constructively criticized and invigorated. This department is the bridge, says Mr. Johnson-Marshall, between high finance and pure research on one side and teachers and architects on the other. A considerable proportion of the strength of that bridge depends on the support it gets from the architect.



L. B. Ginsburg, A.R.I.B.A.

A. P. Holdsworth, F.R.I.C.S.

Edward Procter

Edward Banks, F.R.I.B.A.

Pembroke Wicks

C. J. Berry

## Re-building of London

SIR,—A short time ago I took a day off from my work on the preparation of a development plan for a county very close to London. I found it very depressing to be continually doing paper work and apparently getting no real results. Friends kept telling me of the building—real building—going on in London.

So I took a walk through the city, and what I saw was more disheartening than the weather, for that can change overnight. Can nothing be done, I wondered, about this ghastly business, this complete negation of all our hopes and ideas for reconstruction?

Then your editorial appeared, with its most illuminating illustrations. Thank goodness, but is it enough? Most of us who care are aware of this dreadful denial of real architecture and real planning, but we seem impotent among the lack of interest around

us. At least something is being built, says the ordinary man, and we need houses—I think of Oxhey; and we need offices—I think of the Lessor scheme.

Can we do nothing more than make these weak unlibellous protests? I feel your issue of March 15 could herald a campaign. Surely you could gain wider and wider support.

London.

L. B. GINSBURG.

## Why Preserve Lead Roofs?

SIR.—There are many old buildings—particularly churches and cathedrals—whose roofs are covered with heavy lead. In many instances those in charge of the buildings are exercised in their minds to find ways and means of repairing the ravages of time on these buildings.

May I suggest that architects and surveyors responsible for the maintenance of old buildings consider now and again whether it would not be in everybody's interest, and particularly the building owner's, to salvage old thick lead roof coverings and re-cover the roofs with equally suitable more modern materials?

This would have many advantages. It would be a lucrative source of income, at present scrap lead prices, to pay for other essential repairs. It would considerably lighten the loads on old structures. It would enable an examination to be made of timber otherwise inaccessible. To have an old building with a heavy lead roof and a badly decayed stone façade for which appeals are being made in vain for money for repair seems rather like the beggar who dies leaving a bag of sovereigns.

One of the many buildings I have in mind is a church with a famous spire covered with heavy lead. There have been appeals for money to repair the timber and lead of this spire. Surely to strip all the lead and so lighten the load, and then to cover the spire with cedar shingles, would be a vast improvement structurally, would to some extent, at least, obviate the necessity for an appeal for funds and, at the same time, would not detract from any fame the spire has acquired.

Sheffield.

A. P. HOLDSWORTH.

## Low Cost Housing

SIR,—May it not well be that the entirely unproved intangible and visionary "planning" and "density" theories of the past twenty years have added very greatly to the total costs of the housing schemes. Most of these planning theories have evolved without the least regard for all economic consideration as to the cost of land, roads, sewers, water, gas and electric services, with the consequent cost of the maintenance of the same in the future. Further, the multiplicity of roads to houses provided and the increased spread of housing sites have proved to create transport problems which is the very thing the planners claim to have

considered. We are cursed with a superlative complex today on the question as with everything else and the simple question on housing still remains, viz., how can we supply the greatest number of houses at the least total cost; in total, I mean, when everything has been taken into account?

Consideration of these aspects of housing would surely point to the provision of the terrace house, in blocks of not less than 24 houses. I have often wondered what would be the result of a competition amongst architects for a terrace house scheme for the lowest rented houses when all planning and by-law restrictions were removed and arbitrary standards of Ministries ignored and the sole aim were to be the simplest type of house erected with the utmost regard to all-round economy.

The hundreds of thousands of people without homes call for a room to cook and eat in and a room to sleep, not places to stow the bicycle and mangle.

Let us supply what is urgently needed, the "superlativism" can follow later.

EDWARD PROCTER.

Blackheath.

## Let's Save Our Modern Buildings

We must start up a society for the preservation of modern buildings some time.

I have in mind particularly the Sir E. L. Lutyen's "Monkton," Singleton, Sussex, which has been severely man-handled (I should say woman-handled) by Tilly Losch, who in the 'thirties placed some imitation palm trees under Lutyen's eaves, plastered and painted the brick walls and coloured the roof tiles black and green alternately, while the interiors are now in the best Mayfair style!

Tecton's wonderful little house at Aldwick, Bognor, has had its "sun-decks" filled in, and bay windows added in the local builder idiom so that the original form is barely recognizable!

Yet another job is McGrath's Fischers Restaurant (off Bond Street) which has had its front and its innards bayed and gutted.

EDWARD BANKS.

Surrey.

## Code of Professional Practice

The following is a copy of a reply from Pembroke Wicks, Registrar, ARCUK, 68, Portland Place, W.1, to Neil Martin-Kaye's letter on the Code of Professional Practice, a copy of which appeared in the JOURNAL on March 22:—

SIR,—In reply to your letter of March 1, I am directed by my council to inform you that the addition to the Code of Conduct, to which you refer in your letter, prohibiting an architect from soliciting the publication of illustrations or descriptions of his work in the Press for the purpose of increasing his practice was adopted by my council after long and careful consideration. It does not prohibit, and is not intended to prohibit, an architect from keeping the Press informed of work on which he is engaged, and it is open to the editor of any paper to publish illustrations and descriptions of buildings or other works if he is of opinion that they are of sufficient public interest. But this must not be used by an architect as an excuse for an organized campaign to secure unpaid publicity. My council feel sure that responsible architects will appreciate the distinction and will have no difficulty in interpreting the addition to the Code of which you complain.

Further, I am instructed to draw your attention to the opening paragraphs of the Code in which it is expressly stated that the Code is for the guidance of architects—that the object of the Code is to provide a general standard of professional conduct—that it is not intended to lay down hard-and-fast lines between what is and what is not legiti-

mate, and that it will be for the Discipline Committee to determine in any particular case whether the architect has been guilty of disgraceful conduct.

Finally, I am to add that as parliament has entrusted my council—who represent the whole of the architectural profession—with the duty, through the Discipline Committee, of determining what is disgraceful, that is to say, unprofessional, conduct, my council see no reason to accept the view implied in your letter that they have not full authority to amend the Code as and when they consider it necessary.

PEMBROKE WICKS,  
Registrar, ARCUK

London.

## Why Export Houses?

SIR.—In these troublous times it would appear to be impossible to disentangle the architectural, social, economic and political demands made upon the building industry of this country. From the bottom of our hearts (and the Corporation Housing Lists) we welcomed Prof. Bowen's appeal for a "well-planned programme of temporary housing" (AJ, March 22) and marvelled at the announcement printed on the same page that the British building industry is to fabricate 5,000 houses for shipment to Australia.

Can those who frame our present housing policy really give an acceptable explanation for this latest contribution to our export drive?

Malton.

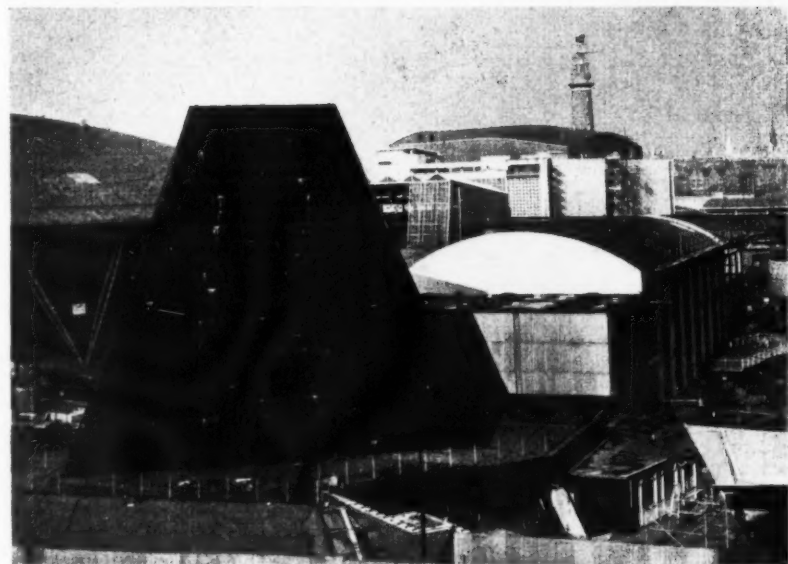
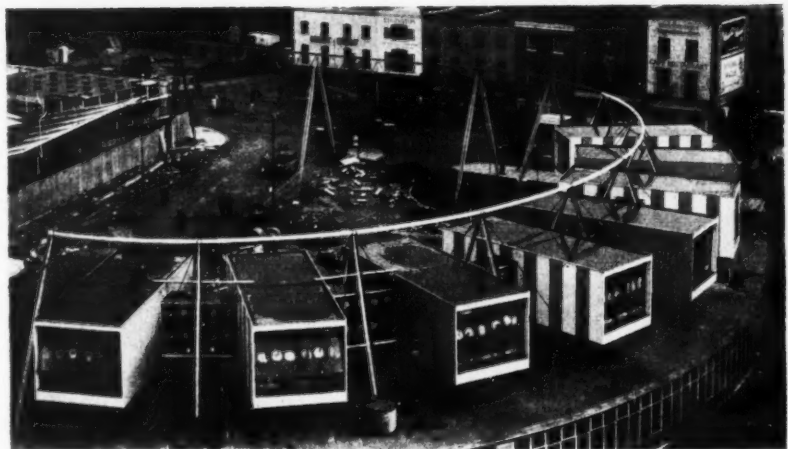
C. J. BERRY.



## CID

### Members Appointed and Re-appointed

The BOT announce that the president has appointed Sir Colin S. Anderson to be a member of the CID. Sir Colin is a director of Anderson, Green & Co., Ltd., shipowners, and of various other companies. He is chairman of the Royal College of Arts, president of the Design and Industries Association, a member of the Arts Panel of the Arts Council, a member of the Council of the Institute of Naval Architects, and was president of the Chamber of Shipping for the year ended February, 1950. The president has also re-appointed Mrs. Helen C. Bentwich, Professor Robin Darwin, Cyril Dee, Sir Kenneth Lee, Bart., R. A. Maclean and Miss Audrey Withers to be members of the Council. Mr. Maclean has been re-appointed chairman of the Scottish Committee of the Council.



Top, a progress photograph of the Royal Suite and Official Accommodation on the South Bank Festival site. This is one of the features designed by the Architects' Co-operative Partnership, which was wrongly credited in our pages two weeks ago for the design of the Industrial Pavilion. (The pavilion was designed by G. Grenfell Baines in collaboration with H. J. Reisenberg.) Above, the Natural Resources building (also designed by the Architects' Co-operative Partnership) behind which is the Country Pavilion, designed by Brian O'Rourke.

## NIGERIA

### Public Works' Architect Appointed

Keith Pegden Smith, of Chalvey Park, Slough, Buckinghamshire, has been appointed as an architect in the Public Works Department, Nigeria. Mr. Smith has held appointments at the Broadstairs and St. Peter's Urban District Council, as an assistant architect to the borough of Slough, and later, to the borough of Ealing.

## AVON VALLEY

### Amenities to be Safeguarded

In order to safeguard the amenities of the beautiful Avon Valley, the Minister of Local Government and Planning, Hugh Dalton, has refused the appeal by the Avon Leather Dressing Co., Ltd., to open a tannery in the premises known as the Avon

Mill, Limpley Stoke, near Bath.

Mr. Dalton supports the proposals of the Wiltshire and Somerset County Councils to preserve the area as one of special amenity. He regards the locality as unsuitable for industry and he considers that a tannery, however carefully conducted, could not fail to have a detrimental effect.

## LAW REPORT

### Charge for Estimate not Recoverable

At the Wandsworth County Court, before His Honour Judge Hodgson recently, Messrs. Douglas Bros. (Builders) Ltd. of Wilcox Road, S.W.8 (represented by Mr. Doggart of Messrs. Young, Sons & Ward) sought to recover from E. R. Mellor (who appeared in person) the sum of £15 15s. for services rendered in estimating and measuring the work to be carried out in the conversion into three flats of Woodmansterne, Putney Heath, S.W.15, on the grounds that their



tender being the lowest should have been accepted. In their particulars of claim the plaintiffs alleged that they had advised the defendant on the previous tenders received and on the items of the specification which could be eliminated in order to reduce the cost of the works and that they had prepared a revised specification upon which they had estimated.

Mr. Batten, the manager of the plaintiffs, in evidence, alleged that there was an agreement that if they could reduce the costs within certain limits they would receive the contract and that although they had tendered below this limit their tender had not been accepted. In cross-examination he persisted that the original claim for waste of time in estimating had not been abandoned and that in addition the claim covered advice on the previous tenders and revisions in the specification.

The defendant, having given evidence that he had 40 years' continuous experience, excepting the periods of the two wars, of conversions and building, stated he had not sought the advice, nor would he have accepted advice from the plaintiffs, that he gave instructions only, and that he himself had revised the architect's specification which had contained works of repair and items unnecessarily increasing the amount for which a building licence was to be applied for. The defendant further stated that he had accepted a higher tender after careful consideration of quality of workmanship and other matters.

His Honour, in giving judgment, stated that he was unable to accept the evidence given on behalf of the plaintiffs. The correspondence, from the letter covering the account rendered by them after they had been notified that their tender had not been accepted, had not mentioned one word as to advice given by them to the defendant on items in the original specification. On the contrary, the estimate sent to the defendant had been given "in accordance with your revised specification" which admitted that the revisions were by the defendant. Neither had there been any suggestion at any time in the correspondence, although there had been ample opportunity, that there had been any agreement to accept the tender if it could be brought within certain limits. On the other hand, he was satisfied that the defendant was not the person who sought advice, but who had definite ideas of his own, which he translated into directions to be carried out, without advice from anyone. In the result, the plaintiffs claim, whether for loss of time in estimating, or for alleged advice, or for loss of profit on an alleged breach of contract wholly failed and judgment must be entered for the defendant with costs on fixed scale.

## DIARY

**Hospitality at Home.** At Tea Centre, Regent Street. Exhibition of furniture and furnishings. (Sponsor, CID.) UNTIL MAY 12

**AA Visit to Exhibition of Architecture being constructed at Lansbury, Poplar.** Leaving 36, Bedford Square, W.C.1, at 9.30 a.m. Tickets must be booked in advance.

APRIL 7

**Sanitation in Multi-Storey Buildings.** H. E. Gooding. At Caxton Hall, Westminster. (Sponsor, ISE.) 6.30 p.m.

APRIL 10

**Some Technical Problems arising in the Building of a New Town.** G. Grenfell Baines. At 66, Portland Place, W.1. (Sponsor, ASB.) 6 p.m.

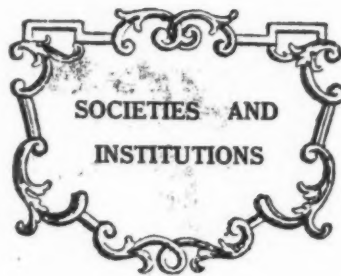
APRIL 10

**Delinquency and Housing Conditions.** Miss M. M. H. Smith. At 13, Suffolk Street, S.W.1. (Sponsor, HC.) 1.15 p.m.

APRIL 10

**AA Annual Reception.** At 34-36, Bedford Square, W.C.1. 8.30 p.m. to 1 a.m.

APRIL 12



*Speeches and lectures delivered before societies, as well as reports of their activities are dealt with under this title, which includes professional societies, trade associations and government departments. To save space they are represented by their initials—see front cover. Lectures cannot usually be reported in full, but the extracts given are in the speaker's own words.*

## NUT

### S. Johnson-Marshall

March 27. **SCHOOL BUILDINGS.** Paper read at a meeting of members and officials of Local Education Authorities at the Easter Conference of the National Union of Teachers at Llandudno.

### S. Johnson-Marshall

A longer, but more accurate title for this talk is "Architecture in the service of education since the war." I want to examine the factors which have made this period unique in the history of school building. For the purpose of a short talk the subject has to be compressed, so I hope you will forgive me for inevitable generalizations. Historically, the patrons of architecture in this country have been the Church, the nobility, commerce and now, the State. By the "State," I mean, of course, local as well as central government. Since the war the State's largest and most important building commitments have been the provision of houses and schools, and I think it is fortunate that we are represented in one of these fields by teachers and educators who are well organized, are articulate, and who have an approach to education which seems to me, as a layman in this field, to provide most admirable scope for experiment and initiative within a stable and developing tradition.

### THE NEW DEAL

You are demanding about 400 new schools a year. This is a far larger number than in any other period of history. And you are having to build at a time when building conditions are more difficult than they have ever been in peacetime. But, against this, you are working to a plan, which, when translated into annual programmes, allows you to organize your building commitments, with certainty, at least one year ahead, and

with a fair degree of accuracy, two or three years beyond that. This gives you a potential authority that is almost unique in the history of building.

Seen from the point of view of the architectural profession, you must emerge as one of the two most powerful and important clients; the other, of course, being "housing." You have never occupied this position before, and it gives you another unique opportunity, both because your work attracts more architects than ever before, and because it is attracting the best of the profession.

The changed attitude of mind towards free education is also having a profound effect on the architects' approach to educational building. In the past he was encouraged to focus his attention, first, on "things," on objects and physical standards, and later, on "people." Now, the whole emphasis is reversed and he is encouraged to concentrate on children first and foremost, on their changing needs as growing human beings, and to work from there towards the design of their surroundings and equipment.

### THE OLD ATTITUDE

To the outsider, a primary school used to be regarded as a place where a measure of good but limited training was ladled out with the object of producing the best results in a fairly narrow and formal type of education. The physical requirements were therefore considered to be simple, and capable of a high degree of standardization. That is, most of the classrooms and their equipment could be exactly similar, and any ancillary accommodation was treated in the same way. In designing lavatories, for instance, plumbing and drains were properly considered first. It is cheaper to concentrate these in one place, so lavatories were centralized in large batteries.

When "people" were considered, it had to be remembered that they had a habit of damaging "things," hence the brown-tiled dado and the cast-iron desks. For a designer the needs were highly standardized and provided little scope for imagination, and almost the only outlet for skill lay in clothing them in pleasant proportions and in concentrating on a really "architectural" façade.

In secondary schools, the problem was more complex because there were more varieties of rooms. But, as each new specialized subject was introduced into the curriculum, the specialists worked out an appropriate room for it and added it to the list. In this way, the needs of the school were examined in a series of separate compartments by the educator. But the arrangement of one compartment in relation to another comprised the design of a school, and this was the province, not of the educator, but of the architect. You presented the architect with a list of compartments, whose sizes were fairly rigidly defined, and he arranged them according to the needs of light and sunshine, of noise, the slope of the ground or the shape of the site. His first thoughts were inevitably concerned with "things" because he was not encouraged to know much about teaching. In small schools this did not matter much, because, even if the separate compartments were inconveniently arranged, from a human point of view, the distances were small and the inconvenience was small in proportion. But, when applied to large schools, the additive pattern has produced some startling results. Distances separating one part of the building from another mount alarmingly and, if there is an element of inconvenience, this will increase in proportion to the distances involved. But different and more insidious faults also emerge.

Every time a room is treated as a water-tight compartment it has to have its attendant circulation space. Large numbers of rooms connected by corridors, like beads on a string, usually induce a most unfortunate environmental effect in human beings. The big school conceived on this pattern is nearly always institutional in character, complicates the lives of the children as well



as the staff and fails to create an environment in which a satisfactory corporate life can be developed. One part of it looks so much like another that rooms can only be identified by their numbers. And it must be difficult to avoid treating their occupants as numbers too. The bigger this type of building becomes, the greater becomes the proportion of circulation space at the expense of educational space. In a large, recently completed secondary school, the teaching area totalled 22,000 sq. ft. and the area devoted purely to circulation was 20,000 sq. ft. I must add that this is not an exceptional case and that both the architect and the education officer are men of considerable ability. But the building was designed in 1947 and we have improved since then. In schools designed between 1946 and 1949, the circulation often took up as much as 30 per cent. of the total area. In current schemes this has been reduced to 16 per cent. or even less.

#### MEETING EACH OTHER HALF-WAY

As I said earlier, the educator's influence on school design was usually limited to stating the requirements of individual spaces and the architect took over from there. It is clear that there was, and often still is, an awkward gap: a gap that can only be filled if the educator can go further with the process than the requirements of individual rooms. He must have a say in the less easily definable needs of environment. But, in order to do this, some educators must have the time and the inclination to learn a lot more about the architects' problems.

It is equally clear that the architect, if he is to start by considering "people" and then move outwards towards "things," must know much more about educational needs from the children's and teachers' point of view. In fact, it is just as necessary for him to become semi-professional in your subject as it is for some of you to become semi-professional in his, and I would go as far as to say that no significant advance in school design is likely unless this happens.

Obviously, it will not be possible for every educator to undertake what, in the case of large Education Authorities, will be a whole-time job, and, equally obviously, the architect should not be prevented from discussing particular problems with teachers and specialists. He should be encouraged to do so, but the needs expressed by different teachers and specialists are so often contradictory that if he is left to sort them out on his own, the architect inevitably becomes the arbiter of educational issues. The difficulty can be overcome if a senior general practitioner works continuously with him. I should like to stress the word "senior" because educational policy will inevitably have considerable bearing on the work and in many cases will be affected by it. And here is where a building programme helps once more. No one who has had anything to do with building a school has honestly felt that he could not do better next time. If the same people work together on successive buildings they will inevitably gain considerable experience of each other's subjects, and, by concentrating their different skills on the same problem at the same time,

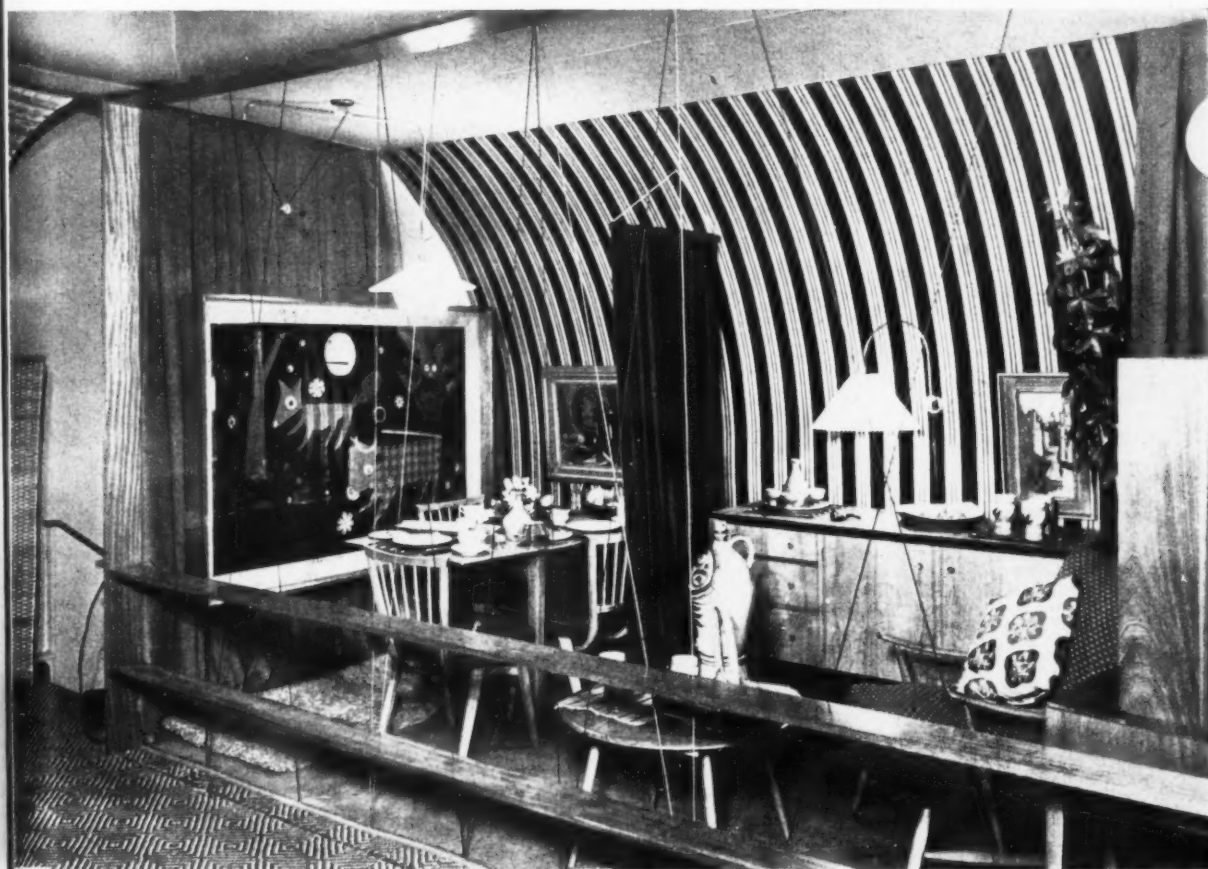
they will make far more progress than they would if they made separate contributions.

