The Architects' JOURNAL for July 12, 1961

ТНЕ



#### standard contents

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

#### NEWS and COMMENT

Astragal's Notes and Topics Letters News Diary Criticism

#### TECHNICAL SECTION

Information Sheets Information Centre Current Technique Working Details Questions and Answers Prices The Industry

#### CURRENT BUILDING

Major Buildings described: Details of Planning, Construction, Finishes and Costs Buildings in the News Building Costs Analysed Architectural Appointments Wanted and Vacant Vol. 134 No. 2 THE ARCHITECTURAL PRESS 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.I. Telephone: Whitehall 0611 Price 15.

Registered as a Newspaper.

#### ARCHITECTS' JOURNAL

★A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their addresses and telephone numbers. The glossary is published in two parts—A to Ii one week, II to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address. ILA Institute of Landscape Architects. 1. Park Crescent, W.1. Museum 3473

Institute of Landscape Architects. 1, Park Crescent, W.1. Institute of Arbitrators. Hastings House, 10, Norfolk Street, W.C.2. ILA I of Arb 

 I of Arb
 Institute of Arbitrators. Hastings House, 10, Norfolk Street, W.C.2.
 Temple Bar 4071

 IOB
 Institute of Builders. 48, Bedford Square, W.C.1.
 Museum 7197

 IQS
 Institute of Quantity Surveyors. 98, Gloucester Place, W.1.
 Welbeck 1859

 IR
 Institute of Refrigeration.
 Dalmeny House, Monument Street, E.C.3.
 Avenue 6851

 IRA
 Institute of Registered Architects.
 68, Gloucester Place, W.1.
 Hunter 1945

 ISE
 Institution of Structural Engineers.
 11, Upper Belgrave Street, S.W.1.
 Sloane 7128

 Joint Fire Research Organisation (DSIR & Fire Offices' Committee).
 Fire Research Station, Boreham Wood, Herts.
 Elstree 1341/1797

 LDA
 Lead Development Association.
 44, Berkeley Square, W.1.
 Grosvenor 8422

 LMBA
 London Master Builders' Association.
 47, Bedford Square, W.C.1.
 Museum 3891

 MAFF
 Ministry of Agriculture, Fisheries and Food. Whitehall Place, S.W.1.
 Trafalgar 7711

 MOE
 Ministry of Health.
 23, Savile Row, W.1.
 Regent 8411

 MOHLG
 Ministry of Housing and Local Government.
 Whitehall 6200
 MOS

 MOS
 Ministry of Supply. Shell-Mex House, W.C.2.
 Gerrard 6933

 MOT
 Ministry of Tra Temple Bar 4071 Federal House, Cedars Road, Clapham, S.W.4. Macaulay 4459 National Federation of Housing Societies. 12, Suffolk St., S.W.1. Whitehall 1631 National House Builders Registration Council. 58, Portland Place, W.1. NFHS NHBRC Langham 0064/5 National Joint Council for the Building Industry. 11, Weymouth Street, W.1. Langham 2785 National Physical Laboratory. Head Office, Teddington. Teddington Lock 3222 Natural Rubber Development Board. Market Buildings, Mark Lane, E.C.3. NJCBI NPL Natural Rubber Development Board. National Smoke Abatement Society. Palace Chambers, Bridge Street, S.W.1. Trafalgar 6838 National Trust. 42, Queen Anne's Gate, S.W.1. Whitehall 0211 Political and Economic Planning. 16, Queen Anne's Gate, S.W.1. Whitehall 0211 Reinforced Concrete Association. 94, Petty France, S.W.1. Abbey 4504 Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh. Fountainbridge 7631 Wimbledon 5101 Langham 5533 NSAS NT PEP **RCA RIAS** RIB RIBA RICS Rural Industries Bureau. 35, Camp Road, S.W.19. Wimbledon 5101 Royal Institute of British Architects. 66, Portland Place, W.1. Langham 5533 Royal Institution of Chartered Surveyors. 12, Great George Street, S.W.1. Whitehall 5322/9245 Royal Fine Art Commission. 5, Old Palace Yard, S.W.1. Royal Society. Burlington House, Piccadilly, W.1. Royal Society of Arts. 6, John Adam Street, W.C.2. Royal Society of Health. 90, Buckingham Palace Road, S.W.1. Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1. RFAC Whitehall 3935 Regent 3335 Trafalgar 2366 RSA RSH Sloane 5134 SBPM Victoria 2186 Society of Engineers. Abbey House, Victoria Street, S.W.1. School Furniture Manufacturers' Association. 30, Cornhill, E.C.3. SE Abbey 7244 SFMA Mansion House 3921 Langham 1984/5 1. Langham 7616 Society of Industrial Artists. 7, Woburn Square, W.C.1. Structural Insulation Association. 32, Queen Anne Street, W.1. Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen. SIA SIA SNHTPC SPAB Society for the Protection of Ancient Buildings Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1. Holborn 2646 Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2. Temple Bar 5006 Timber Development Association. 21, College Hill, E.C.4. City 4771 Town Planning Institute. 18, Ashley Place, S.W.1. Victoria 8815 Timber Trades Federation. 75, Cannon Street, E.C.4. City 5040 War Damage Commission. Eagle House, 90/96, Cannon Street, E.C.4. Mincing Lane 2000 Zinc Development Association. 34 Berkeley Suaare W1. Groevenor 6636 TCPA TDA TPI TTF WDC ZDA Zinc Development Association. 34, Berkeley Square, W.1. Grosvenor 6636

THE ARCHITECTS' JOURNAL for July 12, 1961

#### Important wherever women's toilet facilities are provided

The simple and sensible method of supplying and disposing of sanitary towels . . . Southalls, Britain's largest and most experienced house in this market, introduce their guaranteed equipment.

#### Southalls Automatic Vending Machine

The case is finished in stoved white enamel and chromium with a trouble free dispenser mechanism. It takes pennies. Southalls attend to maintenance and the supply of towels — a countrywide service which is without equal. This machine is a time saver when dispensing the indispensable.

#### Vender

32<sup>∦</sup> high, 5<sup>∦</sup> wide, 4<sup>↓</sup> deep. Price £10.17.0d (net carriage paid). Machines for soluble and other types of towels available.



#### Southalls Gas Sanitary Incinerator

Foolproof in operation, this incinerator is cased in white vitreous enamel with chromium-plated fittings. Gas consumption is slight and disposal is thorough.

#### Incinerator

weighs 28 lbs., 24<sup>‡</sup>" high, 8<sup>‡</sup>" diameter. Price £26 (net carriage paid). Electric incinerators also available.

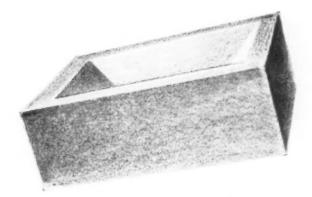


DEPT. AJ, CHARFORD MILLS, BIRMINGHAM 8

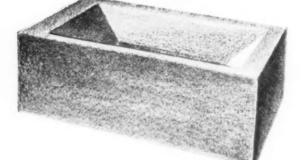


2





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In arctic, tropical and temperate climates, thousands of millions of bricks have been erected with mortar plasticised with FEBMIX ADMIX without one failure occurring. For strength, impermeability, durability and workability, there is no better mortar.

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#### Use the Largest Selling Mortar Plasticiser in the world

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# FEBMIX-ADMIX

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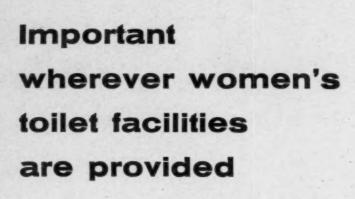


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The simple and sensible method of supplying and disposing of sanitary towels ... Southalls, Britain's largest and most experienced house in this market, introduce their guaranteed equipment.

#### Southalls Automatic Vending Machine

The case is finished in stoved white enamel and chromium with a trouble free dispenser mechanism. It takes pennies. Southalls attend to maintenance and the supply of towels - a countrywide service which is without equal. This machine is a time saver when dispensing the indispensable.

#### Vender

32}" high, 5}" wide, 41" deep. Price £10.17.0d (net carriage paid). Machines for soluble and other types of towels available.

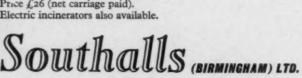


#### Southalls Gas Sanitary Incinerator

Foolproof in operation, this incinerator is cased in white vitreous enamel with chromium-plated fittings. Gas consumption is slight and disposal is thorough.

#### Incinerator

weighs 28 lbs., 241" high, 81" diameter. Price £26 (net carriage paid). Electric incinerators also available.

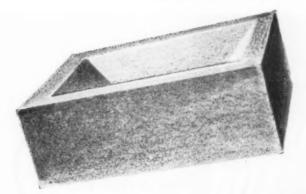


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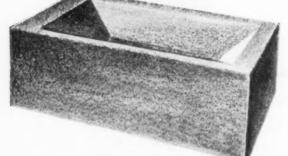
ANOTHER SEN PRODUCT

2





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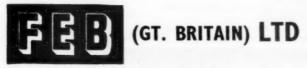
#### Use the Largest Selling Mortar Plasticiser in the world

IT'S

# FEBMIX-ADMIX

IT COSTS YOU MONEY NOT TO USE IT !

3

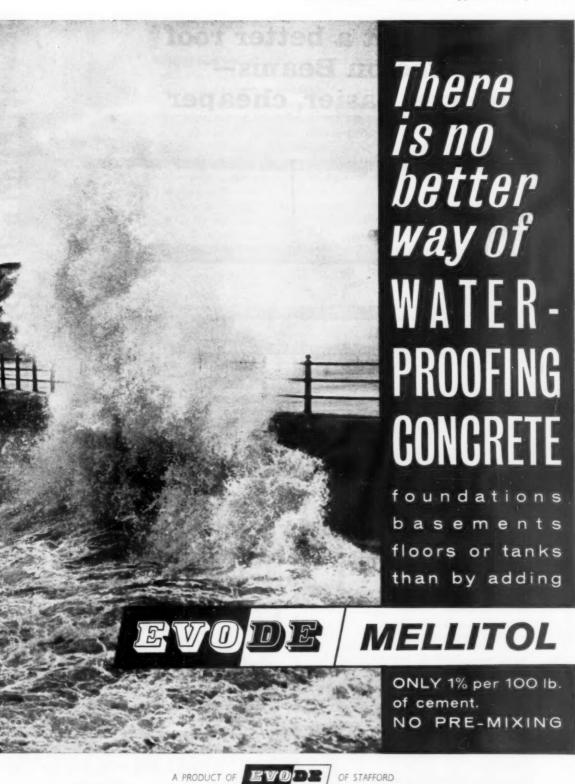


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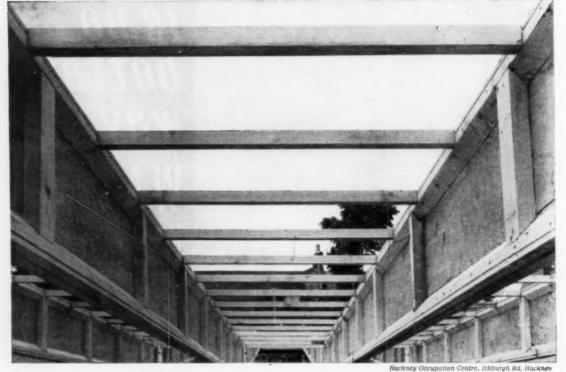


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#### How to get a better roof with Tecton Beamsquicker, easier, cheaper



Architect: Huberi Bennet, F.R.I.B.A. Architect is the Council, County Hall, S.S.I. Contractors: Harrison and Spooner Ltd., Bristol House, 23 Holdorn Viaduct, E.C.I.

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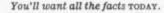
2. You just pick the exact beam for your scheme.

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That is why Tecton Beams have already been used for schools, libraries, shops and office schemes by private architects, County Councils (including the L.C.C.) and Development Corporations.

so TRY OUR FREE DESIGN SERVICE FOR YOUR NEXT FLAT ROOF PROJECT. There's lots more information-Tecton Noggings and Decking Units, Tecton Purlin and Eaves Beams for pitched roofs, and Curtain Wall Panels -all in the literature.





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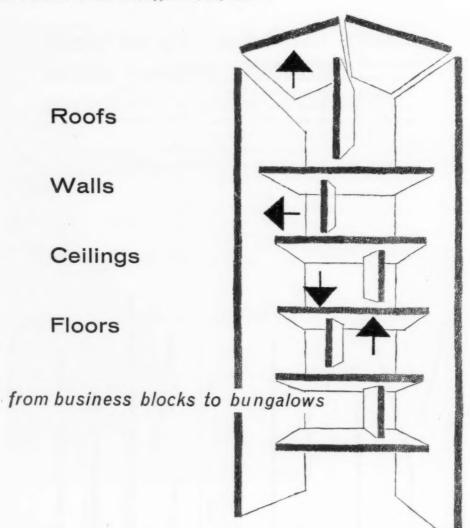
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COMPANY	TEL. NO
ADDRESS	
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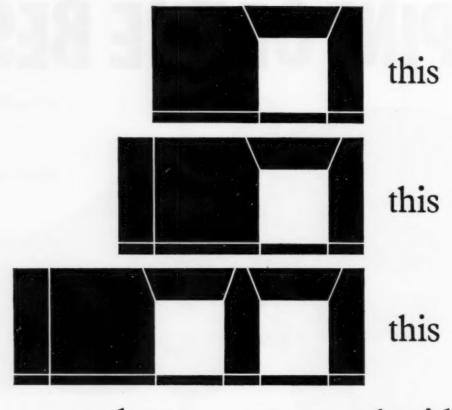


102 Kensington High Street, London W.8 'Phone : WES 0444.

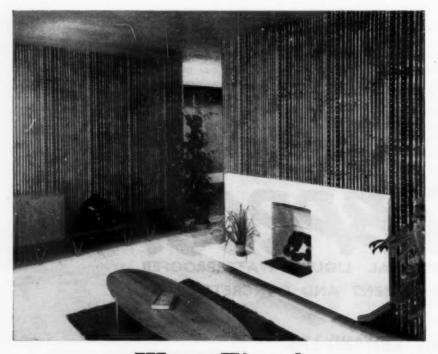
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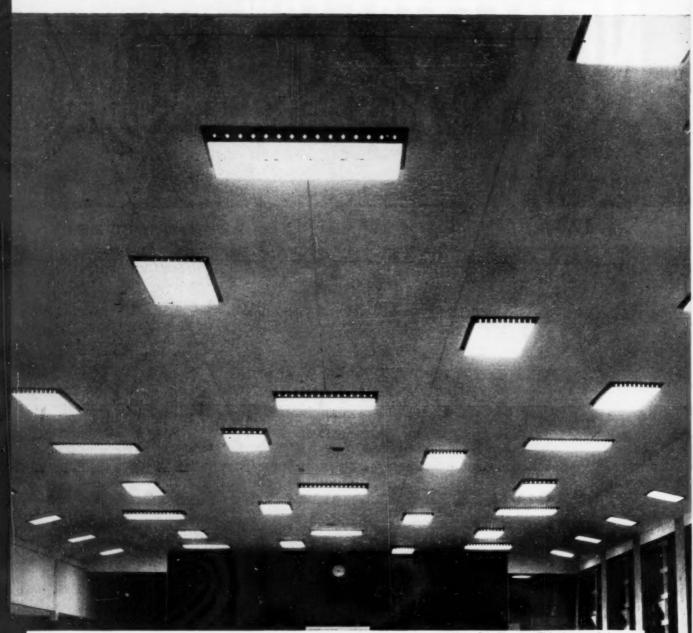
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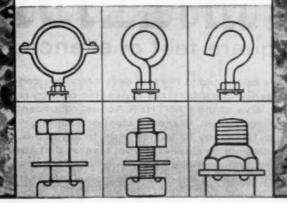
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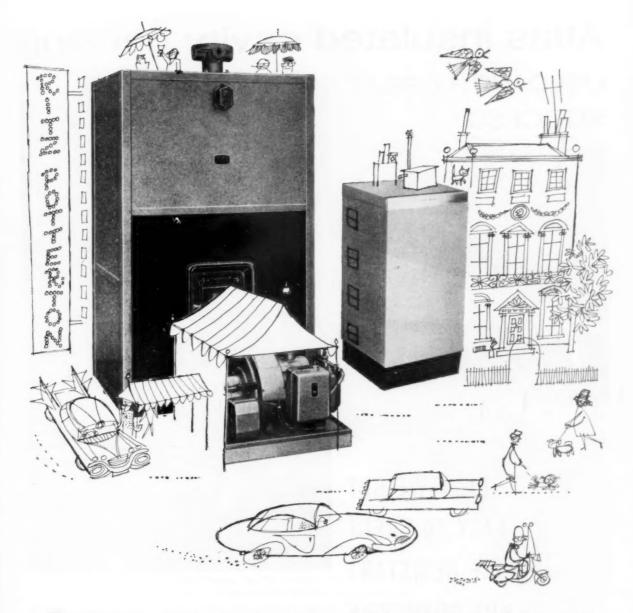
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Two Potterton FOA oil-fired boilers (outputs: 1,000,000 and 625,000 B.th.u./hr.) heat the Griffin Hotel, Leeds. Heating engineers: Modern Heating Co. (Button) Ltd.

And domestic gas-fired Pottertons, installed in co-operation with the North Thames Gas Board, heat 115 new homes built by Wates Built Homes Limited on the Abbotsbury Road Estate, Kensington. Architects: A.E. Stone, Toms & Partners.

Potterton Boilers at the heart of efficient central heating — oil or gas THOMAS POTTERTON LIMITED, DEPT. MM, 20-30 BUCKHOLD ROAD LONDON S.W.IB. VANDYKE 7202. A MEMBER OF THE DE LA RUE GROUP Potterton is a registered trade mark.

# Atlas insulated cavity decking

Interior of Barratts Packaging Ltd., Grantham. Architects Cecil Howitt & Partners, Nottingham

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Atlas Insulated Cavity Decking —dry construction type is the best available for flat roof applications. An insulant can easily be placed in the cavity formed, greatly increasing the thermal resistance of the decking. The interlocking side lap gives a neat finish to the soffit and cuts out convection currents that would lower its insulation value. When in place, the decking requires only the normal felt weathering finish. Illustrated literature sent on request.

BARBOUR INDEX FILE NO. 108





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Far-Air Licensed Manufacturers for Europe BRADFORD STREET · BIRMINGHAM 6

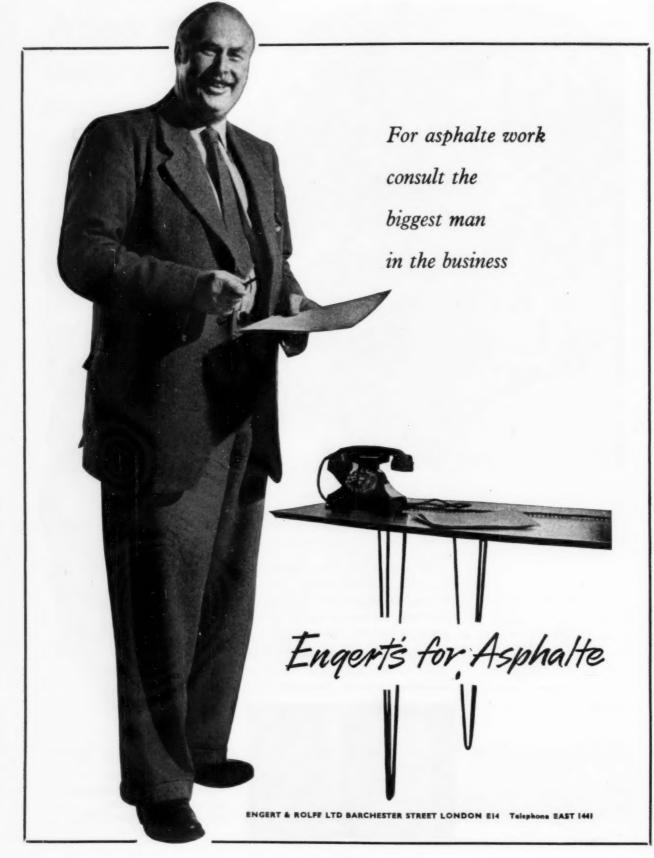


The illustration shows a standard panel filter and an H.P. After Filter full details in Barbour Index File 28.



BIRFIELD GROUP





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THE ARCHITECTS' JOURNAL (Supplement) July 12, 1961



#### When windows must be wide and deep

The need to introduce—whether for practical or for aesthetic reasons—windows that reach generously from floor to ceiling and wall to wall, might appear to present a problem: the problem of installing an efficient heating system economically without taking up valuable space or marring an otherwise uncluttered design.

There is one system that is designed to answer problems of this kind. It is a system of skirting heating developed by Crane Ltd. Crane Skirting Heating is so unobtrusive and its application so flexible that a great deal of freedom of arrangement is attained.

This heating system takes the form of panels which are used in place of the normal skirting. They avoid local 'hot spots' and distribute the warmth evenly where it is needed, without taking valuable floor or wall space. In the example illustrated, and indicated by arrows, 9-inch Type RC (radiant-convector) panels are employed to off-set high heat loss.

 3 types of Crane Skirting Heating
 Type

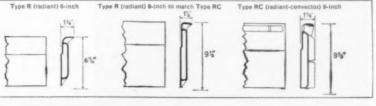
 Type RC 9-inch is particularly suitable for
 installing beneath picture-windows and

 similar features, using elsewhere Type R
 9-inch to match. Type R 6-inch meets

 smaller heat requirements. Panels are in
 2-ft and 1-ft lengths and are made in cast

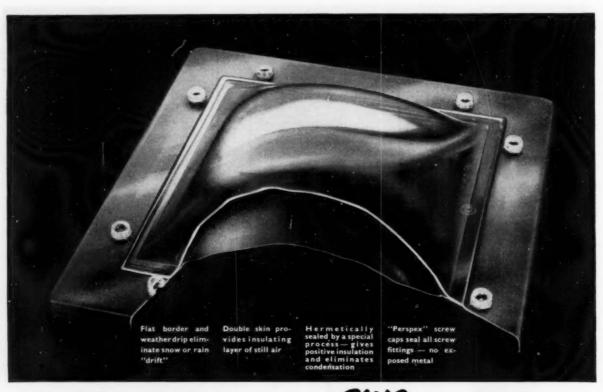
 Iron for resistance to damage and corrosion.
 Decoration; this can be done after installation to suit any colour scheme

28.8



everything points to CRANE skirting heating

Crane Ltd., 15-16 Red Lion Court, Fleet Street, London, E.C.4. London Showrooms: 118 Wigmore St., London, W.1 and Great West Road, Brentford, Middlesex. Branches: Birmingham, Brentford, Bristol, Glasgow, Leeds, London, Manchester. Works: Halifax and Ipswich.



# designed daylight *MUC* insulation at low cost !





CORDAR LIMITED

## ROOF LIGHTS PENDING

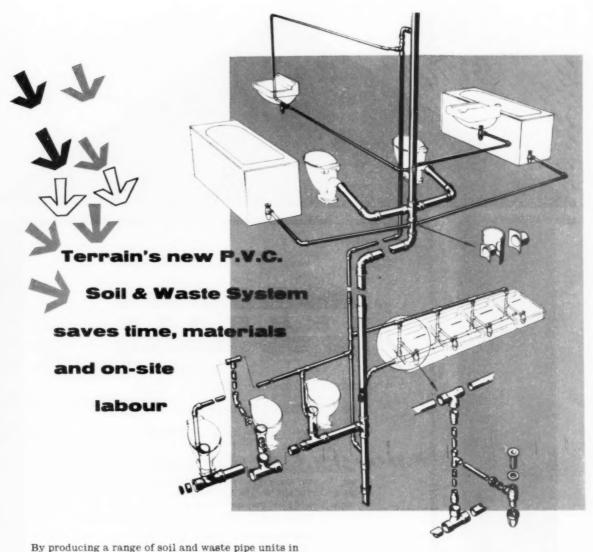
EASILY INSTALLED

An insulated roof light is complementary to an insulated roof and CORDAR double skin 'Perspex' domes give a "U" value of .42 BTU/sq.Ft./HroF—the ideal answer to the problem of THERMAL EFFICIENCY. CORDAR provide maximum light transmission, eliminate condensation, and cut out maintenance with their exclusive featherweight design. A wide range of sizes, circular, square, rectangular.

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Consulting Engineers: Messrs. Merz and McLellan, Newcastle upon Tyne. Architects: Mesars. L. J. Couves & Partners, F.F./A.A.R.I.B.A., Newcastle upon Tyne.

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unplasticised P.V.C., A. B. Plastics Ltd. have now made possible a new system that makes full use of the many advantages of this material while also saving time and labour.

The cold welding technique dispenses with costly conventional jointing materials, and in many cases the use of prefabricated sections reduces on-site labour time still further.

Terrain systems are based on the use of unmodified, unplasticised P.V.C. supplied by I.C.I.

The Burn Brothers Consultancy Division is available for advice in connection with Sanitation, Drainage, Heating, Ventilation, Effluent Pumping and Treatment Plants.

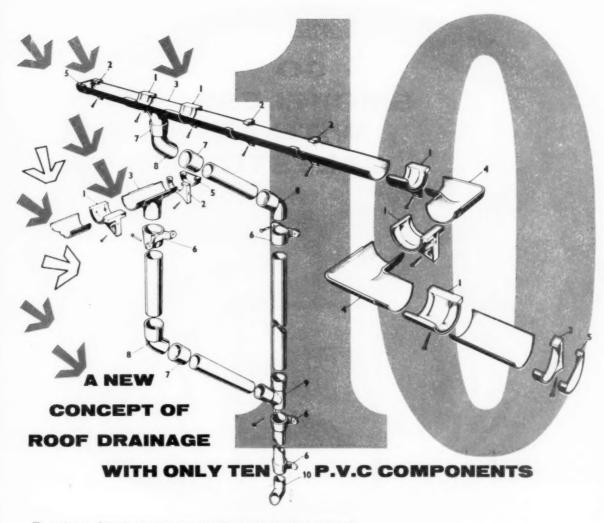
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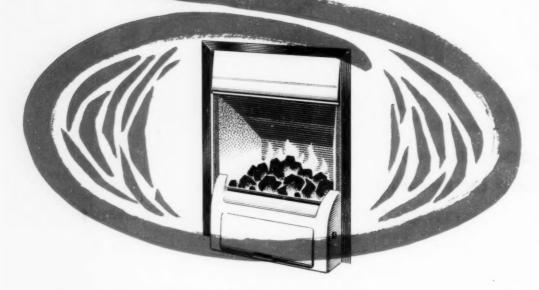


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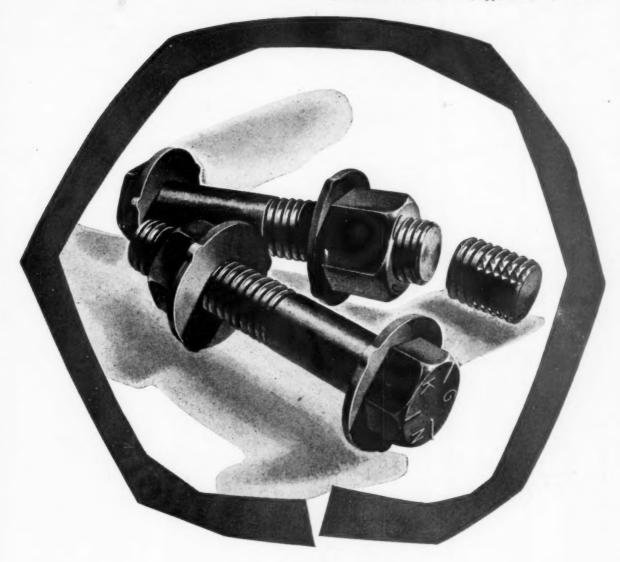
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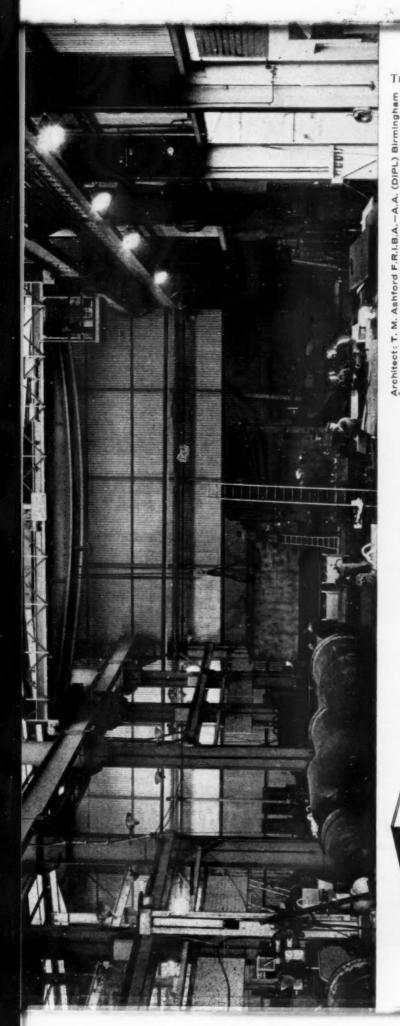
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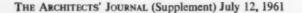
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HE ARCHITECTS' JOURNAL (Supplement) July 12, 1961







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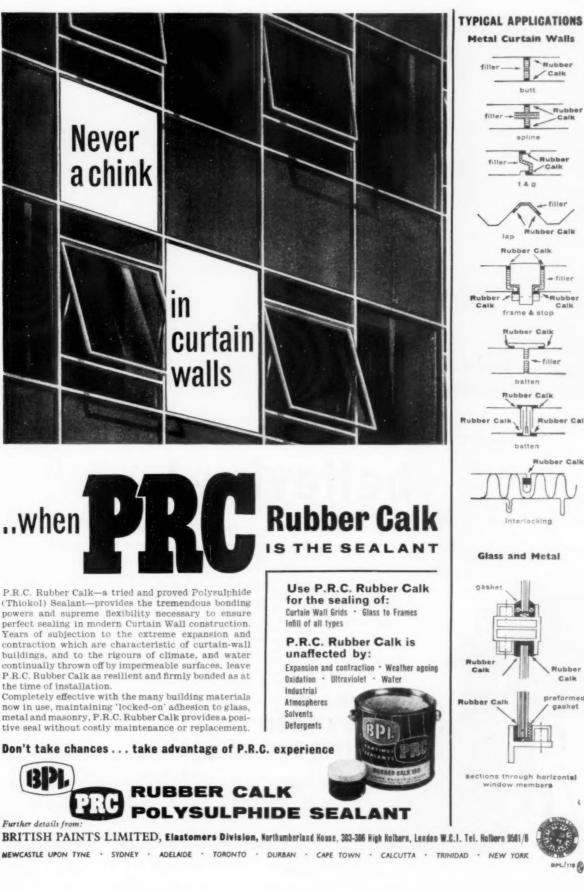
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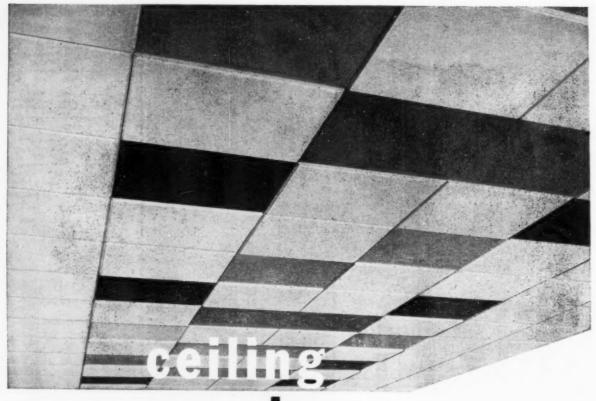
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THE ARCHITECTS' JOURNAL (Supplement) July 12, 1961



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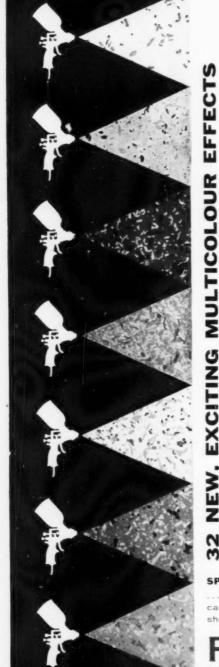
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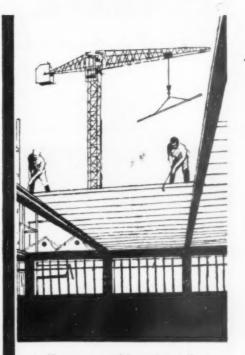




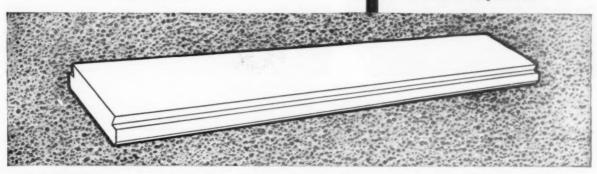
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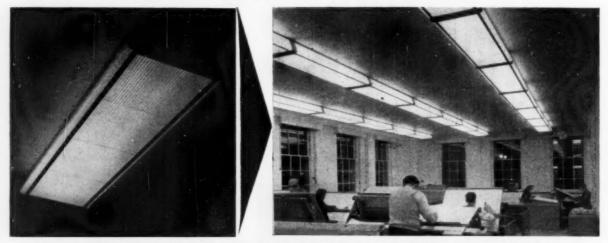
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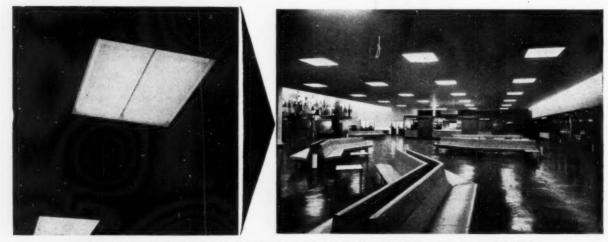
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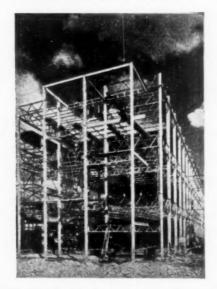




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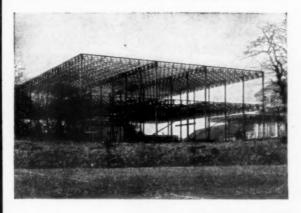
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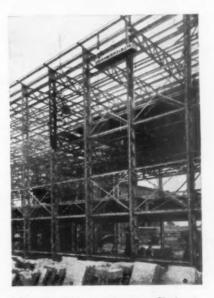


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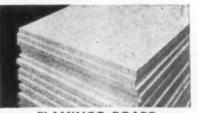
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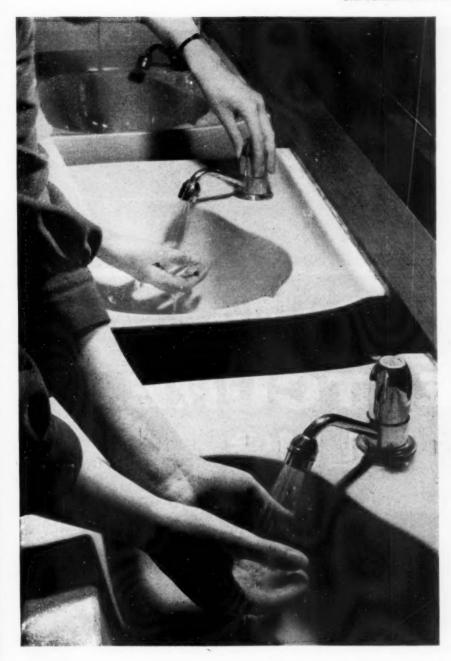
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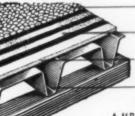
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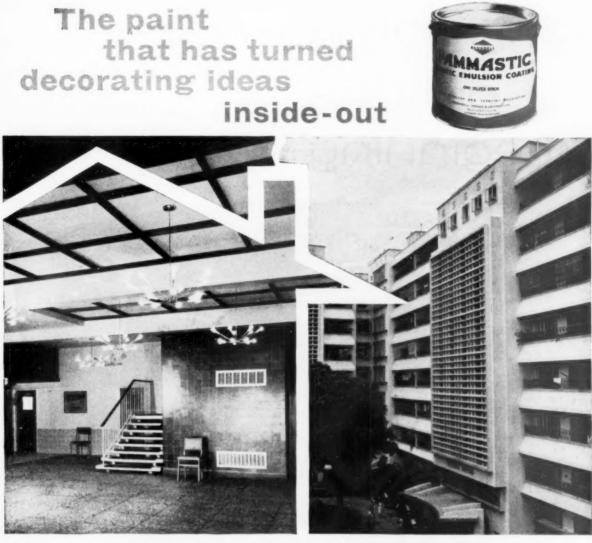


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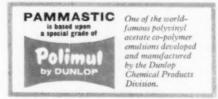
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THE ARCHITECTS' IOURNAL Supplement July 12, 1961

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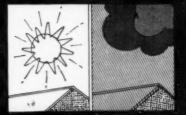
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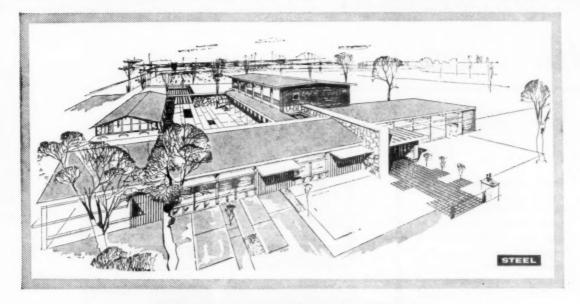


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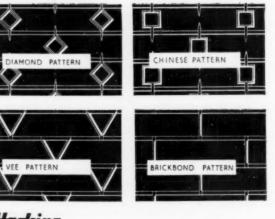
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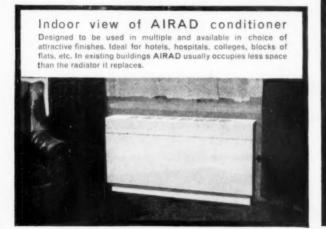
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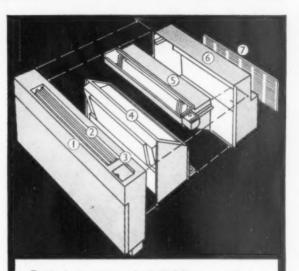
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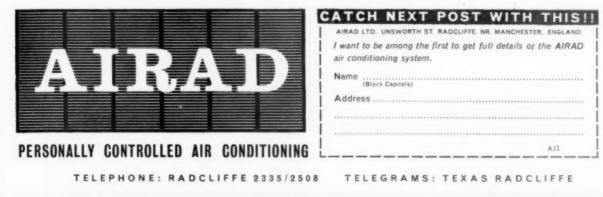
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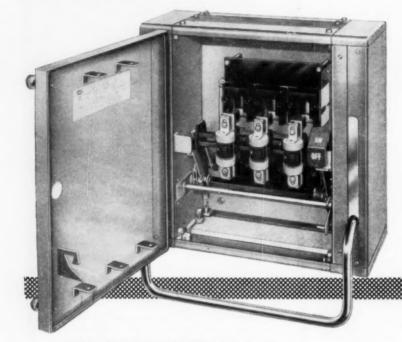
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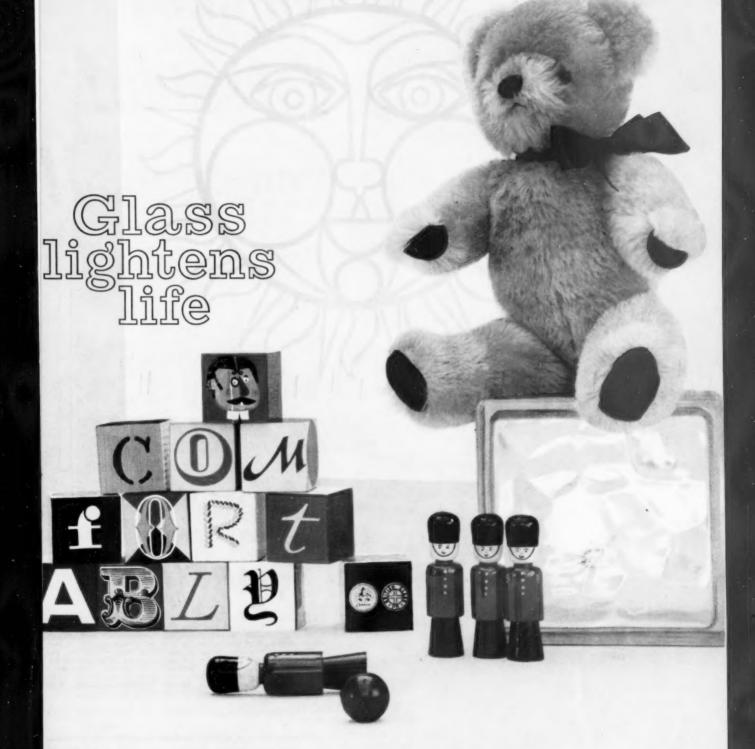
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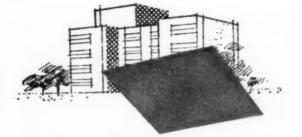




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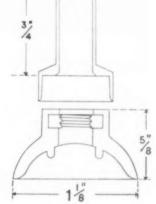
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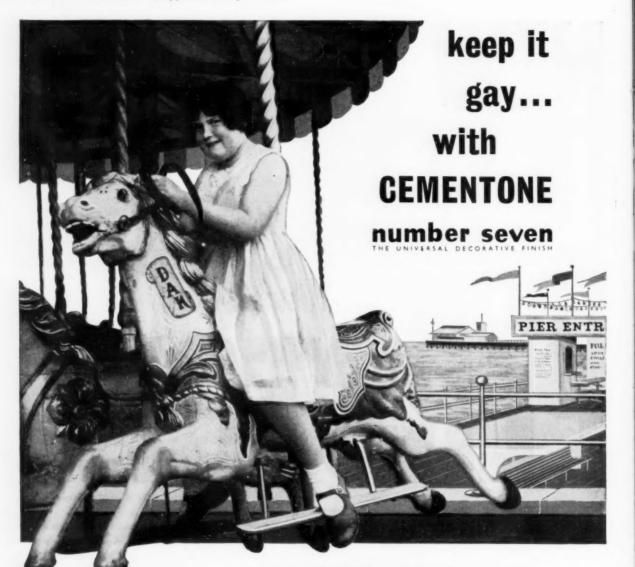
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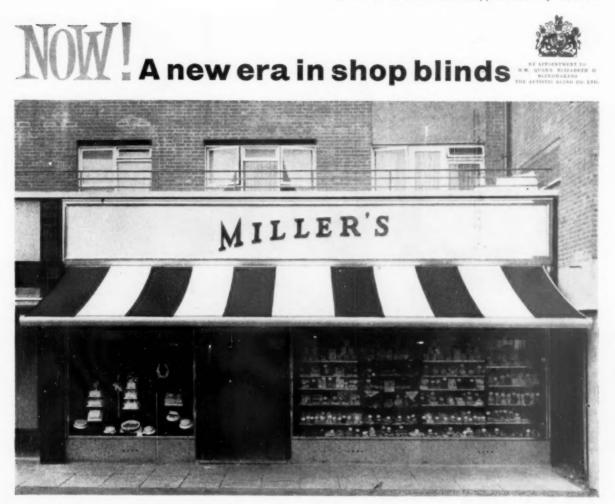
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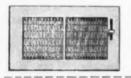
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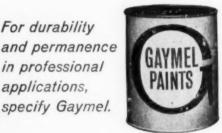
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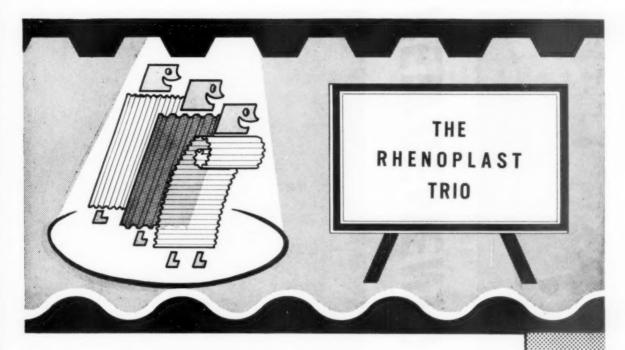
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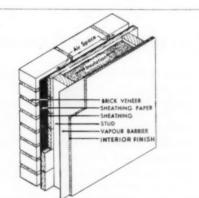
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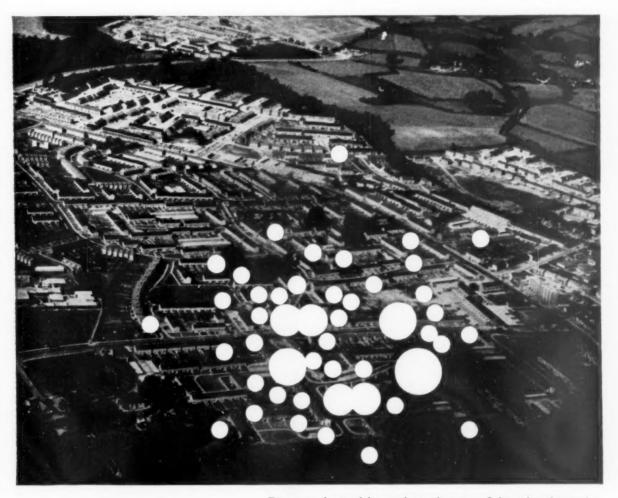
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for ...



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Every year the attack by woodworm increases. It is random destruction, often unnoticed — and yet the damage is estimated at  $\pounds_{10,000,000}$  annually. It is a sphere in which the architect is becoming increasingly involved as more and more property is affected.

But how can he be sure that the measures he suggests are suitable, the product chosen effective, and the treatment given adequate?

Fortunately structural timbers can now have the same lasting protection against woodworm that has proved so effective for many famous buildings and priceless antiques.

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Produced by the largest timber preservative research organisation in Europe, Xylamon has a three-way toxic action combining contact, stomach and fumigant insecticides. It drives deeply below the surface and becomes an integral part of the timber itself. Once applied it destroys *any* wood boring pest or fungus which attempts to attack the wood.

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ASCOT AND THE PRIVATE BUILDER: 5



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(23 detached and semi-detached 3-bedroom bungalows)

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View from the street of the Brooklands Drive bungalows.





Plan view of a kitchen in a semidetached bungalow showing position of the Ascot 709 B.

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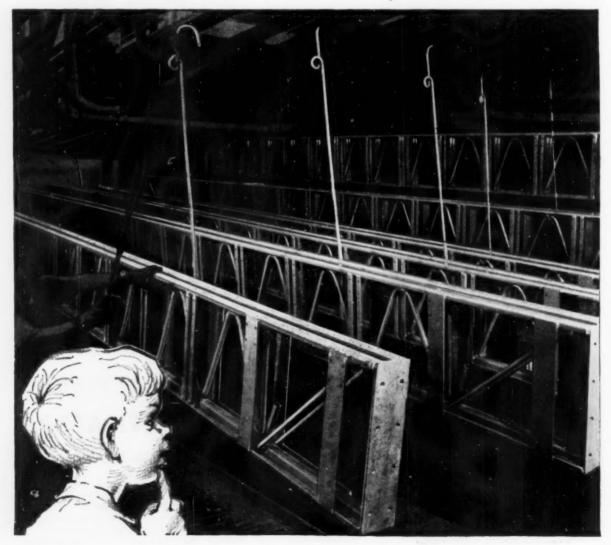
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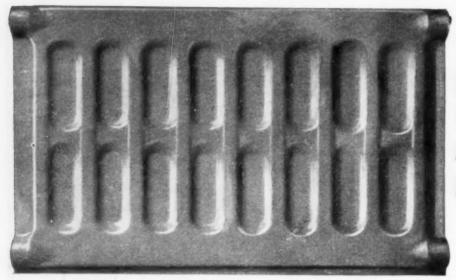
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VENNER

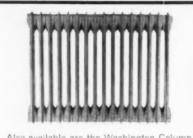
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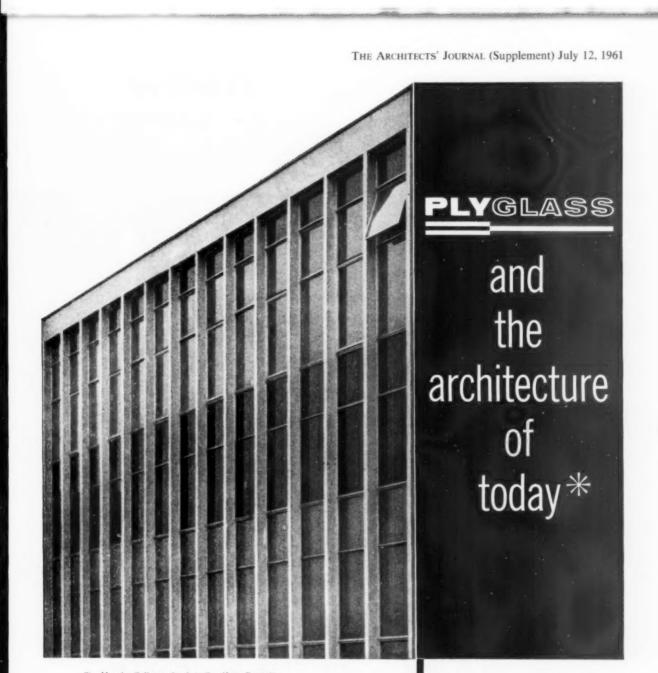
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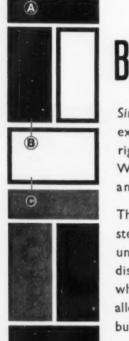


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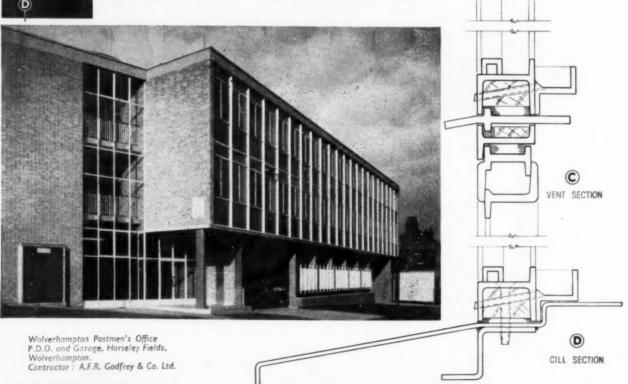
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TRANSOM SECTION

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ADDING



89

THE ARCHITECTS' JOURNAL (Supplement) July 12, 1961

Indeed, Sir Henry. He is, at this moment, recumbent in his usual armchair ---asleep.

I am glad to note, then, that he has conquered his infernal habit of snoring ...

On the contrary, Sir Henry. It is we who have conquered his snoring ! Cast your mind back to the last Committee Meeting . . . when I was largely instrumental in getting it agreed that Cullum instal their Acoustic Tiles in here . . .

Ah yes... Cullum, the tile people. I had already formed the impression this ceiling looked unusually appealing to the eye. And Gad... you mean Lud is snoring now?

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The Acoustic Centre, 58 Highgate West Hill, London, N.G. FITzroy 1221 (6 lines)

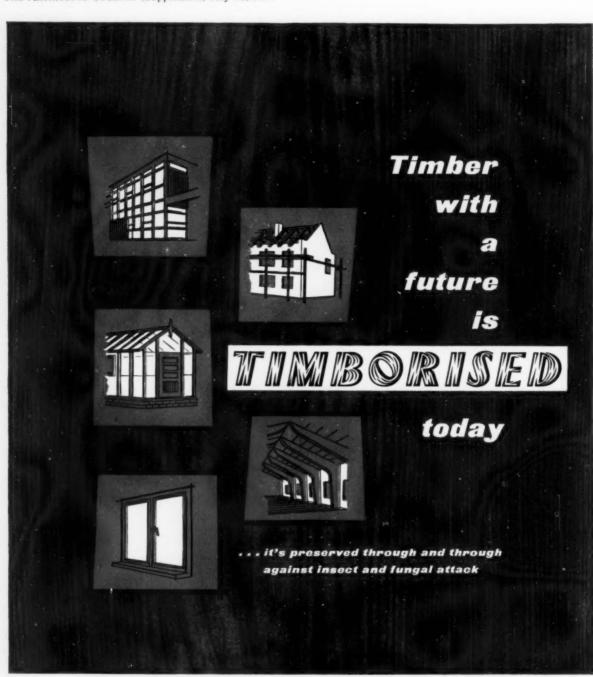
Steward! Two more doubles please . . . we must drink a toast to Cullum at once !