Another advantage of their shared experience is that they will be better qualified to look ahead. Our schools must last us 60 years. From first sketch design to the time they are occupied is often three years and most schools take two years or more to shake down and develop a personality. If their design is based firmly on the average teaching practice current at the time they are conceived, the buildings will be five years old in educational terms before they are fully used. Teaching practice can change considerably in five years, and in 60 it is certain to change a great deal. The further ahead we can design our schools the less they are likely to inhibit their future occupants. So, if it is possible to make a reasoned assessment of the changes that are taking place in our society, and of their implications for teaching practice, our schools will stimulate their occupants when they might otherwise be inhibiting them.

#### THE ARCHITECT'S PROBLEMS

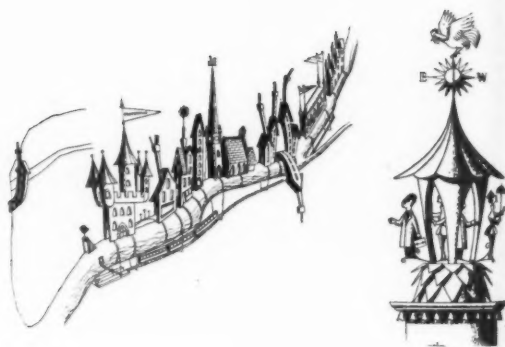
It is also worth examining our subject from the architect's point of view. He is working in a period of great and rapid change; of social change, technical change and aesthetic change, and while some of the implications of these changes are obvious, others are subtle and not easily recognized. All of them impinge on his work, and their effect, because they produce so many new problems, is to make almost everything he does take longer. The changed attitude of mind towards school design, for example, is a

### CID EXHIBITION OF FURNISHINGS AT THE TEA CENTRE, LONDON



"High tea in the parlour" is the title given to this section of the CID's "Hospitality at Home" exhibition at the Tea Centre, Regent Street, which will be open until May 12. The settings have been designed by Roger and Robert Nicholson. See Astragal's comments on page 411.

## FEATURES OF THE FESTIVAL OF BRITAIN PLEASURE



subtle change which has inevitably taken him time to assimilate.

In the sphere of technique the architect cannot produce an efficient as well as beautiful building unless he knows much about the latest developments in, for instance, lighting and heating—and considerable advances have been made by the Building Research Station in these fields. Then there are the well-known, but no less hampering, shortages of materials and manpower; both on the site and in his own office. He also has to cope with numerous regulations and administrative processes, some of which were devised for conditions quite different from ours. Some standing orders for example . . . . And during this period of technical change and shortages we often require an entirely new type of article or system of construction, which, because it is new, is only made by one manufacturer. In cases of this sort, competitive tendering is not always the best method of protecting the

public purse. New techniques of cost accountancy and cost investigation are being developed and must be seriously considered.

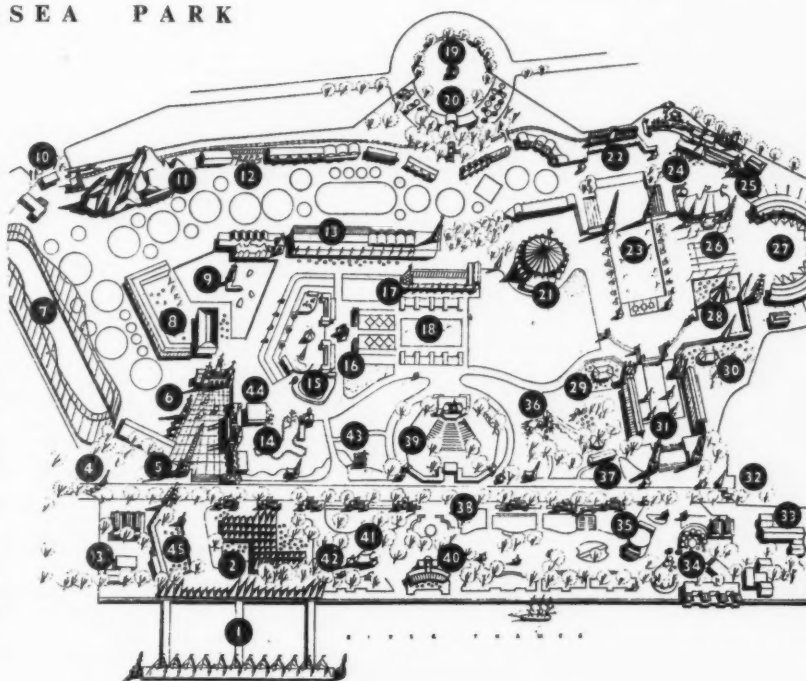
Then there is the Ministry; it takes up a fair amount of the architect's time, but I am going to deal with that separately. Another powerful new entrant in the "time-taking" field is town planning; a friendly entrant, to me, and a very necessary one, but, because it is feeling its way, it sometimes uses much of the architect's time in defensive arguments about aesthetics. If you do not like the look of the buildings your architect produces, get a new architect; but please do not let anyone curtail his aesthetic liberty or you will see the end of live architecture. Qualified teachers have the right to teach in any way they consider to be appropriate. In the enlightened society we should accord our architects similar privileges.

The sum total of the architect's problems must be seen against the background of the tremendous scramble to erect our buildings

in time. Too often exciting architectural opportunities are lost in the scramble, so anything you can do to simplify his extraneous and defensive actions will enable him to spend his time in more constructive work. He will have more time, for instance, to study teaching and the way schools are run. If he does this, he will be in a better position to design his building so that what I might call "the administrative overheads" (such as circulation) use the minimum of space and leave as much as possible for educational use. For example, it is worth remembering that every time you ask for a separate room, that room has to have its own internal circulation area. One instance of this is a classroom store. If it is planned as a separate room, half its area must be used solely for access to the articles you put in it, whereas if it is planned as a shallow alcove off the classroom, its access space will become usable as an extension of the classroom. This raises such questions as these:

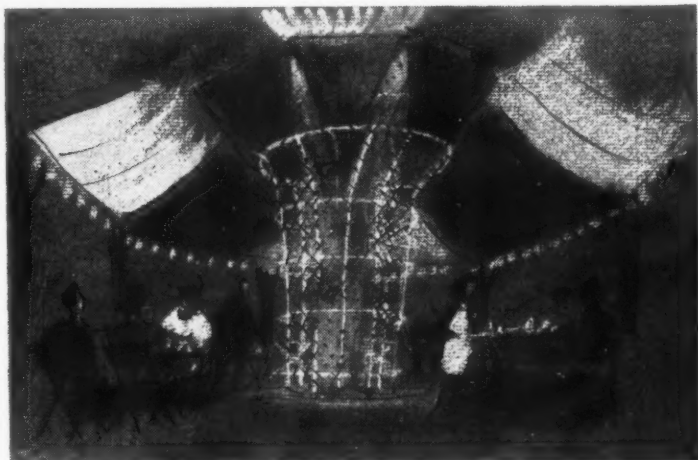
## GARDENS, BATTERSEA PARK

Right, the plan of the Festival Pleasure Garden: in Battersea Park. Opposite page; top, a model of the Gardens, with below left, a sketch of the Riverside Rooms (34 on plan), a prefabricated building of timber and hardboard and canvas, designed by James Gardiner. Architect: Basil Duckett. Structural engineer: Lawrence Kenchington. Opposite page, below right, two features of the Treetop Walk (42 on plan), designed by Bruce Angrave. Below, left, the Aviary Restaurant (37), architect, Hugh Casson, designed round the largest tree in the Gardens, with a budgerigar aviary at its base.



## KEY

- |                                  |  |
|----------------------------------|--|
| 1. Pleasure gardens pier         | 24. Station snack bar                          |
| 2. Pier restaurant               | 25. The Far Tottering and Oyster Creek Railway |
| 3. Staff restaurant              | 26. Lakeside stage and the tent                |
| 4. East gate                     | 27. Crescent (restaurant)                      |
| 5. Fountain tower                | 28. Ranelagh beer garden                       |
| 6. The piazza                    | 29. Vista tea house                            |
| 7. Roller-coaster                | 30. Vista tea house                            |
| 8. Cremorne beer garden          | 31. Vista arcades                              |
| 9. Boating pool                  | 32. West gate                                  |
| 10. South-east gate              | 33. Administration offices                     |
| 11. Dragon ride                  | 34. The riverside rooms                        |
| 12. Festival fare (refreshments) | 35. Riverside theatre                          |
| 13. Garden buffet                | 36. Grotto                                     |
| 14. Peter Pan railway            | 37. Aviary restaurant                          |
| 15. Children's zoo               | 38. Shops                                      |
| 16. Aviary                       | 39. The amphitheatre                           |
| 17. The pavilion buffet          | 40. The terrace tea-shop                       |
| 18. Flower garden                | 41. The music pavilion                         |
| 19. Band stand                   | 42. Treetop walk                               |
| 20. Vauxhall beer garden         | 43. Festival clock                             |
| 21. Dance pavilion               | 44. Refreshment bar                            |
| 22. The giant fernhouse          | 45. Refreshment bar                            |
| 23. Fountain lake                |  |



are children to be taught in small groups some of the time? What sort of discipline will be exercised? What kind of things will the teachers want to keep in the classroom stores? Questions of this kind in infinite variety must arise in the planning of all parts of the school. How can we expect well-designed, up-to-date schools, unless these questions are freely and frequently discussed by architects and educators together? However, the general rule to bear in mind in all this is, I think, that the fewer separate rooms you demand, the more spacious and gracious your building is likely to be. And that is why we prefer to talk in terms of "spaces" and "areas" rather than "rooms."

It is inevitable that during a period like ours, you will find great differences of opinion amongst architects; differences of opinion which are chiefly centred round techniques of building. However, wide differences of opinion about aesthetics and methods of building are the sure preventers of dull uniformity,

and they should be encouraged so long as they do not detract from our main task which is to produce appropriate, and I hope, beautiful buildings in the right numbers, at the right time, and at the right price.

And when you are feeling really cross about architects, as you sometimes must, take a look round the country, and I think you will agree that in spite of all the difficulties, the new post-war schools have reached a far higher educational standard than their predecessors.

## THE MINISTRY AND LOCAL EDUCATION AUTHORITIES

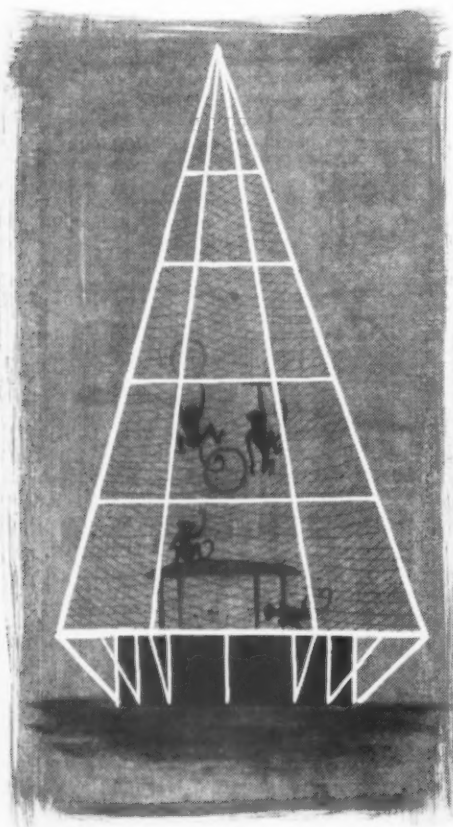
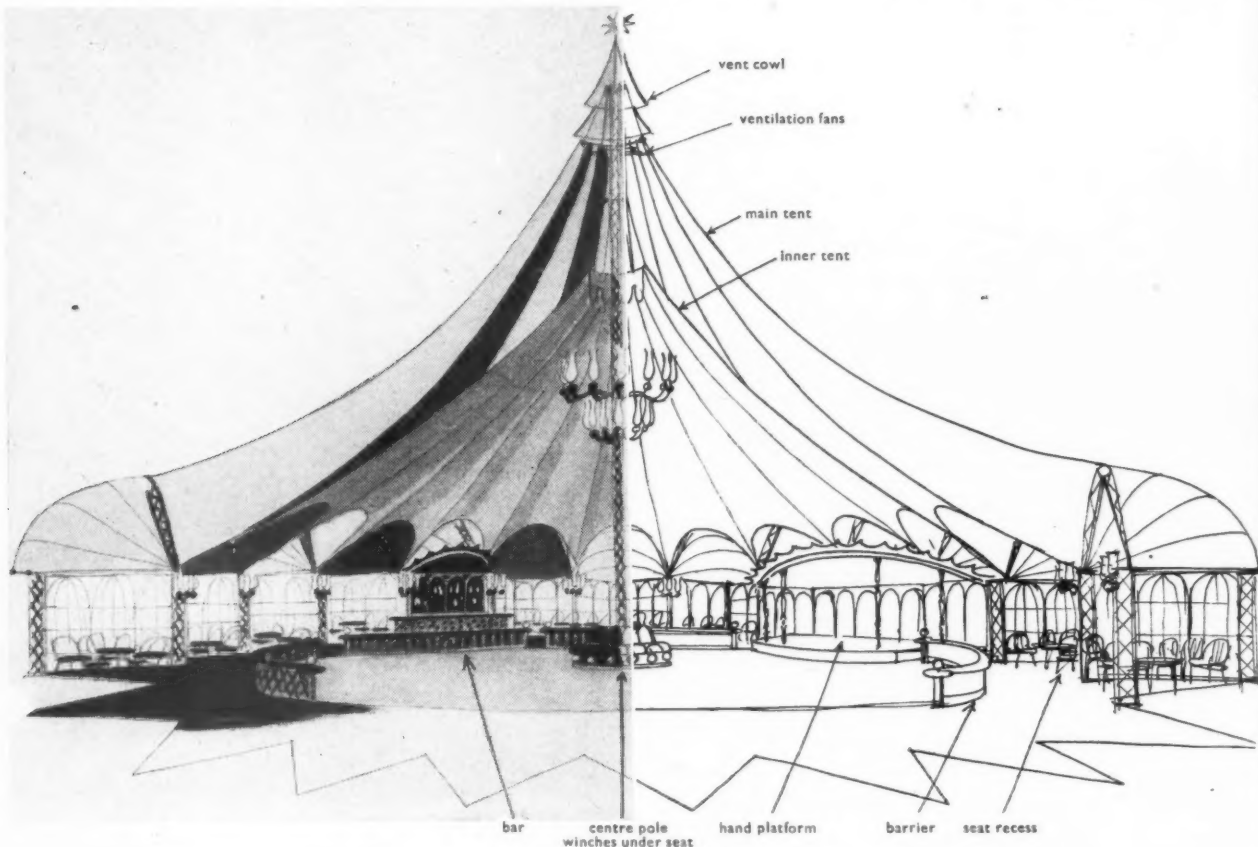
I would like to say a few words about the relationship between local education authorities and that part of the Ministry of Education which is concerned with building. Here I have a slight advantage over some people because I have seen the Ministry of Education from the outside, and experienced it

from within. Like many things, it has changed quite a lot in recent years. From its basic responsibility towards the Minister and Parliament have sprung building regulations, the financial control of each project and, therefore, the examination of each project at least twice whilst it was still on paper. The rationing of scarce materials added further to the list of checks and authorizations whose sum total increased gradually and almost imperceptibly over the years. When seen in perspective, however, this administrative pattern had two major faults. First, it was too complicated, and second, it took away too much of the initiative of local education authorities who, in some cases, we found, were working against us and not with us. (A very natural reaction.)

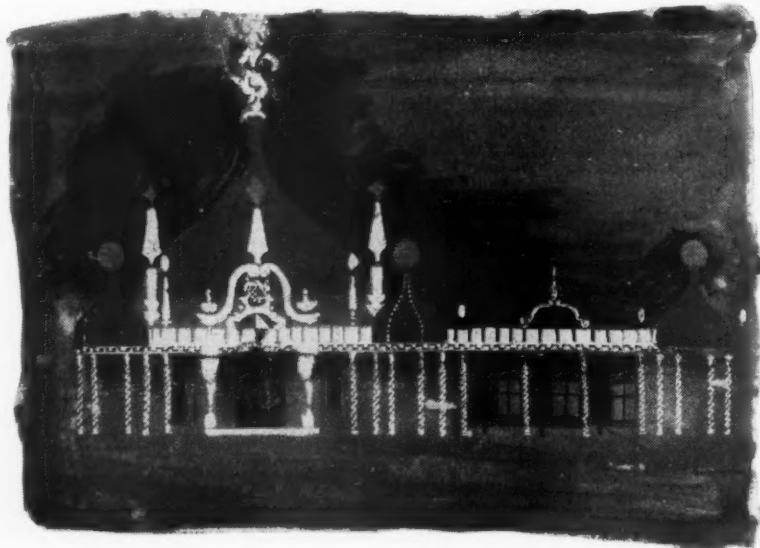
Well, many of the checks have gone, the pattern is much simpler, money is measured out by the twin yardsticks of £140 and £240 a place, and simpler building regulations are on the way.



## FEATURES OF THE FESTIVAL OF BRITAIN PLEASURE



Above, Dance Pavilion (21 on plan), a large tent of brown and yellow striped canvas supported on a steel pole with vertical lattice girder stays instead of guy ropes. Designer: James Gardiner; architect: Roger K. Pullen; structural engineers, S. H. and D. E. White. Below, left, the monkeys' cage, constructed of tubular steel, designed by Fred Millett (architects: Harrison and Seel) for the Children's Zoo and Pets' Corner (15). Below, the Pavilion Buffet, a timber-framed structure with roof and walls of plaster on expanded metal lathing. Architects: Harrison and Seel. Structural engineers: C. F. Blumenfeld.

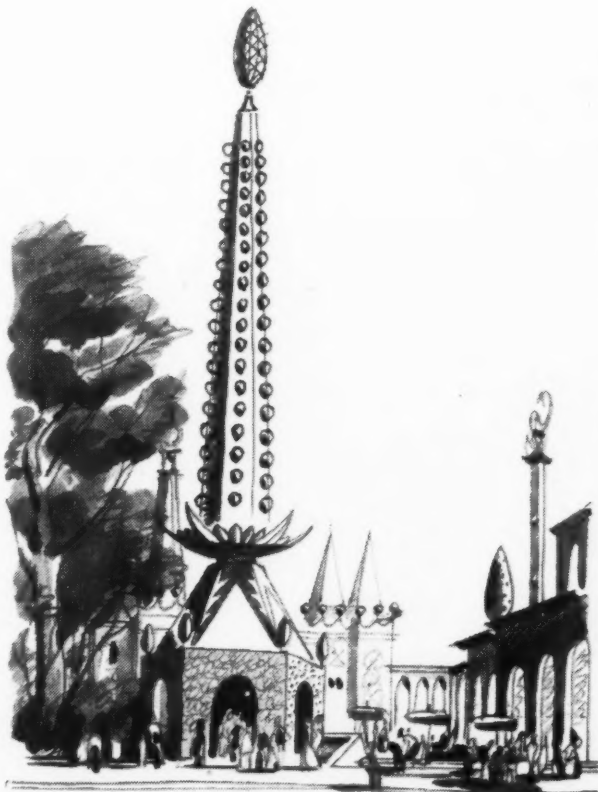




## GARDENS, BATTERSEA PARK



Above, Ranelagh Beer Garden (28); with walls of prismatic glass sheets which can be roofed, in case of rain, by a canvas tent. The architect for it is Bernard Engle. Below, the Fountain Tower (5), a vertical feature on a light steel frame, the upper part consisting of golden coloured aluminium balls attached to endless belts and giving the impression of cascading water. Designer: James Gardiner. Architect: Roger K. Pullen. Structural engineer: Lawrence Kenchington.



The difficulty in making changes of this kind lies in the great variety of ability amongst local education authorities and the fear that someone will make a horrid mistake; for instance, by building a thoroughly bad school. But, when teaching, do you concentrate all your energies on preventing mistakes? No, you give people guidance and then allow them freedom to make mistakes and to exercise their genius. We are trying to take a leaf out of the teacher's book and to move in the same direction.

What then is the role of our branch of the Ministry? Administratively, the Minister's policy in the building field is, shall we say, a positive one instead of a negative one. We are not primarily concerned to see that people do not make mistakes. We are concerned to do what we can to help Authorities build as well as possible. And by building well, we mean building schools and colleges that will serve their educational purposes properly, that will be economical and, last but not least, that will be ready in time.

One aspect of this change in the Ministry's role—and a very important aspect, I think—is that the fulfilment of the educational building programme is clearly seen as a joint responsibility of the central department and of the local authorities. The Ministry's concern no longer ceases when a project is formally approved. The important thing, in my view, is that we and the local authorities are no longer on opposite sides of the table. We both have the same object in view, and, where necessary, we combine in tackling difficulties.

In technical matters it is no use our doing again what you have already done, so we have concentrated our attention on some of the many jobs which for one reason or another local education authorities are unable to tackle. We try to see all of your best, and some of your second best work; to distil it and to infuse into it the latest findings of such organizations as the Building Research Station (who, by the way, are doing more work for education than they have ever done). We try to publish it for you to use as you think fit; we try to use our knowledge to influence those who control our capital investment so that their edicts make practical sense when translated in terms of the man on the ground. In fact, we are a bridge between the rarefied uplands of high finance and pure research on the one side, and you, teachers and educators and your architects who are ultimately responsible for shaping real lives and real buildings. I like to think that in our dealings with our local education authority colleagues, we are getting to the stage at which they visit us, not because they feel that they have to, but because they feel that we might be of some service to them.

In this kind of work there is no clear division between what is technical in an educational sense, technical in an administrative sense, or technical in an architectural sense, so we have combined administrators and architects in one branch with a senior administrator and an architect jointly in charge of it. To ensure that education is properly represented without being subservient, we have a senior member of the Inspectorate working full time with us.

Well, I hope I have made a case for even closer collaboration between educators and architects. All the evidence shows that where each of their skills reaches a high level, and where they are working together, the results are educationally, architecturally and economically outstanding. In the difficult times ahead, our best hope of success lies in bringing to bear, not separately, but at the same time, the combined impact of those skills on each new problem. And the price, because one always has to pay something; the price is that you will have to spend more time in the company of architects! I hope this is not an unhappy prospect, but I am certain that it is a rewarding one for the children whom we all serve.

## COMMUNITY CENTRE

at MALMO, SWEDEN

designed by HANS WESTMAN

A competition was held in 1942 for the design for a community centre in Malmo. The winning scheme, by Hans Westman, is shown on this and the following pages in its completed form. It stands on one side of the Nobeltorget market place. The architect in association with Hans Westman for the design was Klas Anshelm, and the building engineer was Evest Bjuvsten.