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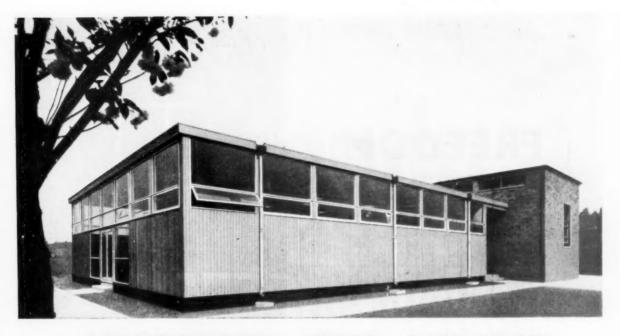
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THE ARCHITECTS' JOURNAL (Supplement) July 12, 1961

## Specify TIMBORISED timber for all building uses

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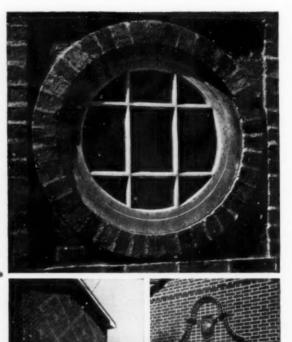
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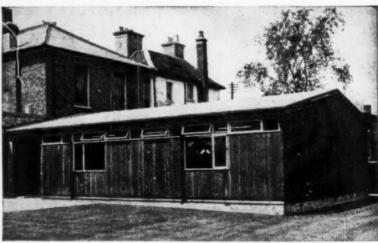
Hospitals

Offices

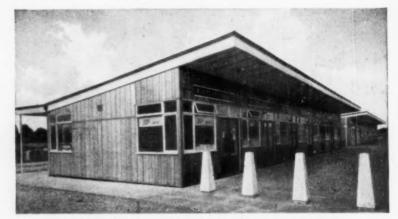
Canteens



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TEMPORARY SERVICES BLOCK FOR SALISBURY CATTLE MARKET : TWO BUILDINGS (1) OFFICES, CANTEEN, ETC. (2) SHOPS. Photograph by courtesy of the City Engineer, City of New Saru

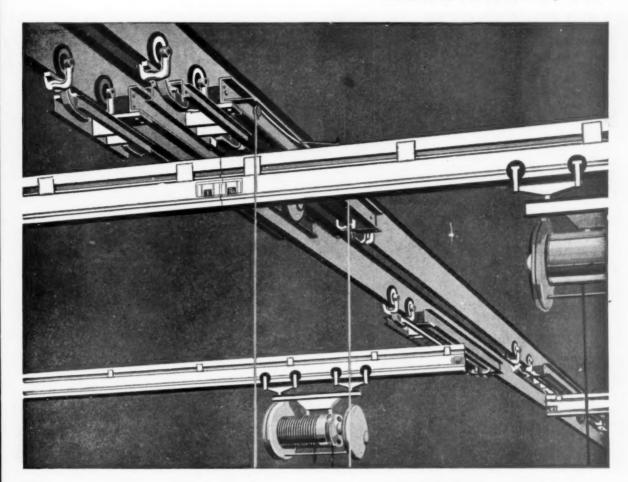


TENNIS PAVILION, HAMPDEN PARK, EASTBOURNE Photograph by courtesy of The Borough Engineer & Surveyor, County Borough of Eastbourne.

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IN ONE! An efficient, lowmaintenance unit that involves no more space than any ordinary sink unit

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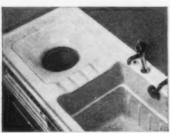


A water-sealed lift-out tray forms the sink base. The whole top is made from the toughest-ever combination of pressure - bonded resins, in depthcoloured white, blue or primrose.



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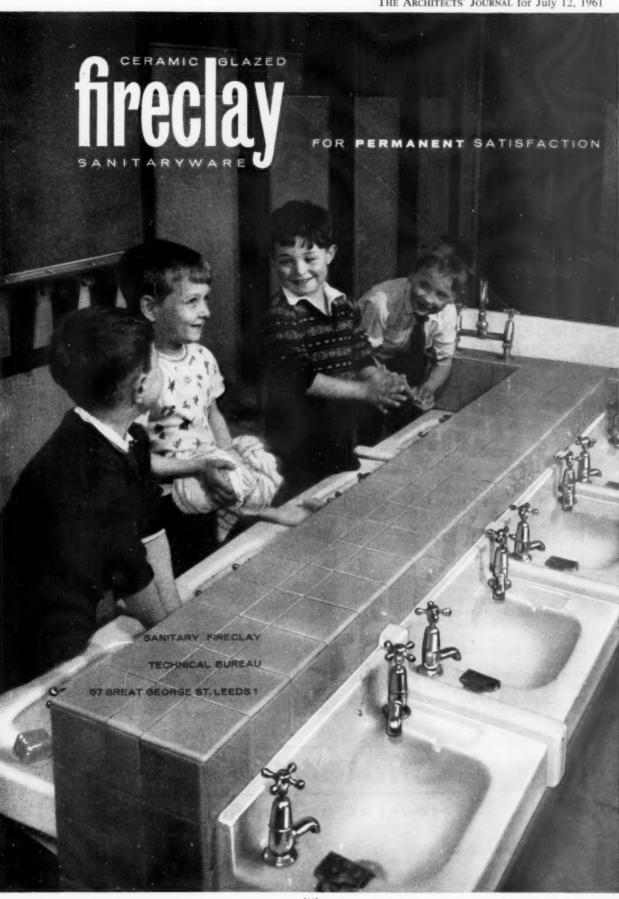




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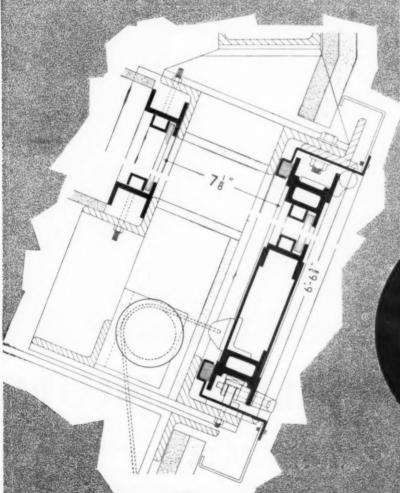


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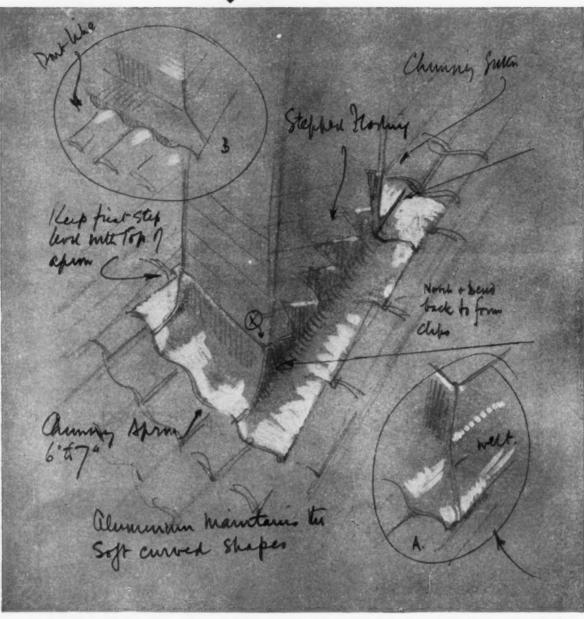
THE B.B.C. TELEVISION CENTRE, WHITE CITY: MAIN ENTRANCE Architect: Graham Dawbarn Esq., C.B.E. (Norman & Dawbarn) in association with M. T. Tudsbery Esq., C.B.E. Consulting Civil Engineer to the B.B.C. Contractors: Higgs & Hill Ltd.

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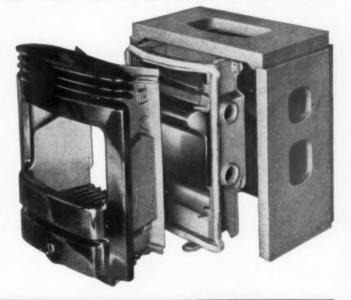
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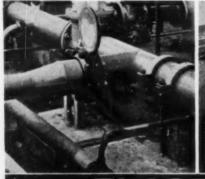
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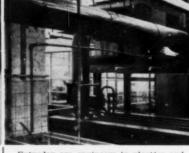
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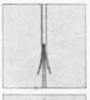
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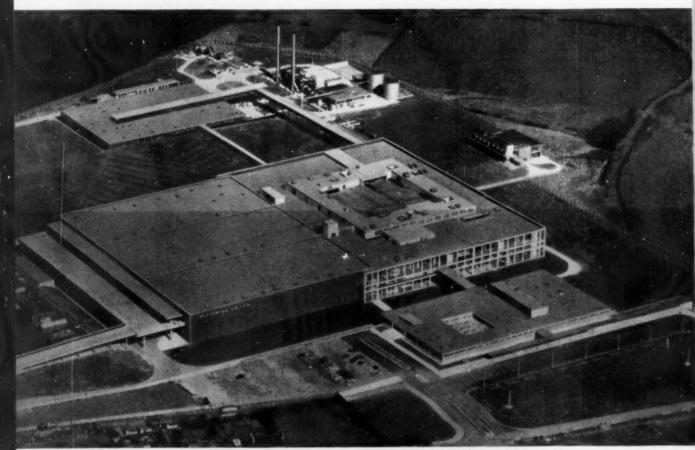
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#### The Architects' Journal

Vol. 134 No. 2 July 12, 1961

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NOT QUITE ARCHITECTURE

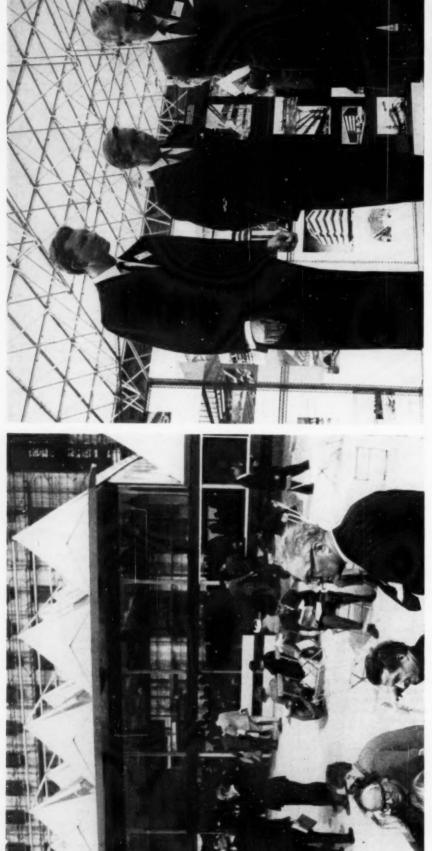
### Hemingway

In writing about war as he had seen it Ernest Hemingway found freedom to reject human values that were sham, and to celebrate his own that were tested. His own when all was said and done were solid old values like sincerity and dignity and courage showing through new attitudes that braced the new hero against the cant and careerism of the times. Tacitly a new code was formulated. The old attitudes were anathema.

"I was always embarrassed," says Frederick Henry in *A Farewell to Arms*, "by the words sacred, glorious, and sacrifice . . . I had seen nothing sacred and the things that were glorious had no glory and the sacrifices were like the stockyards at Chicago if nothing was done with the meat except to bury it."

The trauma of war for Hemingway, of seeing war, of being wounded in war, could never be shaken off and was to charge and inform his sensibilities to the point of obsession so that again and again he would haunt *les mises en scène* of violence and death, trying to find the meaning of it all and to shape it at a time when lesser artists were turning their backs or faking something up or trying to forget. The new code worked. People began to read Hemingway and felt happier and reassured.

This he had the courage and talent to achieve in a society that was mostly trying to entrench itself in inertia against the past cataclysm while all the time preparing a new one on account of this Pilar said in For Whom the Bell Tolls, inertia. It is not true that he gained early critical attention of much consequence. Certainly not in England. From an Establishment standpoint he was, like John Osborne today, better dismissed or hushed up. As Pilar said in For Whom the Bell Tolls; "Do not speak of these things. It is unhealthy." Even today English literary critics





The use value of the IUA's temporary buildings on South Bank exceeded all expectations: they were constantly full of people, working, talking, looking for each other, telephoning, reading, buying photographs of their own delegations, signing on for excursions, and of delegates' wives arranging shopping expeditions. The courtyard, in a week of sun and wind, was fine for a breather, or an assignation, as the top left picture shows. Top right, Theo Crosby and Sir William Holford took Antony Armstrong-Jones round the Exhibition, where they seem to have found something that puzzled them, Right, the foreign delegates pour in for registration.



are only beginning to jump on the bandwagon, and yet, as Koestler said, he was the greatest living writer. He simplified language. cleared away clutter, pared style to the bone and influenced writing as much as Joyce, Eliot and Lawrence. Something big had happened, whatever the critics said, however fast they attacked it. "Prose," said Hemingway, "is architecture, not interior decoration, and the Baroque is over." If there was a serious weakness in his work it was his heroines for failing to convince in the round. They were apt to appear simply as other human beings, not other human beings who were female. So passionately lyrical and transcendental was the projection of love in A Farewell to Arms that, as one American critic pointed out years ago, it involved the spectre of its own damnation and because he was a true artist the author had no option but to kill his heroine off. She wouldn't have lasted, couldn't have lasted. She soared too romantically from the sordid ruins of A Very Short Story, a page and a bit, from The First Forty-Nine. Pilar, however, in For Whom the Bell Tolls was very good, but not the heroine, Maria. The non-heroines were truer. Margot from The Short Happy Life of Francis Macomber, a bitch, and some of the difficult, female women from The Snows of Kilimanjaro, a story that will tell any young man everything he needs to know. Best of all the women was the fat whore in The Light of the World dwelling on her memories.

Hemingway's death got a good press in England, but still the critics are slating *Across the River and Into the Trees* as embittered proof of failing powers. It is not. It is about a man who is to die soon and knows it. If you are to die soon and know it *Across the River* is the book you would not put down. You would read it with care and attention and your heightened perceptions would do the rest. Perhaps in about 100 years' time people in general won't be so cowardly about having to die soon and knowing it and a great novel will come into its own.

One thing would surprise me-if Hemingway had shot himself on purpose while cleaning his guns. It wasn't his style at all. He despised suicide. As Harry the writer dies of gangrene in Africa it is Hemingway speaking, "The rich were dull and they drank too much, or they played too much backgammon. They were dull and they were repetitious. He remembered poor Julian (Scott Fitzgerald) and his romantic awe of them and how he had started a story once that began, 'The very rich are different from you and me.' And how someone had said to Julian. Yes, they have more money. But that was not humorous to Julian. He thought they were a special glamorous race and when he found they weren't it wrecked him just as much as any other thing that wrecked him.

"He [Harry] had been contemptuous of those who wrecked. You did not have to like it because you understood it."

Hemingway understood it all right and his message was courage.

ROBIN MUDIE

The Architects' Journal for July 12, 1961 39

#### The Editors

#### A UN ORGANISATION FOR BUILDING?

Tow that the sixth Congress is over we ask ourselves "Was it worth while?" In general, and from the point of view of those attending, the answer must surely be yes; for the contacts made and the buildings seen at such a Congress as this are an undeniable enrichment for the participants. But if the widening of the personal horizons of some 2,000 Congress members is a great good for architecture, it is an insufficient good. Architecture has not profited by this expenditure in the way that it ought to have done. The time has come to ask ourselves if we can still afford to meet on a social basis alone. For however interesting the main papers, however well sustained the discussions on them and however instructive and entertaining the Congress exhibition or the visits to local buildings, no one would suggest that Congress members received or exchanged anything more than broad impressions and snatches of detailed information.

The generalised topics of the main papers, the division of the delegates into groups of several hundred strong, the failure to sectionalise the working groups by climate, by economic circumstances or by building types, made it almost impossible for delegates to confer together at a useful level. With such sub-division it would also be possible for delegates to meet and discuss in much smaller, more intimate groups. Further, the habitual organisation of the Congresses on these lines gravely influences the composition of the Congress membership, encouraging those who come mainly for the jaunt and discouraging those who might have most to contribute.

To question the value of the Congress is, in fact, to question the value of IUA as at present understood. But before doing this it is important to recall that the IUA is a very young organisation, that it still has an important work to do in establishing itself in the different countries and in the United Nations; and that the present Congress marks a great step forward in the number of delegates taking part, of nations represented and in the degree of public recognition received. But when all these things are granted, the fact remains that the time has passed when architects can afford to meet on the basis of tourists. They are the chief professional guardians of an important section of public welfare. Further, they are living at a time when the rapid circulation of knowledge is of vital importance. Though it may well be that an international congress cannot be the principal medium for exchanging information, the fact remains that the IUA can only make its way in public esteem by the businesslike manner in which it serves the cause of architecture and building; and that, as the Congress must always be the chief public expression of the IUA, the Congress must place this exchange of information in the forefront.

The proposed subject for the next Congress, "Building

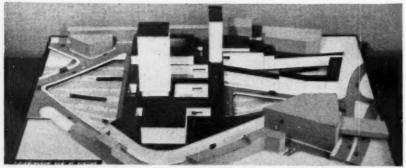
in rapidly developing countries," is a fortunate one for many reasons, not least because it serves to emphasise the public service aspect of the architect's job. A first charge on the IUA must be to establish, both with governments and with the United Nations, the truth that building is as important to welfare as education or food and that it, therefore, deserves a specialised agency in the United Nations which will be as consequential as UNESCO and FAO.

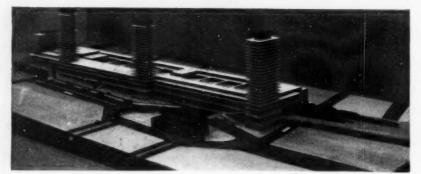


RUSSIA ON SHOW

It was, I'm sure, only a coincidence that the Soviet Exhibition's press day at Earls Court opened with a cheeky version of "Who's Afraid of the Big Bad Wolf" on the amplifiers. No one would want to take the mickey out of this Exhibition. It is disarmingly charming and rather pathetic. The exhibition technique is non-existent, and it is clear that massively-sloganed pictures and actual objects are considered more important than good design, colours and lettering. Nearly all the lettering is hand done in a crude way, and you don't have to look very carefully to see the original pencil lines or the sudden desperation of an artist who had to getasmanywordsinto the last line as he could.

Nevertheless, this chaotic affair makes a nice change from the usual crisp, slick exhibition display, with white on





black lettering so small and dazzling that you can't read it. I certainly came away from Earls Court with a strong impression-that people in Russia are thought to matter more than things. I don't know anything about the technical efficiency of the consumer goods I saw, but they were mostly revolting to look at. The radio sets-mostly of wood-have reached our inter-war depths of degradation in design, and they have a long way to go before they catch up with our latest plastics horrors. The cars are liberally sprinkled with mascots and speed - or status - symbols though there's a superb motor cycle and sidecar out of the ark. Refrigerators, electrical cleaners, cups, saucers, and what have you all resemble the stuff that never gets into the Design Centre in this country. But if the architecture looks dull (only one among dozens of buildings is coated with Neo-Georgiana, and that is an atomic generating station) at least attempts are being made to use modern techniques for getting people housed quickly and comfortably. It is typical of the exhibition that you almost miss, in all the chaos, a suspended full-size mock up of a completely prefabricated flat.

#### CATHEDRALS AND SUCH

Architects did rather well on television last week. Frederick Gibberd, who was interviewed (most efficiently) by the Archbishop of Liverpool, told how he designed the building to suit the very precise requirements of the client, and went on record as not believing in scribbled inspiration on the backs of envelopes. Felix Candela got a less efficient interviewer than the Archbishop in the same programme, and consequently said nothing either memorable or interesting. (He didn't even confirm or deny the claim made in the Radio Times that he designed the Church of the Miraculous Virgin in Mexico City "in an afternoon." A boast or a confession?)

These two interviews convinced me once more that the BBC is often so frightened of going on for too long that an expert being interviewed doesn't have time to say anything useful, and that only if the interviewer knows the

Two new stations for Birmingham: above, New Street; below, Snow Hill subject is it possible to get away from respectful questions and hackneyed replies.

Sir Basil Spence's half-hour commentary on television on the life and work of Wren was good because of the real indignation he put into it : indignation with the Church Commissioners of Wren's day who mucked about with his design for St. Paul's and cut his salary, and indignation about the failure to rebuild the City to Wren's noble plan. He also displayed some warm anger at what has happened to the City again since the war. "What have we done with this legacy?" he asked Spence. " Twice we have had the opportunity to build worthily-what is our standard? the beautiful sound crisp pound notes?

#### SPEC BUILDING ON RIGHT LINES

Some good redevelopment plans for New Street and Snow Hill stations at Birmingham, as well as for Euston and Victoria, were shown at the British Transport Commission's exhibition at the Tea Centre last week. All included lettable office buildings, plus a sprinkling of hotels and stores. At present such developments are forbidden to the Commission, whose functions are strictly limited to public transport, with speculation in railway property outside. the pale. But the development potential of many sites is, of course, enormous, and the BTC is short of capital-even for permanent way modernisation. One hopes the Minister of Transport's promise of new legislation will not be long delayed.

#### \*

The projects exhibited were a reminder of the competence of the regional architects, but the Eastern Region remains supreme—in spite of the Midland's modular unit dry construction system on the Manchester-Crewe line. Where else in the world would you find small stations like Harlow Town and Broxbourne?

I wasn't quite so happy, now I come to think of it, when I saw some conversion jobs in the Eastern Region the other day. Surely it is possible to destroy the character of a station like Colchester—if it must be done—without adding the coffee-house cliche of mosaics-by-the-yard?

## Astragal at the IUA

#### THE STAGE IS SET

Gontran Goulden, the director of the sixth IUA Congress, has confessed to a feeling of satisfaction (and he should have felt some pride) when he surveyed the Royal Festival Hall at the opening session of the IUA Congress. Before him was the main floor comfortably filled with about 2,000 delegates twiddling their receiving sets. On one side were the interpreters tucked into their boxes, on the other the Press. Before him on the platform were all the top brass. From this point on the success of the conference depended largely on the delegates themselves.

The RIBA tradition of running conferences smoothly hasn't been lost, even when the session is twice as long and four times as large.

#### THE OPENING

But enough of that soft guff. Antony Armstrong-Jones opened the congress and considering he was addressing a profession in which he had failed to qualify, he made a brave attempt. He commended the Press for giving an increased coverage of architecture, which was combating public indifference, and he emphasised that it was the end product that mattered : " maximum space at minimum cost," and the need to bridge the gap between the world population and adequate housing. His comment which made the headlines was a plea for excitement in architecture, instancing Lever and Seagram. This is a dangerous one: too many architects are producing discordancy by struggling for excitement. One excitement per vista should be the ration.

#### Architect Ellen Schoendorf brought a message from UN and UNESCO and said that the time had come for the UN to take a greater interest in the IUA and for co-operation on technical reports on housing between the two.

#### PRIVATE GAIN

On the evening of the first day the eminent (which by some official slip did not include ASTRAGAL) were entertained by Lord John Hope, Ministry of Works, at Lancaster House. At the same time dozens of architects all

over London opened their houses and offices to entertain foreign delegates. A few opened in vain, poor chaps, for no guests arrived, others scooped up extra delegates who were wandering lost in the streets. The Architectural Press's *Bride of Denmark* was soon filled. ASTRAGAL particularly liked: The Russians who joyfully drank neat gin, when offered to them as *Vodka inférieur*.

The Mexican delegate who exclaimed "I don't want to discuss building; I want to go shopping at Marks & Spencers and see the town! "

The Irish professor who convinced another Mexican named Bernal, that all Bernals come from Tipperary; including the great Professor J. D. Bernal; therefore he must be a cousin and should contact JDB in the morning without fail.

#### INFORMAL RECEPTIONS

On Tuesday evening, receptions were held at the Design Centre, the Institute of Landscape Architects, London University and the Building Centre. ASTRAGAL attended the last two. London University was lavishly hospitable but the Senate House is a rather gaunt building for this type of entertainment.

The Building Centre was a muddle of exhibits and delegates. Here, Felix Candela argued with a colleague that he felt no urge to abandon churches and factories to tackle housing, which " was largely an organisational problem " as he had no large organisation behind him.

On the same night a number of students were entertained by the JOURNAL in "the Bride." A party from the Edinburgh College of Art arrived in a mini-bus (bearing the school's name) which, they explained, had been paid for from the profits of a "live project." A French student admitted cheerfully that he was in his fifteenth year at the Beaux Arts: he had had to take over his father's vineyards, but was determined, bit by bit, to finish the course. He offered to fill his hosts' empty bottles with wine any time he called.

G2

#### FORMAL RECEPTIONS

On Wednesday evening there were receptions at Guildhall and County Hall. The first was splendidly pompous, with the Lord Mayor, the Sheriff's Mace bearer and a guard of pikemen of the Honourable Artillery Company looking like magnificent remnants of some terribly British pageant. A mass of gold plate, manuscripts and one of the odder British art collections kept everyone amused who was not busy eating, drinking, talking or dancing.

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The Lord Mayor, Sir Bernard Waley-Cohen made the kind of speech which suggests that if he had been in office 10 years ago the City might have been rebuilt and replanned in a more worthy manner. He sternly reminded architects that architecture reflects its age and customs, and if they reproduce coldness and monotony in building it will be reproduced in our lives.

His speech, and a courteous reply by IUA President Mardones Restat was hard to hear because of the buzz of conversation by the visitors, led, to ASTRAGAL'S surprise, by no less a personage than the chairman of a City Corporation Committee.

Those who opted for the LCC rather than the Guildhall on Wednesday (and this included everybody who hadn't a dinner jacket) found lots of friends who hadn't dinner jackets either, the Fire Brigade Band playing on the terrace in a high wind which blew over music stands and sent martinis flying over our clothes. In consequence the offer to visit the roof and admire the view had not many takers, but a polyglot melée of guests swiftly devoured all the salmon mayonnaise (reserves were moved up into the front line with military promptitude), and danced vigorously until dismissed by "The Oueen " at 10.30.

FLEET STREET IMPRESSIONS

The Press coverage of the Congress has been, on the whole, what you might expect, even if the supplement in *The Times* was even larger (24 pages) than had been hoped. The best sustained reporting seems to have been in the *Guardian*; the pop dailies seem to have picked up nothing after the Armstrong-Jones speech.

However, architect readers of The Times must have been surprised by Donald Gibson's reported statement at the IUA congress that " prefabrication denies good site layout, precludes flexibility in detailed planning, produces monotony and involves enormous capital investment." This isn't the effect of Army life on Gibson, but a piece of confidence-shaking mal-subbing by a Press agency. The full statement was "prefabrication of the 'whole house' or 'part-house' denies good site layout, precludes flexibility in detailed planning, produces monotony and involves enormous capital investment; therefore the approach by prefabricating interrelated components is economically much simpler and denies nothing to the skill of the architect." Very different.

## Some delegates' Comments

Anccio Turin (Italy): " Next time, 30, not three, groups, gathered around an equal number of discussion leaders, selected from all parts of the world; in fact a series of debates initiated by short provocative lectures on different and limited aspects of a central theme. Plenty of opportunities for free and informal discussion on subjects sufficiently limited to avoid platitudes, while sufficiently general to attract non-specialists. More opportunities also for contacts with other allied professions by inviting economists, sociologists, engineers and administrators to join in discussions. Less simultaneous multi-language translation, which is always disappointing when used for technical discussions, and more natural grouping of debaters by language affinities. No written papers (for after all we are not yet a scientific society). Plenty of slide projectors used for the evening presentation of architects' work. All this housed in a University where in the summer vacation there would be sufficient lecture rooms available to accommodate many small groups."

E. C. E. Pelles (Israel): "The main value of this Congress has been the international contacts made; the friendships and the discussions which have taken place outside the sessions."

M. Macura, director of Design Institute, Jugoslavia: "An interesting theme would be how to organise the mass productions of dwellings for big cities. Jugoslavia is now semi-developed and aims to be fully industrialised in 10 to 15 years. Its increase in production is the highest in Europe. But such important topics cannot be discussed in such large groups. There is too short a time and too much rushing about."

Professor H. K. Soylemezoglu (Turkey): "I am a professor of architecture at the technical university of Istanbul. One of my main purposes in coming here was to meet British architects, but you are the first one who has spoken to me. Of course there is the snag that I am Turkish, which probably puts you English off, but as you see I can speak French. I think next time that the delegates should have on their badges the languages which they can speak. I would very much like to find out more about British architectural education, and about the preservation of ancient buildings. The Congress is very well organised in every way and my only criticism is that the discussions are too short, a day would be better than half a day."

The Korean delegation, through their interpreter, said they had found the Congress, the exhibitions and the discussions around it extremely interesting. They liked the opportunity of meeting architects from all over the world. Prefabrication, they claimed, had enabled them to rebuild all that was destroyed during the war in six years (85 per cent. of their houses are now prefabricated) and they planned to take back a wide selection of technical books.

Professor J. R. Morales Malva, Chile: "The ideas under discussion are too diffuse and the audience too large. I want little groups. I want to learn about new techniques for answering the problem of earthquakes. We have little new building in traditional materials, it is mainly in concrete, but we have awful slums. The problem is very urgent and if not solved South America will go Communist."

**Mme. H. Staskova, a Prague architect,** said that the Czech delegation had found the Conference highly relevant to their own work, since their next Five Year Plan included a great extension of prefabrication, and experimental buildings using new constructions and materials were already being built by research groups.

G. M. Orlov, Professor of Architecture, Moscow University: "This conference has not got down to essentials. The problem of architecture is the solution of a full life for the people."

Professor Lewis Mumford, U.S.A.: "The form of the Congress is not entirely satisfactory. It is important to get a discussable project; if it is too neutral or vague the conference doesn't come off. The great problem is to break down shyness. To do this you must have plenty of time and not too large a group." Prof. Mumford instanced an eight-day Congress he attended with only 70 members which was markedly successful. He was against a too rigid separation of members into categories as it was so important to learn from others.

# The Congress Working Groups

For working purposes the Congress was divided into three, approximately equal groups. These groups met one in a conference room at the County Hall, one in the National Film Theatre and one in the Royal Festival Hall and spent one morning session on each of the three papers. At the end of each session the author of the paper (or, in the case of Nervi, his deputy) usually commented on the discussion.



The platform at the opening session, left to right: Hitchcock, Holford, Antony Armstrong-Jones, visible beyond microphones, Matthew.

#### The effect of industrialisation on architecture

Professor Hryniewiecki in his paper began by remarking on the backwardness of the building industry: everything was machine made now except buildings. In fact assembly line production offers the only way of providing the buildings we need cheaply and quickly. If standardization is a necessary consequence of mechanization, it must be remembered that it is not only the outcome of economic necessity, but is the expression of our desire to bring equality and fairness into everyday life.

Group C.'s discussion on Professor Hryniewiecki's paper returned persistently to the question of whether or not it was advisable to prefabricate large units. Schmidt of East Germany evidently thought it was, so did Santos of Venezuela and Moisescu of Rumania. But the general opinion of the assembly was that it was unwise. Sir Thomas Bennett who lead the contrary opinion seemed to question the permanent value of prefabrication altogether. It was, he thought, only an emergency solution to an acute problem: standard solutions which suit people today will not suit them in a few years' time. For Sir Thomas only very small components could be safely mass produced.

The more common English view, that you must indeed prefabricate the structure as well as small components, but that you must do so in small units to ensure flexibility, was given by Ling and Cox but was also supported by Gendrop of Mexico who quoted the example of Japanese traditional building.

Another question which much concerned delegates was that of quality. Shillon of Israel quoted his country's experience that housing put up with insufficient regard to quality becomes slums in 10 years. Boitel of France said that it was not reasonable to make economy the chief end of architecture and building; it may be such for urgent provisional solutions, but in general we must make up our minds that building is an inherently costly commodity and that to attempt it too cheaply leads to social degradation. On this question of economy, Wallis of Great Britain pointed out that we cannot really see the direction in which the aim of productivity is leading us. The ingredients of productivity-the cost of plant, labour, materials and overheadsdiffer not only from one country to another but from site to site and from week to week, so that the balance which is most economical in one set of circumstances will not be so for another. Lastly Howgrave-Graham, also of Great Britain, spoke on the limitation which the requirement of fire resistance seemed to place on prefabrication. From the point of view of fire resistance, all prefabricated structures are weak at the joint and this inherent defect makes them unsuitable where there is a high fire load.

Group B's discussion of Professor Hrynewiecki's paper had much in common with that of group C. There was among the Latins the same mistrust of prefabrication as a threat to human values, among those from Eastern Europe the same rather uncritical welcome of it as the sole means of environmental betterment; and once more (though perhaps we say it who shouldn't) the English seemed to have the most experience. Thus Morales of Spain suggested that man was not to be confined within the simple rectangles peculiar to prefabrication, that we were too much influenced by statistics and that function only carries us to the threshold of architecture. He was supported by van Hove of Belgium who said that to place too much stress on the mechanical was to make the mind subordinate to matter. To these hesitances we must add those of people from relatively under-developed countries who were evidently impressed by the lower standard of workmanship to which essays in prefabrication had so far given rise. Mendez of Mexico welcomed it in principle, but spoke of the loss of quality when compared with traditional building and di Martino of France, speaking of his experience in Algiers, said that prefabrication had proved quicker but no cheaper and was characterised by badly fitting parts. On the other side Gocar of Czechoslovakia spoke of prefabrication as an economic and social necessity; Novicki of Poland spoke of it as a means of reforming environment and of raising all building to the level of architecture. Kamensky of USSR said that in Leningrad 34 per cent of all buildings are prefabricated and that it is planned shortly to raise this percentage to 56. Both Kamensky and Marzynski of Poland called for a new building material to suit industrialised production: concrete and steel, it seems, do not really lend themselves very well. The same opinion was voiced by Basciano of Morocco.

Among the UK contributors, Bruce Martin suggested that the future pattern of the manufacturing industry would be that of a few very large firms making the raw materials for components-sheet strip, etc. -and a vast number of small workshops making the components themselves. This situation would make the part of the architect more important and would make dimensional co-ordination essential. The broad effect of industrialisation would be not to reduce working hours (a main objective of the Eastern nations), but by making work more interesting to lead people to want to work longer. Lacey said that the UK's success in prefabricating schools would not have been possible without large programmes, fixed well in advance. The degree of standardisation feasible, he said, varies from one component to another: you cannot standardise whole windows because to do so leads to too many "specials"; it is better only to standardise the parts. Gibson spoke of the saving in architect's draughting time and the consequent freedom to spend more time on design. He also called for central designing and purchasing arrangements for

small architect firms. Howell criticised Professor Hrynewiecki for attaching too much importance to the reduction in the weight of building elements on the ground that mass is important for sound insulation; also for advocating the short life building. This, he said, is too expensive since a building which will last 20 years will in fact last 60 and it is uneconomic to plan to pull it down before. He also spoke of the danger of pseudo morphology: the danger, that is, of carrying into industrial building forms which are proper only to craft building. On this question of durability, Percival, also of the UK, suggested that we should build structures which will last, but can be easily adapted. Professor Hrynewiecki, in summing up, said obligingly, that he agreed with everybody.

The contribution of Group A to the discussion followed the general pattern set by the other two. Developing countries such as the UAR, Rhodesia and Mexico testified to the difficulty they experience in applying any form of prefabrication, and Eastern European countries, such as Bulgaria, Roumania and the USSR, testified to the statistical success arising from mechanisation. The session was characterised by two original contributions. Hartland Thomas of the UK reported a meeting of 150 (the International Standards Organisation, of which he is the IUA representative) at which the 150 agreed to recommend the use of the 10 cm./4 in. module. subject only to agreement being reached on terminology. This gave rise to some other references to dimensional co-ordination: Fickett of us said that in his country the only module to be really respected was 1 in. and Fergusson of Canada reported on a new 4 in. modular structure, the Galbraith Building at the University of Toronto, which is shortly to be the subject of a National Research Council Report.

The second original contribution was from Bakema of the Netherlands who pointed out that "housing" as at present understood has been an emergency operation aimed at providing the needs of anonymous customers, and for this reason housing has been anonymous in character. But the aim of architects must be to free the masses from their anonymity and for this reason he favoured industrialisation based on interchangeable components.

#### The influence of reinforced concrete and technical and scientific progless on the architecture of today and tomorrow

Professor Nervi submitted that the designer of the near future will have to take building technique more and more into consideration and architecture will come to rely far more on building science. He foresees that this century will come to be renowned for initiating a style based upon adherence to the laws of physics.

On the whole the morning's discussion was disappointing. There was much praise of Nervi's work ("stimulus for us all," "profound influence on modern architecture ") but at the same time a deep suspicion on the part of some delegates of the theories he propounded. This suspicion was expressed by Villanueva and Hansen as well as by several others who spoke later and who apparently found it imposible to accept the idea that the future of architecture lies in technology and science. Villanueva went so far as to interpret Nervi's point of view as an equation. architecture = structure, which of course, expressed this way, leads inescapably to the premise that if structural form can be calculated precisely by the application of laws and principles so, too, can the architecture of which it is a part. Unfortunately this rather basic misinterpretation of a thesis which is by no means Nervi's was not refuted, as Nervi was not present and Piccinato, when summing up on his behalf, preferred to ignore the task of defending another's views, on the assumption, no doubt, that if you do not entirely agree with them you are hardly in a position to uphold them. Instead he delivered a witty little lecture of his own which led nowhere, except to remind us that there are traditional materials which are still useful.

The only speaker who did not feel obliged either to make some point of criticism or defence of Nervi's paper however specious, or else to ignore it and seize the opportunity to speak at length about nothing in particular, was Moffett (UK). He commented that Ronchamp was a building which, for many people including himself,



Members of the WA Executive with Antony Armstrong-Jones before the opening ceremony. Left to right: Robert H. Matthew; Antony Armstong-Jones: Henry Churchill, United States: Sir William Holford; V. Machonin, Czech; J. M. Richards; L. Piccinato, Italy; WA President Restat; Grunsfeld, United States; Yang-ting Pao, China; Tschumi, Swtizerland.





The Czechoslovakian delegation sorts its papers

Working group session in National Film Theatre held tremendous emotional appeal. But it could hardly be described as reflecting contemporary materials and structural techniques. Conversely many buildings whose structural expression was impeccable and whose use of new materials was exemplary, failed to elicit any emotional response whatsoever.

The main speakers when working group A met to discuss Nervi's paper were Ove Arup and Felix Candela. In general the chief criticism levelled at the paper was the same as that of working group B. Delegates seem to find unacceptable Nervi's reference to initiating, in our time, a "style of adherence to the laws of physics...." Critics, for the most part, have interpreted this as meaning literally that structural techniques will create a "style" as immutable as the architectonic styles of the past, and they object, therefore, to what would become a sterile discipline on the architect's creative role.

It is interesting that this criticism was championed by an engineer. Arup expressed quite strongly his feelings on the subject. "Building technique," he said, "means accomplishing what we want to accomplish with the least effort." He submitted that the structure of a building and the techniques used for building it were but a part of the complex of factors and considerations which influence architecture.

His view that structure is merely one of the influences and should not be allowed to dominate design considerations was echoed by Conil of France. Both Arup and Candela referred to the "contradiction" between Nervi's work and his theories, just as Villanueva of Venezuela had done the day before in working group B. Rather surprisingly Candela launched an attack upon the widespread experiments with structural form evident in recent projects all over the world. He instanced Sydney Opera House, the TWA terminal in New York and the civic buildings of Brasilia as examples of a preoccupation with structural form for its own sake and he pointed out that, although it would be the last thing Nervi intended, his work tended to promote such an approach among architects. He pointed out that Nervi was a rare artist whereas his imitators seldom had the structural knowledge and appreciation to match their imaginations.

The risk that Nervi's work and the theories he propounded could have a harmful effect was evidently in the mind of Gardner Medwin of UK when he reminded delegates that nobody is entitled to create fanciful structural forms without an understanding of the fundamental principles of construction.

Another note of warning was made by Fickett of USA who pointed out that with every new development in construction technique the building operative had to be familiarised with the new methods.

Working Group C seemed to get their teeth into discussing Nervi's paper much more energetically than either of the other groups and a fairly fruitful discussion took place The Architects' Journal for July 12, 1961 45

even though several speakers strayed from the point.

Mainstone of the UK, an engineer member of the congress, warned that too many architects sought to use fantastic structural shapes as an article of personal faith. He foresaw that Nervi's theory of structural truth could, if followed unthinkingly, lead to the pursuit of structural formalism and a mere striving to be "modern." Delegates were reminded that the needs of architecture in all its complexities required definition. It was for the architect to define these needs.

Objections to Nervi's theory of the coming "style of adherence to physical laws" took one of two forms. Serrano of Spain insisted that it would put an end to the architect's role as an artist and warned of the dangers of monotony which standard structural solutions could bring. Songarev of Bulgaria agreed that structure was not the only factor shaping architecture. Both seemed agreed that Nervi's picture of tomorrow's architecture would have the architect a mere slave of technique.

Only one delegate (significantly not Piccinato) went to Nervi's defence. He was Posener of the UK, who insisted that Nervi had been misinterpreted and quoted the following from his paper, "Why should we fear . . . that all this . . may lead to an intolerable monotony, when the past shows that the general direction given by styles has never hindered the development, and the affirmation of individual personalities, of nations?" The adoption of a style, Posener suggested, does not hinder development. It



The Korean delegation Working Group at County Hall Three Moroccan delegates



may limit choice but the choice is a rich one.

Smith of Australia made an interesting, if somewhat irrelevant, criticism of Nervi's paper by contradicting his reference to the empirical methods of past building. He pointed out that Gothic buildings were indeed calculated and their sizes specified fairly exactly by the patrons of architecture of the day.

A General Survey of Architectural Change Caused by the Emergence of New Techniques and Materials

Professor Henry Russell Hitchcock's paper, started by analysing the attitude of some of the leaders of the modern movement to materials. He stressed in this the aspiration and creative imagination that lay behind the adoption, for instance, of glass and light metal. He assessed the present situation as a rejection of the ideals of the modern movement as inadequate, but rationalism without the romanticism of the imagination hampers the most logical and effective expansion of new materials. What we are seeing now in our new, more subtle and sophisticated approach to materials is probably the birth of a richer style somewhat as the Baroque was the richer and more elastic successor of Mannerism.

The three principal speakers who opened the discussion dealt with Hitchcock's paper none too kindly. In particular, Mumford flatly rejected its thesis, saying that it completely ignored the real issues which were currently threatening architecture and, for that matter, society as a whole. What Hitchcock had to say, he believed, was rather like the old-fashioned dietitian who prescribed in terms of calories, and forgot about the vitamins. He then repeated, in the most eloquent terms, the warning he had already given in his Gold Medal address. Unless architects had some say in the design of mass-produced products for the building industry, and unless they firmly grasped the necessity to design in terms of the needs of human beings and of society, then we would quickly arrive at the situation where man was completely dominated by the machine.

Percy Johnson-Marchall said that the elegant structure of historical comment was all very well, but he hoped that the discussion could concentrate upon the practical steps that architects could take in the face of growing industrialisation.

After these principal speakers, the discussion went very slowly, so slowly that the Chairman, Yang Ting Pao, rather quickly asked Hitchcock to sum up, which he did by quite surprisingly admitting that new materials and techniques could not in themselves create new styles of architecture (surely reversing the whole of his critical thesis?). But he defended the stylistic

change he had identified in his paper as a type of "new baroque" as a development which must be recognised.

The meeting would have then closed, had there not been considerable prodding from Stanley Meyrick, the Group secretary, who got the chairman to invite Percy Johnson-Marshall to speak again. This opportunity was seized to tell the foreign delegates briefly, but very clearly, the story of prefabrication in the British schools programme, as a practical example of how, by development work, the profession could create their own vocabulary of mass-produced components for a large number of buildings.

The discussion started badly, purely because of language difficulties, with a paper written in rather obscure French from the original Hungarian by Mayor. This was followed by a brief but splendid analysis by Buckmaster Fuller of the way in which technical progress had in general not been brought about by the architect, but as a by-product of preparations for war. About two and a half billion dollars had been spent, for instance, on the technical development of military aircraft a weapon superseded as soon as the first sputnik was aloft, but the technical achievements in this field were gradually spreading through to things of everyday life, such as passenger aircraft, cars, etc. In all such development reduction of weight was allimportant, with the sole exception of building. It was already guite clear that many types of buildings could be constructed at one per cent or less of the weight of typical current designs. This would seem to be the main way forward.

Percy Johnson - Marshall discussed LCC housing, which by then many of the delegates had seen, telling how the pilot projects were set up on a firm sociological basis, how mock-ups were made, how a development group was set up, how, in fact, the job of LCC housing was set in motion on a broad and systematic basis.

In the general discussion that followed, speakers suggested that Hitchcock's thesis was either wrong or too narrow. Feyeton of France, who is both engineer and architect, eloquently stated that it was the architect himself that we must be worried about, not how new materials and techniques shaped architecture.

Professor Bedrac of Chile pointed out that most architectural criticism, indeed architectural history, concentrated upon the single, luxury one-off designs, but gave no clue as to the main stream of building. A comparative study was needed of building methods with their sociological background both for the past and the present time.

Bruce Martin made a plea for an international glossary of terms. He felt that this congress was very hampered by this language problem, and such a glossary was essential if there were to be any useful exchange of ideas and information.

The discussion ended without any reply from Hitchcock, a disappointment. But perhaps he was in no real position to sum up, since the discussion was hardly, at least for most of the time, about his paper at all. Hitchcock's paper hardly faired better the following day. The first speaker, Jan Zachwatowicz of Poland, after pointing out that modern architecture was now made up, not of single masterpieces, but of large-scale building to meet the mass demands of society, said that he could only describe Hitchcock's thesis pointing to the emergence of a "new Baroque" as alarming. The second Pole, Dr. B. Liswowski, isolated as the factors tending to shape and change current architecture: new social needs; advances in technology, manufacture, science and aesthetics; the skill of the architect as the leader of a team; skills of consultants working with the architect; and growing understanding of clients of the essential part they must play. He added that to isolate merely the effect of new materials and techniques, as in Hitchcock's paper. and indeed in the work of some architects who ignored all the other influences which should shape design, resulted in wrong attitudes and bad building. Even the use of cast iron (which Hitchcock frequently mentions) in the early factories in England, might be better explained in terms of new space needs for looms, or purely economic factors.

This attitude was echoed by speaker after speaker, Butusov, for instance, after desscribing factories in Russia (each of which making 250 prefabricated flats a day), produced some quite frightening statistics of the number of housing units a year required throughout the world to answer the rapid growth in population, something like 25 million annually. In Russia alone, they had to think now in terms of a million flats a year.

In reply, Hitchcock retracted for the second time. He now, he said, deeply regretted the use in his paper of the term "Baroque." This was being widely misunderstood. All he meant was that there was something in the richer, more fluid designs of some current architects which was analogous to the change that occurred from Mannerism to Baroque.

#### FRIDAY

At the closing plenary session, J. M. Richards (as rapporteur) summed up the discussions on the three main papers. He said that industrialisation had arrived, whether architects liked it or not, but that it would be a trend for the worse without the controlling mind and eye of the architect, and above all his sense of purpose. It was essential to integrate architectural use with industrial production, and it was not without significance that many of the British speakers had referred to the development work in this country in the schools field. He stressed that the success of this programme was not only the integration between architectural and manufacturing needs, but equally between architect and educationist. Very many speakers had pointed out the perils of industrialisation: that the sense of humanity must not be lost. He reminded delegates that machine products are themselves man-made, and that the architect had no exclusive right to speak on behalf of humanity.

# LETTERS

Theo Crosby, ARIBA

T. B. Roels of Kenneth Wakeford, Jerram & Harris

#### N. Constantinides

R. Jas. Crabtree

#### Cyril Sweett, FRICS

Misha Black, RDI, FSIA

#### Crosby replies

SIR: While being duly appreciative of the kind things you have written about the IUA Headquarters building. I think it would be fair to comment on some of your more wounding remarks.

The building is to be used after the Congress—for a variety of functions—by the sponsor companies. The shelving/cupboard situation is a temporary usage of the Congress, like the registration counters, and will be dismantled to leave bare committee rooms. The only storage embarrassment has been the arrival of several thousand free copies of the AJ. As for backless seats, with over 2,000 Congress members using the building, it was necessary to secure a rapid turnover—so, no too-comfortable seats for somnolent mobile fanciers.

The layout, as you point out, ignored the river view, for the following reason. The site is some 300 ft. from the river, with a foreground full of Festival wreckage. The views across the river only make sense if this is cut out, and if your photograph on page 14 of the east court had been taken from eye level, you would have had an interesting juxaposition of John McHale's construction and the towers of Whitehall Court—much more fun than an acre or two of stained concrete and car park.

And, as for that old humanistic approach, man, that was just what we had in mind! It looks better with people.

THEO. CROSBY

PS. By the way, you got the captions to Mary Martin and Anthony Hill's constructions muddled.

#### Office expedition

SIR: Having just returned from a most interesting architectural tour of Rotterdam in company with my colleagues of both London and Bristol offices, I felt you might be interested to learn of this trip.

Fifteen of us after having dinner in London took the Friday evening KLM plane from London Airport to arrive in our Rotterdam Hotel at 10 p.m.

The following day was spent examining

some of the old and new buildings with the president of the Rotterdam branch of the Netherlands Architects, and his wife, both of whom most ably conducted us from place to place so that we could examine buildings of particular interest. Each member of our group was most impressed by the way in which the rebuilding of Rotterdam has been carried out and with the buildings that go to make up this vast scheme.

On Sunday, the whole party decided to take a trip to North Holland by coach and boat, which included Amsterdam and various other places, returning to our hotel early in the evening thoroughly satisfied with our day.

Early next morning, Monday, we caught the plane to London and arrived back in the office about 11 a.m. tired but convinced we had had a worthwhile and enlightening weekend in Holland.

We believe this to be a rather unusual venture so far as private offices are concerned and we wish to take this opportunity of expressing our appreciation to the partners of our firm.

T. B. ROELS

N. CONSTANTINIDES

London, w2

#### Elgin Marbles

SIR: In Not Quite Architecture, AJ, June 22, Mr. Atkinson is very much misinformed concerning the Elgin Marbles. However, disregarding his rather vague points of support for not returning the Elgin Marbles to Athens, perhaps he would like the rest of the frieze to come to the British Museum, just because more people would see it than in the Archaeological Museum (entrance 2s 6d)?

London, NW5

**Regional planning** 

sire: The editorial in your issue of June 15 (*Planning without Regions*) made very interesting reading.

In short, the "planning" theory is returning to the 1932 days, the days of joint committees, etc.

As you so rightly say, "Why not now?" R. J. CRABTREE

Winchester

#### RICS quantity surveyors' fees

SIR: Your report in the issue for June 15 on the new fees scale postulates an interesting theory in suggesting that the degree of responsibility the quantity surveyor assumes should bear some relationship to the differential between the architect and the quantity surveyors' fees.

As for contracts for building work with a large amount of repetition, the fee for complete quantity surveying services amounts to 2:15 per cent on a contract of £500,000, dropping to 1:76 per cent at £1,000,000, the comparison you make between the fees scales is not only misleading but in many respects unfortunate. The Architects' Journal for July 12, 1961 47

It would surely be better—as the report is published under a heading News—if the full implications of the new scales for quantity surveying services were revealed to your readers so that they may judge for themselves.

Chartered quantity surveyors have at all times assumed considerable responsibilities, particularly since the war, and are at all times willing to assume full responsibility for the economics of building construction at all stages from the conception to the completion of the project.

CYRIL SWEETT

London, wcl

#### "Black marks time"

SIR: Astragal must have been in a hurry when he visited the students' exhibition at the School of Industrial Design (Engineering) at the Royal College of Art.

He has directed his full blast of technological criticism at a Second Year exercise (the outboard motors), commended two students, and dismissed the rest as "fancy box work."

I am sorry he did not have time to examine the long focus photographic lens (a serious analytical study carried to working prototype stage), or the crane cabin based on anthropometric and ergonomic examination of the operator's needs, or the motor cycle which the industry considered a sufficient technical innovation to warrant exhibition at the Motor Cycle Show.

He missed the improvements to the cabin arrangements of a Cessna aircraft, the new fountain pen, the minimal bathroom, the telephone, new window furniture and photocopiers.

The improved mechanical principles incorporated in the last so impressed the firm which originally briefed the students that they commissioned the College to redesign their present equipment.

MISHA BLACK

Not quite fair to the students?

London, sw7

#### ASTRAGAL replies:

No, I don't think I missed any of the items on Professor Black's list-though many visitors apparently did, so depressed were they by the conventional styling of most of the exhibits, and so accustomed were they to seeing substantially the same "improvements" to substantially the same sort of products at other schools that are not, unlike the RCA, supposed to be the highest post-graduate design school in the country -may I refer Professor Black to page 902 of the same issue of the AJ for another opinion supporting the now widespread impression that the RCA is lagging where it should lead? If Kit Evans, too, was misled, may it not be that the unfairness to the students lies in the superficial and arty manner in which the exhibits were put before the public, and in the failure to communicate such mechanical improvements as had taken place?

#### BASA EXHIBITION

## Work of twenty schools of architecture

BASA deserve considerable commendation for so successfully staging this exhibition in the RIBA's Florence Hall, believed to be the first of its kind to be mounted in this country. Every encouragement should be offered to assist this to become an established event.