*The main facade.*



KEY

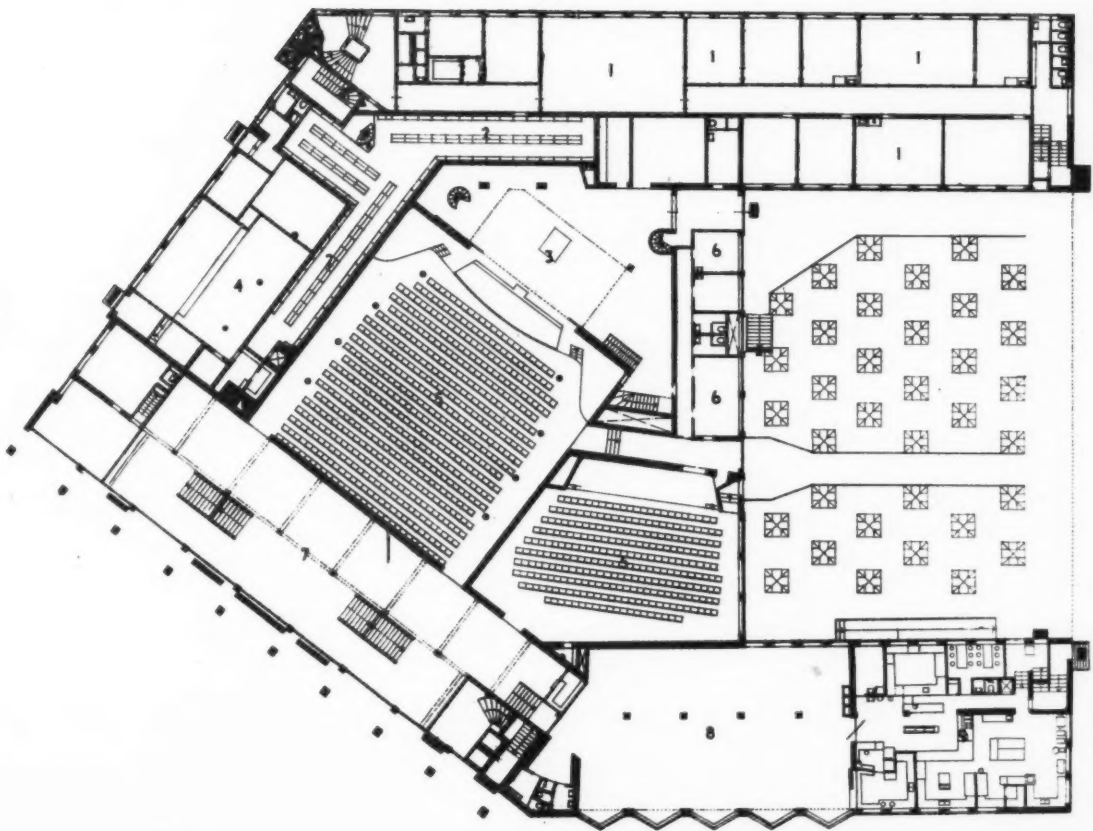
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KEY

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KEY

1. Office.
2. Book store.
3. Stage.
4. Dispatch room.
5. Assembly room.
6. Dressing room.
7. "People's Hall."
8. Restaurant.
9. Kitchens.

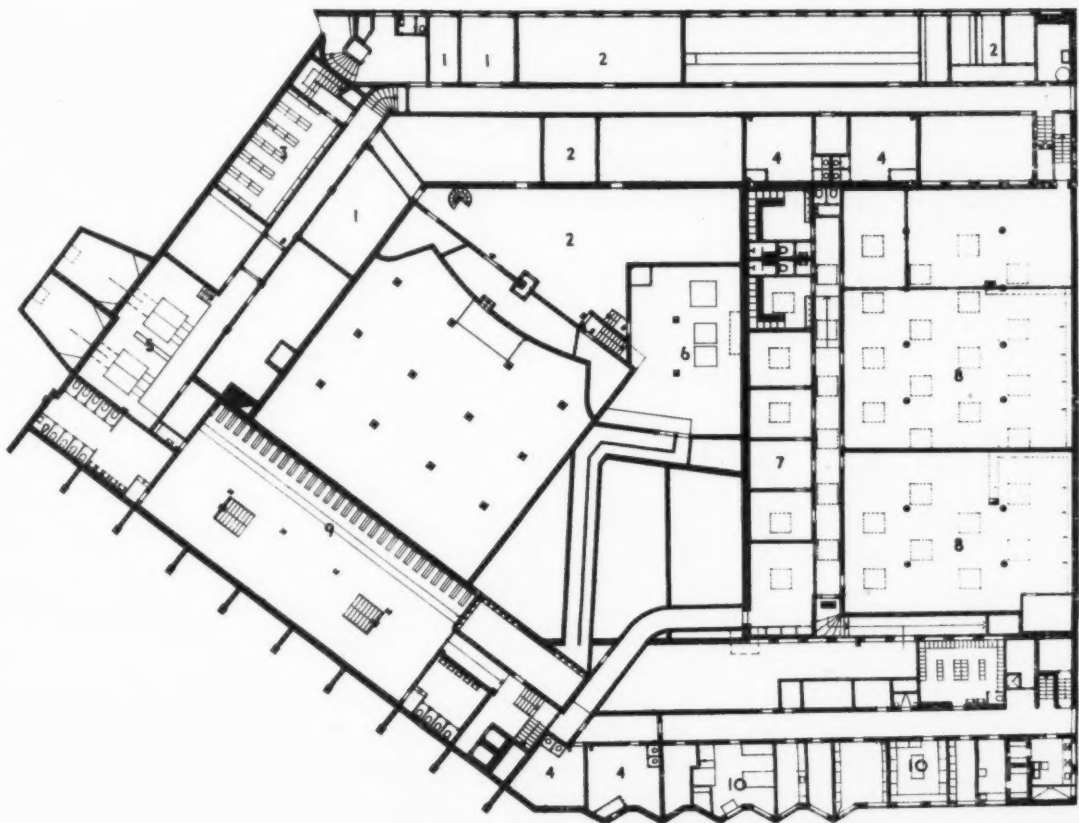


Ground floor plan



KEY

1. Electrical installation.
2. Store.
3. Archives.
4. Air-raid shelter.
5. Boiler room.
6. Air conditioning.
7. Office.
8. Printing and records.
9. Cloakroom.
10. Kitchen.



Basement floor plan

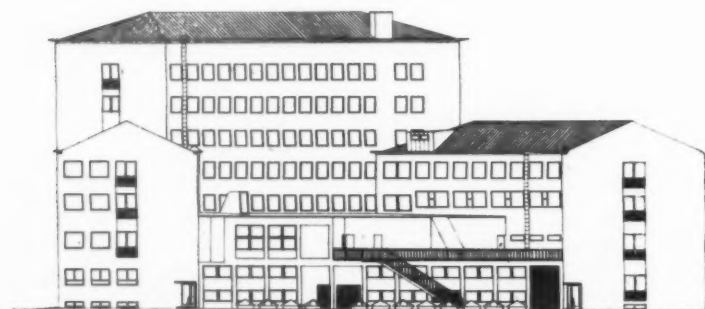


*The main foyer, or People's Hall.*

## COMMUNITY CENTRE

at MALMO, SWEDEN

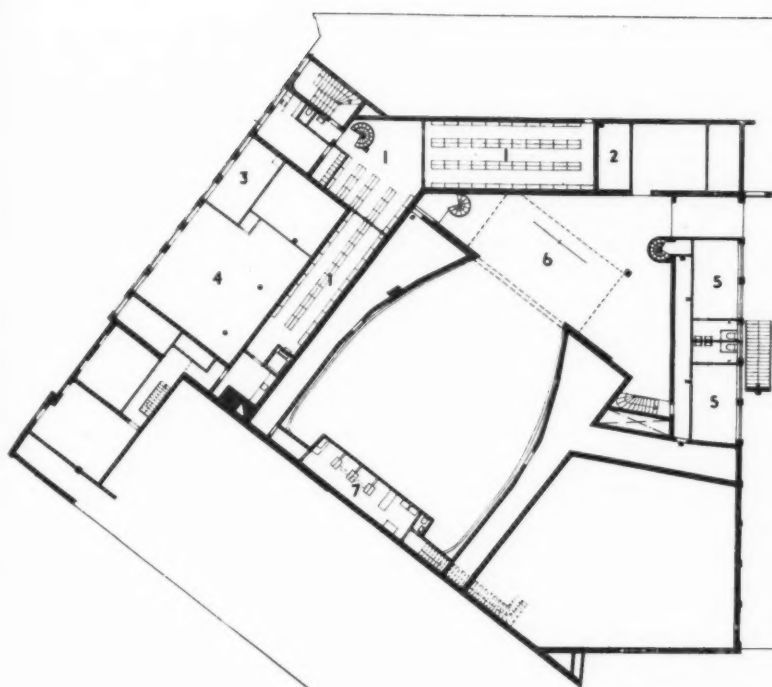
designed by HANS WESTMAN



The south facade

**GENERAL.**—The community centre is very well situated in a position dominating the square. The square being a public meeting place, the architect has endeavoured to achieve the effect of the main hall of the community centre being an interior continuation of the square outside. This impression is aided by three factors. Firstly, the rectangular paving stone of the square is continued into the main hall. Secondly, the open entrance loggia does not form an abrupt break between the inside and





Mezzanine floor plan

KEY: 1. Book store.

2. Store.

3. Air conditioning.

4. Post.

5. Dressing room.

6. Upper part of stage.

7. Projection room.

the outside of the building. And thirdly, the ground floor wall of the main facade facing the square is glazed throughout its length and thus forms the minimum visual barrier possible. The change, therefore, from the open square to the main hall, or, as the architect calls it, the "People's Hall," is not abrupt, but a gradual slow transition through varying degrees of enclosure, first by columns, then the roof of the loggia and, lastly, the glass doors. The sense of complete enclosure is, of course, finally achieved in the largest assembly hall which lies in the centre of the block without any external openings at all.

PLAN.—The main hall, or "People's Hall", is the main circulation area, both vertically and horizontally, for the principal sections of the community centre. In order to emphasise the position of the various departments a decorative frieze runs over the doorways. The hall is built through two storeys to ensure the feeling that it is a continuation

*The largest assembly hall.*

# COMMUNITY CENTRE

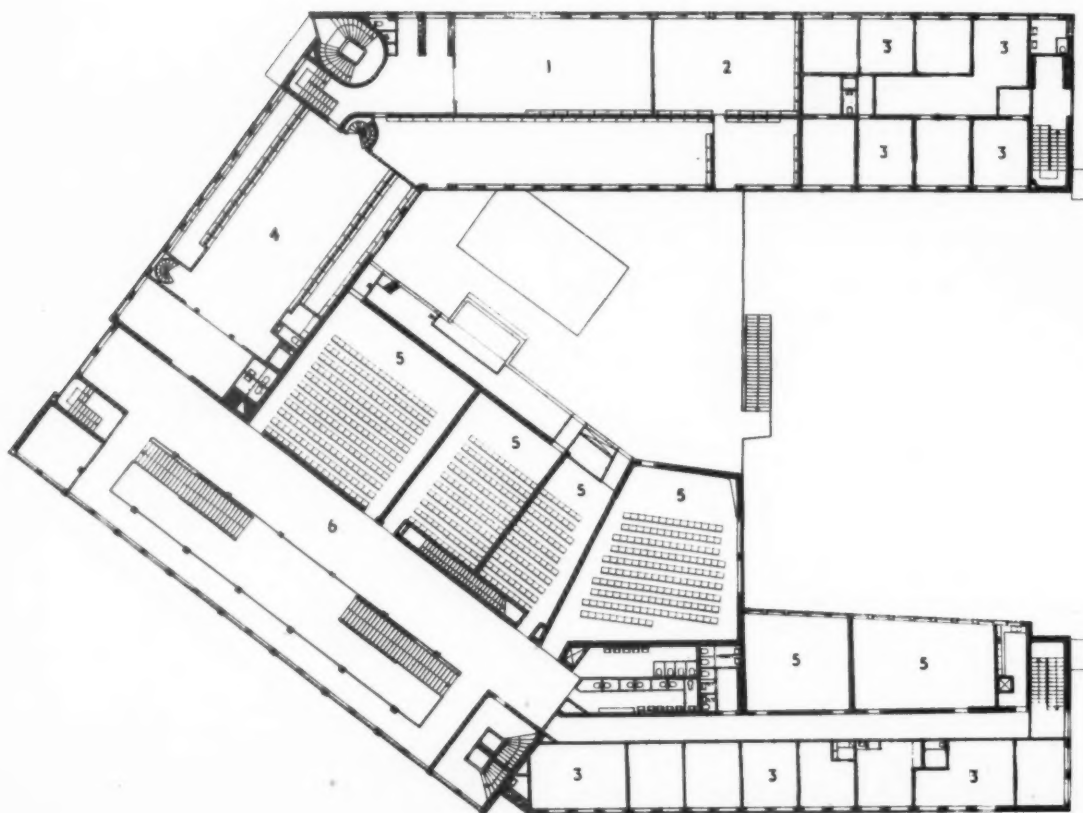
at MALMO, SWEDEN  
designed by  
HANS WESTMAN



Second floor plan

## KEY

1. Office.
2. Upper part of lending library.
3. Work room.
4. Wireless room.
5. Press room.



First floor plan

## KEY

1. Children's lending library.
2. Children's reading room.
3. Office.
4. Lending library.
5. Assembly hall.
6. Upper part of "People's Hall."

Top  
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left  
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Top, the lending room of the library. The light fittings are the only ones in the whole building not designed by Hans Bergström but are the responsibility of the librarian. Above; left, the reading room, and right, the children's section of the library:

of, and closely related to, the square outside, and in addition to the floor covering of paving-stones of polished gneiss aping the stones of the square outside, to which reference has already been made, the inner wall is of exposed brickwork in contrast to the smooth surfaces, glazing, and light colours of the external walls and ceilings. To keep this space free for circulation, all the main lavatories and cloakrooms are placed on the basement floor.

**CONSTRUCTION.**—This is partly concrete frame

and partly brick. The walls are faced with a hand-struck cavetto brick and the roof tiles are smoke-black in colour and made by the same manufacturer. The facade facing the square is covered with a light-coloured mosaic between the brick pilasters. The parquet-covered floor of the main assembly hall can be raised and lowered. This is achieved by an electric motor working jacks equally distributed under the floor, and the floor can be raked to the correct angle for all purposes. The seating is removable.

## FLATS

in KILLICK STREET, FINSBURY, N. 1.

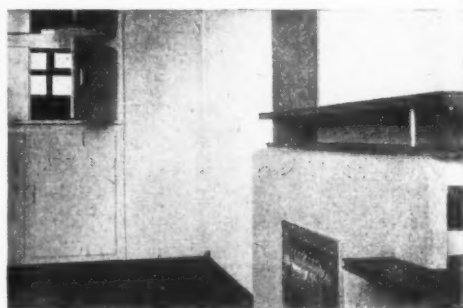
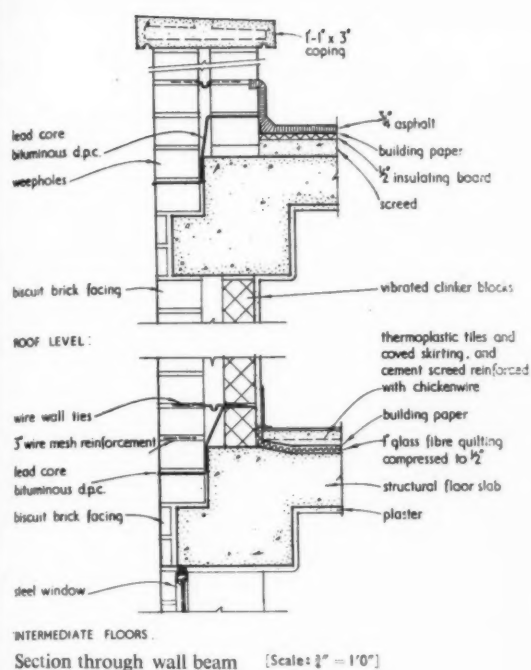
designed by JOSEPH EMBERTON

Stuart Mill House, a block of flats for the Finsbury Borough Council, contains 24 flats of three and four rooms, accommodating 108 persons. The site of  $\frac{3}{4}$  of an acre was expensive; therefore a density of 130 persons per acre was permitted. Town planning angles for daylighting in relation to existing buildings and streets determined the position and height of the building within narrow limits.

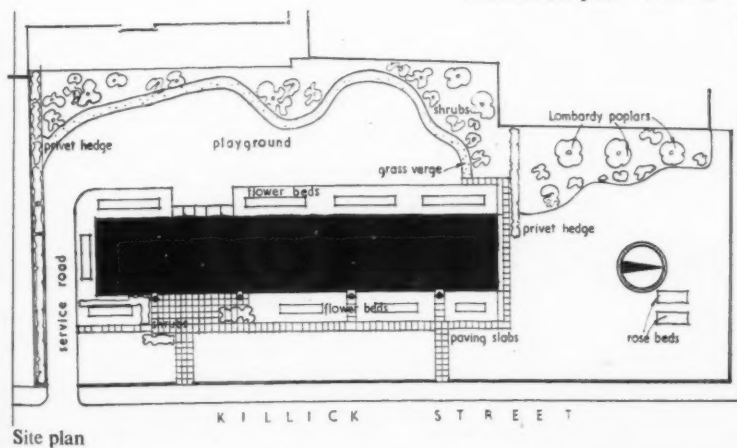
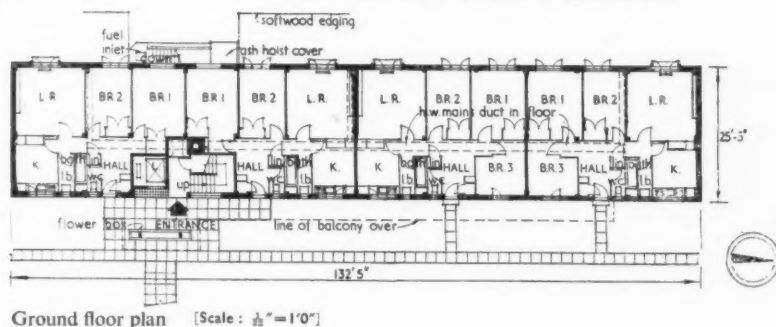
*The east facade from Killick Street.*







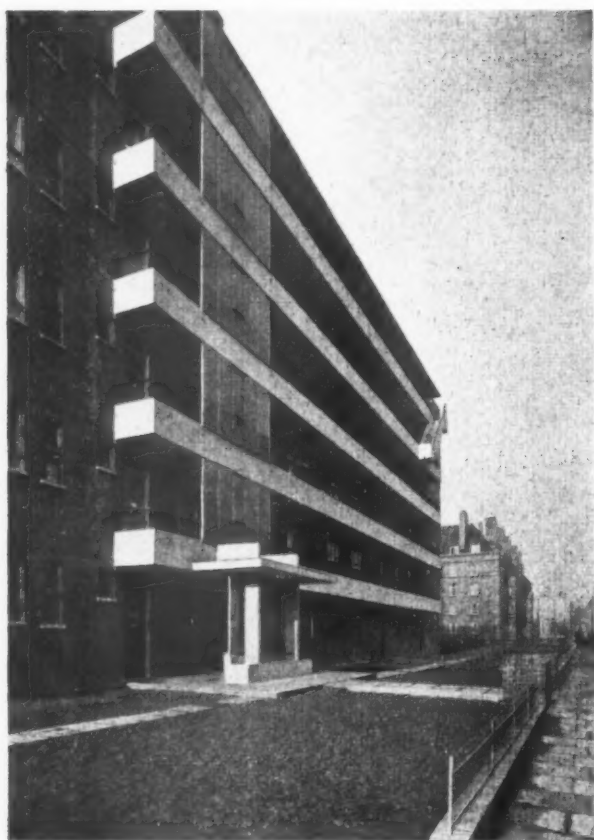
Top right, the west facade. Above, typical living room with electric fire and shelf fitting, and hatch to kitchen on the left.



**PLAN.**—The block was first planned to give direct access to all flats from two lifts at a cost within the MOH ceiling figure, but to reduce the cost and provide lower rents this was changed to balcony access and one lift. The 8-passenger lift can also carry a pram as pram storage is provided with each flat and not centralized at ground level. Kitchens are planned with space for a dining table.

**CONSTRUCTION.**—The framework is of *in situ* reinforced concrete with hollow tile floors and roof. External walls are of cavity construction with an outer skin of flint bricks and an inner skin of 3-in. vibrated clinker blocks.

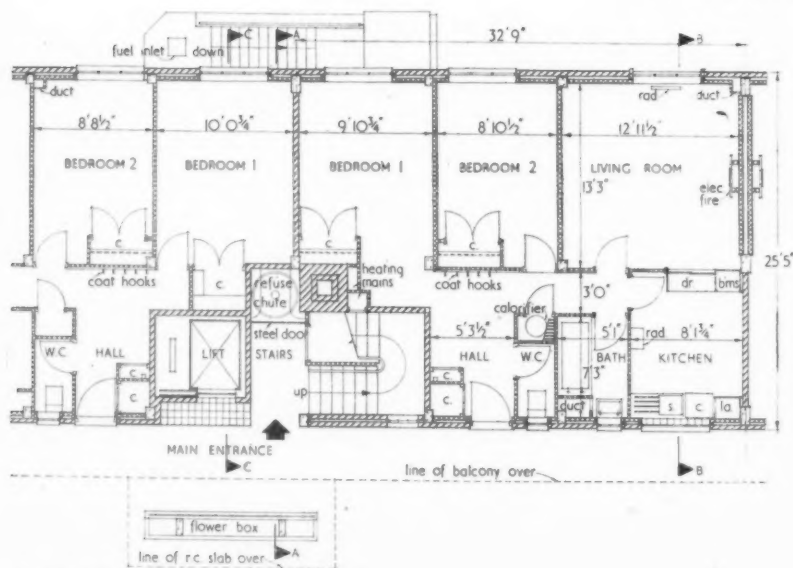
**FINISHES.**—Party walls are insulated from the structure with fibreboard at top and ends, and with felt at the foot. Living room floors have 1 1/2-in. floating screed on 1-in. fibreglass mat. The glazed screen above the entrance protects the lift openings. The small external stair from fourth to fifth floor meets fire-escape requirements for a floor above 42 ft.



Above, the east facade looking north. Below right, the main entrance with glazed panels above, protecting lift entrances.

## FLATS

in KILLICK STREET, FINSDURY, N.1  
designed by JOSEPH EMBERTON

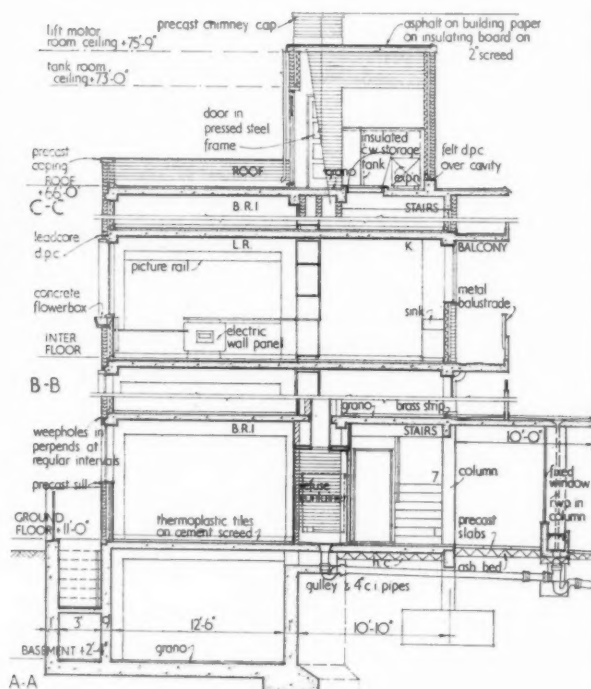


Part plan of ground floor [Scale:  $\frac{1}{16}'' = 1' 0''$ ]

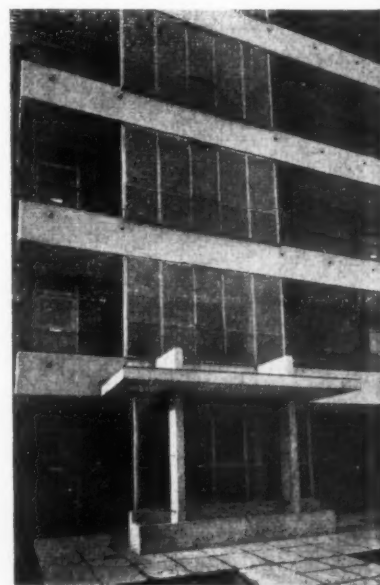
from the ground. Internally, walls are mainly plastered with a flat washable finish.

**SERVICES.**—There is an accelerated low pressure hot water heating system with solid fuel boilers and automatic hopper-fed stoker, providing background heating to living rooms only. Living rooms also have an electric fire in a precast terrazzo surround. Plumbing and drainage is carried internally in ducts. The contract price was £47,387 (4s. 2d. per ft. cu.).

The general contractors were Y. J. Lovell & Son Ltd. For list of sub-contractors, see page 440.



Sections A-A, B-B and C-C



INFORMATION CENTRE · INFORMATION SHEETS  
QUESTIONS AND ANSWERS · CURRENT TECHNIQUE  
THE INDUSTRY · PRICES · TECHNICAL ARTICLES

## TECHNICAL SECTION

*In 1945 the French Minister of Reconstruction and Town Planning asked Marcel Lods, the architect, to draw up a plan for Sotteville-les-Rouen. It is to the credit of the French authorities that they adopted M. Lods's unconventional scheme, which he describes below.*

### TOWN PLANNING IN AN ANCIENT CITY

By Marcel Lods

(Translated from the French\*)

From the first, it was considered advantageous to study Sotteville and the adjacent town of St. Etienne du Rouvray simultaneously. The greater part of Sotteville is built-up, leaving few open spaces, but St. Etienne includes a great deal of open space. Hence, by planning the two townships as one, it would have been possible to take advantage of this difference. For, even without the intervention of a town

planner, it was obvious that the town of St. Etienne should give a certain amount of land to its neighbour—Sotteville.