#### Impact

The BASA brochure states: "Educational reform must be based on a fundamental re-assessment of the theory and practice of architecture and architectural education. and not simply on the streamlining of the existing system." The relevance of this statement is brought home by a survey of the work of these 20 schools, which discloses that the general pattern of education seems to have changed but little from that current 15 or 20 years ago. This is evidenced in the recurrence of First Year "Artist's Studios" leading by graduated steps to Fifth Year " Cathedrals."

It was not possible to discern any clear sense of direction emerging from the displayed work as a whole, and it was only rarely that this could be gleaned from the displays of individual schools. Strict limitation on the space available to each school must have posed difficulties of selection, but only a very few schools seemed to have felt the need to present a coherent impression of their courses.

There was little indication that anything was being done in the field of studies in the human sciences, whilst there was every indication of a preoccupation with the design of buildings per se. The few schools which are trying to reorientate their teaching in line with the possible needs of the future in relation to their own facilities, stand out prominently by virtue of their considered and well-conceived displays.

#### **Display form**

A simple bolted softwood framework on a square grid of about 10 ft. fills the Henry Florence Hall. Each school is limited to six display boards (two of which are quite modest), displayed within a square bay. The boards are pinned to a deep rail above head height, with a similar bracing rail at knee level. These rails are arranged to pass through the centres of columns composed of four light deal sections. This arrangement is admirable for its simplicity and evident cheapness, and was erected with exemplary alacrity. If the framework is to be used for other exhibitions, it may be necessary to add some wire bracing to prevent slack developing at the joints through the "let's see how strong it is" assaults of dedicated architects.

Due to the relatively small size of the boards (an economic compulsion), the gaps between them become rather obtrusive. A closer grouping of boards and some coherent relationship with the framework might

obviate this, and also assist in defining the circulation. These, however, are but small criticisms to set against the achievement.

#### **Outstanding displays**

EDINBURGH COLLEGE OF ART SCHOOL exemplified one of the best display techniques, though a number of photographs of First Year models were inverted. Photographs of the Biophysics Department Building designed and built by sandwich students, showed this to be one of the more distinguished of the live projects. The display generally conveyed the impression that the school is doing a good job.

LIVERPOOL presented a display of uncomplicated work supported by brief explanations indicating an integrated and comprehensive course. The Second Year problem studied in detail, impressed as an excellent educational device.

MANCHESTER UNIVERSITY stated that their aim was "education in the broadest sense, to set the student on a course of development extending throughout his professional life." In support of this, work was shown under titles of "Basis, Process, and Product," paralleling the earlier, intermediate, and final years; this was refreshingly free from esoteric preoccupations.

NOTTINGHAM, in spite of having suffered a fire which destroyed their prepared material, were still able to present an interesting and vital impression of their analytical yet imaginative approach. A da Vinci Museum in Florence was remarkable for its use of apparently casual and haphazard forms derived from traditional sources, though the claim that this was still of this age was not readily appreciated. A marvellous measured drawing of a water mill may do much to resuscitate this dubious exercise. A strong impression was left that this is a very lively school achieving worthwhile results from new methods.

ROYAL WEST OF ENGLAND admitted to " varying the course in the light of experience' (streamlining?), but countered this by the inclusion of such studies as Perception, Comprehension, Classification, Generalisation, Creative Intuition, Rationalisation, Making Value Judgments, and Communication . . . in the First Year. This was one of the few schools to give brief explanations of the course in each year.

#### **General comment**

The BARTLETT and DURHAM UNIVERSITY schools are both undergoing reorganisation following the appointments of their new professors. The BARTLETT wisely presented a very small and selective display of work concentrating on the new First Year course. with explanations of the aims and organisation of the school in support. In contrast, DURHAM showed an uneven selection of work which underlined the transitional dilemmas of the school.

The ARCHITECTURAL ASSOCIATION, which also has a new head, appeared to be holding its hand with a prestige exhibition, the greater

part of which was devoted to the already well-publicised Paddington Development Scheme

KINGSTON chose to restrict their display to the Field Study of Blandford they undertook in 1960, so that it was not possible to compare their work with that of other schools.

LEICESTER displayed First Year Sketch Designs exhibiting startingly powerful influences from sources as varied as the Maison Jaoul, Charles Eames, and "Italian Wright." It seemed remarkably early for students to be cutting their teeth on such strong meat.

BIRMINGHAM concentrated exclusively on photographs of their well-known live projects, without showing the processes by which these come about, information which would have been very useful and interesting; their "Conglomerates" are such fascinating educational tools as to deserve wide publicity.

Almost without exception, those schools having access to allied craft departments exhibited work on the traditional pattern of more and more complex buildings, few of which seemed to exploit the advantages of such special facilities.

A number of schools presented far too many reduced Photostats of complex drawings which proved quite indigestible to the exhibitee. One school not only fell into this trap, but also mounted their minute Photostate on large-scale patterned photographic backgrounds; the effect of this was devastating.

It is unfortunate that the integrating theme of "How the Schools Go About It" should not have been followed, so that all schools could have been contrasted with one another in this respect, for this must be the main interest in such exhibitions. Individual student's work, whilst interesting in its own right, must be considered subsidiary to the main purpose of an exhibition of this kind. BASA might consider mounting a separate exhibition of exciting, off-beat, blind alley, exploratory, and ridiculous yet stimulating schemes, and organising a panel of respected avant-garde critics to dissect them; this could provide some outlet for the projection of architectural imagery. At the same time, an equally selective exhibition concentrating on work showing a practical and integrated concern for the human needs of the moment might prove more in keeping with BASA's aims.

The exhibition closed last week.

G. P. W. TAYLOR

# DIARY

Designs for prisons and penal institutions from many countries, at the Architectural Association daily from 2 to 5 p.m. Until JULY 15

Architecture Today: Arts Council Exhibition designed by Trevor Dannatt. Until JULY 29

Russian Trade Fair, Earls Court.

JULY 7-29

**NEWS** 

## **R**IBA Council 1961-1962 Election results

DOCCIDENT	
PRESIDENT: Professor Sir William Holford U	nopposed
PAST PRESIDENTS:	
	nopposed
Sil Basil Spence	VOTES
FELLOW MEMBERS OF COUNCIL:	
<ol> <li>George Grenfell Baines (Preston)</li> <li>Albert William Cleeve Barr</li> <li>John Lewis Womersley (Sheffield)</li> </ol>	1,923
ASSOCIATE MEMBERS OF COUNCIL: 1. Percy Edwin Alan Johnson-	
Marshall (Edinburgh) 2. William Alexander Allen	2,611
(Garston)	2,406
3. William Gough Howell	1,623
4. Thurston Monier Williams	4,373
LICENTIATE MEMBER OF COUNCIL:	
1. John Leslie Jones (Cheltenham)	
U	nopposed
ORDINARY MEMBERS OF COUNCIL:	
1. Clifford Ewart Culpin (F)	1,455
2. John Charles Eastwick-Field (F)	1,366
3. Kenneth John Campbell (A)	1,331
4. Leonard Grange Vincent (A) (Stevenage)	1,208
CANDIDATES NOT ELECTED:	VOTES
1. David Barclay Waterhouse (A)	1,196
<ol> <li>Jeremy James MacKay-Lewis (A)</li> <li>Leslie Hugh Wilson (F)</li> </ol>	1,183
(Dullature, by Glasgow) 4. Peter Browning Dunham (F)	1,161
(Luton) 5. Leonard Cecil Howitt (F)	1,146
(Manchester)	1,140
6. Bryan Percy Westwood (F)	1,138
<ol> <li>Guy Barrie Oddie (A) (Epsom)</li> <li>Roger Talbot Walters (A)</li> </ol>	1,067
(Chessington)	1,042
9. Joseph Roy Parker (A) (Birkenhead)	1,031
10. George Haslehurst Lawrence (A)	
(Edinburgh) 11. Professor Jack Hollingworth	1,004
Napper (F) (Newcastle u. Tyne)	998
12. Harold Conolly (F) (Chelmsford	) 900
<ol> <li>George Roland Adamson (A)</li> <li>Basil Robert Ward (F)</li> </ol>	873
14. Basil Robert Ward (F)	853
15. John Clifford Barker (F) (Bedfor	
16. Eduardo Gordon Dodds (A)	660
<ol> <li>Norman Harold Fowler (F) (Lee</li> <li>Charles Edward Pearson (F)</li> </ol>	eds) 599
(Lancaster)	579
19. Herbert Kellett Ablett (F) (Hemel Hempstead)	564
20 Ernest Frederick Tew (E) (Bath)	463
<ol> <li>Ernest Frederick Tew (F) (Bath)</li> <li>David Stokes (F)</li> </ol>	403
22. Edwin Williams (F) (Teddington	) 368
23. Frederick Thomas Orman (F)	328
Dun Divio Tur im	

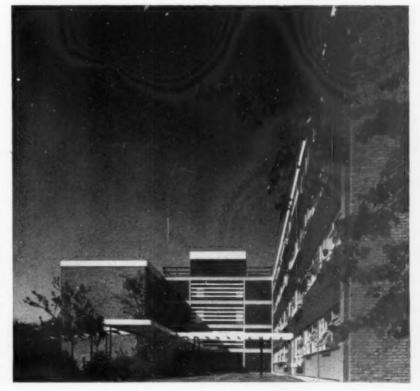
#### **BUILDING THEATRES** Congress of Theatre Technicians

British theatre architecture got a shot in the arm last week when a new variable-stage theatre for Birmingham was announced during the Congress of the Association of International Theatre Technicians. As adaptable theatre architecture was the theme of the Congress, the news of Cannon Hill Theatre (architect Herbert Jackson, director John English) was timely. Its stage will be capable of variation from proscenium style through a three-sided platform to theatrein-the-round. The theatre, which will be in The Architects' Journal for July 12, 1961 49

#### Good housing design awards



Two winning schemes in the MOHLG 1961 good housing design competition: below, Parkgate, Hove, designed by Eric Lyons; above, Munster Square, St. Pancras, London, designed by Edward Armstrong & Frederick MacManus. See also pp. 71 and 72



a park two miles from central Birmingham, will be part of a Midlands Art Centre for Young People embracing facilities for swimming, skating, dancing and games as well as drama. A trust fund has been set up to finance it and Birmingham Corporation has given its approval. A special Act of Parliament will, however, be necessary to make the park site available.

Another theatre project which had an airing was Stephen Garrett's design for a civic theatre-in-the-round at Newcastle under Lyme. Still only at a provisional-drawing stage, the theatre, if built, will at last provide a full-sized plant for English advocates of theatre-in-the-round.

Although the conference provided the first chance ever for British technicians to discuss experience and ideas with foreign counterparts, wide differences evidently separate national approaches to progressive theatre. According to the newly-formed Association of British Theatre Technicians what we need is information applicable to provincial civic theatres up to 1,000 seats in capacity. American experience, however. is mainly centred on small amateur community theatres and non-commercial college ones: Germany's is in the field of heavily subsidised "push-button opera houses" (80 have been built since the war). According to Peter Moro, designer of Nottingham Civic Theatre, French experience is probably most pertinent to us. He said: "Like us they don't build theatres, but if they did, they would face the same problems." It is often said that fire and safety regulations stand in the way of improved theatres and particularly of open-stage ones in which audience and action occupy the same space. Eric Jordan of the LCC spoke to the Congress on this subject. He made it clear that the absence of fly-towers for storing sets and of elaborate settings on stages themselves greatly reduced the fire hazards of open stages and stages-in-the-round. He said that the LCC would not hinder such developments.

Peter Moro spoke to the Congress about his theatre at Nottingham. One of the things that makes Peter Moro a key man in the ABTT, apart from the fact that he has tackled the problem of designing an outstanding new theatre and is now getting it built, is that he seems able to accept the limitations of municipal enterprise in a democracy few of whose inhabitants care or know very much about the threatre.

A most entertaining paper was given by Frederick Bentham, a director of Strand Electric, talking largely about the troubles he has had with architects planning theatre lighting installations. The famous case of the Festival Hall was trotted out again, but what has always struck me about that was not only how short-sighted the architects must have been to restrict the lighting installation so severely, but how strong-minded they were to resist Mr. Bentham in full cry. The ABTT's aim is to see that the 26 new theatres now under consideration in England achieve a high level of design and efficiency. The Association includes Peter Hall, Sean Kenny, and George Devine and its first coup was the holding of the AITT Congress in London. They hope this will be a first step

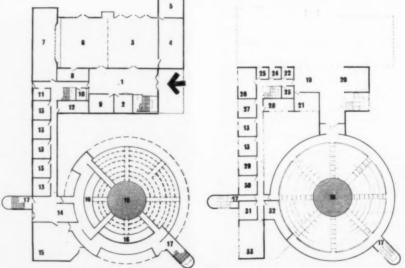
#### MOE BUILDING BULLETIN No. 3\*

#### Village schools

This latest addition to the remarkable series of bulletins about schools will be a "must" for the many private architects who are likely to be called upon to deal with local village schools. As with several of the more recent bulletins, it is notable for giving advice without limiting freedom in design and, above all, for its conveyance of a sense of enthusiasm and sympathy which, if it can be grasped by the individual architects responsible for these small but important school jobs, will be most valuable.

A good deal of the detail contained in this bulletin follows on from earlier studies, especially from Bulletin No. 16 which dealt with the Amersham Development Project. There are four main sections of which the first and the early part of the second are perhaps the most valuable. Section one deals briefly with the background to design in village schools, showing how much the family atmosphere and local interests should affect planning. Section two illustrates seven new small schools with a full description of a two-class school in Oxfordshire.

Sections three and four cover the remodelling of existing schools and include four examples. There are appendices which include a cost analysis of the Oxfordshire new school and a full list of the furniture. Since many of these small schools may well be dealt with by local architects who may not have had much previous experience of school work, it might have helped on the office routine side if some advice could have been included to elucidate the mysteries of SB Forms and the whole drill of obtaining approvals both for LEA projects and for those for church schools where slightly different procedure is involved. Subject, however, to this small criticism, the Ministry scores again in giving a lead to good planning. (See Building Study opposite.) \* HMSO 55 6d



Stephen Garrett's designs for a theatre-in-the-round at Newcastle u. Lyme: above, front elevation, below, left, ground floor plan, right, first floor plan.

towards shaking British theatre out of its technical insularity and towards stimulating more progressive design. They do not advocate one type of stage since they recognise different drama demands different settings, but they are determined to see that whatever stages are built are good of their kind. They feel that exchange of ideas and the establishment of a fund of experience should make this possible. An Architectural Planning Committee is to be set up which will make available to any architect faced with designing a theatre the latest information about all sides of theatrical design.

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# Infants' School

building study-2nd series

at TREYEW, TRURO, CORNWALL designed by F. K. HICKLIN, County Architect H. DOOTSON, Assistant County Architect assisted by K. M. G. KIRKBRIDE G. HARPER quantity surveyor R. H. HARDING electrical consultants heating consultant L. J. FOWLER

This project, although not in the strictest sense a village school, is mentioned in *MOE Building Bulletin No.* 3, just published, because it so admirably illustrates two planning themes; first, maximum flexibility of use, and second, the largest possible teaching area with the minimum of circulation. In addition, it is interesting to see how a local authority can take these ideas, also the basis for the planning of the MOE development projects at Finmere, Oxfordshire, and Great Ponton, Lincolnshire (AJ, June 30, 1960), and described in the *Bulletin*, and interpret them in a completely different way.



#### building study-2nd series

APPRAISAL. Despite the lip service paid on all sides to the schools programme, little attention is usually paid to the bulk of the output by local authorities. True, there are the outstanding successes of the CLASP group and several other authorities, mostly in or near the big centres of population, whose work is well known to the profession. But these hardly give a complete picture of the schools output as a whole, and it is therefore difficult to gauge how far the lessons put out by MOE in the Building Bulletins and in other ways is being understood, absorbed and applied. At the same time there are many smaller authorities, Cornwall being a typical case, which face special problems of a limited range of materials and craftsmanship, coupled with marked differences in climate, and which are bound to exert some influence on design. In compensation, such smaller and relatively isolated rural areas are often avoiding the rapid rise in building prices, which is currently causing schools architects such difficulties in or near the big conurbations, so that the CLASP type solution is not necessarily the right answer, at least for the moment, particularly bearing in mind the high cost of transport from the manufacturing centres.

The particular interest of this school is that it indicates how such a relatively isolated authority can, in fact, largely because of the lines of communication for school design set up by MOE, understand and absorb current and forwardlooking ideas on school design, and yet interpret them in a way which is in no sense a slavish imitation of MOE Development Group designs (the very last thing this team would wish), but an interpretation which turns to advantage the limitations and potentialities of local conditions.

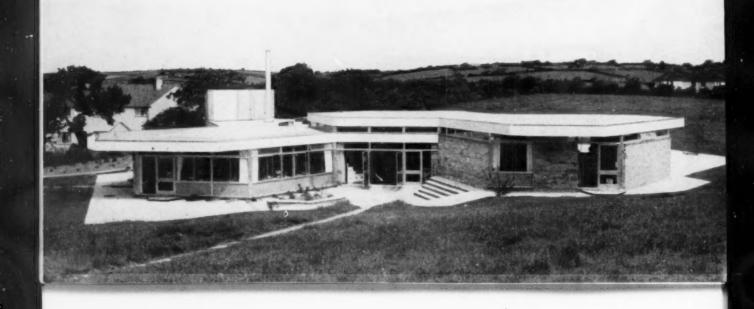
The main feature of the planning of this small school, which parallels the planning of the MOE schools at Finmere and Great Ponton, is the method of grouping class spaces directly round a central hall, with flexible partitions between, allowing a very wide variety of different uses when one or more of the class spaces are opened into the hall. At the same time, thanks to the fall across the site, it was relatively easy to raise the floor level of one of the classes so that, if need be, it could double as a stage.

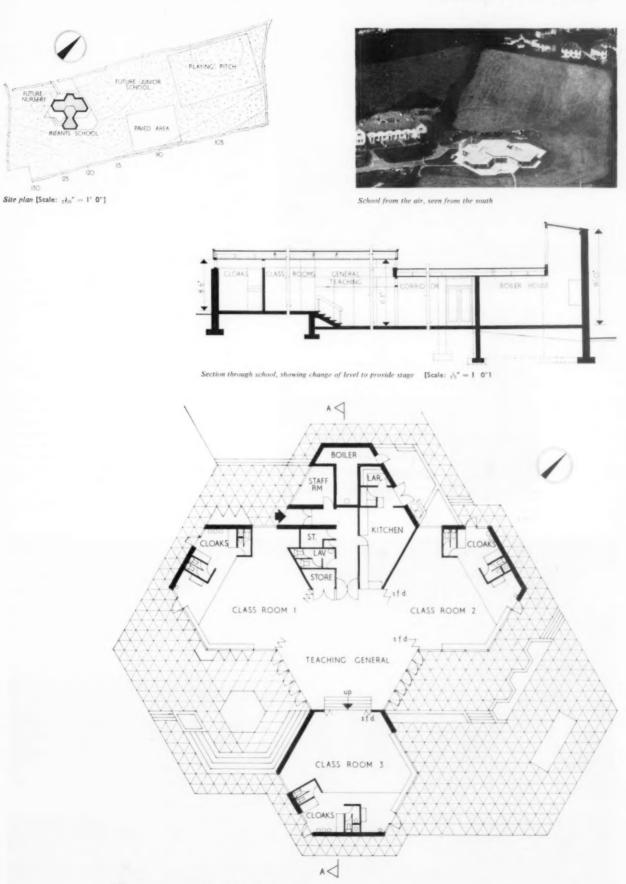
This arrangement, of course, can get rid of wasteful circulation space in the small school, except for the entrance hall. The other factor, which is equally essential in this type

School from the south

of plan for the primary school, is that each class space must be able to function completely as a separate unit with its own entrance, w.c. and coats facilities. This has been done by providing just under nine hundred square feet for each class, out of which these ancillaries are taken, the planning arranged on the same basis as, for instance, the MOE Amersham school plan (AJ, I August 1957) so as to provide a central space big enough for the whole class when there is formal teaching, and smaller bays opening off for practical and other activities carried out by small groups of children. At first sight there are inherent dangers in the deliberate choice of a plan which is a repeating hexagon, the sort of repetitive device that Frank Lloyd Wright was, for instance, so fond of using in his housing, which worked admirably in most parts of the building, but which when knitted interminably through such things as bathrooms and w.c.s, led to all sorts of embarrassing difficulties of detailed planning. It cannot be said that this school is entirely free of such problems, there being the one snag that the kitchen servery is slightly awkward and cramped. But in compensation, the class spaces, because of this non-rectilinear plan, are a fresh and exciting interpretation of the Amersham-type classroom concept, particularly the delightfully informal and small-scale spaces opening off the central volume of each class, which is itself free and irregular. At the same time, the hexagon device allows each class space to enjoy a variety of aspect, view and sunshine, and to be related to outside play areas, themselves informally arranged. In addition to these outdoor spaces, which knit in so happily with the interiors, a small outdoor theatre and a general play space have been provided. The theme of closely-knit but informal planning is consistently carried out both internally and externally, the two being regarded quite rightly as one design entity.

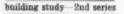
The architects have been able to take advantage of local materials, such as precast concrete roof units and the external stone walling. At the same time, due to the lack of plasterers as a separate trade (this work is apparently usually done in Cornwall, sometimes indifferently, by masonbricklayers), plaster with a rough wood-float finish has been used. This is particularly successful in its own right as a texture, and has the added advantage of being much more resistant to marking and abrasions than normal smooth





Plan of school and external works [Scalo: 24" = 1' 0"]

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School from road (above), and (top) entrance steps. Below, entrance with classroom on right

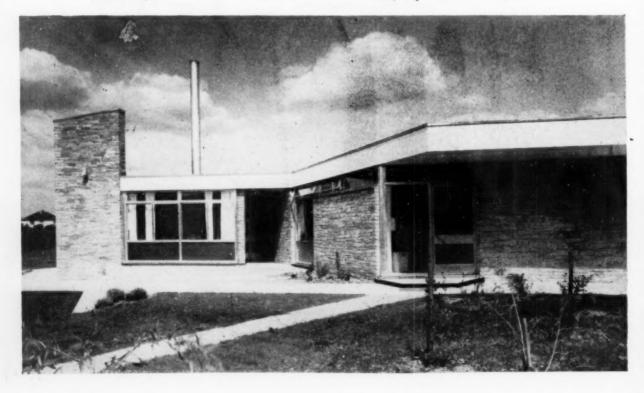
plaster. At the same time it is evident that the architect has attempted, very successfully, to provide a building which is largely maintenance-free, by a minimal use of paintwork. The result is an aesthetic which, without any theoretical or phoney aspirations to produce a regional character for the building, has achieved something which is specifically Cornish, whilst being thoroughly in line with the very best forward-looking ideas on primary school design. A few of the minor details as you go round the building are slightly awkward, and there is too much exposed pipery. Cornwall is one of those offices which believes firmly in delegating responsibility, and one cannot help feeling that these minor matters have resulted from a certain amount of inexperience, but that thanks to what has happened on this job, it will not occur again. In other words, the jobs architect method is the best possible way of improving the quality of local authority building.

#### CLIENT'S REQUIREMENTS

A three-class infants school for 120 children equipped with kitchen, and ancillary rooms for staff, stores, etc. All detail planning was carried out in collaboration with specialist organisers under the County Secretary for Education.

#### SITE

A field of  $4 \cdot 8$  acres, on which eventually will also be built a primary school with its own playing field, on the western fringe of Truro immediately adjacent to new council housing known as the Malabar Estate. The site falls some 26 ft. from south-west to north-east with the steepest part in the north-west corner. There is a flattened depression in the south-west corner where the infants' school has been built. The cross-fall in this area is 7 ft. Access to the site is from the estate in the north-west corner; the entrance road will later be extended to serve the primary school. No long distance views from the site except towards the northwest, there being higher ground all round giving some shelter against the worst gales; no existing trees except for small elms<sup>4</sup> and oaks in the hedgerow.



#### PLANNING AIMS

As much floor space for teaching areas as possible within the cost limit, thus also to reduce circulation space to a minimum; to provide teaching spaces which would allow a degree of flexibility in use, and within each permit a variety of activities to go on at the same time, each in its appropriate area. Also to provide a common hall area closely located to the classrooms, so that all or any of these could be opened into it. These requirements suggested the plan of five interlocking hexagons, the central one being the hall, three outside ones the teaching spaces, the fifth to accommodate kitchen, staff room, boiler room, etc. Each hexagon is about 1,000 sq. ft. in area. Each teaching space contains its own cloakroom, entrance and lavatories, with alcoves to either side, one of which is a workspace with tiled floor; this still leaves a large area open for formal teaching or other activities involving the whole class. The fall of the site allowed one teaching space to be raised above the floor level of the rest of the school. All the teaching spaces open on one side to the hall, the higher one forming a stage. This arrangement gives a variety of internal views, and each classroom gets its fair share of sun. The external play area is broken down into smaller areas on three levels between and around the hexagonal wings. One has been made into a small arena which could be used for outdoor drama. The roof is cantilevered over each class entrance to form a covered porch, but there are no outside covered play spaces, since the climate makes these either unnecessary or ineffective. A nursery unit is proposed as a future extension and this will be planned as another hexagon adjoining the north-west classroom.

#### SUMMARY

Total floor area: 5,250 sq. ft. Type of contract: RIBA fixed price. Tender date: July 1959. Work began: August 1959.

Entrance, with staff room and tank tower on left



Close relationship between indoor and outdoor spaces

Work finished: August 1960.

Tender price of foundation, superstructure, installation and finishes, including drainage to collecting manhole:  $\pounds 20,580$  os. od.

Tender price of external works and ancillary buildings, including drainage beyond collecting manhole:  $\pounds_{1,575}$  os. od. Total:  $\pounds_{22,155}$  o. od.

#### COST ANALYSIS

Based on tender (AJ revised elemental breakdown in use from November 10, 1960.)

	Cost per :	ыq.	π.
	1		d
Preliminaries and insurances	1	£.	11
1.53 per cent of remainder of contract.			
Contingencies		1 1	11
Work below lowest floor finish		6	6
Unreinforced concrete slab on site filling			



building study 2nd series

#### STRUCTURAL ELEMENTS

#### Frame

3-in. diameter mild steel tubing columns supporting star-shaped traditional 12 in.  $\times$  6 in. rolled steel joist. Beams cased within roof space, stanchions clad in pressed aluminium.

#### Roof

11-in. lightweight locally made reinforced concrete decking supported on 5 in. × 2 in. joists notched to the top member of steel joists. Ceiling is fixed to a second set of 5 in.  $\times$  2 in.

joists notched to the bottom flange of the steel beams. 1-in. aqua-play fascia painted white with an aluminium flashing.

Three-layer built-up bitumen roofing finished with 1-in. Cornish granite chippings; 611 sq. yds., 60s. 6d. per sq. yd.

#### Rooflights

Four each 4 ft.  $\times$  2 ft. consisting of a sheet of }-in. wire glass held in an aluminium sub-frame. The remainder is constructed in marine plywood. In the side of plywood upstand is a small bottomhung hopper to provide ventilation; 31 sq. yds., 73s. 6d. per sq. yd.

#### External walls

Slate stone slabs backed with concrete against a vertical damp membrane painted on in three coats with a 4-in. concrete block inner leaf; 160 sq. yds., 131s. od. per sq. yd.

#### Windows and external doors

The sashes, sub-frames, frames and external doors in extruded aluminium section. Lower windows are horizontal sliding with top hung open out hoppers above. Glazed in 32 oz. sheet glass with }-in. armour-plate in the panels between floor and sill level. 9 single doors.

5 double doors.

Each 3 ft. 0 in. wide × 6 ft. 5 in. high. 8 single action floor springs, 8 pull handles and 10 pairs lever handles and latches. Total area of windows and doors; 2,223 sq. ft., 31s. 10<sup>3</sup>d. per sq. ft.

#### Partitions

4-in. concrete block; 128 sq. yds., 16s. 6d. per sq. yd. 9-in. concrete block; 43 sq. yds., 30s. od. per sq. yd.

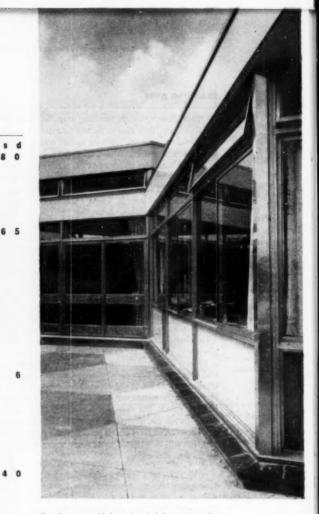
#### Internal doors

Plywood doors on skeleton frame core. 14 single doors each 6 ft. 6 in. × 2 ft. 6 in., I pair double doors 5 ft. × 6 ft. 6 in.; 254 sq. ft., 6s. od. per sq. ft. 3 sliding and folding partitions all 8 ft. o in. high; 424 sq. ft., 11s. od. per sq. ft.

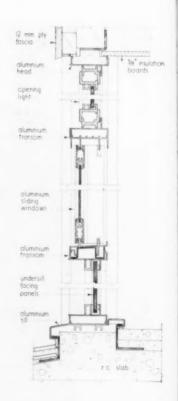
#### Ironmongery

Latches and lever handles to all doors, bronze hinges and one pair of floor springs. Ironmongery to sliding and folding partitions.

Total of structural elements: 45s 7id



Detail, above and below, of typical classroom windows



#### [Scale: 2" = 1' 0"]



7

1 11

1 12

13 6

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FINISHES AND FITTINGS

#### Wall finishes

1-in. single coat sand cement rendering finishes with a fine wood float; 521 sq. yds., 10s. 9d. per sq. yd.

8

1

1

#### **Floor finishes**

Wood block except for stores, lavatories and " dirty " areas of the classrooms, which are in concrete tile.

3-in. Iroko woodblock; 364 sq. yds., 34s. od. per sq. yd.

Concrete tiles; 147 sq. yds., 33s. 6d. per sq. yd.

#### **Ceiling finishes**

§-in. asbestos cement sheeting "V" jointed and fixed to 5 in.  $\times$  2 in. joists with 2 in.  $\times$  1<sup>1</sup>/<sub>2</sub> in. noggings as required. No cover mould around the edge; 594 sq. yds., 27s. 3d. per sq. yd.

#### Decorations

Walls and ceilings, 2 coats of emulsion paint. Exposed hardwood internally treated with 2 coats cellulose lacquer.

Aluminium windows and doors left exposed. Remaining softwood door frames and other exposed joinery primed, 2 undercoats and I finishing coat of gloss paint.

#### Fittings

Built-in cupboards provided in all classrooms, including a casing for heaters. Built-in cupboard in headmistress's room. Shelving in kitchen, stores, and kitchen fittings.

#### Total of finishes: 12s 9d

#### SERVICES

	1	1
No. of each		
type		
3		
4		
12		
3		
9		
2		
	type 3 4 12 3 9	type 3 4 12 3 9

#### Waste, soil and overflow pipes

Waste and overflow pipes in copper

#### **Cold water services**

Copper generally, including rising main and galvanised storage tank. No. of draw-off points: 10.

#### Hot water services

Electric water heaters taken from cold water supply and discharging over the various fittings directly. No. of draw-off points: 14.

#### Heating and ventilation services

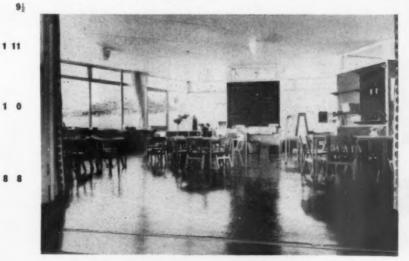
Heater batteries providing forced warmed air, fed from oil-fired boiler. Heat load 379,000 Btus per hour. Intake fans to each heater cabinet in classrooms to introduce a percentage of fresh air. 2 roof extract ventilators in kitchen.



Entrance hall, the only circulation area



Assembly Hall (above) and typical class room (below)



#### building study-2nd series

#### **Electrical services**

Distribution by pvc covered cable with bare copper wire to earth for lighting supply. Screwed conduit for power circuits. No. of points: lighting, 48; power, 16; radio, 4.

**Special services** 

Sink unit, 2 ft. hot cupboard, 8 cu. ft. refrigerator, potato peeler and wash-up unit

#### Drainage

4-in. glazed earthenware pipes.

#### Total of services: 20s 01d

#### External works

Drainage out-fall 100 ft. long	IId.
Roads and paths	2s. 81d.
Electrical water connections	IId.
Site layout and planting	91d.
Boundary walls and fences	81d.

#### Total cost per sq. ft. of floor area:

£20,580 (net cost excluding external works)

5,250 sq. ft. (measured inside external walls)

#### CONTRACTORS

Main: E. Jewell. Sub-contractors and suppliers—Ironmongery: Dryad Metal Works Ltd. and Hendersons Ltd. (sliding/ folding partitions). Flush doors: John Williams & Co. Ltd. Electrical: South Western Electrical Board. Wood block flooring: Jewsons Ltd. Heating: Weatherfoil Ltd. Aluminium windows: John Thompson (Beacon Windows) Ltd. Roofing: William Briggs & Son Ltd. Steelwork: J. H. Slade Ltd. Sanitary fittings: Adamsez Ltd. Ceiling sheeting: Cape Asbestos Co. Ltd. Staircase nosings: Ferodo Ltd. External walling: The Old Delabole Slate Co. Ltd.

seembly Hall. By use of sliding folding doors, this can be thrown into any or all of the class spaces

#### COST COMMENTS

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3 15

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This cost analysis displays differences with other recently published examples. The main groups of elements are compared with the MOE village schools at Finmere and Great Ponton, and with the Herts loadbearing experiment at Cheshunt (AJ, 27 April, 1961) in the table below:—

1	11	Group of elements	Treyew	Finmere	Great Ponton	Cheshunt
2	31/2	Preliminaries, etc., work below ground floor level Structure	s d 9 68 36 02	s d 8 01 29 21	s d 9 04 24 4	s d 6 91 28 71
		Finishes and fittings Services Total net cost	12 9 20 0 <sup>1</sup> / <sub>2</sub> 78 5	15 2 13 71 66 01	14 92 14 52 62 75	12 9 <sup>2</sup> 12 11 61 1 <sup>1</sup>
			£ 5. d	. £ s. d.	£ s. d.	£ s. d.
		MOE net cost per place Area per place (sq. ft.)	149 10 . 43 75	41·21	144 10 6 43 89	144 3 21 46 0

It is clear that there is a saving on finishes for the Treyew school, more especially in comparison with the MOE village schools, because of the greater use in the structural elements of high quality self-finished materials. This is particularly noticeable under decoration, which at Treyew cost 1s. 6d. per sq. ft. in comparison with rather over three shillings for the MOE schools. This does not, however, completely explain the higher figure for structure at Treyew. Here the main difference is not, as might be expected, in the external walling, where despite the use of local stone the elemental cost at Treyew is strictly comparable with the other three schools, evidence that the use of such local materials is no expensive whimsy. The main difference lies in windows and external doors, which cost 13s. 6d. in comparison with under 5s. for the two MOE schools, and 7s. 11d. at Cheshant. The choice of aluminium for this element is very understandable in an area so highly exposed, particularly with the advantage of low maintenance costs. But this sort of decision has only been made possible because of the very efficient planning which allowed an extremely high percentage of teaching area.





## THE INDUSTRY

This week Brian Grant describes a domestic centralised vacuum cleaning plant, the plastics exhibition, roofs supported by cables, and some new brochures on lighting fittings

#### Centralised vacuum cleaning

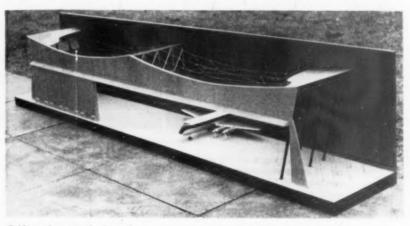
A centralised vacuum cleaning system with a centrally placed suction unit and pipework to strategically placed sockets is nothing new in large-scale buildings, and in fact a small scale unit for domestic use was produced before the war. The smaller version has now been revived by Goblin, and consists of a large capacity suction unit which can be placed out of the way in a utility room or garage and should not need frequent emptying. The cost of a complete installation seems likely to be in the region of £100, but it avoids carrying the ordinary suction cleaner, which can be fairly heavy. from room to room, as there is only the light suction hose to be plugged in. The system also has the advantage that dust is not stirred up in the unswept parts of the room by the air streaming from the outlet of the ordinary portable cleaner. It should perhaps be pointed out that the sockets give suction only, and that the paint spraying devices sometimes supplied for use on the pressure side of the normal cleaner are not possible. I have generally found such fittings to be not of much use, and certainly inferior to the high pressure spray attachments which the electric drill people produce, so this limitation probably does not matter much. (British Vacuum Cleaner & Engineering Co. Ltd., Goblin Works, Leatherhead, Surrey.)

#### **Plastics** exhibition

The plastics exhibition will have closed by the time these notes appear. It was a show

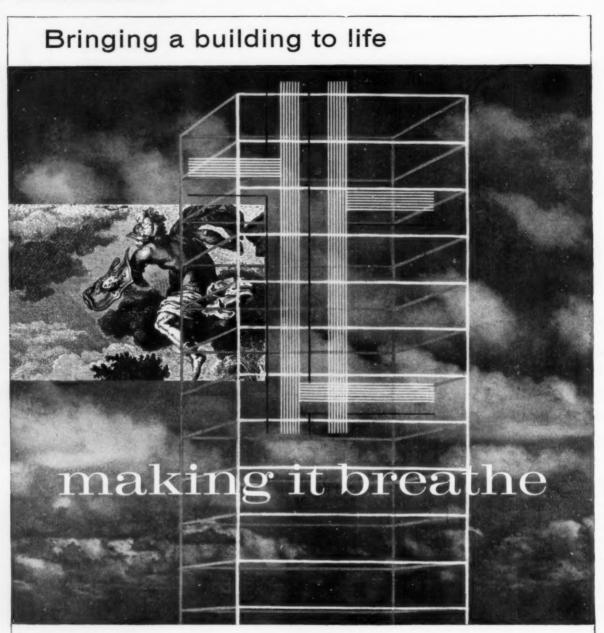


Centralised vacuum cleaning by Goblin



Cable roof supports by Jawerth

devoted very largely to the machinery suppliers and the manufacturers of raw materials, so that the end products shown were intended to be mainly eye-catchers like car bodies or speedboats, but there were one or two stands, notably ICI, where a good deal of space was devoted to products for the building industry. There is still, of course, a tendency to make faithful copies of timber and steel shapes, but the more sensible producers are having second thoughts, as can be seen in such relatively simple things as rainwater goods. Much is also being made of the possibilities of plastic pipe for mains wate: distribution and similar services, where it seems that this country is well behind the rest of Europe; but plastics for general plumbing is definitely not yet. For cold water services, yes, but not for hot, and it is too much to expect the average builder to use two materials where he has been accustomed to one only. One or two firms are suggesting the use of foamed plastics for filling brick wall cavities, an idea which seems to me wrong, for although it will improve the insulation, a cavity seems intended more for waterproofing than for insulation, and



A modern building is a living organism. It must breathe for its occupants, and ventilation or air conditioning systems are its lungs. How it breathes; the number of air changes, the amount of heating or cooling and humidity of the air depends on many factors; its function, number of occupants, aspect and seasonal changes. These must be calculated, and plant, fans, ducting and outlets designed at an early stage. Then, as the building grows, the installation proceeds, at the pre-arranged pace.

It's a problem of design, teamwork and timing, needing organisation and experience. In fact, if it's a big job, it's more than likely that the whole thing was left in the hands of Haden — capable hands, thoroughly versed in the problems of bringing a building to life.

# HADEN

#### Heating, Air Conditioning, Piping and Sanitary Engineers

G. N. HADEN & SONS LTD., 7/12 Tavistock Square, London W.C.1 and branches throughout the United Kingdom and Overseas

#### technical section

anything which can form a bridge between the two skins is better avoided.

ICI, incidentally, have published an excellent 70-page booklet on *Plastics in Building*, well illustrated and objective, and an admirable guide for those who want to know which types of plastics are suitable for what. Get a copy from the ICI *Plastics Division, Black Fan Road, Welwyn Garden City, Herts.* 

#### Cable supported roofs

The Jawerth system of roof construction was evolved in Stockholm and gives long clear spans free from columns. It makes use of what is described as a rigid cable roof truss, which consists of two main cables, an upper and a lower, braced together by diagonal ties to make the truss rigid and prevent distortion under load. The diagonals are secured to the main cables by specially designed clamps and are pre-tensioned. A tension is thus applied to both the main cable and to the stays, the pre-tensioning loads being calculated so that the tension is maintained under all conditions of loading. A variety of coverings can be used: one that has been employed with great economy consists of a light trough type of decking fixed to the cables by U bolts and finished with insulating board and roofing felt. Ceilings are fixed to the lower cables, or may be suspended.

The system has spread to France and Germany, and in Paris a covered market with a clear span of 14 ft., designed by Michel Fourtané, was completed as recently as May this year. Marketing in this country is in the hands of British Ropes Ltd., Anchor & Hope Lane, Greenwich, London, SE7.

#### **Lighting fittings**

Troughton & Young have just issued two new leaflets, one of which (27) shows a complete range of slim section fittings in the Tubalux series. They are made in single and twin lamp versions and are for commercial, industrial or decorative use. The other leaflet (26) illustrates 8 ft. twin lamp industrial fittings with Westinghouse 110 watt high output lamps. The fittings are suitable for factories or stores, especially where light intensities above the average are needed, or for the lighting of high bays. The lamps have an extremely long life, up to 18,000 hours' continuous burning, so that fewer lamp replacements are required. (Troughton & Young Ltd., 143, Knightsbridge, London, SW1.)

The prices are prepared by Davis, Belfield and Everest, Chartered Quantity Surveyors.

#### 8 ESTIMATING

# current wage rates, market prices and measured rates

#### Wage rates

Rates of wages as from February 6, 1961, are as follows:

	Craftsmen	Labourers		
	s d	s	d	
London District	5 14	4	6	
Liverpool and District	5 I÷	4	6	
Grade classification A	5 0	4	44	

#### Market prices

Prices are given for the major items in each trade, they are intended as average prices and include delivery in the London area. They do not include overhead charges and profit.

#### **Measured** rates

Prices which are intended to be average for work carried out in the London area include 10% to cover overhead charges and profit except in the case of work which would be carried out by specialists when 5% has been allowed. The prices given in italics represent the total value of the materials included in the measured rates, including an allowance for waste and 10% for overhead charges and profit. The cost of labour included in the measured rates (including its proportion of overhead charges and profit) can be ascertained by subtracting the prices in italics from the prices in heavier type.

#### Abbreviations

Inches: in. Feet: ft. Yards: Y. Yards cube: YC. Yards super YS. Feet cube: FC. Feet super: FS. Ton: T. Feet run -FR. Thousand: M. Square: Sq. Number: No. Hundredweight: C. Pound: Ib. Gallon: Gal.

#### **Preliminaries**

To all estimates based on prices for measured rates add, if required, for Preliminaries, water, insurances, etc., depending on the nature of the job.

#### **Price changes**

\* Shows changes in market prices and measured rates since the last issue (April 6, 1961).

8 E

stimating

Current wage rates, market prices and

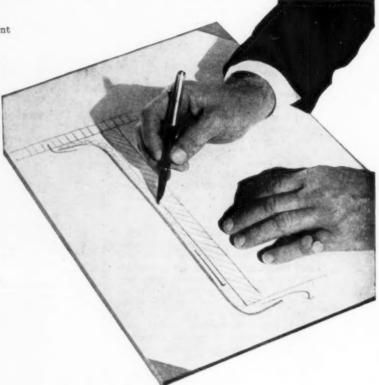
measured

rales



# That's a good question: I'm glad you asked

We're always glad to answer that one. Yes, Rubervent does prevent roof blisters. Tiny granules on the underside of the lowest layer of built-up roofing allow vapours exhaled by the screed to pass harmlessly to outer atmosphere. It's been proved to be the most effective way. How is it keyed ? In a very special way that not only anchors it firmly, but prevents any damage to the roofing by hair cracks or distortions in the screed. Who does the laying ? Real experts, of course. The Ruberoid Contract Division.



#### RUBERVENT: RUBEROID'S LATEST TECHNIQUE IN BUILT-UP ROOFING

Full technical information available. Write or telephone
TME RUBEROID COMPANY LIMITED, 45VB COMMONWEALTH HOUSE, 1-19 NEW OXFORD STREET, LONDON, W.C.1, HOLBORN 9501 (5 LINES)

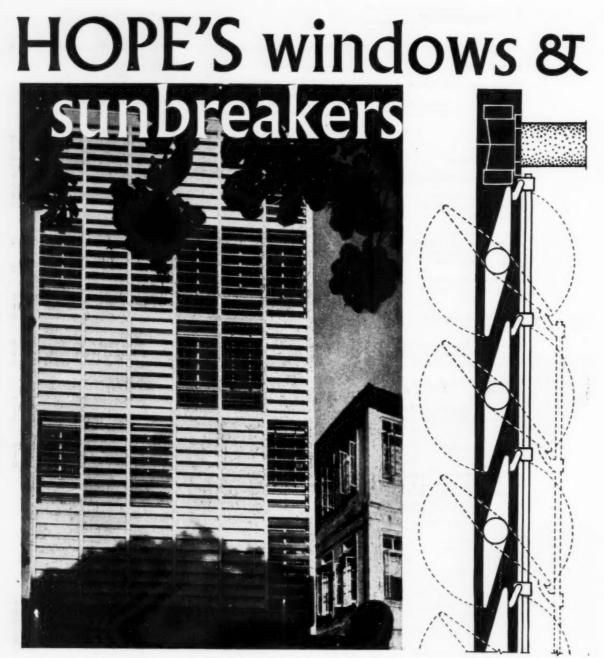
s d

technical section							
EXCAVATOR		s	d	EXCAVATORcontinued	5	d	CONCRETOR-continued
Market prices				Mechanical excavation and dispos	al		Measured rates
Carting away, up to 8 mile				Excavating for shallow surface			Concrete
Hand los Machine los		*7 *6	8	excavation and loading into lorries or dumpers (using § yd. cube excavator) YC	3	0	Portland cement mass concrete in foundations, etc.
Hardcore	YC	10	6	Excavating for surface excavation and removing, spreading and levelling not			I : 12, 11-in. " all-in " aggregate
Measured rates				exceeding 200 yds. (using 6 yd. cube scraper) YC	2		1:3:6, 11-in. aggregate
Hand excavation and dispos	al			-,	•		I:2:4, 2-in. aggregate
NB: the following are applicable to excavation in heavy soil.				Removing excavated material and depositing, not exceeding 200 yds. (using 3 yd. cube dumper) YC	2	2	$I: I\frac{1}{2}: 3, \frac{1}{2}$ -in. aggregate
Excavating over site to remove top soil and veget				Planking and strutting			Add for: Working around rod or mesh reinforcement YC
able matter, 6 in. deep As above, 12 in. deep	YS YS	12	4	Planking and strutting to sides of surface or basement excavation FS			Underpinning in short
Excavating over site to reduce levels and getting	×c			Depth up to 5 ft.		9	lengths YC Walls: YC
out Excavating for basement	YC	10	10	Depth up to 10 ft. Depth up to 15 ft.	1	"	Not over 6-in. thick 6-in. to 12-in. thick Over 12-in. thick
and getting out	YC			Planking and strutting to sides of surface and			Columns: YC
Depth up to Depth between 5 & I		12		basement trenches FS			Not over 72 sq. inches 72 to 144 sq. inches
Depth between 10 & I			0	Depth up to 5 ft.		2	Over 144 sq. inches
Excavating surface trenche and ditto	YC			Depth up to 10 ft. Depth up to 15 ft.		3 <u>1</u> 4	Suspended floors and roofs YC
Depth up to		14	н	Planking and strutting underpinning in short			Not over 41-in. thick 41-in. to 6-in. thick
Depth between 5 & 1 Depth between 10 & 1			4	lengths FS	1	5	6-in, to 12-in, thick
Excavating basement		-		Timber left in excavation FS	11	0	Beds : YC Not over 41-in. thick
trenches and ditto	YC			Hardcore			41-in. to 6-in. thick 6-in. to 12-in. thick
Commencing 5 ft be existing ground	level	20	4	Hardcore filled-in in layers, each layer well rammed YC	21	7	Hollow tile floors
Commencing 10 ft. be existing ground		25	8		14	5	Hollow tile floor of clay
Commencing 15 ft. be existing ground		31	I	Bed of ditto, 4-in. thick YS	31	7	blocks at 15-in. centres laid on formwork (measured separately), nibs filled in
Add to excavation for: Basketing out and				CONCRETOR			with concrete (1:2:4) and finishing top of tiles with
depositing Underpinning in trenches in short	YC	10	10	Market prices			bed of concrete I hin. thick including tamping around
lengths	YC	8	1	Portland cement, 6 tons and			reinforcement (measured separately) YS
Isolated pier holes, etc. Breaking up existing		5	5	over T Normal setting*	116	9	4-in. thick tiles
brick foundations Breaking up existing	YC	38	0	Rapid hardening*	127	3	6-in. thick tiles
concrete foundations	YC	50	9	Washed, crushed and graded shingle YC			8-in. thick tiles
Wheeling surplus excavate	ed			‡-in. down		6	with times tiles
material not exceeding 100 yards and depositing	YC	5	5	I <u>+</u> -in. down		6	Sundries
Add to last for:				Sharp sand YC Hollow clay floor blocks	22	0	Finishing concrete with trowelled face to receive
Roughly spreading and levelling	YC	1	7	to BS. 1190 M	7/0	•	linoleum YS
Spreading, levelling and consolidating to make u levels		3	6	$\begin{array}{c} 12\text{-in.} \times 12\text{-in.} \times 4\text{-in.} \\ 12\text{-in.} \times 12\text{-in.} \times 6\text{-in.1} \\ 12\text{-in.} \times 12\text{-in.} \times 8\text{-in.1} \end{array}$	052	0	Applying horizontal damp-proof membrane of
Returning, filling-in and				Mild steel rods to B.S. 785 de- livered station in 10 ton lots T			Synthaprufe in two coats to surface of concrete and blinding with sand to form
well ramming excavated material around foundatio	YC	4	9	I-in. diameter *		5	key YS
Loading surplus material i				-in. diameter *			Supplying floor clips (p.c. 6d.
lorries and carting to tip, not exceeding 8 miles	YC	*16	0	I-in. diameter *			each) and fixing No.
Excavating from spoil hea	DS			Steel wire mesh fabric to			Hacking face of concrete to form key YS
selected top soil, wheeling not exceeding 100 yards,	g			BS. 1221 YS 4-32 lb. per yd. super	*2	10#	Bush hammering face of
spreading, levelling and				6.57 lb. per yd. super 9.32 lb. per yd. super		41	concrete to expose aggregate, from YS
consolidating, not exceed	VC	2		a se in per fu super	0		-66. 08 asot 11 0111

es t mass ndations, etc. aggregate \*63 7 aggregate \*63 7 41 6 41-in. aggregate \*75 0 52 10 2-in. aggregate \*81 9 1-in. aggregate \*89 6 67 4 and rod or YC 5 5 in short YC 16 3 YC over 6-in. thick 27 | to 12-in. thick 18 | 1 ver 12-in. thick 13 6 YC er 72 sq. inches 51 5 144 sq. inches 40 7 144 sq. inches 32 6 oors and roofs ver 41-in. thick 21 8 h. to 6-in. thick 18 11 to 12-in. thick 16 3 YC ver 41-in. thick 10 10 h. to 6-in. thick 8 1 to 12-in. thick 2 8 or of clay centres laid measured neasured s filled in I : 2 : 4) p of tiles with t 1-in. thick ng around measured YS

## 4-in. thick tiles \*18 9 6-in. thick tiles \*22 9 14 1 8-in. thick tiles \*28 9 18 11 ete with

to receive YS 1 4 ontal mbrane of two coats ncrete and and to form 5 4 3 10 YS clips (p.c. 6d. 1.1 No. concrete YS 1 9 ng face of YS 7 8



ALLEN & HANBURYS (NIGERIA) LTD, LAGOS Godwin and Hopwood, Chartered Architects

The main elevation is faced with an aluminium grid divided into 30 openings of equal size, each containing eight aluminium "aerofoil" sunbreakers. These are horizontally pivoted, linked together, and operated by hand from inside, through vertically pivoted casements in the windows.

HOPE'S WINDOWS The Name Guarantees HOPE'S Sunbreakers are made in. a variety of profiles in pressed steel or aluminium, both single and double skinned, fixed and movable: the latter can be hand or mechanically operated.