However, after lengthy arguments on the subject, on which it is charitable not to linger, it was decided that a joint study of the two plans could not be undertaken, and Marcel Lods was asked to apply his energies to the planning of Sotteville alone.

#### PROCEDURE

Mr. Lods was particularly anxious that he should be allowed to combine the functions of town planner, architect-in-charge and executive architect. In order that the English reader should understand the importance which Lods attached to this view of his functions, it is necessary to explain the usual French procedure.

A town planner, having been given the responsibility of preparing a plan, carries out the work only to the stage at which the plan is approved. The number of details prepared, or the number of consultations which take place on the application of the plan, may vary, but the town planner's task is finished at this stage. It is also stipulated that the town planner should not undertake work in the town for any other than public bodies. Without this stipulation, the important landowners, who are liable to have a great influence on decisions concerning the town plan, might also bring pressure to bear on the town planner, in order that the layout might be specially favourable to their particular interests, contrary to the public interest.

One cannot conceive a more unrealistic system than this. In the course of his work, the town planner inevitably develops very definite ideas as to the solution of the town's problems. If the execution of the plan is handed over to another technician, there is always the risk that this technician will have ideas different from those of the town planner. Nor is it likely that he would be able to acquaint himself fully with all the reasons and arguments of his pre-

decessor. As a result of this division of responsibility, what usually appears on a plan is of a conventional and schematic character.

Being persuaded that an imaginative plan for the town could not be realized unless it were translated into actuality by the planner himself, Lods applied for a relaxation of the normal methods of procedure, and this was granted.

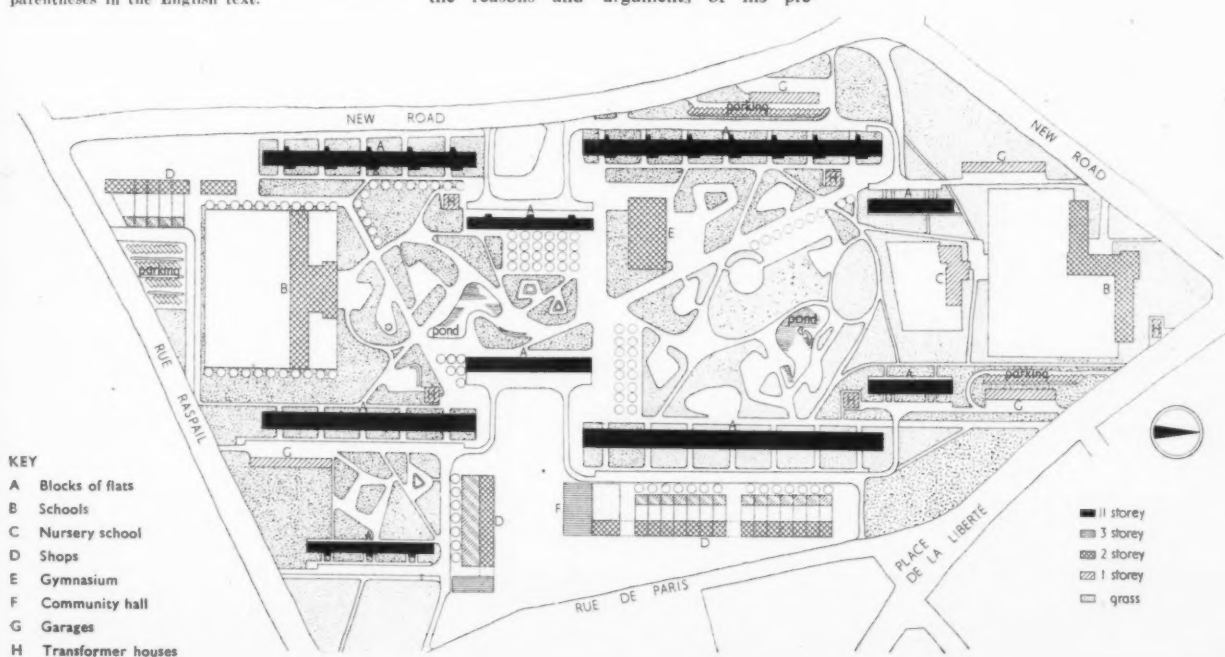
#### THE PROBLEM

Sotteville suffered two different types of war damage. On the one hand, there was very comprehensive destruction along the route of the railway. On the other hand, there was widely scattered local destruction, caused by isolated "incidents" which took place over the whole area of the township. The zones of complete destruction were clearly bounded, and an entirely new plan was required only for this area.

The town of Sotteville was, for the greater part, composed of houses on their own plots, bearing no relation to each other. The density of building was, however, much too great for individual houses (many were constructed in terraces, having a frontage of only 16 feet. But the municipal authorities were, rightly, concerned with the problem of finding new housing accommodation to cater for the increasing demand of a growing population. Therefore, if reconstruction was to be confined to the zones of complete destruction, it was not possible to increase the town's housing accommodation by building houses of the same type as those which had been destroyed.

[La ville de Sotteville était en grande partie construite en pavillons répartis dans des lotissements sans liaison réciproque. L'extrême réduction des surfaces de terrain affectées à chacun des pavillons, (de nombreuses maisons étaient construites en bandes d'immeubles jointifs édifiées sur des terrains de cinq mètres de façade) aboutissait à une densité d'habitation trop élevée pour des constructions individuelles. On ne pouvait donc augmenter les possibilités de logement si on se bornait à reconstruire dans

Fig. 1. Sotteville-les-Rouen Site plan of one of the new neighbourhood units.



\* In translating Marcel Lods's account of his flats at Sotteville-les-Rouen, a great deal has been lost. His original manuscript has the vibrant quality of the man but, alas, there is no English equivalent. Two of the more telling paragraphs in the original have been inserted in parentheses in the English text.





Fig. 2.  
Close-up of  
first block.

les zones détruites, des maisons du même caractère que celles qui avaient disparu.]

Of course, the problem might have been considered on a larger scale. It might have been decided that the city of Rouen, of which Sotteville is a part, had reached a size which should not be exceeded, and that decentralization, by means of creating a completely new town in a zone still clear of building, should have been aimed at.

#### THE SOLUTION

The municipality, limited by the necessity of meeting the demands of its population, took the view that the most important problem was to increase, in every possible way, the housing capacity of the township. Everything was contemplated up to, and even including, the construction of buildings on the only green space remaining in the town, the Bois de la Garenne, situated in the centre of the town. The town planner, accepting the necessity of putting more houses on the same area (the solution of sacrificing the Bois de la Garenne having naturally been emphatically discarded) had only one solution to offer—that of changing completely the housing density. He put forward a solution in the following terms: Definitely, we will not destroy the Bois de la Garenne, which is indispensable—being the only open space in the town. Very much to the contrary: we propose to create other open spaces which will be complementary to the Bois de la Garenne. Nevertheless, we shall find more houses than there were originally. In order to achieve this we shall increase the population density in the zones of complete destruction from their old figure (170 or 200 persons to the acre) to 740 persons to the acre. The former figures being the maximum for individual houses of the required standard, the latter

figure will be made possible by high building.

("Nous ne détruirons certes pas le Bois de la Garenne qui est indispensable au seul titre d'espace vert de la ville, bien au contraire, nous allons créer d'autres espaces verts qui compléteront celui-là, et néanmoins nous trouverons plus de logements qu'auparavant.

"Pour parvenir à ce double résultat, nous allons faire passer la densité d'habitation des zones détruites de leur chiffre ancien (70 ou 80 habitants à l'hectare) chiffres maxima envisageables si l'on veut obtenir des pavillons donnant des conditions d'habitat admissibles, à 300 habitants à l'hectare, chiffre permis par la solution de l'habitation en hauteur.")

Such a solution was perfectly practicable and in accordance with the trend shown in all countries of the world during the last few years.

There are two ways of distributing humanity over the earth:

(1) Individual houses with their plots of land give certain advantages of isolation, quiet and privacy, which are only achieved at the cost of maintaining a low density of habitation.

(2) Concentration, on limited areas, of tall buildings which, themselves, have different advantages from individual dwellings (views, plenty of air, plenty of sunshine and the possibility of common services); thus enabling ground to be freed whilst, at the same time, the dwelling density is increased.

It is, perhaps, unnecessary to state that Marcel Lods's first suggestions aroused a certain scepticism, and the first effort had to be made with the Municipal Council. Members of the Council proved to be understanding and had the courage to study,

objectively, the advantages and disadvantages of the proposals put before them. The second effort had to be made with the population as a whole, who were called together at meetings, which took place in cinemas in the town. Complete details of the project were shown to them, together with sketches and plans, and, after a while, more than a third of the people (judging by the results of a written questionnaire) were willing to give the project a trial.

#### THE PLAN

Meanwhile, the plan had been established and adopted by the Municipal Council. It comprised the creation, in the zone of complete destruction, of two neighbourhood units, one situated on a piece of land of  $5\frac{1}{2}$  acres, the other, on a piece of land slightly smaller. The first zone was to be put in hand at once. The green belt, resulting from the construction of the first neighbourhood unit, was to be joined to the Bois de la Garenne. It was to be enlarged by two further green belts to be created by filling-up a quarry and by preserving the grounds of a large mansion which had, fortunately, escaped the usual "breaking up." Thus, a large, uninterrupted green belt, crossing a large strip of country, would be made up.

The Municipal buildings, intended for an administrative centre and grouping in one unit the Town Hall, Law Courts, Tax Office, Post Office, Fire Brigade, Municipal Library, etc., would naturally find their place in the lower part of the Bois de la Garenne and would be arranged in a public park.

#### THE BUILDINGS

The plan adopted, the next step was to construct the first group of buildings. (Figs. 2 and 3 indicate the present state of progress.) Each building is to have ten storeys, with three staircases and two dwellings to each landing; i.e., 20 dwellings to each staircase—60 dwellings in all. Construction was undertaken with the aid of State funds for "Immeubles sans Affectations Individuelles" (ISAI).

It will be seen from Fig. 1 that the buildings face east/west. This orientation was preferred to a north/south orientation. In country like the valley of the Seine, which is often rainy and cloudy, it is important to get as much sunshine as possible; and orientation should be chosen from this point of view.

Taken by itself, a south elevation is best but, if there are habitable rooms on both elevations, it is the total value of the two opposite elevations which counts. And, from the point of view of gaining radiant heat, the value of east and west sun is greater than the value of north and south.

In addition, morning and evening radiation, which is nearly horizontal, penetrates more deeply into the interior of rooms than radiation at mid-day. Maximum advantage is taken of these radiations when elevations face east and west. The buildings are narrow, to allow sunshine to penetrate to the extremities of the rooms, thereby exerting a useful bactericidal action.

#### THE FLATS

The division of the three essential functions of the dwelling, reception, service and living, can be seen from the plan (Fig. 4). In particular, the three bedrooms, the w.c. and the bathroom, with a small linen closet annexed, can be separated by a curtain from the living room. This means that the business of the house can continue without interfering with the reception of visitors, etc.

The living room faces both directions. The bedrooms face one only. The kitchen, considered as a working room, and not as a living room, gets plenty of sunlight and even the w.c. is sunny. Two balconies, of which one is as large as a room, are provided for



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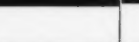

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**FLOOR FINISHES | LINOLEUM****19.G1**

The Architects' Journal Library of Information Sheets 305. Editor: Cotterell Butler, A.R.I.B.A.


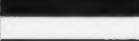
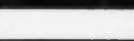
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full size							
nominal thickness in.	$\frac{5}{64}$ "	$\frac{3}{32}$ "	$\frac{1}{8}$ "	$\frac{5}{32}$ "	$\frac{11}{64}$ "	$\frac{15}{64}$ "	$\frac{17}{64}$ "




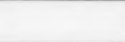
**PLAIN LINOLEUM.**

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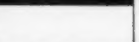
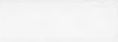
**PRINTED LINOLEUM.**

thickness mm.	2.00	3.20	4.50
full size			
nominal thickness in.	$\frac{5}{64}$ "	$\frac{1}{8}$ "	$\frac{11}{64}$ "





**INLAID LINOLEUM.**

thickness mm.	2.00	3.20	4.50	6.70
full size				
nominal thickness in.	$\frac{5}{64}$ "	$\frac{1}{8}$ "	$\frac{11}{64}$ "	$\frac{17}{64}$ "

**GRANITE, JASPE, MOIRÉ AND MARBLE.**

thickness mm.	2.50	3.20	4.50	6.70	8.00
full size					
nominal thickness in.	$\frac{3}{32}$ "	$\frac{1}{8}$ "	$\frac{11}{64}$ "	$\frac{17}{64}$ "	$\frac{9}{16}$ "

**CORK CARPET.**

thickness	 2.50 mm. ( $\frac{3}{32}$ ")	 3.20 mm. ( $\frac{1}{8}$ ")	 4.50 mm. ( $\frac{11}{64}$ ")	 6.70 mm. ( $\frac{17}{64}$ ")
application	domestic	showrooms, offices, domestic	hospital wards, restaurants, shops, offices	ships, cinemas, theatres, public buildings, hotel bars

**APPLICATION ACCORDING TO THICKNESS.****LINOLEUM: SUMMARY OF TYPES.**

Compiled from information supplied by The Linoleum Manufacturers' Association.

## 19.G1 LINOLEUM : GENERAL DATA, TYPES AND USES

This Sheet supersedes Sheet 19.G1 published 30.6.49. It is the first of a group on linoleum and covers general data, types and uses. Information on the laying and fixing of linoleum is given on Sheet 19.G2, and specifications on Sheet 19.G3. 19.G4 deals with specialised applications such as to furniture and fittings.

### Material

The principal ingredient in the manufacture of linoleum is oxidised linseed oil. This is mixed at a high temperature with thoroughly ground cork or wood flour and colouring pigments. Linoleum is dried or seasoned in heated chambers for from two to six weeks according to thickness.

For all gauges the plastic mass, when in the unseasoned state, is applied under pressure to a jute canvas or bitumen-saturated paper felt backing.

On plain linoleum up to and including 2.50 mm. gauge the canvas backing may or may not be painted. Gauges thicker than 2.50 mm. always have unpainted backings.

In other types of linoleum, gauges up to 4.50 mm. may or may not have a painted canvas backing according to quality.

All linoleums of gauges greater than 4.50 mm. have an unpainted backing except in some cases (jaspe and marble patterns).

Where the backing is of paper felt it is left unpainted, no matter what gauge or type the linoleum.

Linoleum does not absorb water and does not support combustion.

### Types

The types of linoleum obtainable are listed below. The standard range of thicknesses in which the various types are obtainable is set out diagrammatically on the face of this Sheet.

The gauge of linoleum is usually given in millimetres, but for convenience approximate inch equivalents are given.

**Plain linoleum:** This is available in the following standard colours—brown, dark brown, light green, dark green, light blue, dark blue, terra-cotta, crimson, brick, white, black, grey and biscuit.

**Printed linoleum:** This consists of a surface print on a base of plain linoleum and is produced in a very wide range of patterns. This type of floor finish is commonly used where an inexpensive covering is required.

**Inlaid linoleum:** This is made by inlaying a variety of colours to form a pattern which goes right through to the backing. The individual components of the pattern are cut, laid in position and keyed to the

backing under pressure. This type of linoleum is suitable where a pattern is required combined with resistance to heavy wear.

**Granite, jaspe, moiré and marble linoleums:** These are formed by the blending of a variety of coloured linoleum mixtures during the manufacturing process.

**Cork carpet:** This is a resilient floor covering with a softer tread than ordinary linoleum, being largely composed of granulated cork. Standard colours available include brown, blue, green and red. It is chiefly used in situations where quietness is desirable. Cork carpet can be used as an underlay beneath linoleum.

### Applications

An estimate of the amount of traffic to be provided for will govern the gauge of the linoleum to be used. The diagram on the lower part of the face of this Sheet gives approximate gauges recommended for some common applications.

The heavier gauges of linoleum may be cut into tiles, strips, etc., and arranged in any design.

### Maintenance

Under ordinary conditions all linoleums may be kept clean by the use of mild household soap and a clean wet cloth. Scrubbing with harsh soaps or powerful alkali cleaning agents is injurious. To maintain the surface it should first be cleaned of all dirt and a light, even coat of wax polish rubbed well in. At frequent intervals, once daily if possible, all loose dirt should be removed with a damp cloth and the surface repolished with a polishing machine or pad. Linoleum should not be over-waxed: when this condition develops the coatings should be cleaned off with white spirit or paraffin, and a light even coat of polish applied.

### Relevant British Standard

*B.S. 810 : 1950 Sheet linoleum and cork carpet.*

*Compiled from information supplied by:*

**The Linoleum Manufacturers' Association.**

Address: Roxburghe House, 273-287, Regent Street, London, W.1.

Telephone: Regent 6140 and 6149.



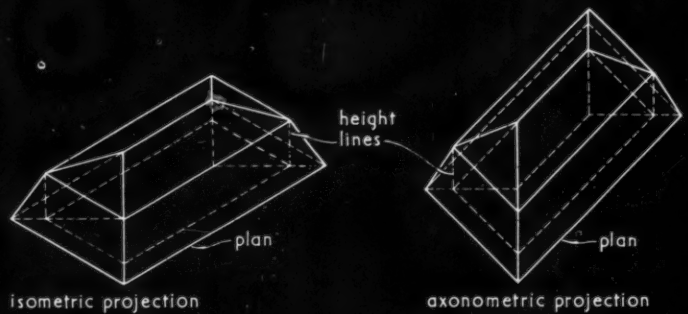
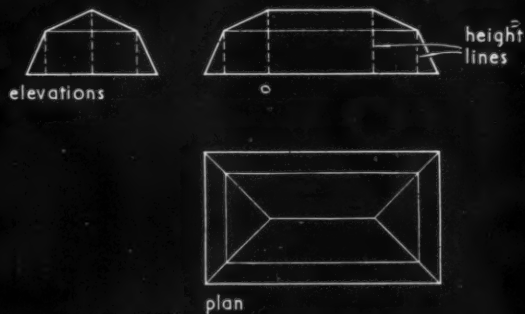




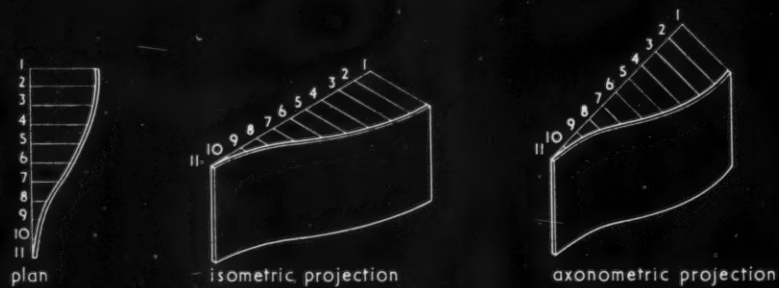
## DRAUGHTSMANSHIP | ISOMETRIC AND AXONOMETRIC

I.B24

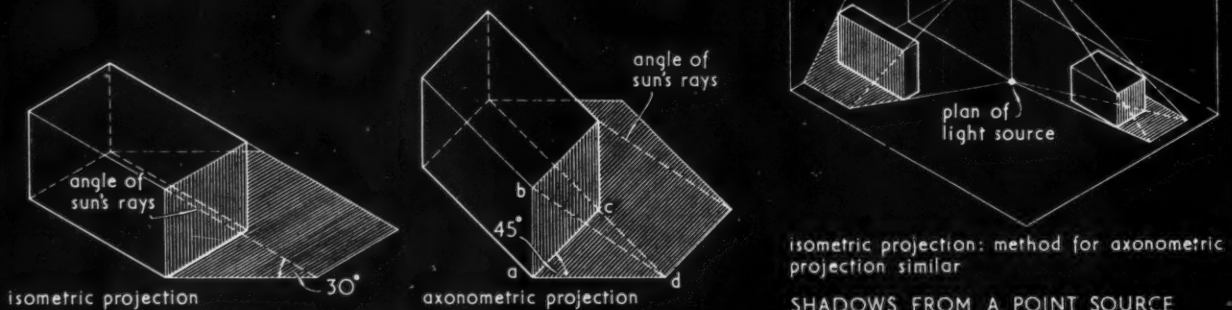
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## INCLINED SURFACES.

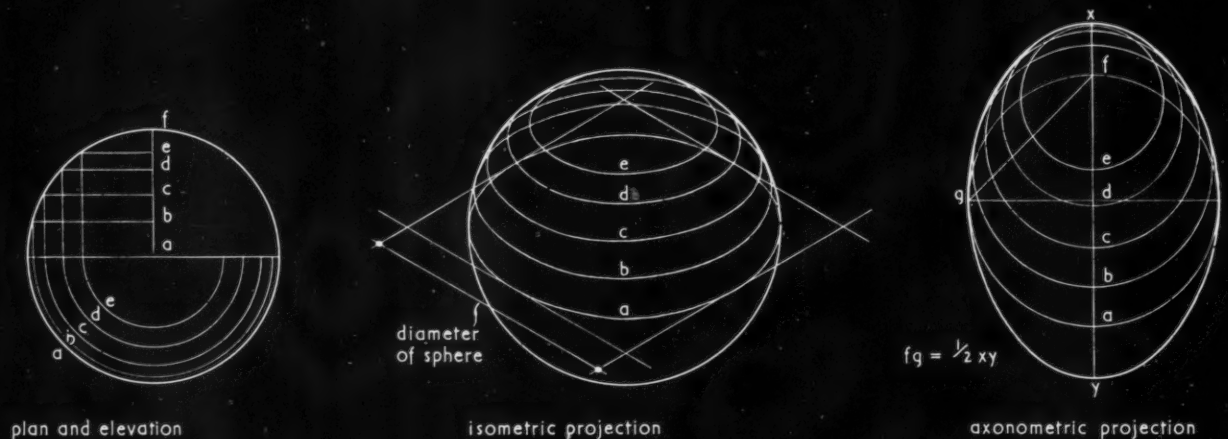


## FREE SHAPES.



## SHADOWS FROM THE SUN.

## SHADOWS FROM A POINT SOURCE OF LIGHT.



## SPHERES.

## ISOMETRIC AND AXONOMETRIC PROJECTIONS: FURTHER EXAMPLES.

Compiled by Leslie A. Lee L.I.O.B. and H.N.Hoskings A.R.I.B.A. for Eagle Pencil Company—Chemi-Sealed Turquoise pencils.

## 1.B24 ISOMETRIC AND AXONOMETRIC PROJECTIONS : FURTHER EXAMPLES

This Sheet, one of the series on draughtsmanship, deals with further examples of drawing in isometric and axonometric projection.

### Inclined Surfaces

Pitched roofs or other inclined surfaces may be set up, as explained in Sheet 1.B23, by first drawing an enclosing "box" and marking on it the parts of the object that make contact with it. From these points the complete surfaces may be plotted.

Another method is to draw the plan in isometric or axonometric projection, draw vertical lines from the salient points and mark on them the heights taken from the elevations; these points when joined together give the shape required.

### Free Shapes

These shapes may be found in relation to an enclosing square or rectangle, or by taking offset lines from one of the main axes as shown on the face of this Sheet.

### Shadows from the Sun

Shadows may be shown on exterior views to increase the three dimensional effect of the metric projection. They may first be plotted on the plan and elevations and transferred to the metric projection or the method described below may be used.

In isometric projection it will be seen that the angle of shadows falling on the ground from the vertical face of an object is horizontal and the angle of the sun's rays passing through any point is at  $30^\circ$  to the horizontal. It is, therefore, a simple matter to draw the shadows straight in with a  $30^\circ$  set square.

In axonometric views the angle of the sun's rays must be found (see drawing) and this is done by drawing a line at  $45^\circ$  to the side *ac* from *a* to cut another line parallel to *ac* and the same distance from it as the height *ab*. The point of intersection *d* represents the shadow position on the ground of the upper corner *b*, thus by joining *bd* the angle of the sun's rays may be determined. In any axonometric drawn at  $45^\circ$  to the horizontal, as that on the face of this Sheet, the angle of the sun's rays to the horizontal will be  $35^\circ 16'$ .

### Shadows from a Point Source of Light

Shadows from a point source of light for interior views may also be cast directly on the metric projections. The principle of construction used is the same as that given in Sheet 1.B37 for perspective views.

### Spheres

Spheres may be drawn by taking a number of horizontal "cuts" through the solid at different levels. These cuts are plotted in metric projection and the curved line which encloses them gives the projected shape of the sphere.