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

technical section			
CONCRETOR—continued	ŧ	s	d
Formwork including struttineasing and striking:	ng		
Vertical faces of foundation	YS	19	9
Vertical faces of wall	YS	10 20 7	2 4 3
Battering faces of walls	YS	25 9	11
Soffit of floors Not over 12-ft. h	YS	20	2
12-ft. to 14-ft. h	igh	9 26 11	0 8 6
Sloping soffit of stairs	YS	<b>24</b> 9	4
Sides of columns	FS	2	7
Sides and soffits of lintels and beams	FS	2	9
Add to the above for wrot formwork including rubbin down concrete	g YS	2	8
Reinforcement			
Mild steel rods to BS 785, hooked, bent, tied and fixing I-in. diame §-in. diame §-in. diame §-in. diame §-in. diame \$-in. diame	eter eter	*66 49 51 *74 53 *81 55 *96 60	10 3 7 11 6 11 3 3
BS 1221 and fixing 4-32 lb. per yd. sup 6-57 lb. per yd. sup 9-32 lb. per yd. sup Precast concrete	ber	*4 3 *6 5 *8 7	6 4 7
Precast concrete (1 : 2 : 4) finished fair on exposed far and hoisting setting and jointing: $4\frac{1}{2}$ -in $\times$ 6-in. lintels rein- forced with one $\frac{1}{2}$ -in. rod	ces FR	3	
$4\frac{1}{2}$ -in. $\times$ 9-in. ditto with the		2	5
<ul> <li>1-in. rods</li> <li>Piling</li> <li>Reinforced pre-cast concrepiles, approximate prices f supplying, unloading, pitch</li> </ul>	FR	4	57
and driving 12-in. $\times$ 12-in. up to 30 ft.			
long 14-in. $\times$ 14-in. up to 50 ft. long	FR	*25	
Sheet steel piling, ditto	т	1165	0

BRICKLAYER	s	d
Market prices		
Soft sand YC	19	0
Hydrated lime T I	10	0
Plain Flettons M I	32	0
Second hard stocks M 3	52	2
Lingfield Engineering wire cuts Grade B M 2	86	0
Hessian base damp-course to BS 743 YS	*3	
$\begin{array}{ll} \text{Damp course slates, 14-in.} \\ \times \text{ 9-in.} & \text{IOO} \end{array}$	76	0
Wall ties, galvanised 100	15	8
Partitions		
$\begin{array}{c} \mbox{Clinker concrete, solid} & \mbox{YS} \\ & 2\frac{1}{2}\mbox{-in.} \\ & 3\mbox{-in.} \\ & 4\frac{1}{4}\mbox{-in.} \end{array}$	579	7 1 4
Thermalite YS 21-in. 3-in. 4-in. 6-in.	7 8 11 16	0506
Hollow clay 21-in. (6 cavity) 3-in. (ditto) 4-in.	4 5 7	7 9 3
Normal quality wood wool slabs YS 2-in. 24-in. 3-in.	8 10 11	
Measured rates		
Reduced brickwork in cement lime mortar, Lingfields in cement mortar YS Flettons Second stocks Lingfield Grade B	<b>36</b> 19 <b>59</b> 42 <b>55</b> 36	2 0 10 9 11 2
Half brick wall ditto YS Flettons	19	**
Second stocks Lingfield Grade B	31 20 30 17	
11-in. hollow wall with 2-in. cavity and wall ties YS Flettons Second stocks	<b>43</b> 18 <b>67</b> 42	3502
One brick wall built fair and pointed both sides YS Flettons Second stocks Lingfield Grade B	<b>43</b> 19 <b>67</b> 42 <b>61</b> 36	3 0 0 8 10 2
Sundries		
Extra for internal fair face and flush pointing YS Cutting, toothing and bonding new work to old FS	1	6

BRICKLAYER-continued s d Damp-proof courses Horizontal damp-proof course of two courses of slates and bedding and pointing FS 4 3 4 Horizontal damp-proof course of hessian base bitumen and laying on brick walls FS \*9 6 Horizontal damp-proof course of lead lined hessian base bitumen and laying on brick walls FS \*1 7 1 4 Facings Extra over ordinary brick-work with bricks P.C. 132s. per 1,000 for facings as described To solid wall in Flemish nd Facings P.C. 250s. per M 15 3 8 7 YS bond Facings P.C. 350s. per M 22 6 15 10 Facings P.C. 450s. per M 29 10 23 2 To cavity wall in stretcher bond YS Facings P.C. 250s. per M 12 8 6 Facings P.C. 350s. per M 18 3 Facings P.C. 450s. per M 23 9 17 Half brick wall in facings built fair and pointed on one side YS Facings P.C. 250s. per M 31 4 16 Facings P.C. 350s. per M 36 11 21 Facings P.C. 450s. per M 62 42 27 Partitions Clinker concrete solid partition blocks and setting in cement lime mortar YS 21-in. 12 5 21-in. 12 5 6 10 3-in. 15 1 8 8 41-in. 19 2 11 5 44-in. 19 Thermalite ditto YS 21-in. 12 11 8 6 3-in. 15 10 3 4-in. 19 6 13 4 6-in. 27 7 4-in. 19 10 Hollow clay ditto YS 2<sup>1</sup>/<sub>2</sub>-in. 11 3 (6 cavity) 3-in. 13 7 7 2 (ditto) 4-in. 16 9 0 9 Wood wool slabs ditto YS 2-in. 14 4 67 10 24-in. 16 12 2 18 10 3-in.

13 9

### The Architects' Journal for July 12, 1961 63

Marley VINYI SUITERS & downpipes At last, the most up to date rainwater goods you can buy, at prices that compete favourably with the lowest-cost gutters and downpipes. Smooth, sturdy, nomaintenance Marley Vinyl gutters and downpipes are now available at half the weight-half the priceyou can't afford to use anything else!

## EASIER TO TRANSPORT

because these new gutters and downpipes are so light, so easy to handle.

\*Patents applied for

HON STATISTIC

are available in grey with vinyl coated brackets.

ER TO INSTALL

No jointing compound to fix. The recessed socket comes fitted with a special neoprene gasket to hold the spigot flush in the

Stop ends and swannecks are heavy grade vinyl, and all units

## SEVENOAKS · KENT · Sevenoaks 55255 London Showrooms · 251 Tottenham Court Road · W1

socket.

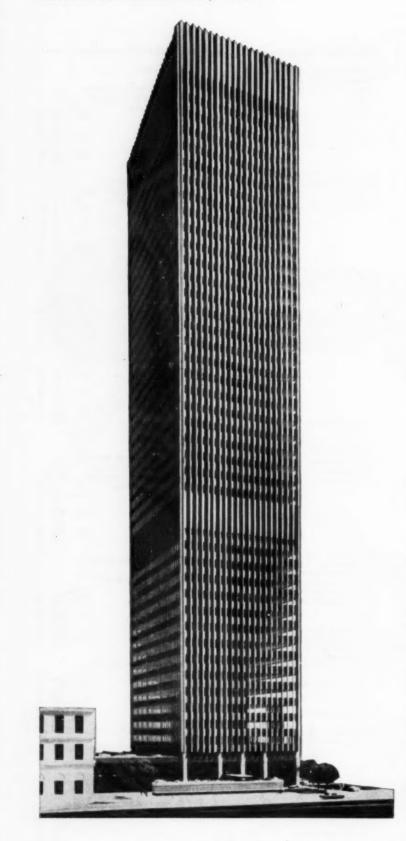
something

to shout

ahout

The Architects' Journal for July 12, 1961 64

RAINLAYER		s	d	DRAINLAYER-conti	nued	s	d	DRAINLAYER-conti	nued	\$	¢
farket prices				" Best " quality salt-glaz stoneware drain pipes a				Cast iron drains			
alt glazed stoneware p				laying and jointing in				Cast iron spigot and soc			
nd fittings, "Best" qu	ality:			trench	FR 4-in.	2	8	drain pipes and laying an jointing in trench	FR		
Ordinary pipes	FR					ĩ		Jonienig in crenen	4-in.	14	4
	4-in.	1	7		6-in.	3				12	0
	6-in. 9-in.	24	44 34		9-in.	2	5		6-in.	20	9
	2-111.		-4		2-111.	5	2		9-in.	39	6
Bends	No.		-							33	1.1
	4-in. 6-in.	47	9	Extra over "Seconds " quality pipes for:				Soun cast iron enight an	d		
	9-in.	19	3	quality pipes for.			- 1	Spun cast iron spigot an socket drain pipes and la	aving		
and the second second				Bend	No.		. 1	and jointing in trench	FR	-	
itch fibre pipe	FR		101		4-in.	3	9		4-in.	7	
	3-in. 4-in.	2	6		6-in.	3 5	2 5		6-in.	5	-
	6-in.	5	01		V-111.	. 4	9		-111e	9	1
					9-in.	15			9-in.	21	-
last iron spigot and so	ocket			1		14	11			15	1
ipe to BS 437		31	1	Single junction	No.			Extra over cast iron plp	es		
	6-in.	45	6	a farrener	4-in.	6	5	for:			
	9-in.	85	2				10	Bend	No.	-	
pun iron spigot and s	socket				6-in.	97	3 4		4-in.	32 25	
ipe to BS 1211, Class					9-in.	19	9		6-in.	74	
	4-in.	14	5			17	6			65	
	6-in.	22	7 9	Deuble					9-in.		
	9-in.	37	7	Double junction	No. 4-in.	10	9			174	
feasured rates						8	1	Branch	No.		
					6-in.	15	5		4-in.	49	
renches and beds					0.1-	12 30	3		6-in.	42	
xcavate trenches by	hand in				9-in.	26	4		W. CERA	99	
eavy soil, including p							-		9-in.		
nd strutting, part ret				Stoneware gullies						252	
illing and ramming an				Cala alared amonad gull	lu			Cast iron gullies			
wheeling and spreadin surplus, for pipes 4-in				Salt-glazed trapped gui with galvanised grating				Cost mon Banner			
5-in. and 9-in. dia.	YR			including setting gully				Cast iron gully trap with			
				and surrounding with				invert and setting on a			
Average depth of trer	nch 3-ft. 4-ft.	18	2	and jointing to drain 6 in. × 6 in. grati	No.			and jointing to drain	No.		
	6-ft.			o m. × o m. graci	outlet	26	4	and lemme to a sum	4-in.		
	9-ft.	76	8			21	9		1	37	
European around an Inc				9 in. $\times$ 9 in. grati		40	5		6-in.	101	
Excavate trench as las by mechanical trench					outlet	48 42			9-in.		
by meenamear crement						12				237	
Average depth of trea			8	Grease and mud gully				e			
	4-ft. 6-ft.		9	diameter with 4-in. ou				Cast iron inspection fittin	ags		
	9-ft.			galvanised bucket and and setting gully on an				Branch with one branc	h		
				surrounding with conc				each side	No.		
6-in. concrete bed an				and jointing to drain	No.		2		4-in.		
benching for:	YR					79	4		6-in.	173	
	ter pipes	10	3	Road gully with 6-in. c	outlet				- 11 E	276	
4-in. diame	L.h.a.	6	4	including setting on an	d				9-in.	600	•
4-in. diame		*12		surrounding with cond						574	5
4-in. diame 6-in. diame	eter pipes	-	5	and jointing to drain 15-in. dia. 30-	No.		4	Branch with two brand	thes		
6-in. diame		+14	7	1.3-III. UIA. 30-	m. deep	98		each side	No.		
									4-in.		
6-in. diame 9-in. diame	eter pipes	*14		18-in. dia. 48-	in. deep					283	
6-in. diame 9-in. diame 6-in. concrete bed an	eter pipes	*14		18-in. dia. 48-	in. deep	<b>244</b> 205			4	A. A	
6-in. diame 9-in. diame 6-in. concrete bed an	eter pipes	*14			in. deep				6-in.		
6-in. diame 9-in. diame 6-in. concrete bed an	eter pipes nd YR	*14	0	18-in. dia. 48- Pitch fibre drains	in. deep					464	
6-in. diame 9-in. diame 6-in. concrete bed an surround for: 4-in. <b>di</b> ame	eter pipes nd YR eter pipes	*14 9 *16	94	Pitch fibre drains Pitch fibre drain pipes	and					441	
6-in. diame 9-in. diame 6-in. concrete bed an surround for:	eter pipes nd YR eter pipes	*14 9 *16 10 *20	942	Pitch fibre drains	and	205		Mashala source and for	9-in.	441	
6-in. diame 9-in. diame 6-in. concrete bed an surround for: 4-in. <b>di</b> ame 6-in. diame	eter pipes nd YR eter pipes eter pipes	*14 9 *16 10 *20 12	9425	Pitch fibre drains Pitch fibre drain pipes	and trench FR	205	2	Manhole covers and fram	9-in.	441	
6-in. diame 9-in. diame 6-in. concrete bed an surround for: 4-in. <b>di</b> ame	eter pipes nd YR eter pipes eter pipes	*14 9 *16 10 *20 12	94256	Pitch fibre drains Pitch fibre drain pipes	and	205	2 3 14	Galvanised cast iron to	9-in. mes	441	
6-in. diame 9-in. diame 6-in. concrete bed an surround for: 4-in. diame 6-in. diame 9-in. diame	eter pipes nd YR eter pipes eter pipes	*14 9 *16 10 *20 12 *25	94256	Pitch fibre drains Pitch fibre drain pipes	and trench FR	205	2 3 1 1 1 1	Galvanised cast iron to BS 497 Grade C and b	9-in. mes edding	441	
6-in. diame 9-in. diame 6-in. concrete bed an surround for: 4-in. diame 6-in. diame 9-in. diame	eter pipes nd YR eter pipes eter pipes	*14 9 *16 10 *20 12 *25	94256	Pitch fibre drains Pitch fibre drain pipes	and trench FR 3-in. 4-in.	205	2 3 11 11 2 9 1	Galvanised cast iron to BS 497 Grade C and be frame in cement and c	9-in. mes edding	441	
6-in. diame 9-in. diame 6-in. concrete bed an surround for: 4-in. diame 6-in. diame 9-in. diame Stoneware drains	eter pipes nd YR eter pipes eter pipes eter pipes	*14 9 *16 10 *20 12 *25	94256	Pitch fibre drains Pitch fibre drain pipes	and trench FR 3-in.	205	2 3 11 9 1 10	Galvanised cast iron to BS 497 Grade C and by frame in cement and c in grease	9~in. mes edding over	441 941 906	
6-in. diame 9-in. diame 6-in. concrete bed an surround for: 4-in. diame 6-in. diame 9-in. diame Stoneware drains " Seconds " quality s	eter pipes nd YR eter pipes eter pipes eter pipes	*14 9 *16 10 *20 12 *25	94256	Pitch fibre drains Pitch fibre drain pipes	and trench FR 3-in. 4-in.	205	2 3 11 9 1 10	Galvanised cast iron to BS 497 Grade C and b 'rame in cement and c in grease Double seal flat	9-in. mes edding	441 941 906	
6-in. diame 9-in. diame 6-in. concrete bed an surround for: 4-in. diame 6-in. diame 9-in. diame Stoneware drains " Seconds " quality s glazed stoneware dra and laying and jointi	eter pipes and YR eter pipes eter pipes eter pipes ain pipes ang in	*14 9 *16 10 *20 12 *25	94256	Pitch fibre drains Pitch fibre drain pipes laying and jointing in t Extra over pitch fibre	and french FR 3-in. 4-in. 6-in. pipe	205	2 3 11 9 1 10	Galvanised cast iron to BS 497 Grade C and b 'rame in cement and c in grease Double seal flat 24-in.	9-in. mes edding over No × 18-in	441 941 906	8
6-in. diame 9-in. diame 6-in. concrete bed an surround for: 4-in. diame 6-in. diame 9-in. diame Stoneware drains " Seconds " quality s glazed stoneware dra and laying and jointi	eter pipes nd YR eter pipes eter pipes eter pipes salt- ain pipes ng in FR	*14 9 *16 10 *20 12 *25 15	942568	Pitch fibre drains Pitch fibre drain pipes laying and jointing in t	and trench FR 3-in. 4-in. 6-in. pipe No.	205	2 3 111 91 10 8	Galvanised cast iron to BS 497 Grade C and b 'rame in cement and c in grease Double seal flat 24-in.	9-in. mes edding over No	44/ 941 906 121 121 121	317
6-in. diame 9-in. diame 6-in. concrete bed an surround for: 4-in. diame 6-in. diame	eter pipes and YR eter pipes eter pipes eter pipes ain pipes ang in	*14 9 *16 10 *20 12 *25 15	942568	Pitch fibre drains Pitch fibre drain pipes laying and jointing in t Extra over pitch fibre	and french FR 3-in. 4-in. 6-in. pipe	205	2 3 1 1 1 2 1 1 2 1 1 2 1 1 2 1 2 1 2 1	Galvanised cast iron to BS 497 Grade C and b 'rame in cement and c in grease Double seal flat 24-in.	9-in. mes edding over No × 18-in × 24-in	441 941 906 121 121 197 188	
6-in. diame 9-in. diame 6-in. concrete bed an surround for: 4-in. diame 6-in. diame 9-in. diame Stoneware drains " Seconds " quality s glazed stoneware dra and laying and jointi	eter pipes nd YR eter pipes eter pipes eter pipes salt- ain pipes ng in FR	*14 9 *16 10 *20 12 *25 15	942568	Pitch fibre drains Pitch fibre drain pipes laying and jointing in t Extra over pitch fibre	and trench FR 3-in. 4-in. 6-in. pipe No.	205 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 3 1111 911 10 8 10 10 10 10 10 10 10 10 10 10 10 10 10	Galvanised cast iron to BS 497 Grade C and by 'rame in cement and c in grease Double seal flat 24-in. 24-in. Double seal recessed	9-in. mes edding over No × 18-in × 24-in	441 941 906 121 197 188 134	81734
6-in. diame 9-in. diame 6-in. concrete bed an surround for: 4-in. diame 6-in. diame 9-in. diame Stoneware drains " Seconds " quality s glazed stoneware dra and laying and jointi	eter pipes and YR eter pipes eter pipes eter pipes salt- ain pipes ng in FR 4-in,	*14 9 *16 10 *20 12 *25 15	0 942568 8 5865 5	Pitch fibre drains Pitch fibre drain pipes laying and jointing in t Extra over pitch fibre	and trench 3-in. 4-in. 6-in. pipe No. 3-in.	205	2 3 11111 911 10 8 10 8 10 8 7	Galvanised cast iron to BS 497 Grade C and b 'rame in cement and c in grease Double seal flat 24-in. Double seal recesses 24-in.	9-in. mes edding over No × 18-in × 24-in d No	441 941 906 906	8 1 7 9 6 9



ARCHITECT: Peter Dickinson, Toronto, Montreal, Ottawa & London

Stately beauty of Spoutcrag Slate

The tallest building in the Commonwealth is to be given the permanent beauty of Spoutcrag Green Slate. The 43-storey. 600 feet high Canadian Bank of Commerce Building which will soon dominate the skyline of Montreal is being clad with 125,000 square feet of naturally riven. light sea green Spoutcrag Slate specially shipped from Broughton Moor. Aesthetics apart, this beautiful Lake District slate with the unique bar markings was chosen because its colour and texture will outlive centuries of climatic and atmospheric attack. Broughton Moor and Spoutcrag Green Slate in several finishes and shades is used for facings, floorings, copings and cills all over the world. Send for samples and technical details-a technical expert in most areas is available to advise on fixing methods.



Coniston, The Lake District, Lancs Tel: Coniston 225/6.

ASPHALTER Measured rates Damp proof course and tanking 1-in. vertical damp proof course in two thicknesses on brick or concrete YS BS1097 BS1418 1-in. horizontal damp proof course in one thickness on brick or concrete YS BS1097 BS1418 Vertical tanking in three thicknesses YS BS1097 BS1418 Horizontal tanking in three thicknesses YS BS1097 BS1418 Horizontal tanking in three thicknesses YS BS1097 BS1418 Horizontal tanking in three thicknesses on and including felt underlay YS BS162 6-in. skirting with angle fillet at bottom and rounded edge at top turned into groove FR BS162	s 17 21	d 4	Gra dus Rec
Damp proof course and tanking 1-in. vertical damp proof course in two thicknesses on brick or concrete YS BS1097 BS1418 1-in. horizontal damp proof course in one thickness on brick or concrete YS BS1097 BS1418 Vertical tanking in three thicknesses YS BS1097 BS1418 Horizontal tanking in three thicknesses YS BS1097 BS1418 Horizontal tanking in three thicknesses YS BS1097 BS1418 Roofing 1-in. flat laid to falls in two thicknesses on and including felt underlay YS BS162 6-in. skirting with angle fillet at bottom and rounded edge at top turned into groove FR BS988	21	-	dus Rec 6
<ul> <li>in. vertical damp proof course in two thicknesses on brick or concrete YS BS1097 BS1418</li> <li>in. horizontal damp proof course in one thickness on brick or concrete YS BS1097 BS1418</li> <li>Vertical tanking in three thicknesses YS BS1097 BS1418</li> <li>Horizontal tanking in three thicknesses YS BS1097 BS1418</li> <li>Horizontal tanking in three thicknesses on and including felt underlay YS BS1097 BS1418</li> <li>Roofing</li> <li>in. flat laid to falls in two thicknesses on and including felt underlay YS BS1082</li> <li>G-in. skirting with angle fillet at bottom and rounded edge at top turned into groove FR BS988</li> </ul>	21	-	Gra dus Rec 6
Course in two thicknesses on brick or concrete YS BS1097 BS1418 <u>1</u> -in. horizontal damp proof course in one thickness on brick or concrete YS BS1097 BS1418 Vertical tanking in three thicknesses YS BS1097 BS1418 Horizontal tanking in three thicknesses YS BS1097 BS1418 Horizontal tanking in three thicknesses YS BS1097 BS1418 Roofing <u>1</u> -in. flat laid to falls in two thicknesses on and including felt underlay YS BS162 6-in. skirting with angle fillet at bottom and rounded edge at top turned into groove FR BS988	21	-	Ree 6
BS1418 1-in. horizontal damp proof course in one thickness on brick or concrete YS BS1097 BS1418 Vertical tanking in three thicknesses YS BS1097 BS1418 Horizontal tanking in three thicknesses YS BS1097 BS1418 Horizontal tanking in three thicknesses on and including felt underlay YS BS162 6-in. skirting with angle fillet at bottom and rounded edge at top turned into groove FR BS988	21	-	
course in one thickness on brick or concrete BS1097 BS1418 Vertical tanking in three thicknesses Horizontal tanking in three thicknesses SS1418 Horizontal tanking in three thicknesses BS1097 BS1418 <i>Roofing</i> 3-in, flat laid to falls in two thicknesses on and including felt underlay SS988 BS1162 6-in, skirting with angle fillet at bottom and rounded edge at top turned into groove BS988	10		No
BS1097 BS1418 Vertical tanking in three thicknesses YS BS1097 BS1418 Horizontal tanking in three thicknesses YS BS1097 BS1418 <i>Roofing</i> 1-in. flat laid to falls in two thicknesses on and including felt underlay YS BS988 BS1162 6-in. skirting with angle fillet at bottom and rounded edge at top turned into groove FR BS988	10		Me
thicknesses YS BS1097 BS1418 Horizontal tanking in three thicknesses YS BS1097 BS1418 <i>Roofing</i> $\frac{3}{2}$ -in, flat laid to falls in two thicknesses on and including felt underlay YS BS988 BS1162 6-in, skirting with angle fillet at bottom and rounded edge at top turned into groove FR BS988	13	6 8	Cer
BS1097 BS1418 Horizontal tanking in three thicknesses YS BS1097 BS1418 Roofing 3-in. flat laid to falls in two thicknesses on and including felt underlay YS BS988 BS1162 6-in. skirting with angle fillet at bottom and rounded edge at top turned into groove FR BS988			
thicknesses YS BS1097 BS1418 Roofing 4-in. flat laid to falls in two thicknesses on and including felt underlay YS BS988 BS1162 6-in. skirting with angle fillet at bottom and rounded edge at top turned into groove FR BS988	24 29	8	
Roofing 4-in. flat laid to falls in two thicknesses on and including felt underlay YS BS988 BS1162 6-in. skirting with angle fillet at bottom and rounded edge at top turned into groove FR BS988	17	4	Ce tro
<ul> <li>a-in. flat laid to falls in two thicknesses on and including felt underlay YS BS988 BS1162</li> <li>6-in. skirting with angle fillet at bottom and rounded edge at top turned into groove FR BS988</li> </ul>	25	2	
chicknesses on and including felt underlay YS BS988 BS1162 6-in. skirting with angle fillet at bottom and rounded edge at top turned into groove FR BS988			
BS1162 6-in. skirting with angle fillet at bottom and rounded edge at top turned into groove FR BS988			
fillet at bottom and rounded edge at top turned into groove FR BS988	12		Gr
	2 2	17	1-1
	*	'	lai
6-in. fascia with solid water check roll at top and under- cut drip at bottom FR BS988	4	2	a-i pro
BS1162	4	9	an- lay
Flooring			
2-in. asphalt flooring laid on prepared screed YS			
BS1076 BS1410	12	35	Sh
a-in. brown asphalt flooring laid on prepared screed YS BS1451	14	8	1
-in. brown pitchmastic			flo
flooring laid on prepared screed YS BSI375		10	
Sundries			Com
Labour and material forming collars around pipes including angle fillet at bottom and			P.
rounded top edge No. Small pipe Large pipe		9	fix
Labour warming up and jointing new to old flat FR			V

AVIOR		\$	d
farket prices			
Granite chippings, ‡ in. to lust	т	48	7
ted quarry tiles, 6 in. $\times$ 6 in. $\times \frac{7}{8}$ in.	YS	14	2
loelite paving, 2-in.	YS	13	11
feasured rates			
Cement and sand floated creed to receive pavings	YS ≩-in.	4	3
	I-in.	2 5	2
1	1 <u>+</u> in.	353	10
Cement and sand paving rowelled hard and smoot	th		
	YS 축-in.	4	10
	-	2 5	4 9
	I-in,	3	1
	I‡-in.	63	4
Granolithic paving laid or			
concrete	YS I-in.	7	6
	l <u>∔</u> −in.	596	3 8 11
in. red composition pav aid on prepared screed	YS	16	6
-in. terrazzo paving laid prepared screed	on YS	38	4
Sheet rubber flooring, pl and marble colours and laying	ain YS #-in. 76-in. 4-in.	39 47 57	3
	ours YS 2 mm. 5 mm.	21 26	
l-in. thermoplastic tile flooring and laying-on sc	reed YS	9	to
Cork tile flooring, fixing mastic and sealing	with YS ‡-in.	29 33	"
	YS 2 mm. 3 mm.		
	YS 2 mm. 2 mm.		
Red quarry tiles laid on prepared screed	YS s-in. Z-in		
2-in. Noelite paving laid prepared bed, in randon and mixed colours	on n sizes YS	20	
12 in. $\times$ 12 in. anchor s plates laid complete	teel	6	0 3

MASON h a Market prices Stone in blocks in truckloads at stations in the London area: Beer FC 10 6 Portland FC 9 10 Woodkirk Blue building FC 19 2 quality Broughton Moor slate in blocks at stations in the London area FC 60 0 Marble in blocks at works: Dove FC 70 0 Roman stone FC 65 0 **Measured** rates Stone and all labours, fixing and setting in mortar: Pilasters and quoins FC Portland Beer 58 10 56 0 FC Portland Jambs 61 11 Beer 59 0 Lintels FC Portland 63 3 60 3 Beer FC Portland 79 Arches 3 Beer 75 6 Ashlar average 7-in. on bed with plain dressed face FS Portland 34 8 Beer 33 0 Extra for each additional I-in. thickness FS Portland 4 9 4 6 Beer 12 10 Beer 12 5 3 Artificial 4-in.  $\times$  12-in. coping, weathered and twice throated set and jointed in cement FR mortar Portland 24 11 Beer 23 9 Artificial 12 3 Steps and thresholds FC Portland 61 5 Artificial 36 6 Marble and slate 4-in. plain polished linings and fixing on brick backings FS Broughton Moor slate 27 3 Roman stone 35 9 Dove marble 37 10 Faience It-in. faience slabs and fixing on prepared brick or concrete backing YS 115 6

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Drum series. A range of 25 pendant, wall and ceiling units, from 5" to 15" in diameter, available in 6 colours. Its salient feature is the translucent opal precision moulded louvre. Designed by Paul Boissevain.