In isometric the sphere appears as a circle, the diameter of which is equal to the major axis of an ellipse representing a circle of the same diameter as the sphere.

In axonometric, it will be seen that the cuts are circles and the enclosing line is an ellipse: the minor axis of the ellipse is equal to the diameter of the sphere and the focal points on the major axis fall on a circle drawn on the minor axis. The distance from a focal point to one end of the minor axis is equal to half the length of the major axis. From these axes the ellipse may be constructed without recourse to the method previously described.

This Series of Sheets covers geometrical drawing, orthographic, isometric and axonometric projections, perspective, rendering, lettering and draughtsmanship generally.

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each flat. These balconies give the flats one of the advantages of the individual house, for it is possible to get outside for reading, rest and even for taking meals.

The interior equipment includes electric lighting, heating, and cold and hot water supply in the kitchen and the bathroom (hot water being supplied by gas heaters). The bathroom contains bidet, lavatory basin and showerbath (the latter with a board attached for laundry) and a w.c. in a separate compartment. The linen closet contains cupboards and an ironing board, etc. The kitchen is equipped with a double sink of stainless steel and in one of these sinks there is an outlet for rubbish with a hermetic seal. A hood, connected to the outside air, collects the steam and vapour from the gas cooker. A large cupboard with a serving hatch separates the kitchen from the living room. This hatch allows the mother of the family to keep an eye on her children while she is busy preparing a meal.

A complete system of furnishing, which is properly adapted to the plan, has been developed. A prototype has been carried out as a typical individual dwelling, so that bombed-out people can understand features of the layout which are not apparent from the drawings.

The price of the equipment and fittings is available and is of particular interest to people who lost both their houses and their furniture.

Each staircase (for 20 dwellings) is supplemented by 2 lifts. Meters are installed in the lift enclosure; they are visible from the lift cage and accounts can be made up without entering any of the flats.

#### SYSTEM OF CONSTRUCTION

There was the usual choice between a steel frame and a concrete frame. The extreme shortage of materials, which existed at the time the work commenced, influenced the choice of reinforced concrete for the frame. This consists of columns and beams, cast *in situ*, on which are fixed small, prefabricated joists in vibrated concrete. The whole structure rests on foundations in direct contact with the soil. The soil consists of sand and gravel, part of the ancient river-bed of

Fig. 3. The first block of flats, during construction.



the Seine, which is capable of carrying a heavy load.

An access passage to the cellars is provided in the basement. The cellars for ten storeys of dwellings need a greater area than the ground area of the building itself. Taking advantage of this, a basement has been provided which extends beyond the perimeter of the building and thus provides a foundation sufficiently large to provide for the overturning moments due to wind pressure on either of the long elevations. The main external walls have, on the outside, a cladding of slabs of vibrated concrete, of which the external face is finished in exposed Seine gravel; thus providing a surface very little subject to changes in colour or texture. Separated from the external cladding by an air space is an inner wall of light-weight concrete which provides thermal and acoustic insulation. This is plastered internally in the dwelling rooms and faced

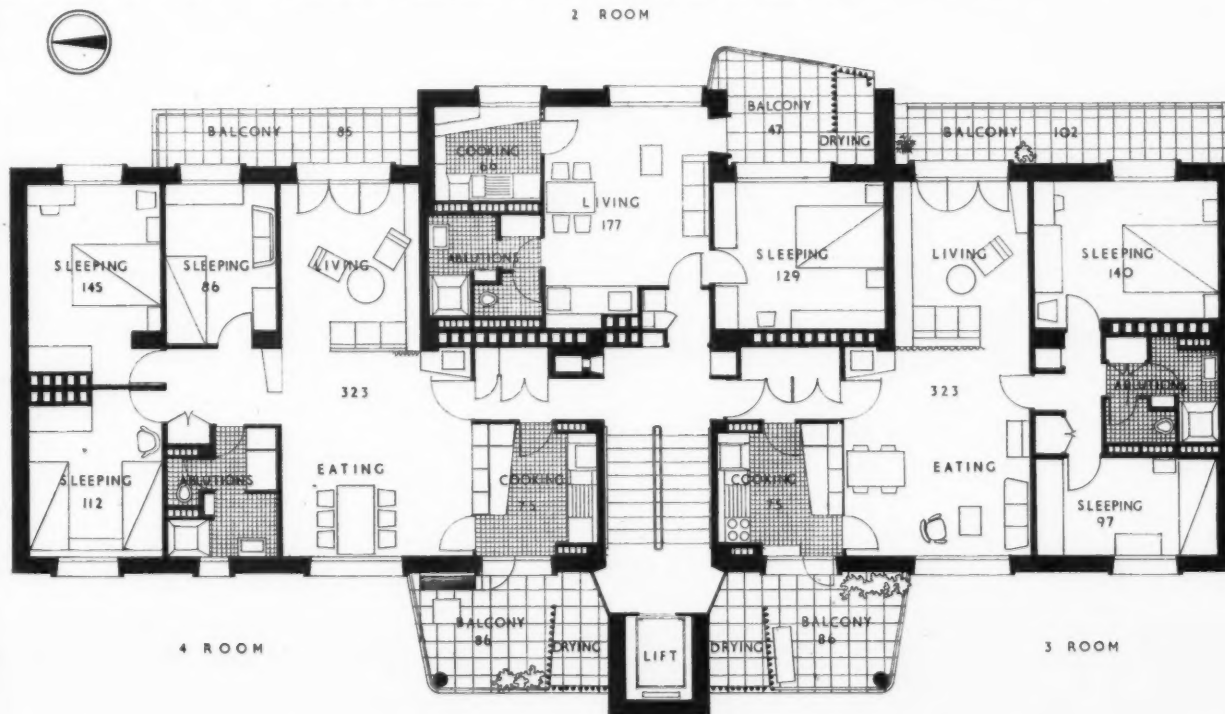
with tiling, fixed in cement mortar, in the rooms where water is used (kitchen, douche, lavatories, w.c.).

The window openings have metal frames and windows in double glass with an air space between, in order to provide good acoustic and thermal insulation. Each window opening has, in addition, an opening light.

The floors are covered with linoleum, in the habitable rooms, and with clay tiles in the rooms where water is used. The ceilings are covered with fibrous wallboards to provide sound absorption and thermal insulation. At ground level and in the basement,

Fig. 4. Part of typical floor plan of the second block of flats. (Figures indicate floor areas in sq. ft.)

2 ROOM





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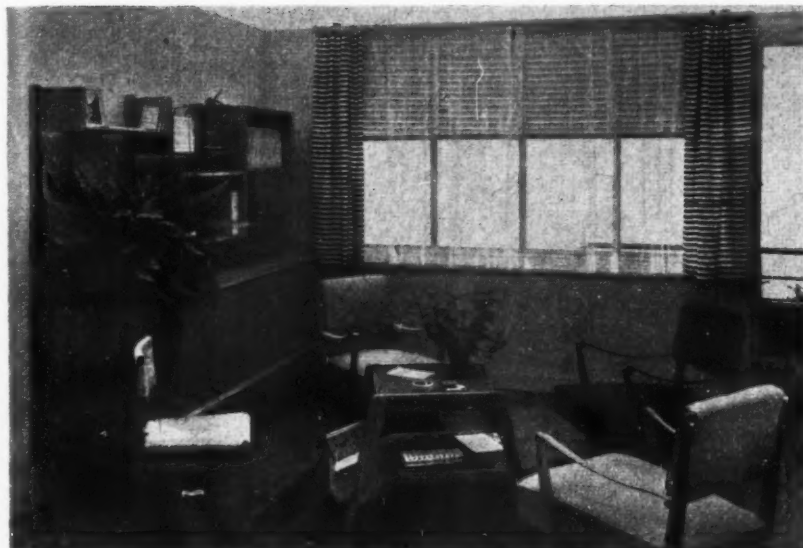


Fig. 5. Furnished prototype flat; furniture and decorative scheme designed by Marcel Gascoin, architect and decorator. Part of the living room.

there are shops, bicycle and pram sheds. Pipe runs for the sanitation, refuse chutes, electricity, gas, drains, etc., are all accessible from the basement passage which runs the entire length of the building. Stop-cocks and wash-out taps can be reached at any time from this gallery, which is lighted electrically.

#### THE SCHEME AS A WHOLE

The entire zone, which makes up the first neighbourhood unit, will include just over 800 dwellings. The first 60 are under the control of ISAI, as mentioned above. The 120 following (to be known as building "B") will be put in hand under State finance. The frame of this building, which is similar to the one described above, has now reached the second storey. The 150 following (building "C") are ready to start.

The total ground area occupied by the buildings, when the 800 dwellings are constructed, will be roughly 6 per cent. of the total available area; that is to say, 94 per cent. of the ground will remain as open space. This open space will be used for two school buildings, a gymnasium, an assembly hall, and shops. Mechanical transport will be excluded from the neighbourhood unit, apart from four special cases—fire brigades, ambulances, furniture vans and funerals. For the delivery of heavy goods, very limited access will be permitted. In other words, children going from their homes to school will not encounter vehicles. Garages and parking places are situated at the periphery of the central area. Pedestrians in the township will walk among gardens. In summer they will follow paths beneath the trees and in winter they will be able to follow covered ways.

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

## INFORMATION CENTRE

### 5.43 planning: public utilities

#### TRAFFIC SURVEY

*A Directional Traffic Survey for Middlesbrough and its Application to Main Road Planning in a Large Built-up Area.* J. P. Wain (Journal of the Inst. of Municipal Engineers, Feb. 5, 1951. pp. 678-704).

A lengthy extract of a paper by the Chief Assistant Engineer, Borough Engineer's Department, Middlesbrough, on the procedure employed in making an "origin and destination" traffic survey, September, 1949.

The census was taken during a 12-hour period at 14 points. It is interesting to see that the total cost of the survey (excluding salaries of office staff) was only £433, of which about £400 was for the 50 per cent. Road Fund grant.

### 9.17 design: general

#### CODES OF PRACTICE

*Codes of Practice for Buildings, Construction and Engineering Services.* 4th Report. (HMSO, 1950. 1s.)

Alterations in organization, reduction of number of Codes. Progress to December, 1949.

The steady progress which is taking place in the preparation of Codes of Practice is apt to pass unnoticed. This Report, although presumably out of date by the time of its publication, is, nevertheless, a useful reminder of what was achieved up to the end of 1949. An appendix gives a list of the Codes which it is now proposed should be drawn up; the original programme having been amended. The Report also tells something of the publicity work which has been carried out. It would be interesting to know how many architects keep a filed set of the Codes available for reference. Like British Standards, they may be things one does not want to read very often but they do form a valuable source of reference.

### 14.40 materials: concrete

#### HIGH ALUMINA CEMENT

*High Alumina Cement.* BRS Digest No. 27. (HMSO, Feb., 1951. 2d.)

Properties and use of high alumina cement.

Most people in the building industry know something about high alumina cement but few know much more than that it has a high rate of strength gain. While it is true that this characteristic is the chief reason for its use, it has other characteristics which must be recognized if it is to be used properly. The purpose of this BRS Digest is to describe these properties.

The important points noted are: the upper and lower limits for the ratio of cement to aggregate; special treatment of shuttering; limitation on placing during hot weather; and limitation of the thickness which may be poured in one operation. The Digest



Fig. 6. Prototype flat (as above). The dining portion of the living room.

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also describes the resistance of high alumina cement to many, but not all, chemicals and its use in making concrete for refractory purposes and in mortar for flue linings in chimneys to slow burning stoves.

A brief, lucid and useful description which includes graphs of crushing strengths.

#### 14.41 materials: concrete CONCRETE IN WINTER

*Steam—An Aid in Building Production.* (Engineering Services No. 1. Jan., 1951.)

Description of methods used to permit concrete being placed in cold weather at the Royal Festival Hall.

This important article describes the precautions which must be taken to permit the placing of concrete to continue under temperatures at, or slightly below, freezing point, and to ensure the protection of new concrete under conditions of 10° to 15° of frost.

Aggregates were de-frosted by steam injected from tubular poker. To protect the new concrete, the work was covered by tarpaulins arranged to provide an air space adjacent to the concrete. Steam was then discharged into the enclosures.

The article gives a brief description of details.

#### 16.71 materials: miscellaneous MODULAR BRICKWORK

*Modular Co-Ordination at Work.* James T. Lindrum (The Brick Builder, Jan., 1951).

Report of experimental houses in modular and non-modular brick construction at University of Illinois. Insufficient data for final conclusions but appreciable saving in labour shown on limited trials.

#### 17.73 construction: general STRUCTURE OF ARCHITECTURE

*Contemporary Structure in Architecture.* Leonard Michaels. (New York: Reinhold Publishing Corporation, 1950. USA, \$8.50; London: Chapman & Hall Ltd., 68s.)

An impressive treatise on the architect's collaboration with the structural engineer. 230 pages, more than 300 drawings and large-size photographs. Deserves to be read (and even studied) by architects and engineers who will thereby learn a lot about each other's ways of thinking.

If it were not for the high price of this volume it would be easy to predict an outstanding success for it. The book has that sort of attraction which makes the reader give it much more time than he intended. Chapter I, on contemporary structure, follows the historical development from skeleton frames which take axial loads and bending, to space enclosing structures, like slabs and shells. Chapter II deals with the structure in architectural design, including plan, section, structural form and expression. A section on structural materials follows as an "appendix" but this might well have formed a chapter in its own right, covering steel, concrete, timber and light alloys.

In his preface, the author discusses the problem he had to solve in deciding upon the right framework for his book. It is a measure of his success that the unavoidable overlapping in subject matter and illustra-

tions has been kept within reasonable limits but there is still scope for improvement.

Bridges have rightly been included to illustrate what can be achieved by a synthesis of sound engineering and good architecture, and Robert Maillart's work is given well-deserved prominence.

A word of praise is due to the author for taking pains in giving full acknowledgment to the designers, architects and engineers of individual jobs, and to his literary sources. The index could be made more useful if it were split up into separate sections with subjects on one side, and designers and authors on the other.

The subject of prefabricated floor components (pp. 70 ff.) should be given more space and should include other types and materials besides concrete, e.g., light gauge steel flooring. Composite construction of steel and concrete is essentially dependent on efficient bond cleats (pp. 202 ff.) and more up-to-date types could have been shown.

Students and architects commencing in practice will not find their way easily through such bewildering choice of alternative structural solutions. The practical designer, however, before solving his particular problem will find plenty of inspiration in looking through this book.

It is high time that "the divorce of engineer and architect in the nineteenth century" (p. 127) should be superseded by intimate collaboration. To promote this has obviously been Mr. Michael's aim in writing his book. It deserves every success.

#### 19.115 construction: details EXTERNAL SHEET COVERINGS

*Board and Sheet Coverings (External).* Draft BS C of P. Sub-Codes 124.200 to 124.204

and 124.207. (British Standards Institution. 1950. 10s.)

General recommendations on external sheeting. Details of weatherboards, sheet metals, asbestos-cement, plywood and wood-wool slabs.

Sub-code 124.200 gives the usual recommendations about exchange of information, etc., and then deals with design requirements. In the sub-codes dealing with the different types of sheet coverings, tabulated information is given on the spacing of supports, the spacing, dimensions and types of nails or screws required and other important fixing data for hardboards, plywood, asbestos-cement sheet, wood-wool building slabs, timber, and ferrous and non-ferrous metal sheet. Recommendations are made as to the various fixings for sub-frames and the methods of fixing coverings and infillings, together with joint treatments suitable for various materials.

The sub-codes each deal with their specific subject in a similar way to sub-code 124.200 described above. The grades, thicknesses and weights of particular coverings are given, where appropriate, and recommendations made on suitable preservatives, fire retardants, fixing and jointing accessories, and flashings, etc. Considerations affecting design are dealt with fully for each particular type of covering, and notes are included on transporting, protecting, storing and fixing the covering (including preparatory work); on scaffolding and tackle; and on suitable finishing treatments. Each sub-code concludes with some information on inspection, testing and general maintenance of the coverings.

The document includes illustrations showing the different types of weatherboard coverings and methods of jointing.



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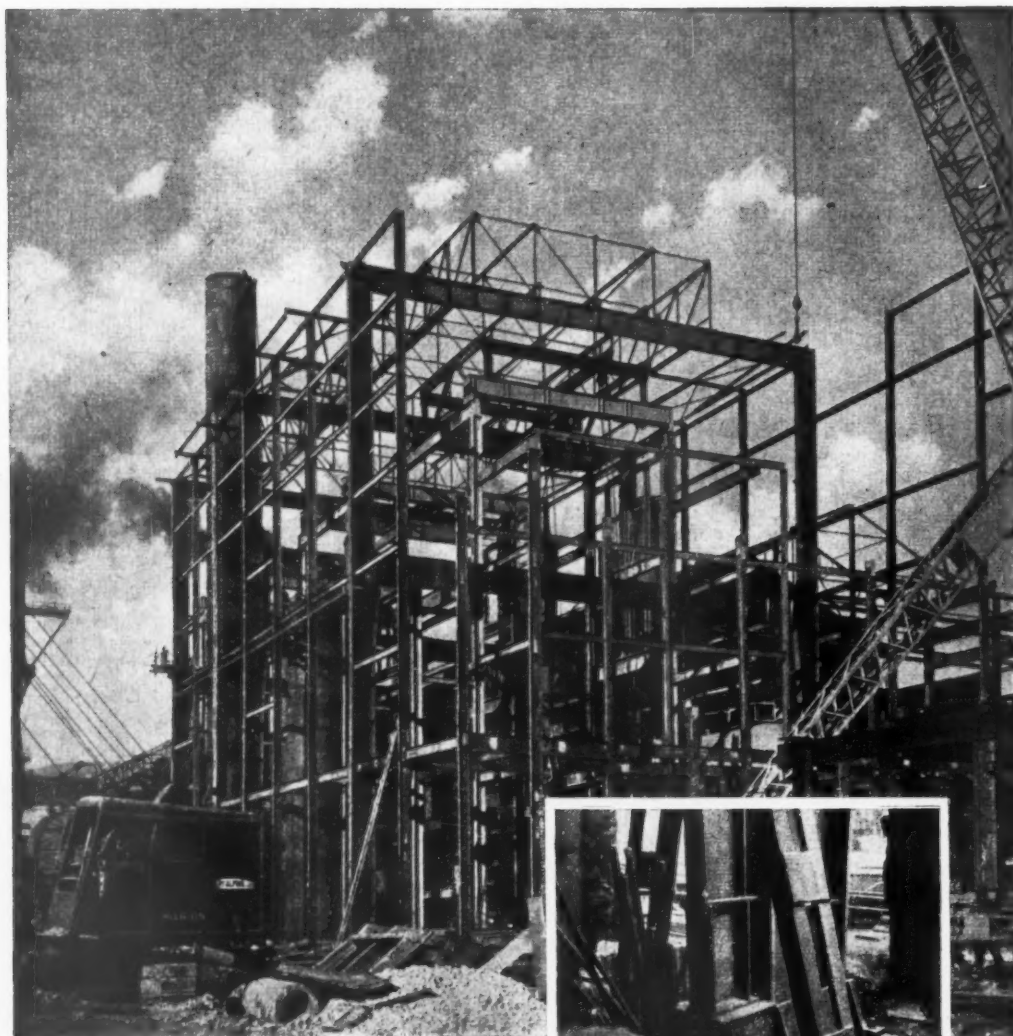
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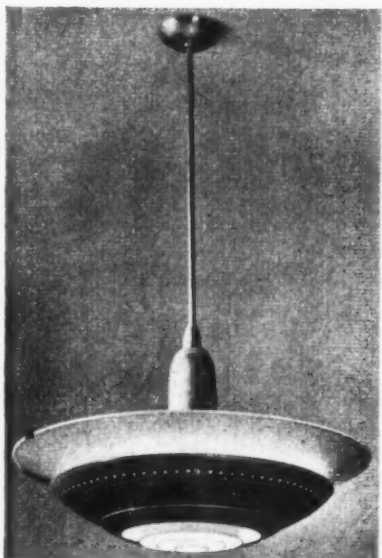
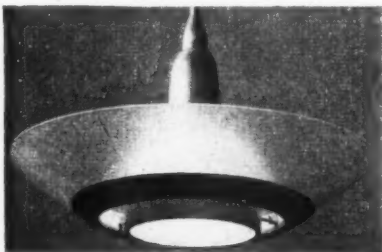
*This feature covers both the production and marketing of new materials and designs of equipment, as well as the general trend of developments within the Building Industry.*

## THE INDUSTRY

By Brian Grant

### LIGHTING FITTINGS

The illustrations below show fittings from Troughton & Young's new Mondolite range. These fittings are built up of standardized reflectors in different shapes and finishes, and it is possible to build up fittings from various parts which give direct or indirect lighting, downwards or reflected from the ceiling. Many of the possible variations can be seen in the re-built showrooms which this firm opened a few weeks ago, and there are on show as well the Ultralux fittings, which one remembers so well from pre-war days, the post-war Tubalux fluorescent series and the recently extended Versalite range. Incidentally, Troughton & Young's redesigned showroom is well worth a visit, but A. B. Read, the designer, is sufficiently well known for one to be able to take that for granted. (Troughton & Young Ltd., 143, Knightsbridge, S.W.1.)



Two fittings from Troughton and Young's new interchangeable Mondolite range.

### GAS COOKERS

General Gas Appliances Ltd. have just introduced a new cooker, which has been designed by Raymond Loewy and which is named after him. Selling at a price of sixty guineas, it is obviously a luxury job, and has a large, four-burner hotplate 23 in. by 18½ in. and an oven with internal dimensions of 17½ in. by 15½ in. and a height of 16½ in. The grilling section has a door, so it can be used as a warming cupboard, and this again is larger than the grill on most standard cookers. All taps are of the push-in safety type and the burners have automatic lighting from a small dry battery which is claimed to last for several months. The automatic lighting is controlled by a push button at the left of the row of gas taps, and burners light at once when the button is pressed providing the tap has been turned on. So far as the oven is concerned, there is an interlocking control arranged so that the burners will light only when the oven door is opened. This is done presumably in order to prevent quantities of gas collecting in the oven if ignition is slower than usual, when the battery is almost exhausted.

The interior of the oven is finished in vitreous enamel and the sides, back, top and bottom can all be lifted out as separate panels so that they should be quite easy to keep clean. Another interesting design detail is that the oven flue comes out at the back of the hotplate, and in front of the splashplate so that there should be no staining on the wall behind the cooker, and the cooker can be fixed flush against the wall. (General Gas Appliances Ltd., Corporation Road, Audenshaw, Manchester.)

### FACTS ABOUT LIFTS

Messrs. Marryat & Scott have produced an informative catalogue, with the title *What Happens When You Press the Lift Push*, explaining how all the gear, which is usually taken for granted, works. Perhaps the most interesting sections are those dealing with the delay relays which give you time to open the door and get out at your own floor even though some impatient person may have his finger on the call button on another floor. There are also some interesting notes on the levelling devices which ensure that the lift will stop accurately at each floor whether it is full or empty. Lifts are now so much a part of everybody's day-to-day life that it is somewhat surprising to find a whole page devoted to the question "do lift ropes break?" The answer is that they don't, and if they do it doesn't matter provided, of course, that the automatic stop is working. (Marryat & Scott Ltd., Wellington Works, Hounslow, Middlesex.)

### PLASTIC VENTILATOR

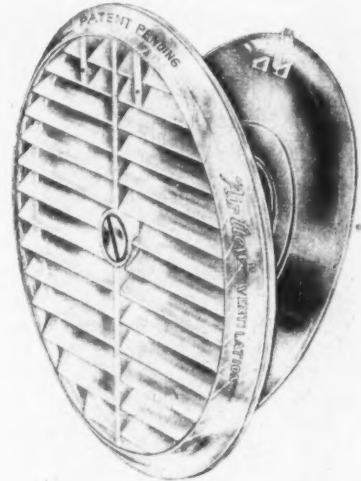
The adjacent illustration shows a small diameter ventilator made of clear plastics. Fixing is quite simple, as the ventilator clamps with a single screw into a 6½-in. diameter hole cut in the window. Retail price is £1 6s. without a back flap. (Fenton, Byrn & Co. Ltd., 21, Berrylands Road, Surbiton, Surrey.)

### LIGHTNING CONDUCTORS

W. J. Furse & Co. have just issued a new catalogue of lightning conductor terminals and fittings. When it is a question of running copper tape down the outside of a building one would assume that the fixing would be comparatively simple, but when one looks at the number of standard fixing clips in this list one realizes that quite a number of different types are needed. A useful little publication which gives one a good idea of accepted constructional details and has some useful notes on the generally accepted principles of lightning protection. (W. J. Furse & Co. Ltd., Traffic Street, Nottingham.)



The Raymond cooker. General Gas Appliances new luxury gas cooker.



A new ventilator in clear plastic.

## Announcements

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The current advance on basic pre-war list prices of the products of Messrs. Sanders, Falcon Electrical Works, Wednesbury, is 110 per cent. and 10 per cent. An un-illustrated list of prices consolidating the 110 per cent. advance has been published, and is available on request, but it has not been generally circulated. This list will be subject to 10 per cent. advance.

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

## ENQUIRY FORM

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

.....  
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 .....

*Please ask manufacturers to send further particulars to:—*

NAME .....

PROFESSION or TRADE .....

ADDRESS .....

A.J. 5451

Mr. Aiden J. Kernan, A.R.I.C.S., will be glad to receive manufacturers' information sheets, catalogues and technical brochures at 15, College Green, Dublin, Eire.

Walter Lilly and Co. Ltd., building contractors, of Westminster, have appointed Mr. Henry J. Scholey to the position of Contracts Manager. A Canadian by birth, Mr. Scholey has been engaged on many major projects throughout the United States and Canada, and he also had considerable experience of the construction industry in England during the war years. The firm have recently increased the telephone lines of head office, Abbey 4661, where there are now 10 lines, and their purchasing office, Pollards 5266, where there are now 4 lines.

Mr. R. Shirley-Smith, B.A.R.C., A.R.I.B.A., A.M.T.P.I., has resigned his appointment as Deputy Divisional Planning Officer in the Accrington office of the Lancashire County Planning Department in order to become a partner in the firm of Samson, Colthurst and Steer, Architects and Surveyors, 1, Hammett Street, Taunton, Somerset. He would be pleased to receive trade catalogues.

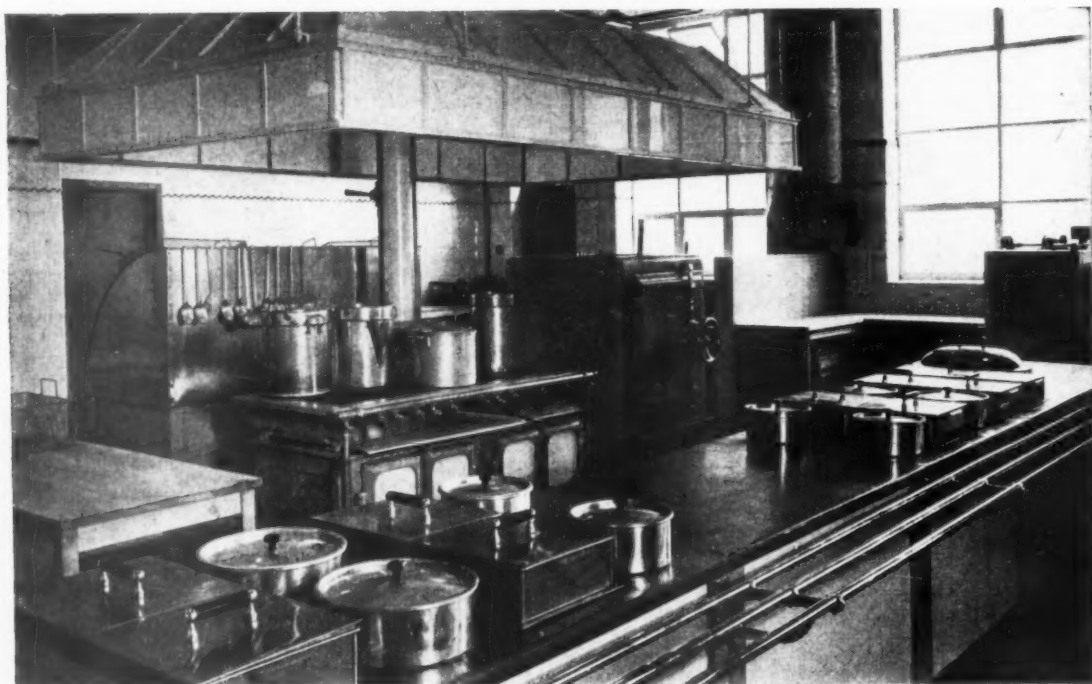
The steadily increasing use of copper sheet and tube in the building industry is reflected in the stream of enquiries for lectures and practical demonstrations by the CDA Building Engineer, Dr. E. Carr, and his assistants, H. Glover and S. G. Clements. These lectures can be illustrated with sound films or lantern slides, dependent on the equipment available in the lecture room. Principals of technical colleges and secretaries of masters' and operatives' organizations, etc., wishing to avail themselves of these facilities, which are given free of charge, should apply to the Copper Development Association, Kendals Hall, Radlett, Herts.

## Correction

On March 29 we omitted to mention that Messrs. Clarke, Nicholls & Marcel were consulting engineers for the Factory at Coleford, Gloucester.

## Buildings Illustrated

Stuart Mill House, Killick Street, Finsbury, N.1. (Pages 430-432.) Architect: Joseph Emberton, F.R.I.B.A. Consulting Electrical Engineers: A. E. Mohring & Son. Quantity Surveyors: Gardiner & Theobald. General Contractor: Y. J. Lovell & Son Ltd. Sub-contractors: Excavation, Y. J. Lovell & Son Ltd.; foundations, Caxton Floors Ltd.; dampcourses, The Ruberoid Co. Ltd.; asphalt, Pilkington Asphalte Co. Ltd.; concrete blocks, partitions, Broad & Co. Ltd.; reinforced concrete, Caxton Floors Ltd.; facing bricks, Uxbridge Flint Brick Co. Ltd.; precast concrete, Emerson & Norris Ltd. (Conalcrete); glass, Aygee Ltd.; patent flooring (Accotile), Armstrong Cork Co. Ltd.; waterproofing materials, Quickset Water Sealers Ltd.; central heating, Carrier-Ross Engineering Co. Ltd.; gas fixtures, North Thames Gas Board; boilers, Ideal Boilers & Radiators Ltd.; electric wiring, Bective Electrical Co. Ltd.; electric heating, Electroway Electric Fires; plumbing, G. N. Haden & Sons Ltd.; sanitary fittings, John Bolding & Sons Ltd.; door furniture, James Gibbons Ltd.; casements, window furniture, Crittall Manufacturing Co. Ltd.; metalwork, Clark, Hunt & Co. Ltd.; joinery, Peerless Built-in Furniture Ltd.; mantels, terrazzo fire surrounds, Hall & Co. Ltd.; lifts, Bennie Lifts Ltd.; signs, The Lettering Centre.



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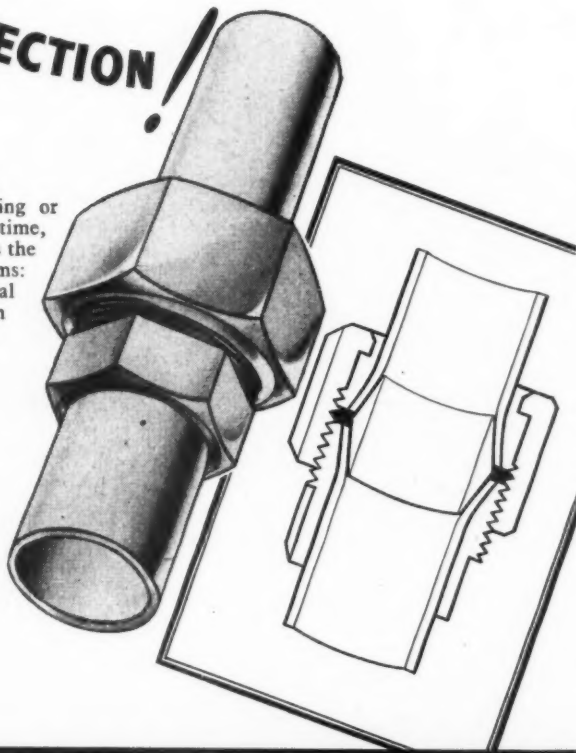
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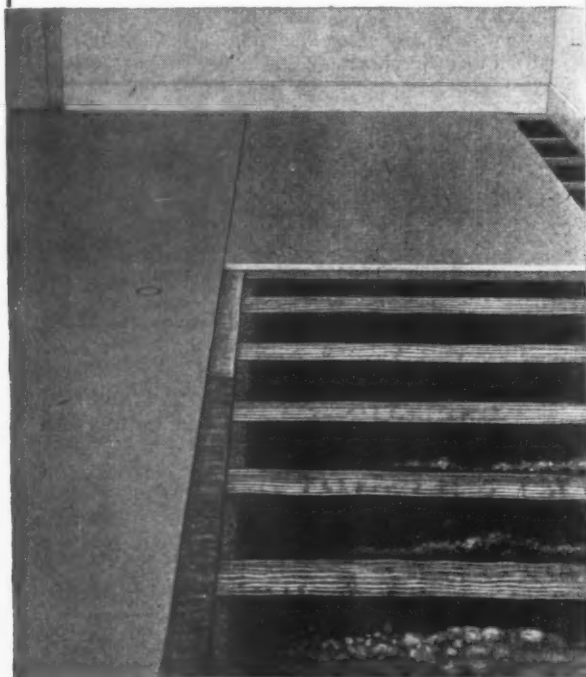
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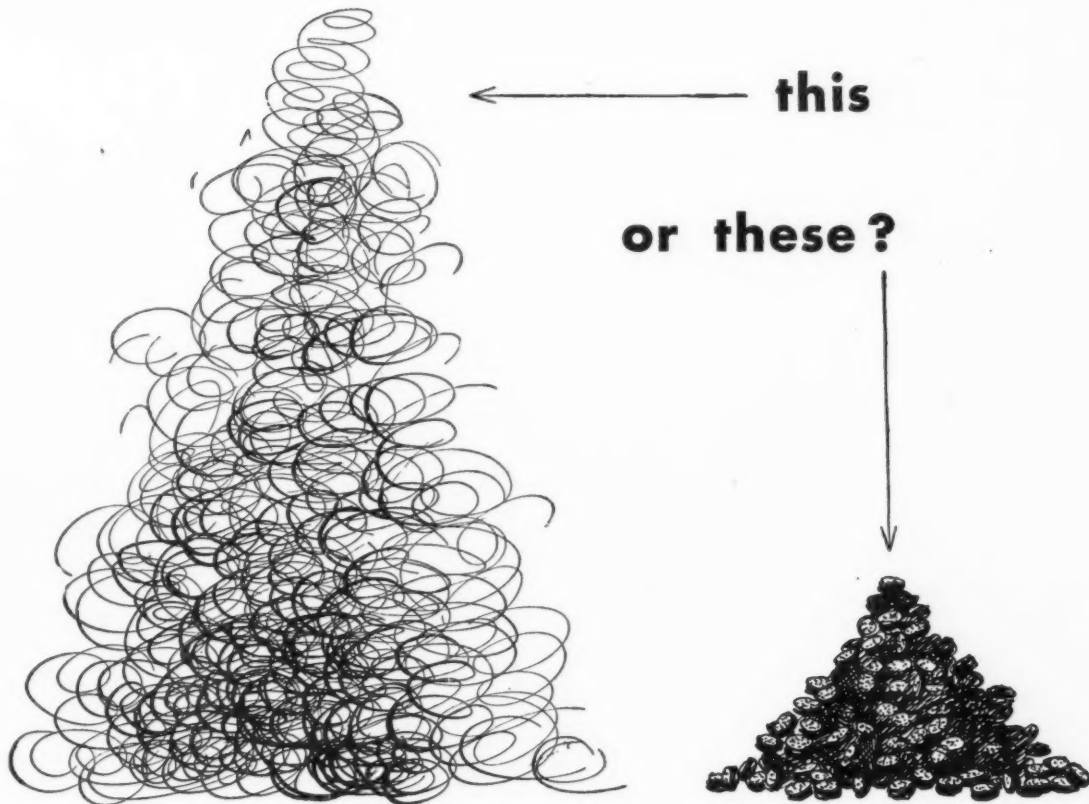
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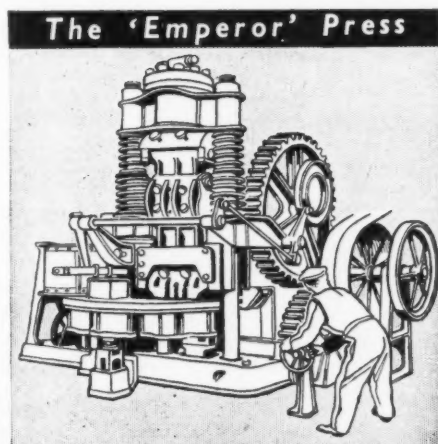


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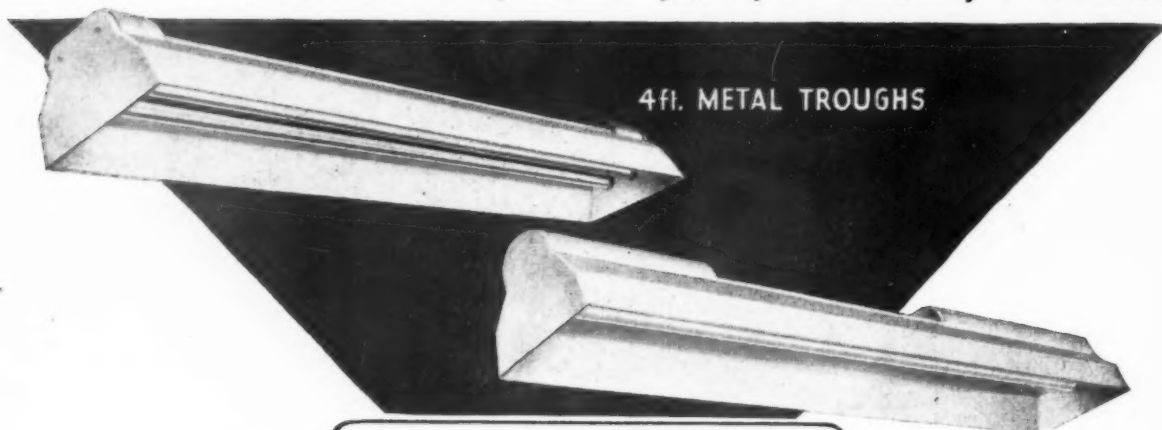
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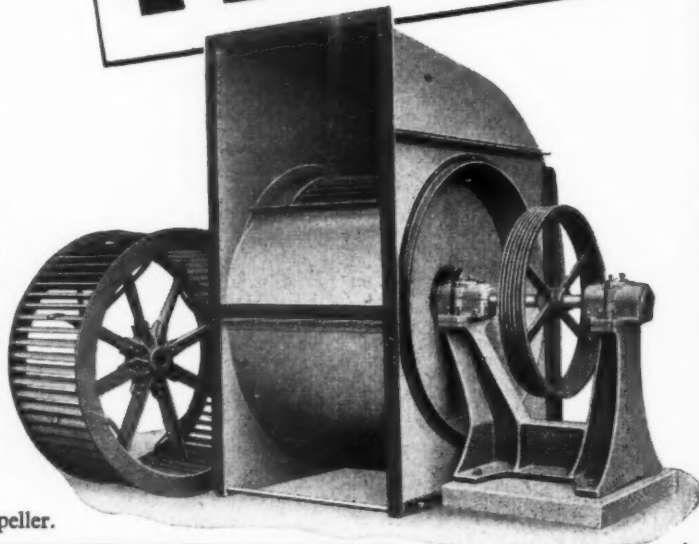
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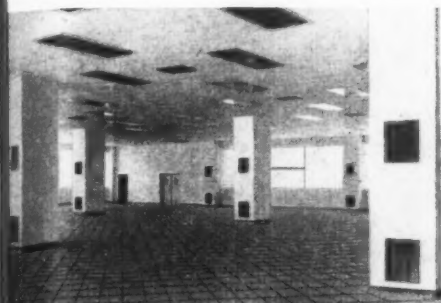
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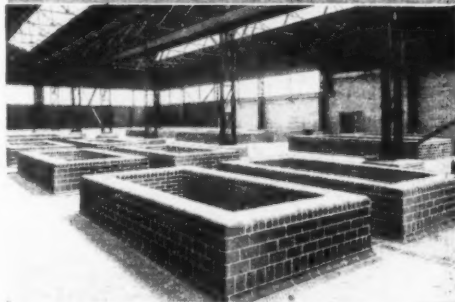
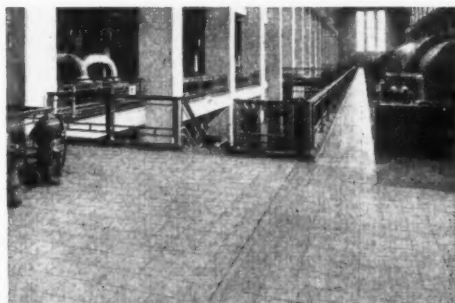
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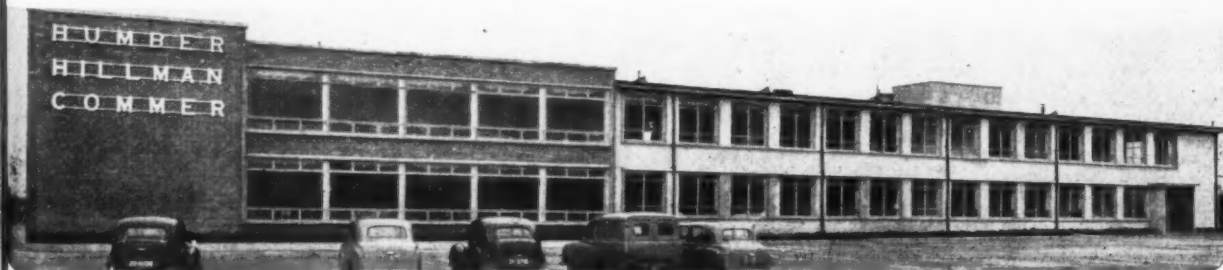
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### structural steelwork

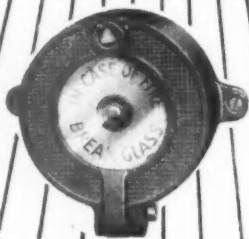
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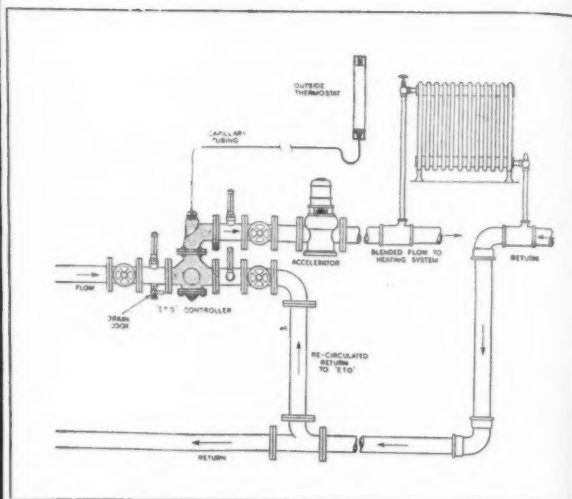
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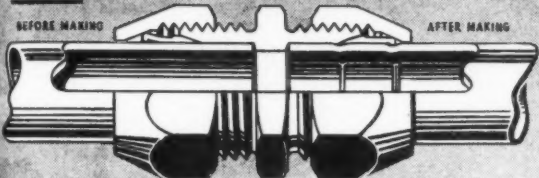
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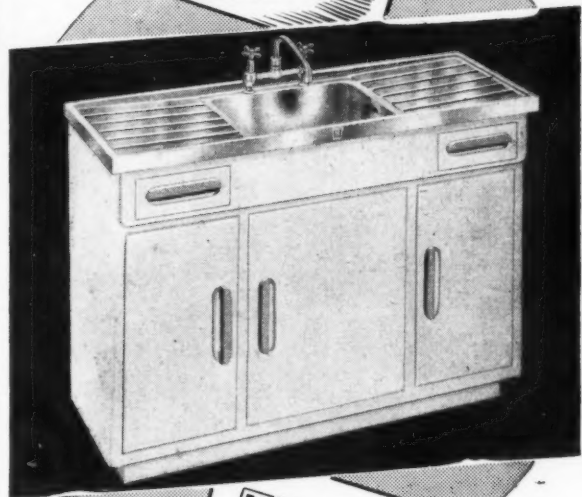
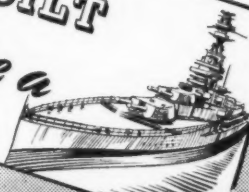
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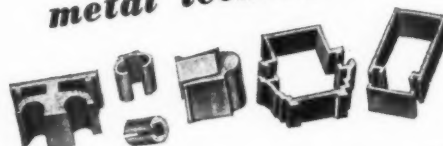
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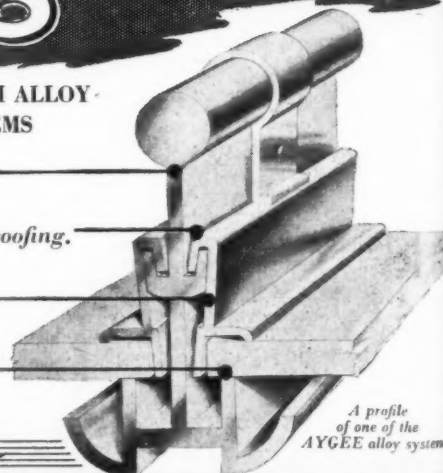
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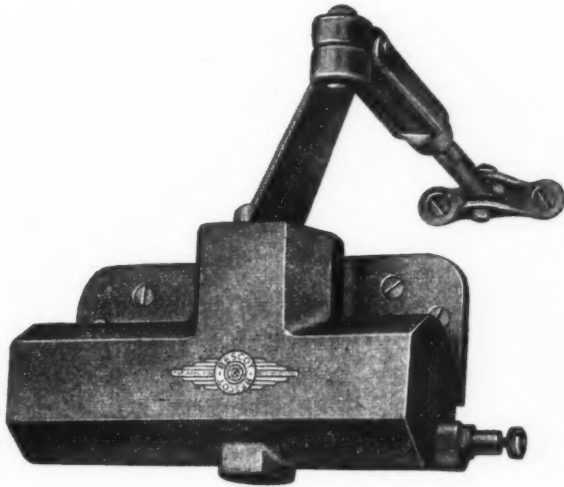
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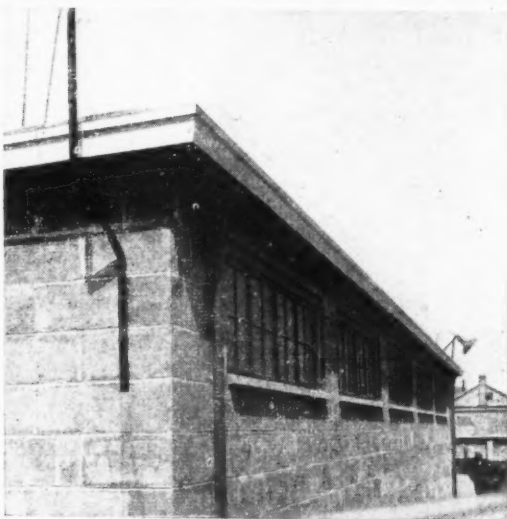
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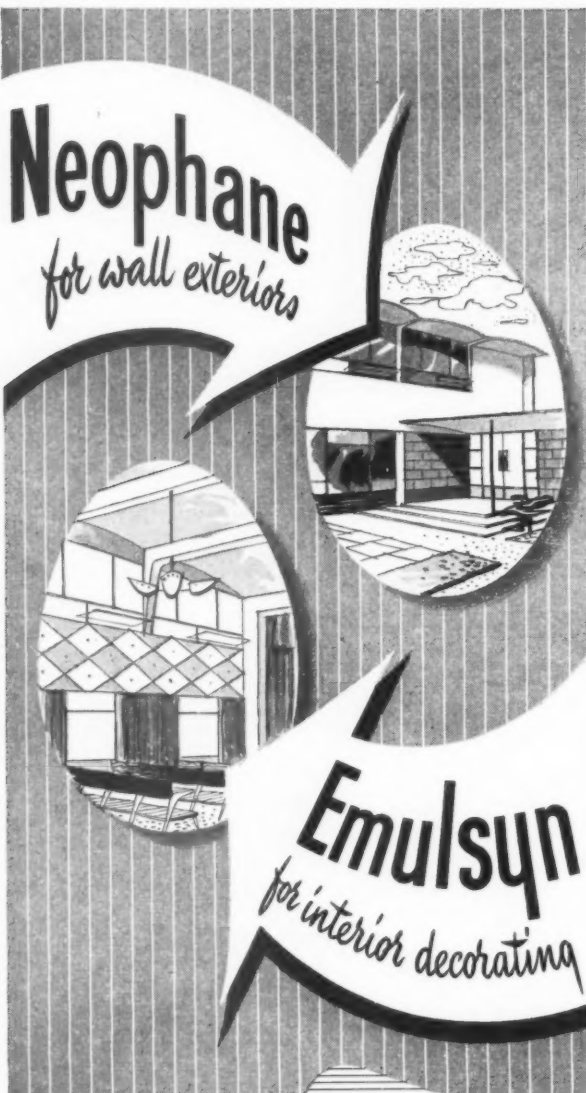
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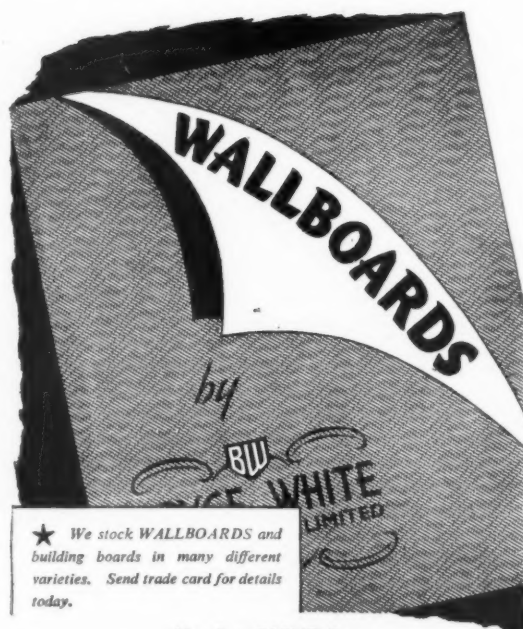
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THIS, THE FIRST OF THREE BOOKS written and published at the recommendation of the Royal Institute of British Architects, provides up-to-date information on building materials in a form most useful to architectural students and to practising architects. Mr. Handisyde deals both with traditional materials and the many new materials which have come into use during the past two decades and takes full account of the very considerable amount of recent scientific research which has been brought to bear on all materials, old and new alike. He examines thoroughly those problems of increasing concern to architects today—to what extent alternative materials will provide comfortable buildings, warm and quiet and secure against fire, as well as weatherproof and durable.

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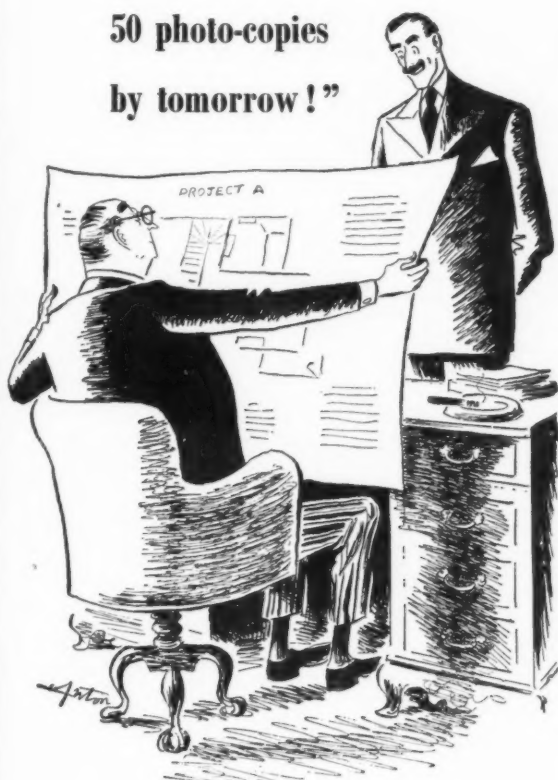
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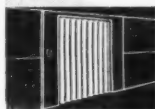
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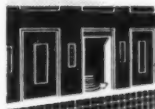
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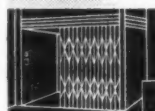
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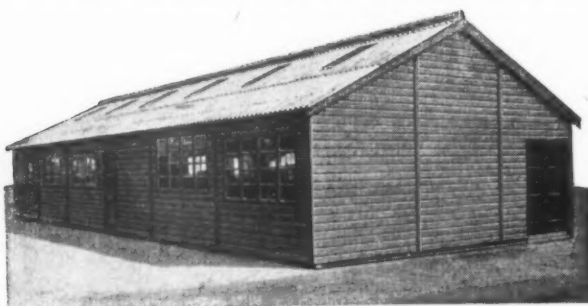
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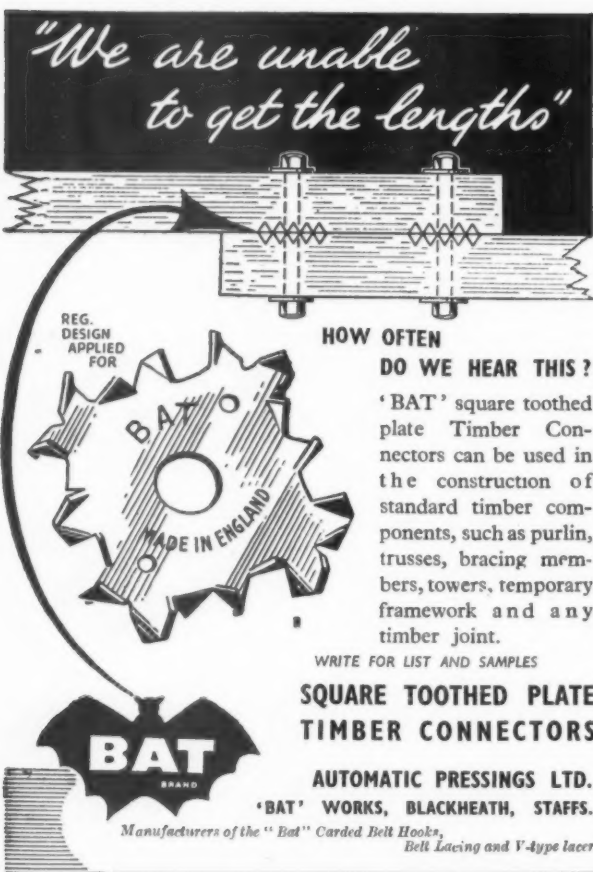
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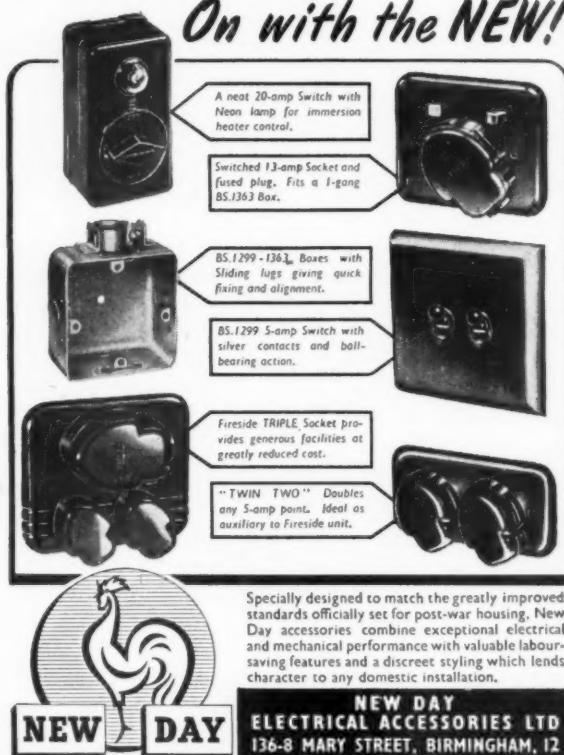
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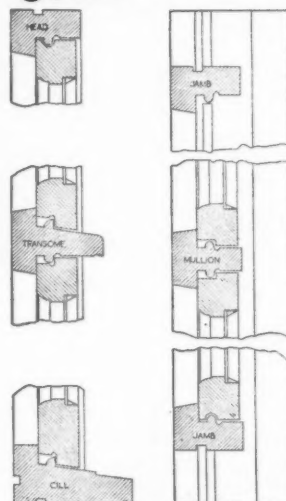
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## CLASSIFIED ADVERTISEMENTS

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

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

## Public and Official Announcements

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

**NORTH THAMES GAS BOARD.**  
Applications are invited for the following appointment in the Architects' Section of the Chief Engineer's Department of Westminster: **SENIOR ARCHITECTURAL ASSISTANT**, minimum starting salary £250 per annum.

Applicants, who must be Registered Architects and should be studying for or have passed the Final Examination of the R.I.B.A., should be capable of preparing working and detailed drawings and specifications, and supervising and controlling the work on contracts. Experience in design and planning of industrial buildings would be an advantage.

The appointment is of a permanent nature, and pension arrangements will be discussed with short list candidates.

Applications, stating age, qualifications, and particulars of previous appointments held, must be submitted to the Staff Controller, North Thames Gas Board, 30, Kensington Church Street, London, W.8, quoting reference 9757 4341

**LONDON COUNTY COUNCIL.**  
Applications are invited for positions of **ARCHITECTURAL ASSISTANT** salaries up to £280 a year in the Housing and Valuation Department. Commencing salaries will be determined according to qualifications and experience. Engagement will be subject to the Local Government Superannuation Acts, and successful candidates will be eligible for consideration for appointment to the permanent staff on the occurrence of vacancies.

Successful candidates will be required to assist in the design, layout and preparation of working drawings for housing schemes (cottages and multi-storey flats), and will be employed in the Housing Architect's Division.

Forms of application may be obtained from the Director of Housing, The County Hall, Westminster Bridge, S.E.1 (stamped addressed envelope required and quote reference A.A.1). Canvassing disqualifies. (816) 4558

**CITY OF LEICESTER.**  
**HOUSING DEPARTMENT.**  
368 FLATS, NEW PARKS ESTATE.  
**CLERK OF WORKS.**

Applications are invited for the above appointment, which will be for approximately 3 years. Salary £500 per annum.

Applicants must have had extensive experience in the erection of centrally heated Multi Storey Reinforced Concrete Framed Structures.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and to the termination by 1 month's notice on either side. Successful applicants will be required to pass a medical examination. Applications, stating age and experience and endorsed "Clerk of Works," together with copies of two recent testimonials, to be delivered to the undersigned not later than 10 a.m., 10th April, 1951.

Canvassing, either directly or indirectly, will be a disqualification.

J. S. FYFE, A.R.I.B.A.,  
Housing Architect,  
Municipal Offices, Charles Street, Leicester. 2201

**ZETLAND COUNTY COUNCIL.**  
Applications are invited for the temporary appointment of qualified **ASSISTANT** in the County Architect's Department. Salary: Grade V and Va, i.e., £520, rising to £610 per annum, of A.P.T. Division of Salary Scale, placing according to age and experience. Written applications, giving particulars of age, qualifications and experience, and stating when applicant can take up duty, must be lodged with the undersigned not later than 30th April, 1951, with one copy of not more than three recent testimonials. Canvassing in any form will be a disqualification.

JOHN N. SINCLAIR,  
County Clerk.  
County Buildings, Lerwick.  
14th March, 1951. 2172

**NEWCASTLE REGIONAL HOSPITAL BOARD.**  
**QUEEN ELIZABETH AND SHERIFF HILL HOSPITALS, GATESHEAD.**

The Board wishes to plan the comprehensive development of the Queen Elizabeth and Sheriff Hill Hospitals (the sites of which adjoin each other) from their present combined bed accommodation of about 275 to between 500 and 600 beds, together with the provision or extension of all related departments.

Architects who are interested in receiving an invitation to act for the Board in connection with this project should forward their names and give full details of their experience of hospital design and construction or of their qualifications for undertaking the work.

Responses to this advertisement should be received by the undersigned not later than the 27th April, 1951.

E. B. JENKINS,  
Secretary.  
"Dunira," Osborne Road, Jesmond,  
Newcastle-upon-Tyne, 2.  
27th March, 1951. 2261

## NATIONAL COAL BOARD—WEST MIDLANDS DIVISION.

**ARCHITECTURAL ASSISTANT, GRADE I—TWO VACANCIES.**

Applicants should be able to prepare sketch plans and working drawings from rough sketches, and have a good knowledge of construction and have passed the Intermediate Examination of the R.I.B.A.

Salary scale £410 to £550, and commencing point according to experience and qualifications. Posts are eligible for the Board's Superannuation Scheme.

Applications, giving age, qualifications, experience, etc., to be sent as soon as possible to the **DIVISIONAL ESTABLISHMENT OFFICER,**

National Coal Board,  
West Midlands Division,  
Hinley Hall, Dudley, Worcs. 2242

**LONDON ELECTRICITY BOARD.**  
**DRAUGHTSMAN.**

Applications are invited for the above position in the North-Western Sub-Area.

Candidates should be experienced in the following in relation to distribution systems up to 11 k.V.—(a) Plan and cable layout work; (b) diagrams; (c) cable surveys and wayleaves; (d) telecommunications.

The commencing salary, which is provisional, pending agreement with the appropriate negotiating organisations, will be in accordance with qualifications and experience, and will be within the range £300/£500 per annum inclusive.

Application forms obtainable from Establishments Officer, 46, New Broad Street, E.C.2, on receipt of addressed foolscap envelope, to be returned duly completed within 7 days. Please quote ref. EST/V/11c/A on envelope and all correspondence. 2241

**BOROUGH OF BLYTH.**  
**BOROUGH ENGINEER'S DEPARTMENT.**

Applications are invited for the appointment of a **JUNIOR ARCHITECTURAL ASSISTANT**, in accordance with Grade I of the A.P.T. Division of the National Scale of Salaries, i.e., £390 per annum, rising to £450 per annum.

Candidates should have passed or be studying for the Intermediate Examination of the R.I.B.A. The appointment is subject to the Local Government Superannuation Act, 1937, one month's notice on either side, and the successful candidate passing a medical examination.

Applications, endorsed "Junior Architectural Assistant," stating age, qualifications and experience, must be delivered to the undersigned, with copies of three recent testimonials, not later than 16th April, 1951. Canvassing will disqualify, and applicants must disclose relationship with any member or senior official of the Council.

EDWIN W. CARTER,  
Town Clerk.  
"Dinsdale," Marine Terrace,  
Blyth, Northumberland. 2240

**COUNTY BOROUGH OF HALIFAX.**  
**BOROUGH ENGINEER'S DEPARTMENT.**

Applications are invited for the following appointments:—

(a) **ARCHITECTURAL ASSISTANT (Schools).** Salary A.P.T. VII (£635-£710).

(b) **ARCHITECTURAL ASSISTANT (Schools).** Salary A.P.T. V (£520-£570).

If necessary housing accommodation will be made available to the successful applicant for position (a). The person appointed to position (a) will act as Chief Assistant in the Schools Section of the Department.

Candidates should possess appropriate technical qualifications, and will be required to pass a medical examination. The appointments will be subject to the conditions of service adopted by the Corporation and to the Local Government Superannuation Act, 1937.

Candidates must disclose whether to their knowledge they are related to any member of or the holder of any senior office under the Council.

Applications, stating age, qualifications, present position, salary and experience, accompanied by copies of three recent testimonials, should be appropriately endorsed and delivered to the undersigned not later than Saturday, 14th April, 1951.

RICHARD DE Z. HALL,  
Town Clerk.  
Town Hall, Halifax.  
23rd March, 1951. 2239

**GOVERNMENT OF NORTHERN IRELAND.**  
**MINISTRY OF FINANCE.**

**ASSISTANT ARCHITECT (SCHOOLS ADVISORY).**

Applications are invited for an unestablished appointment as **ASSISTANT ARCHITECT** in the Schools Advisory Section of the Directorate of Works, Ministry of Finance.

The duties of the successful candidate will be, *inter alia*, to assist in the examination and reporting on plans for all types of school buildings and community centres submitted to the Ministry of Education for approval.

Remuneration will be according to qualifications and experience within the salary range £500-£750 per annum.

Qualifications: Candidates must be registered Architects by examination and have had experience in schools design, preferably in the Architect's Department of an Education Authority.

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

Applications, giving date of birth and full details of qualifications and experience, should be sent to the Director of Establishments, Ministry of Finance, Stormont, so as to reach him not later than the 10th April, 1951. 2221

## BOROUGH OF WALLSEND.

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

(a) **ARCHITECTURAL ASSISTANT.** Salary A.P.T. IV (£480-£525). Applicants should hold a recognised architectural qualification and have had considerable experience in design and layout of Council Houses and Public Buildings.

(b) **ENGINEERING ASSISTANT.** Salary A.P.T. III (£450-£495). Applicants should have passed the Intermediate Examination of the Institute of Municipal and County Engineers or the Royal Institute of Chartered Surveyors, and have had experience in Municipal engineering and surveying, including roads, sewers, housing layouts, etc.

The appointments will be subject to the terms of the National Joint Council's Conditions of Service and to the Local Government Superannuation Act, 1937. Canvassing will be deemed a disqualification, and applicants must disclose whether they are related to any member or senior officer of the Council.

Applications in envelopes suitably endorsed, stating age, qualifications and experience, together with copies of not more than three testimonials, to be received by the undersigned not later than Saturday, 14th April, 1951.

CHAS. E. BRADBURY,  
Town Clerk.  
Town Hall, Wallsend. 2252

**CIVIL SERVICE.**  
**QUANTITY SURVEYORS AND ASSISTANT QUANTITY SURVEYORS** are required through out the United Kingdom by the Admiralty, War Department, Air Ministry, The Ministry of Works, The War Damage Commission, and occasionally overseas by the Admiralty, Air Ministry and War Department. Although these are not established posts, some of them have long term possibilities, and competitions are held periodically to fill established vacancies.

Salaries for these professional posts in London for Officers over 26 years of age range from £500 to £750 per annum in lower grades and from £750-£1,000 per annum in the higher grades. They are slightly lower in the provinces. Salary on entry will be in accordance with age, qualifications and experience.

Vacancies also exist for **QUANTITY SURVEYING ASSISTANTS** and others having some experience in a quantity surveyor's office, at salaries ranging from £300 per annum upwards.

Applicants should write, quoting ref. J.Q.S., to Room 368, Ministry of Labour and National Service, Technical and Scientific Register, York House, Kingsway, London, W.C.2. 2255

**ROYAL BOROUGH OF KINGSTON-UPON-THAMES.**

**APPOINTMENT OF ARCHITECTURAL TRAINEE.**

Applications are invited for above appointment in Borough Surveyor's Department.

Applicants must have matriculated and be prepared to undertake to complete a period of three years in Architects' section, which training, together with private study, should enable them to qualify for the appropriate R.I.B.A. examinations.

Salary: General Division, £210 at 20 years of age, £240 at 21 years of age, rising by £15 per annum.

Appointment is superannuable, and successful candidate will be required to pass medical examination. Appointment subject to one month's notice.

Applications, stating age, details of scholastic training, any previous employment or study, whether period of Military training has been completed, and names of two persons to whom reference may be made, to be made to the undersigned, "Architectural Trainee," by 21st April, 1951.

A. W. FORSDIKE,  
Town Clerk.  
Guildhall, Kingston-upon-Thames.  
22nd March, 1951. 2254

**COUNTY BOROUGH OF SOUTHAMPTON.**  
**BOROUGH ARCHITECT'S DEPARTMENT.**

Applications are invited for the following positions:—

(a) **ARCHITECTURAL ASSISTANT.** Grade II (£420-£465).

(b) **SENIOR QUANTITY SURVEYOR.** Grade VII (£635-£710).

(c) **ASSISTANT QUANTITY SURVEYOR.** Grade V (£520-£570).

(d) **SENIOR ASSISTANT PLANNING OFFICER.** Grade VI (£595-£660).

(e) **PLANNING ASSISTANT.** Grade I (£390-£435).

(f) **JUNIOR PLANNING ASSISTANT (Temporary).** General Division (£135-£385).

Applications, on forms obtainable from my office, should be returned not later than 14th April, 1951. 2222

**CITY OF COVENTRY ARCHITECTURAL AND PLANNING DEPARTMENT.**

Applications are invited from persons with suitable training and experience for the following vacancies on the establishment of the above Department:—

(a) **ONE QUANTITY SURVEYING ASSISTANT.** Grade A.P.T. III (£450-£495 p.a.).

(b) **ONE QUANTITY SURVEYING ASSISTANT.** Grade A.P.T. II (£420-£465 p.a.).

Application forms may be obtained from the undersigned, and should be returned by Thursday, 19th April, 1951.

DONALD GIBSON,  
City Architect and Planning Officer.  
1a, Warwick Row, Coventry. 2223



**LONDON COUNTY COUNCIL.  
ARCHITECTS' DEPARTMENT.**

Applications are invited for positions of **ARCHITECT**, Grade III (£550-£700), and **TECHNICAL ASSISTANT** (up to £580) for work on new housing, schools, and other public buildings. The positions are superannuable. Candidates for Grade III positions should possess professional qualifications. Application forms from the Architect (A.E./P.S.), The County Hall, West-approached footscap envelope. Canvassing dis-  
minister Bridge, S.E.1, enclosing stamped  
qualifies. (384) 3914

**COUNTY COUNCIL OF ESSEX.  
COUNTY ARCHITECT'S DEPARTMENT.**

Applications are invited for the following appointment on the Established Staff of the County Architect's Department:—  
**SECTIONAL ASSISTANT ARCHITECT**, Grade IX, A.P.T.D., in charge of a group of other assistant architects. Salary at a rate of not exceeding £900 a year. Candidates should be Members of the Royal Institute of British Architects, and should have had experience in the planning, designing and construction of modern public buildings.

In fixing the commencing salary regard will be had to the experience and qualifications of the successful candidate.

Canvassing, either directly or indirectly, is forbidden.

Applications must be made on a form obtainable from the County Architect, Mr. H. Conolly, F.R.I.B.A., at the address stated below, and when completed, the form, accompanied by copies of not more than three recent testimonials, should be returned to reach him not later than 18th April, 1951.

**JOHN E. LIGHTBURN,**

*Clerk of the County Council.*

County Hall, Chelmsford, Essex. 2253

**GLENROTHES DEVELOPMENT  
CORPORATION.**

Applications are invited from suitably qualified persons, under 45 years of age, for the post of **DEPUTY CHIEF ARCHITECT AND PLANNING OFFICER**. Salary £1,000-£1,150, with placing according to experience.

Applicants should be Corporate Members of the R.I.B.A. and T.P.I., and should have had considerable experience in the design of large layouts and the design and construction of all types of buildings, together with a sound knowledge of contractual procedure, good administrative experience, and the ability to organise and supervise technical staff.

The post is superannuable under the Local Government (Scotland) Act, 1937, and the successful candidate will be required to pass a medical examination.

A rented house will be available at a very early date.

Canvassing, directly or indirectly, of members of the Corporation will constitute an absolute disqualification.

Applications, giving full particulars of the candidate's age, qualifications and experience, together with copies of not more than three recent testimonials, must reach the Secretary, Glenrothes Development Corporation, Woodside, Glenrothes, by Markinch, Fife, not later than 13th April, 1951. 2234

**WARWICKSHIRE COUNTY COUNCIL.  
COUNTY PLANNING DEPARTMENT.**

Applications are invited for the following appointment:—

**SENIOR PLANNING ASSISTANT.** A.P.T., Grade VI (£595-£660 per annum).

Applicants must be Corporate Members of the Town Planning Institute, with good experience in Development Plan work. The successful applicant will be engaged on the preparation of the County Development Plan and will be stationed at Warwick.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination. He will also be required to provide and maintain a motor car, for which travelling and subsistence allowances will be paid in accordance with the Council's scale.

Applications, giving age and full details of experience, together with the names of two persons to whom reference may be made, should be forwarded to J. J. Brooks, M.I.Mun.E., M.T.P.I., County Planning Officer, Northgate, Warwick, not later than Saturday, 21st April, 1951.

Canvassing, directly or indirectly, will be a disqualification.

**L. EDGAR STEPHENS,**

*Clerk of the Council.*

Shire Hall, Warwick. 2233

**COUNTY BOROUGH OF CROYDON.  
SCHOOL ARCHITECT'S SECTION.**

Applications are invited from suitably qualified persons for this appointment.

Salary Grade, A.P.T., Va, £550-£20-£610 per annum, plus London weighting of £30 per annum at age 25 and over.

Living accommodation is not offered.

Application forms, available from the Chief Education Officer, Education Office, Katharine Street, Croydon, on receipt of stamped addressed envelope, must be returned to him within 14 days of the appearance of this advertisement.

Canvassing will disqualify.

**E. TABERNER,**

*Town Clerk.*

19th March, 1951. 2215

**COUNTY BOROUGH OF HALIFAX.  
BOROUGH ENGINEER'S DEPARTMENT.  
AMENDED ADVERTISEMENT.**

Applications are invited for the following appointments:—

**CHIEF ARCHITECTURAL ASSISTANT.** Salary A.P.T., VII (£535-£710).

**QUANTITY SURVEYOR.** Salary A.P.T., VII (£535-£710).

**ARCHITECTURAL ASSISTANT (General).** Salary A.P.T., V (£520-£570).

Housing accommodation for the successful applicants will be provided if necessary.

Candidates should possess appropriate technical qualifications, and will be required to pass a medical examination. The appointments will be subject to the conditions of service adopted by the Corporation and to the Local Government Superannuation Act, 1937.

Candidates must disclose whether to their knowledge they are related to any member of or the holder of any senior office under the Council.

Applications, stating age, qualifications, present position, salary and experience, accompanied by copies of three recent testimonials, should be appropriately endorsed and delivered to the undersigned not later than Saturday, 14th April, 1951.

**RICHARD DE Z. HALL,**

*Town Clerk.*

Town Hall, Halifax. 2214

**BOROUGH OF CROSBY.  
BOROUGH ENGINEER AND SURVEYOR'S  
DEPARTMENT.  
ARCHITECTURAL ASSISTANT.**

Applications are invited from persons holding an appropriate qualification for the above appointment. Salary in accordance with the National Scale of Salaries, viz., A.P.T., IV (£480 to £525 per annum).

Applications, on forms obtained from the undersigned, to be delivered not later than noon on Monday, the 23rd April, 1951.

**HAROLD O. ROBERTS,**

*Town Clerk.*

Town Hall, Waterloo, Liverpool, 22. 2219

**LONDON ELECTRICITY BOARD.**

Applications are invited for the following appointments in the Architect's Section of the Chief Engineer's Department in Central London:—

(a) **ARCHITECTURAL ASSISTANTS.** Commencing salary will be from £500 per annum, dependent upon qualifications and experience.

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 Architect's office.

(b) **DRAUGHTSMEN.** Commencing salary will be from £350 per annum, dependent upon ability and experience.

Applicants should be neat draughtsmen, and preferably have had several years' experience in an Architect's office.

Salaries for the above posts are provisional, pending grading of the posts under the National Agreement of the appropriate negotiating body.

Application forms obtainable from Establishments Officer, 46, New Broad Street, E.C.2, on receipt of an addressed footscap envelope, to be returned duly completed within 7 days. Please quote ref. EST/V/1148/A. on envelope and all correspondence. 2220

**METROPOLITAN BOROUGH OF HOLBORN.  
BOROUGH ENGINEER AND SURVEYOR'S  
DEPARTMENT.**

Applications are invited for the appointment of a **GENERAL TECHNICAL ASSISTANT** on the permanent staff, at a salary of £450-£525 per annum, plus London weighting (£10, £20 or £30, according to age).

Candidates should be expeditious draughtsmen and capable of carrying out surveys and levelling.

Candidates with suitable experience may be offered a starting salary above the minimum.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and the National Joint Council's Scheme of Conditions of Service. The candidate selected will be required to pass a medical examination.

Further details of duties may be obtained by reference to the Borough Engineer and Surveyor. Applications, together with full particulars and the names of three referees, to be sent to the Town Clerk, Town Hall, 197, High Holborn, W.C.1, by the 30th April, 1951. 2225

**CITY AND COUNTY OF BRISTOL.  
CITY ARCHITECT'S DEPARTMENT.**

Applications are invited for the appointment of a **SENIOR ASSISTANT ARCHITECT**, Grade VII (£535-£710 per annum), on the permanent staff.

Applicants must be Associate Members of the Royal Institute of British Architects or hold equivalent qualifications, and have good general experience in design and construction, particularly in large Educational projects.

Appointment is subject to the provisions of Local Government Superannuation Acts, 1937 and 1939, and successful applicant required to pass a medical examination. Appointment terminable by one month's notice in writing on either side.

Housing accommodation provided, if necessary, at an economic rent.

Applications, giving full details, including age, training, qualifications, experience, present position and salary, and the names of two referees, must be delivered to the undersigned by Wednesday, 11th April, 1951.

**J. NELSON MEREDITH, F.R.I.B.A.**

*City Architect.*

Eagle House, Colston Avenue, Bristol, 1. 2226

**ABERDEEN HARBOUR COMMISSIONERS.  
HARBOUR ENGINEER'S DEPARTMENT.**

Applications are invited for the post of **ARCHITECTURAL ASSISTANT** in the Harbour Engineer's Office, Aberdeen. Applicants should be under 40 years of age, with experience in structural steelwork reinforced concrete and general building design and construction. Preference will be given to candidates with some experience of property procedure and the preparation of reports. The salary £395-£570, according to qualifications, rising by annual increments of £15. The appointment is subject to the Commissioners' Superannuation Scheme, and the candidate selected will require to pass a medical examination before appointment.

Applications, stating age and qualifications, with full details of experience, together with copies of recent testimonials, should be lodged with the Harbour Engineer, 15, Regent Quay, Aberdeen, not later than 30th April, 1951. Harbour Engineer's Office, Aberdeen. 2267

**LEEDS REGIONAL HOSPITAL BOARD**

invites applications from members of the Institute of Clerks of Works of Great Britain (Inc.) for the appointment of a **TEMPORARY CLERK OF WORKS** for the erection of a 116-bed Ward Block at the Sutton Branch of Hull Royal Infirmary, Sutton, Hull.

Applicants must have had experience in the erection of large steel-framed buildings and in hospital construction and fittings. The work is estimated to cost £200,000, and is expected to start in May, 1951. The salary for the post will be £610 per annum.

The appointment will be subject to the provisions of the National Health Service (Superannuation) Regulations, 1950, to the passing of a medical examination where the candidate is not already in the Health Service, and will be terminable by one calendar month's notice on either side.

Applications, stating age, qualifications, experience and details of present employment, together with the names of two referees, to be forwarded to the Secretary to the Board, 29/31, Eastgate, Leeds, 2, by not later than 21st April, 1951. Canvassing in any form, either directly or indirectly, will disqualify. 2262

**PERTH AND KINROSS JOINT COUNTY  
COUNCIL.**

Applications are invited for the appointment in the County Architect's Department for an **ARCHITECTURAL ASSISTANT**. Salary Scale A.P.T., Grade II-III (£420 to £495 per annum), with placing according to qualifications and experience.

Applicants for the post must have experience in an Architect's office, preferably that of a Local Authority, and be capable of undertaking surveys and preparing working drawings under supervision.

The appointment is subject to the provisions of the Local Government Superannuation (Scotland) Act, 1937.

Applications, giving particulars of age, training, experience and qualifications, together with copies of not more than three recent testimonials, should be lodged with the County Clerk, County Offices, York Place, Perth, not later than 7th April, 1951. 2216

**MINISTRY OF WORKS.**

There are vacancies in the Chief Architect's Division for **ARCHITECTURAL ASSISTANTS** and **LEADING ARCHITECTURAL ASSISTANTS**, with recognised training and fair experience. Successful candidates will be employed in London and elsewhere on a wide variety of Public Buildings, including Atomic Energy and other Research Establishments, Telephone Exchanges, and Housing.

Salary: Architectural Assistants, £300-£525 per annum; Leading Architectural Assistants, £500-£625 per annum. Starting pay will be assessed according to age, qualifications and experience. These rates are for London; a small deduction is made in the Provinces.

Although these are not established posts, some of them have long term possibilities, and competitors are held periodically to fill established vacancies.

Apply in writing, stating age, nationality, full details of experience, and locality preferred, to Chief Architect, Ministry of Works, Abell House, John Islip Street, London, S.W.1, quoting reference WG10/BC. 2217

**SUDAN GOVERNMENT.**

The Public Works Department requires an **ARCHITECT**, aged 28 to 36, for service in the Sudan.

Sound experience is required in working up detailed designs from sketches and in the preparation of working drawings for buildings of a public and domestic character. Candidates should be Associates of the R.I.B.A. or hold other recognised professional qualifications in Architecture.

Appointment will be on probation for a Short Term Contract of two years, at a salary ranging from £E.771 to £E.1,438 per annum.

Cost-of-living allowance varying between £E.142 and £E.352 per annum, according to the number of dependents, is at present payable, and, subject to certain limitations, an outfit allowance of £E.60 is payable on appointment. There is at present no income tax in the Sudan. Free passage on appointment. Further particulars and application form may be obtained on application to: Sudan Agent in London, Wellington House, Buckingham Gate, London, S.W.1. Please mark envelopes "Architect 4/140." 2208



# GLENROTHES DEVELOPMENT CORPORATION.

Applications are invited from suitably qualified persons, under 45 years of age, for the following appointments:—

(a) TWO ARCHITECTS. Salary scale £570-£780.

(b) THREE ASSISTANT ARCHITECTS. Salary scale £450-£570.

(c) ONE JUNIOR ENGINEERING ASSISTANT. Salary scale £400-£520.

With placing in each case according to experience.

Applicants for post (a) above should be Corporate Members of the R.I.B.A. and should have had experience of the design and construction of large housing layouts, etc.

Applicants for post (b) should have general architectural experience and should be able to prepare working details from preliminary sketches.

Applicants for post (c) should have experience of carrying out surveys of large areas, including levelling and the preparation of contoured drawings. Experience in drainage would be an advantage.

The Corporation will give every assistance in securing housing accommodation.

The posts will be superannuable under the Local Government (Scotland) Act, 1937, and the successful candidates will be required to pass a medical examination. No canvassing.

Applications, with details of age, qualifications and experience, together with copies of three recent testimonials, must reach the Secretary, Glenrothes Development Corporation, Woodside, near Marinch, Fife, not later than Tuesday, 17th April, 1951.

## NORTHERN IRELAND HOSPITALS AUTHORITY.

Applications are invited for the post of ARCHITECTURAL ASSISTANT on the Headquarters Staff of the Authority.

Applicants must be Associate Members of the Royal Institute of British Architects.

Duties will involve hospital work of all kinds, including the planning of new projects.

Candidates selected for interview will be expected to produce drawings and/or photographs of their work illustrating their general ability in both creative and constructional work.

The salary for the post will be on the scale £600-£750 per annum, and will be subject to deduction for superannuation in accordance with regulations made under the Health Services Act (Northern Ireland), 1948.

It is the Authority's policy to give preference to candidates who served in His Majesty's Forces in wartime.

Canvassing, either directly or indirectly, will be an absolute disqualification. Any approach to a member of the Authority or a member of a Committee of the Authority, in writing or otherwise, by or at the request of any applicant, will be regarded as canvassing.

Applications, stating age, experience and qualifications, and giving names and addresses of three persons to whom the Authority may apply for a confidential report, should be sent in an envelope marked on the top left-hand corner "Architectural Assistant," so as to reach the Secretary, Northern Ireland Hospitals Authority, 58, Howard Street, Belfast, not later than 5 p.m. on 30th April, 1951.

## STAFFORDSHIRE COUNTY COUNCIL. COUNTY PLANNING DEPARTMENT.

Applications are invited for the following appointments in the County Planning Department:—(a) SENIOR ASSISTANT, Design and Development Section, A.P.T., Grades VII-VIII: salary from £635 to £760 p.a.; (b) SENIOR ASSISTANT, Estate and Survey Section, A.P.T., Grade VI: salary from £595 to £660 p.a.

The Department is concerned with implementing parts of the County Development Plan. Candidates for both appointments should preferably have experience in Estate Development Work, Urban Redevelopment Schemes, and the prepara-

tion and carrying into effect of housing estate layouts.

Applicants for (a) should be Associates of the R.I.B.A., and for (b) Corporate Members of the Royal Institution of Chartered Surveyors. In both cases Corporate Membership of the Town Planning Institute would be an advantage. Experience in valuation and/or estate management would be an additional recommendation for appointment (b).

Applicants should give details of age, education and training, qualifications, present and previous appointments and experience, and should include copies of two recent testimonials and the names of two other persons to whom reference can be made. Applications should be sent to D. W. Riley, County Planning Officer, 41a, Eastgate Street, Stafford, not later than the 21st April, 1951.

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

## NORTHERN IRELAND HOUSING TRUST.

Applications are invited for the following posts:—

ASSISTANT ARCHITECTS: (1) £650-£825-£925; (2) £575-£625-£650.

Candidates must be Corporate Members of the R.I.B.A., and should have experience of housing projects.

The point of entry under the scales will be determined by qualifications and experience.

The person appointed will be required to participate in a contributory Superannuation Scheme which allows for reciprocal transfer of benefits in Local Government Superannuation Schemes in suitable cases.

Preference will be given to ex-Service candidates.

Assistance in obtaining housing accommodation may be given to successful candidates.

Forms of application, which should be returned not later than 19th May, 1951, may be obtained from the General Manager, Northern Ireland Housing Trust, 12, Hope Street, Belfast.

SCOTTISH SPECIAL HOUSING ASSOCIATION, which is a non-profit making Company, Limited, by guarantee, and financed by H.M. Treasury, invite applications for the appointment of ARCHITECT, Grade II, £450-£525-£575, with planning for age and experience. The post is superannuable under the Local Government Superannuation (Scotland) Act, 1937. Forms of application with full particulars can be obtained from the Secretary, 15/21, Palmerston Place, Edinburgh, 12.

## Tenders for Contracts

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

PROPOSED OFFICES, WORKSHOPS AND STORES, CATHERINE STREET, WIDNES.

Tenders are invited for the erection of a new Office Block, Workshops and Stores for the Water Department.

The work generally comprises a steel-framed structure throughout with brick infilling, the total floor area being approximately 4,540 ft. super. Copies of the drawings, B.I.s of Quantities and form of Tender may be obtained from the Borough Architect, Brendan House, Widnes Road, Widnes, on the deposit of £1 ls., which will be refunded on the receipt of a bona fide tender not subsequently withdrawn.

The Conditions of Contract may be inspected on application to the Borough Architect.

Tenders on the form provided must be delivered to the undersigned not later than 10 a.m. on Wednesday 2nd May, 1951. The lowest or any Tender will not necessarily be accepted.

FRANK HOWARTH,  
Town Clerk.

Town Hall, Widnes.  
30th March, 1951.

## NATIONAL UNION OF MINEWORKERS (DURHAM AREA). MINERS' HALL, RED HILL, DURHAM CITY. COMPLETE INTERNAL AND EXTERNAL DECORATION. TO PAINTERS.

Tenders are invited for the work required to be done in connection with the above. The specification and Schedule can be obtained on application to the undersigned.

No tender will be considered unless enclosed and sealed in the endorsed envelope supplied, addressed to the General Secretary, National Union of Mineworkers (Durham Area), Red Hill, Durham City, and delivered not later than Monday, 16th April, 1951.

No pledge is given to accept the lowest or any tender.

SAMUEL WATSON,  
General Secretary.

Miners' Hall, Red Hill, Durham.

## Architectural Appointments Vacant

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

SENIOR and JUNIOR ARCHITECTURAL ASSISTANTS required (permanent position) for varied and interesting work. Write, giving particulars of experience and salary required, to Ruddle & Wilkinson, F.R.I.B.A., Long Causeway Chambers, Peterborough.

ARCHITECTURAL ASSISTANTS urgently required in both London and Portsmouth offices of London architect. Applicants should be of at least intermediate standard. Interesting work and good salary for right man. Send applications in duplicate, giving age, qualifications and experience to Box 2179.

ARCHITECTURAL ASSISTANT, above Inter. standard, required N.E. London. Ind. and Comm. Projects. Box 2177.

ARCHITECTURAL ASSISTANT, of Inter. standard, required for work on designing and detailing industrial and administrative buildings. Write, stating experience and salary required, to Box 2198.

THE CO-OPERATIVE WHOLESALE SOCIETY, LIMITED, invite applications for an appointment as SENIOR ARCHITECTURAL ASSISTANT, on the staff of the Manchester Architect's Department, at a commencing salary of £550-£650 per annum, according to experience and ability.

Applicants, who must have had practical office experience, are required to have a sound knowledge of building construction and be able to produce working drawings and details from sketch plans. Experience in the design and planning of modern industrial and commercial buildings will be considered an advantage.

The appointment is permanent, with prospects of promotion. The successful candidate will be required to undergo a medical examination for entry into a compulsory superannuation scheme.

Applications, stating age, experience, and qualifications, to be addressed to the Chief Architect, Co-operative Wholesale Society, Ltd., 1, Ballon Street, Manchester.

ARCHITECTS' CO-OPERATIVE PARTNERSHIP require an ASSISTANT, with experience of administration. Salary according to experience. Apply in writing to 34, Gordon Square, London, W.C.1.

ARCHITECTURAL ASSISTANT, Intermediate or higher standard, required for industrial projects. R.I.B.A. scale of salaries. Application invited to Box 2228.

ARCHITECTURAL ASSISTANT required, with about 5 years' office experience. Practice is of varied nature, offering ample scope for suitable man. Write, stating full particulars of experience, how soon free and salary required. Welch & Lander, F.R.I.B.A., 38, Gloucester Place, Portman Square, W.1.

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**ARCHITECTURAL ASSISTANT** required, about R.I.B.A. Intermediate standard. Apply in writing to B. J. Beswick & Son, 19, Victoria Road, Swindon, Wilts., stating experience and salary required. 2256

**SENIOR ASSISTANT** required in Hertfordshire practice. General, domestic and Public House work. Living accommodation available. Apply, giving fullest particulars, to Box 2237.

**ARCHITECTURAL ASSISTANTS**, with good experience, required for light industrial work. Applicants should be at least Intermediate standard. Salaries will be in accordance with the R.I.B.A. scale. Pension Scheme available. Apply in writing to Fairbrother, Hall & Hedges, Chartered Architects, 63, Castle Street, Edinburgh, 2. Tel. 25542. 2251

**ARCHITECT'S ASSISTANT** required for interesting County Practice. Excellent draughtsmanship essential, fully capable of preparing working drawings. Good salary and prospects. Fredk. Storer, A.R.I.B.A., 24, Foregate Street, Worcester. 2247

**ARCHITECTURAL ASSISTANT** wanted for well-known firm of Chartered Surveyors in the Home Counties, experienced in the preparation, without supervision, of specifications and plans for domestic alterations and conversions, supervision of building repairs, and preparation of plans of small areas of land. Good prospects of advancement. Write, giving age, qualifications, and brief details of experience, also salary required. Box 2248.

**ARCHITECT**, London, requires at once a **CHIEF ASSISTANT**, able to take charge of office and outside work. Partnership possible later. Write, stating age, qualifications, experience and salary, Box 1001, c/o 7, Coptic Street, W.C.1. 2249

**SCHERRER & HICKS**, 19, Cavendish Square, W.1, require **ARCHITECTURAL ASSISTANT**, second or third year evening standard. Salary by arrangement. Telephone Museum 1105. 2245

**ARCHITECT'S SENIOR ASSISTANT** required for busy varied practice. Sound knowledge of construction and working drawings essential. Some managerial experience and knowledge of multi-storey flats advantageous. Full particulars, age, and salary required to: Cessford Hall, F.R.I.B.A., Grantham House, Putney Heath, S.W.15. 2260

**SENIOR ASSISTANT**, capable of supervising Drawing Office and carrying out jobs under Principal's supervision. Devonshire office. Send full details, including salary required, to Box 2256.

**SENIOR ASSISTANT** required urgently to take control of large, unusual job to be developed on modern lines under E. May, Architect and Town Planner, Nairobi. Must have experience of large scale contemporary work. Salary £810×£30-£270 p.a. Apply Overseas Architects Service, 5, Welldon Crescent, Harrow. 2258

**ARCHITECT'S ASSISTANT** required for small office centre of Manchester. Varied practice. Must be good draughtsman, able to survey, age 20-25. Initiative essential. State experience and approx. salary. Box 2238.

**CANADA**—Required experienced **ARCHITECTURAL ASSISTANT** for Nova Scotia. Preference single man or married man prepared proceed family. Age 30-40. Salary \$5,600 p.a. Apply Overseas Architects Service, 5, Welldon Crescent, Harrow. 2232

### Architectural Appointments Wanted

**ARCHITECT AND TOWN PLANNER**, fully qualified, University trained (34), good business man, administrator, chaser-up and works supervisor, but limited drawing board experience, is seeking suitable post for four days a week, or would take charge of town planning work in two or more offices for a lesser period each week. London area. Propositions to Box 2257.

### Other Appointments Vacant

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

**DRAUGHTSMAN**, with experience in the design of structural steelwork on industrial buildings, required. A knowledge of reinforced concrete and general building construction also desirable. A flat will shortly be available. Write, stating age, experience, and salary desired, to Box 2155.

**BUILDING ASSISTANT AND DRAUGHTSMAN** required for factory maintenance staff, Huntley & Palmers, Ltd., Reading. Applicant should be a good draughtsman, with some knowledge of quantities and estimating. Age approximately 30 years. Five-day week. Commencing salary up to £500, according to age and experience. Apply to the Clerical Manager. 2213

**DRAUGHTSMAN**, preferably with ability to marshal technical information about building materials, required immediately for organisation specialising in the production of technical catalogues and other publicity matter for the building and allied industries. Please give brief details of experience and salary required. Box 2243.

**QUANTITY SURVEYOR (Senior)** required. Write, stating qualifications, experience, salary, and when free. L. W. Barnard & Partners, Architects and Surveyors, 13, Imperial Square, Cheltenham. 2236

**SECRETARY** required for Architect's London office. Previous experience in Architect's office or similar essential. Salary according to qualifications. Alternate Saturdays. Phone Temple Bar 9970 for appointment. 2229

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**OUTSTANDING ACADEMY DRAWINGS** now being completed, further Commissions can be undertaken by Perspectivist, Winston Walker, F.R.I.B.A., A.A.Dipl., Dipl.T.P., A.R.Ae.S., 107, Sloane Street, S.W.1. Telephone SLOane 1410. 2176

**R.I.B.A.** Calculations of Simple Structural Members and Theory of Structures. Postal Tuition. Apply D. A. Fowler, Dip.Arch.(Abdn.), F.R.I.B.A., 22, Oakwell Mount, Leeds, 9. 1209

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**R.I.C.S.**, M.R.San.I., 11 years' experience, offers part-time assistance in the survey of land and buildings, and the preparation of measured and working drawings. West of England area. Own car and equipment. Box 2200.

**R.I.B.A.** would like Evening or Saturday morning work. Working Drawings, Surveys, Perspectives, Details. Box 2231.

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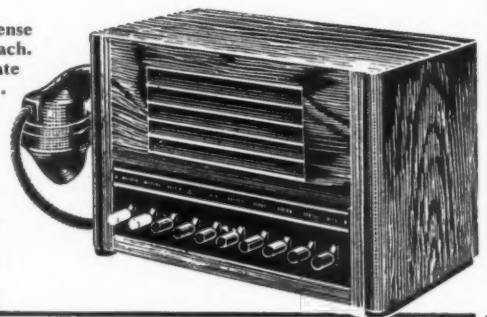
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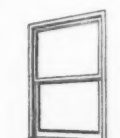
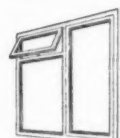
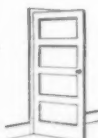


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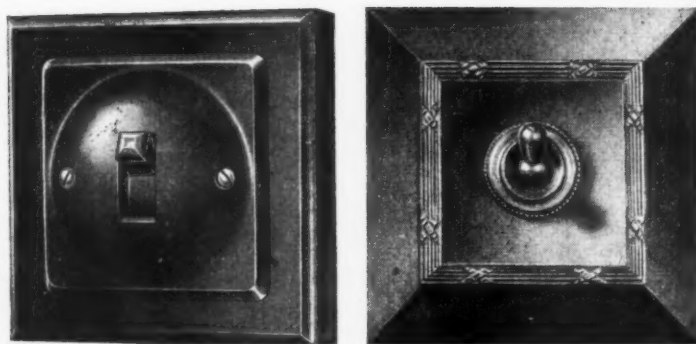
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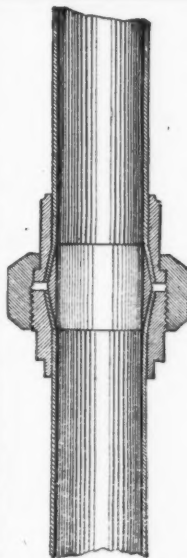
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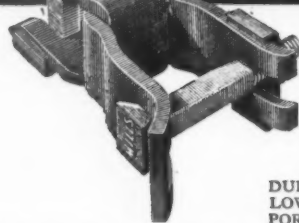
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