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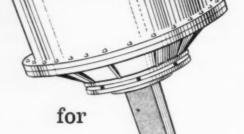
SLATER, TILER AND s d ROOFER Market prices Welsh slates, best quality M 16-in. × 10-in. \*1087 9 20-in. × 10-in. \*2111 9 Best hand made sand faced plain tiles,  $10\frac{1}{2}$ -in. ×  $6\frac{1}{2}$ -in. M\*356 9 Plain concrete tiles,  $10\frac{1}{2}$ -in.  $\times 6\frac{1}{2}$ -in. M 170 3 Interlocking concrete tiles, 15-in.  $\times$  9-in. M\*417 6 Grey corrugated asbestos YS 7 0 Measured rates Welsh slates laid to a 3-in. lap Sq. 16-in. × 10-in.\*295 0 20-in. × 10-in.\*410 0 Westmorland green slates in random sizes laid 3-in. lap Sq. 722 0 Westmorland green slates Sq. 742 0 Best hand made sand faced plain tiles,  $10\frac{1}{2}$  in  $\times$   $6\frac{1}{2}$  in. laid to a 4-in. gauge Sq. Sq.\*235 0 Best hand made sand faced plain tiles,  $10\frac{1}{2}$  in.  $\times$   $6\frac{1}{2}$  in. hung vertically to  $4\frac{1}{2}$ -in. Sq.\*260 0 gauge Plain concrete tiles,  $10\frac{1}{2}$ -in.  $\times$  6 $\frac{1}{2}$ -in. laid to a 4-in. gauge Sq. 123 0 Berkshire hand made sand faced red pantiles,  $14\frac{1}{2}$  in.  $\times$  10 in. laid  $2\frac{1}{2}$ -in. head and Sq. \*223 0 11-in. side lap Interlocking concrete tiles, I5-in. × 9-in. laid to a 3-in. Sq. 85 0 Grey corrugated asbestos cement sheets fixed to wood roofs Sq. 123 0 Grey corrugated asbestos cement sheets fixed vertically Sq. 133 0 Cedarwood shingles laid 5-in. Sq. 245 0 gauge Metal roof decking and fixing with hook bolts, finished with 1-in. insulation board and three layers self finish YS felt roofing fing YS 18 gauge for spans up to 10 ft. 60 6 20 gauge for spans up to 8 ft. 6 in. 52 6 Two layer one ply bitumen felt and fixing with bitumen to concrete or boarding YS 9 6 Three layer bitumen felt YS 12 7 Nuraphalte thermoplastic Nuraphaite thermopred roofing laid on prepared surface, for areas of 300 to YS 27 6 Patent ribbed aluminum roofing and fixing to purlins Sq. 325 0

technical section

CARPENTER		4
	5	d
Market prices		
Softwood Std. Carcassing quality Joinery quality	1840 2300	
$\frac{1}{2}$ -in. fibre board Sq.	46	6
‡-in. standard hardboard Sq.	39	0
≩-in. insulating gypsum wallboard YS	2	11
Measured rates		
Softwood and fixing		
In plates, sleeper joists and lintels FC	<b>15</b> 13	4
In floor and ceiling joists FC	17	11
In stud partitions, purlins and struts FC	<b>20</b> 13	3 4
In hip and valley rafters FC	23 13	1
Battening and boarding	15	-
Slate or tile battens $l\frac{1}{2}$ in. $\times$ $\frac{3}{4}$ in. and nailing to fixing for: Sq.		
16-in. $\times$ 10-in. slating to $6\frac{1}{2}$ -in. gauge	43	3
20-in. $\times$ 10-in. slating to $8\frac{1}{2}$ -in. gauge	33	0
$10\frac{1}{2}$ -in. $\times$ $6\frac{1}{2}$ -in. plain tiling to 4-in. gauge	59	0
14½-in. $\times$ 10-in. pantiles to 12-in. gauge	23	0
S.E. boarding in batten widths		
close jointed and fixing to flat or sloping roofs Sq.	120	
<b>∦</b> −in.	85	0
I-in.	147	0
T. & g. boarding in batten		
widths close jointed and fixing to flat or sloping roofs Sq.	140	6
<u>å</u> -in. I-in.	96	06
1-11.	127	0
a-in. wrot and cross tongued eaves soffit FS	2	40
$\frac{3}{4}$ -in. $\times$ 6-in. wrot and		
grooved eaves fascia p.o. FS		10
Wall and ceiling boards fixed to softwood YS		
1/2-in. fibre board	65	10 0
1-in. hardboard	5 4	93
≩-in. insulating gypsum wallboard	5	6
$\frac{3}{16}$ -in. asbestos cement flat sheeting	8	11
4-in. asbestos cement flat sheeting	4	8
2-in. Stramit, standard	6	8
quality fixed to joists with butt joints	16	27

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JOINER	s	d
Measured rates		
Floors and skirtings		
Tongued and grooved softwood flooring and nailing to joists	ł	
Sq. Z-in.	166	0
I-in.	124 191 149	0
I-in. nominal double grooved t. and g. block flooring set in mastic and polished YS		
Swedish softwood	30	0
European beech	32	6
African Muhuhu	37	9
Burma teak	41	0
Moulded skirtings, 3-in. to 6-in. sectional area planted on (per inch in sectional area) FR		
Softwood		3
Oak		10 9
Extra for grounds plugged to brickwork FR		
Softwood		10 2
Windows		
2-in. rebated and moulded sashes divided into squares FS Softwood Oak	3	11
Extra for side hanging Each Softwood Oak	34	06
Doors		
2-in. framed, ledged and braced doors, filled in with 1-in. t. and g. and V jointed boarding and hanging FS		
Softwood	65	10
Four panelled door square both sides and hanging FS Softwood	7	2
Oak	6 21 20	521
$1\frac{3}{8}$ -in. Standard flush door, hardboard faced size 2 ft. 6 in. $\times$ 6 ft. 6 in. and hanging No.	<b>44</b> 32	65
12-in. honeycomb core flush door lipped four edges, veneered faced with West African Cedar, size 2 ft. 6 in.	75	
× 6 ft. 6 in. and hanging No.	63	3
Linings and frames		
Window and door linings, 6-in. to 12-in. sectional area (per inch sectional area) FR Softwood		
Oak		310
Frames wrot all round and framed (per inch sectional		
area) FR Softwood		3
Oak		10



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technical section					
JOINER-continued	s	d	IRONMONGER	s	d
Mullions, transomes and sills			Market prices		
(per inch sectional area) FR Softwood Oak Mouldings, architraves, etc., 4-in. to 6-in. sectional area		4	As prices for ironmongery vary so greatly depending upon the type and quality required, no prices are quoted here		
(per inch sectional area) FR Softwood		4	Measured rates		
Oak		3 11 10	The rates which follow are for <b>fixing only</b> and are inclusive of profit		
6-in. window boards, I-in. thick with rounded nosing tongued at back and including			To softwood		
bearers FR Softwood	2	3	3-in. steel butts Pr.	4	10
	3	9	6-in. barrel bolts No.	2	2
Oak	5	8	Cupboard locks No.	4	6
Shelving and fittings			Cylinder night latch No.	7	7
3-in. shelving of 2-in. slats			Mortice latch No.	6	0
spaced I-in. apart on bearers (measured separately) FS			Mortice lock No.	7	7
Softwood	2	8	Casement fastener No.	1	10
♣-in. solid shelving on bearers FS			To hardwood		
Softwood Oak		5 0 11	Add $33\frac{1}{3}\%$ to above		
	4	4	STEEL & IRON WORKE	R	
2-in. shelf bearers plugged to wall FR			Market prices		
Softwood Oak	!	8 51 4	Structural steel joist sections, basis sizes,	705	
	1	1		785	3
Staircases 1-in. treads and 2-in. risers			Extras for other than basis sizes vary between 10s. and 70s. per ton		
tongued together on and including framed carriages FS Softwood	5	0	Measured rates		
Oak	3	10 10 2	Rolled steel joists in steel framed structures hoisted and fixed complete T	650	
I¼-in. × II-in. wall string plugged to brickwork FR Softwood	4	10	Rolled steel stanchions including caps, bases, cleats, etc. T	910	
Oak	3 12 11	971	Riveted compound girders including plates and rivets T		
14-in. $\times$ 9-in. outer string FR Softwood Oak	338	9 / 0	Metal windows including cutting and pinning lugs to brickwork and bedding frames in cement mortar No.		
Ends of treads and risers housed to strings No.	7	2	Domestic type 4 ft. high to BS 990 Type ND2F 3 ft. 3¼ in. wide	96	
Softwood Oak	17	41	Type HD2F 3 ft. 3 <sup>1</sup> / <sub>4</sub> in. wide		3 10
$2\frac{1}{2}$ -in. $\times$ 3-in. moulded			Type NDIIF 6 ft. 64 in.	89	10
handrail FR Softwood	3	4	wide	164	3 10
Oak	276	8	" Z " range, 4 ft. high Type ZNDI 2 ft. 04 in. wide	64	
$l_{4}^{1}$ -in. $\times$ $l_{4}^{1}$ -in. square		-	Type ZND4F 6 ft. 0 <sup>3</sup> / <sub>4</sub> in. wide		5 1
balusters FR		9	the second se	130	
Softwood Oak	;	612 5 2	Curtain walling grid with proportion of opening lights, supplied and fixed		
Framed ends to balusters No. Softwood Oak		7	excluding glazing and infill panels, approximate prices FS Galvanised steel Aluminium	*23	3

MONGER	s	d	PLASTERER	\$	d
t prices			Market prices		
es for ironmongery			Plastering sand YC	22	0
greatly depending the type and quality d, no prices are quo	ted		Plaster to BS 1191 Class B in loads of 2 tons to 3 tons 19 cwt. T		
red rates			Browning	171	0
es which follow are ng only and are te of profit			Fibred browning Board finish Carlite plaster in loads of		0
vood			2 tons to 3 tons 19 cwt. T		
eel butts	Pr. 4	10	Undercoat Finishing		0
arrel bolts	No. 2	2 2	2-in. plaster lath, over		
ard locks	No. 4	6	600 yds. YS	2	21
er night latch	No. 7	7	6-in. $\times$ 6-in. $\times \frac{1}{4}$ -in. white glazed wall tiles YS	*19	0
	No.	5 0	Measured rates		
e lock	No. 7	7	Metal lathing		
ent fastener	No. I	10	No. 24 gauge expanded metal lathing and fixing YS		0
lwood			To softwood soffits	4	4
13% to above			To metal 28 BG steel angle bead to BS 1246, Figure 7, Profile C3,		10
L & IRON WO	RKER		plugged to brickwork or partitions FR	1	2 5
et prices					2
ural steel joist s, basis sizes,	T+70		Lime plaster		
s, 50 ton lots for other than izes vary between	T*78	, ,	Render float and set on brick walls and partitions YS	7	
d 70s. per ton			Render, float and set on concrete including hacking YS		5
ired rates				2	4
steel joists in steel structures hoisted omplete	and T 165	0 0	Render, float and set on expanded metal lathing YS	7 2	<b>9</b> 5
steel stanchions ng caps, bases, cleat	s.		Gypsum plaster		
d compound girders ng plates and rivets	T 191		Render in cement-lime-sand (1:1:6) and set in gypsum plaster on brick walls and partitions	6	1
windows including g and pinning lugs to ork and bedding in cement mortar			Render in gypsum fibred browning-sand $(1 :  \frac{1}{2})$ and set in gypsum on concrete	1	11
stic type 4 ft. high 990			soffits including bonding coat	5 9 3	<b>9</b> 8
e ND2F 3 ft. 34 in. v	7	8 10	Render and set on expanded		
e HD2F 3 ft. 3¼ in. v	8	9 10	metal lathing including pricking up coat YS		-
e NDIIF6 ft.6½ in e	16	4 4 3 10	Lightweight plaster	4	0
range, 4 ft. high e ZNDI 2 ft. 04 in. v	5		Render and set in lightweight plaster on brick walls and		
e ZND4F 6 ft. 0≩ i e		6 10 6 5	partitions YS	2	6 9
in walling grid with			Sundries		
rtion of opening supplied and fixed ling glazing and infil			Labour arris Ff Make good plaster up to	ŝ	5
, approximate price Galvanised	s FS		metal bead FI	8	2

C

typsum board finish setting pat on last4 6 I4 in.pat on lastYS4 6 II-in. gypsum wall board xed to vertical studding nd scrimming jointsI2-in. gypsum wall board xed to vertical studding nd scrimming jointsYS5 10 3 2Vall screeds3 2The above are Standard-List prices plus $27\frac{1}{2}\%$ -in. cement and sand creed on brick walls to eceive tilingYS4 3 I-in. portland cement and and (I : 3) plain face rowelled smooth on brick vallsYS6 11 II/IIITyrolean rendering tender in cement, lime, sandII	27 10 17 109 116	· 10111 99712 000 66	PLUMBER—continu Rainwater gutters and pin Half round eaves gutter and fixed to fascia with brackets: Cast-iron, f-in. Pressed steel, 18g. Asbestos cement Aluminium	iþes r jointed	s 3253 *3242 3142
soil goods soil goods soil goods soil goods Medium weight pipe to BS 416 and BS 460 in 6 ft. lengths No. 3-in. 6 ft. lengths No. 3-in. 6 ft. lengths No. 3-in. 6 ft. lengths No. 4-in. 4	27 10 17 109 116 103 141 180 0 1	10 <sup>1</sup> / <sub>2</sub> 97 <sup>1</sup> / <sub>2</sub> 00 66	Half round eaves gutter and fixed to fascia with brackets: Cast-iron, <u>1</u> -in. Pressed steel, 18g. Asbestos cement	FR 4-in. 6-in. FR 4-in. 6-in. FR 4-in. 6-in. FR	253 *32*42 314
xed to softwood soffits nished to receive plaster YS49 2Medium weight pipe to BS 416 and BS 460 in 6 ft. lengthsNo. 3 -in. 4 -in. 6 ft. lengthsNo. 3 -in. 4 -in.iypsum board finish setting oat on last746-in. gypsum wall board xed to vertical studding nd scrimming joints7510-in. cement and sand creed on brick walls to eceive tiling743-in. Portland cement and and (1 : 3) plain face rowelled smooth on brick vallsYS611-in. Portland cement and and (1 : 3) plain face rowelled smooth on brick vallsYS611-in. Portland cement and and (1 : 3) plain face rowelled smooth on brick vallsYS611-in. Portland cement and and (1 : 3) plain face rowelled smooth on brick vallsYS611-in. Portland cement and and (1 : 3) plain face rowelled smooth on brick vallsYS611-in. endering tender in cement, lime, sand1111Steel tubes to BS 1387 medium weight galvanised I -in.	27 10 17 109 116 103 141 180 0 1	9 7 1 2 0 0	and fixed to fascia with brackets: Cast-iron, $\frac{1}{8}$ -in. Pressed steel, 18g. Asbestos cement	FR 4-in. 6-in. FR 4-in. 6-in. FR 4-in. 6-in.	253 *32*42 314
3-in.ivpsum board finish setting boat on last3-in.foat on lastYS4in. gypsum wall board xed to vertical studding nd scrimming jointsIad scrimming jointsYS5Vall screeds3-in. cement and sand creed on brick walls to eceive tilingYS4Iain faceI-in. Portland cement and and (I: 3) plain face rowelled smooth on brick vallsYS6-in. Portland cement and and (I: 3) plain face rowelled smooth on brick vallsYS6ItIIYrolean rendering Render in cement, lime, sandYS6	27 10 17 109 116 103 141 180 0 1	9 7 1 2 0 0	Pressed steel, 18g. Asbestos cement	4-in. 6-in. FR 4-in. 6-in. FR 4-in. 6-in.	253 *32*42 314
YS     4     6       in. gypsum wall board xed to vertical studding nd scrimming joints     I     2       in. gypsum wall board xed to vertical studding nd scrimming joints     YS     5       IO     3     2       Vall screeds     3     2       -in. cement and sand creed on brick walls to eceive tiling     YS     4       Iain face     5       -in. Portland cement and and (1:3) plain face rowelled smooth on brick valls     YS     6       Yrolean rendering     YS     6       Yrolean rendering     YS     6       Render in cement, lime, sand     1	10 17 109 116 103 141 180 0 1	9 7 <sup>1</sup> / <sub>2</sub> 0 0	Asbestos cement	6-in. FR 4-in. 6-in. FR 4-in. 6-in.	253 *32*42 314
<ul> <li>in. gypsum wall board xed to vertical studding nd scrimming joints</li> <li>YS</li> <li>YS</li> <li>Yall screeds</li> <li>in. cement and sand creed on brick walls to eceive tiling</li> <li>YS</li> <li></li></ul>	17 109 116 103 141 180 0 1	7½ 0 0	Asbestos cement	FR 4-in. 6-in. FR 4-in. 6-in. FR	53 *32 *42 314
xed to vertical studding nd scrimming jointsYS5104-in. 6-in.32The above are Standard-List prices plus $27\frac{1}{2}\%$ The above are Standard-List prices plus $27\frac{1}{2}\%$ Vall screedsLead pipe in quantities of 5 cwt. to 1 tonC-in. cement and sand creed on brick walls to eceive tilingYS4-in. face15-in. Portland cement and and (I : 3) plain face rowelled smooth on brick vallsYS6Yrolean rendering tender in cement, lime, sand11	17 109 116 103 141 180 0 1	7½ 0 0	Asbestos cement	4-in. 6-in. FR 4-in. 6-in. FR	*3 2 *4 2 3 1 4
3 2 Vall screeds -in. cement and sand creed on brick walls to eceive tiling YS 4 3 Iain face -in. Portland cement and and (I : 3) plain face rowelled smooth on brick valls YS 6 II i II Steel tubes to BS 1387 medium weight galvanised FR $\frac{1}{2}$ -in. I -in. Vall screeds Lead pipe in quantities of 5 cwt. to I ton C BS 1085 I Polythene tubing, heavy gauge, in quantities of 500 to 999 ft. Steel tubes to BS 1387 medium weight galvanised FR $\frac{1}{2}$ -in. I -in. I -in. I -in. I -in. I -in.	109 116 103 141 180 0 1	0 0 0 6 6	Asbestos cement	4-in. 6-in. FR 4-in. 6-in. FR	2 *4 2 3 1 4
Vall screedsprices plus $27\frac{1}{2}\%$ -in. cement and sand creed on brick walls to eceive tilingYS43-in. cement and sand creed on brick walls to eceive tilingYS43-in. faceI5-in. Portland cement and and (I : 3) plain face rowelled smooth on brick vallsYS611-in. Portland cement and and (I : 3) plain face ryrolean renderingYS611-in. portland cement and and (I : 3) plain face ryrolean renderingYS611-in. portland cement and and (I : 3) plain face ryrolean renderingYS611-in. portland cement and and (I : 3) plain face ryrolean renderingYS611-in. portland cement and and (I : 3) plain face rowelled smooth on brick ryrolean renderingSteel tubes to BS 1387 medium weight galvanised $\frac{3}{1}$ -in. $1\frac{1}{2}$ -inin. cement, lime, sandII	116 103 141 180 0 1	0		6-in. FR 4-in. 6-in. FR	2 *4 2 3 1 4
-in. cement and sand creed on brick walls to eceive tiling YS 4 3 loin face -in. Portland cement and and (1:3) plain face rowelled smooth on brick valls YS 6 11 fyrolean rendering tender in cement, lime, sand	116 103 141 180 0 1	0		FR 4-in. 6-in. FR	2 3 1 4
creed on brick walls to eccive tiling     YS     4     3     BS 602     I       lain face     I     5     Polythene tubing, heavy gauge, in quantities of 500 to 999 ft.     Polythene tubing, heavy gauge, in quantities of 500 to 999 ft.     IOO FR       -in. Portland cement and and (I : 3) plain face rowelled smooth on brick valls     YS     6     II       I     I     I     Steel tubes to BS 1387 medium weight galvanised     FR       Yrolean rendering     1/1     I = in. I = in.     I = in. I = in. I = in.       Render in cement, lime, sand     I     II     II	116 103 141 180 0 1	0		4-in. 6-in. FR	4
eceive tiling YS 4 3 I 5 Iain face -in. Portland cement and and (1:3) plain face rowelled smooth on brick valls YS 6 11 Tyrolean rendering Render in cement, lime, sand I arin.	116 103 141 180 0 1	0		4-in. 6-in. FR	4
Iain face       Polythene tubing, heavy gauge, in quantities of 500 to 999 ft.         -in. Portland cement and and (1:3) plain face rowelled smooth on brick valls       YS       6 11         I       I       I       I         Yrolean rendering Render in cement, lime, sand       V       6 11       I	141 180 0 1	6	Aluminium	FR	4
lain face       gauge, in quantities of 500         -in. Portland cement and       to 999 ft.         and (I : 3) plain face       100 FR         rowelled smooth on brick       1-in. I         valls       YS         I       I         Steel tubes to BS 1387         medium weight galvanised       FR         3-in.       1-in.         Tyrolean rendering       1-in.         Render in cement, lime, sand       1-in.	141 180 0 1	6	Aluminium		2
-in. Portland cement and and (1 : 3) plain face rowelled smooth on brick valls YS 6 11 1 11 Steel tubes to BS 1387 medium weight galvanised FR 1-in. 1 Steel tubes to BS 1387 medium weight galvanised FR 1-in. 1 1-in. 1 1-in	141 180 0 1	6	Aluminium		
rowelled smooth on brick valls YS <b>6 11</b> <i>I II</i> Steel tubes to BS 1387 medium weight galvanised FR $\frac{1}{2}$ -in. <i>I</i> -in.	0			9-10.	
valls YS 611 1 11 Steel tubes to BS 1387 medium weight galvanised FR 3-in. 1-in. 1-in. 1-in. 1-j-in. 1-j-in. 1-j-in. 1-j-in.	0				4
ryrolean rendering Lender in cement, lime, sand medium weight galvanised FR $\frac{1}{2}$ -in. 1-in.	1		Rainwater since inister	hand back	
Tyrolean rendering l+in. I d+in. I d+in. I d+in. I d+in. I d+in. I d+in. I d+in. I d+in. I d+in.	1		Rainwater pipes jointed fixed to walls with pipe		
lander in cement, lime, sand I 4-in.	1	91	Cast iron, 3-in.	FR	
		51	18	3-in.	64
I : I : 6) and finishing withThe above are Standard Listhree coats patent coloured mixprices less $36\frac{1}{2}\%$		Oż		4-in.	7 5
preparations applied with and operated machine YS 10 9 Galvanised malleable fittings.			Pressed steel, 24g.	FR	
2 8 Bend No.	3	0		3-in.	*4
prayed " Limpet " asbestos 14-in.	4	7		4-in.	*6
Approximate prices for sprayed	6	6			4
Limpet "asbestos on the Tee No. ollowing surfaces to the J-in.		1	Asbestos cement	FR	
hickness shown for \$-in.	i	6	risectos coment	3-in.	3
uantities of 1,000 yds. super. I-in. Normal pressed finish. I1-in.	23	2		4-in.	24
New concrete soffits and I1-in.	4				3
1/2-in. 14 5 prices less 171%, less 61% plus					
3-in. <b>19 8</b> 40%			Aluminium	FR 3-in.	5
Copper tubes to BS 659 FR	*1	0		4-in.	47
YS Ž-in,	*1	05		<b>T</b> -111.	5
1/2-in. 16 6 Î-in. 2/2-in. 21 9 I1/2-in.	*2	2 7			
I-in. 23 10 The above are calculated on a			Soil and ventilating pipe	25	
extra over the above prices basis price of 2s. 4§d. per lb. plus diameter extras.			Lead soil, waste and ve		
YS 3 5 Measured rates			ing pipes fixed to walls lead tacks at the follow		
Wall tiling			sizes and weights (lbs.		
i-in. $\times$ 6-in. $\times$ 4-in. glazed Milled sheet lead C Flat roofs Flat roofs			yd. run) 3.	l-in. 15	11
wall tiles set and jointed Gutters and flashings on prepared screed YS	193	0	4	-in. 19	8
Standard quality, white #44 9 24 SWG copper sheet FS	5	9	Cast iron soil, waste an		9
Eggshell matt or glossy *55 0 Flat roofs Gutters and flashings		9	ventilating pipes with	caulked	
PLUMBER 23 SWG copper sheet FS			joints fixed to walls wi nails	ith pipe FR	
Flat roofs		6		n. heavy	7 5
Market prices Gutters and flashings	6	6	4-ir	n. heavy	9
Sheet lead, 3½ lb. and I4 gauge zinc FS upwards, in quantities of Flat roofs	3	7			6
5 cwt. to I ton C 106 9 Gutters and flashings		7	Asbestos cement soil,		
Copper sheeting, 23 gauge, 20 SWG super purity			and ventilating pipes w socketed joints made in	n	
n I-ton lots C 330 0 aluminium FS Flat roofs	5	4	caulked neat cement fit	ixed	
Zinc sheeting, 14 gauge, in Gutters and flashings		4	to mana wren nonder Da	3-in.	3
I-ton lots C I30 0 20 SWG commercial quality				4-in	25
Aluminium sheeting 20 SWG C Super purity 522 9 Flat roofs	4	1			3

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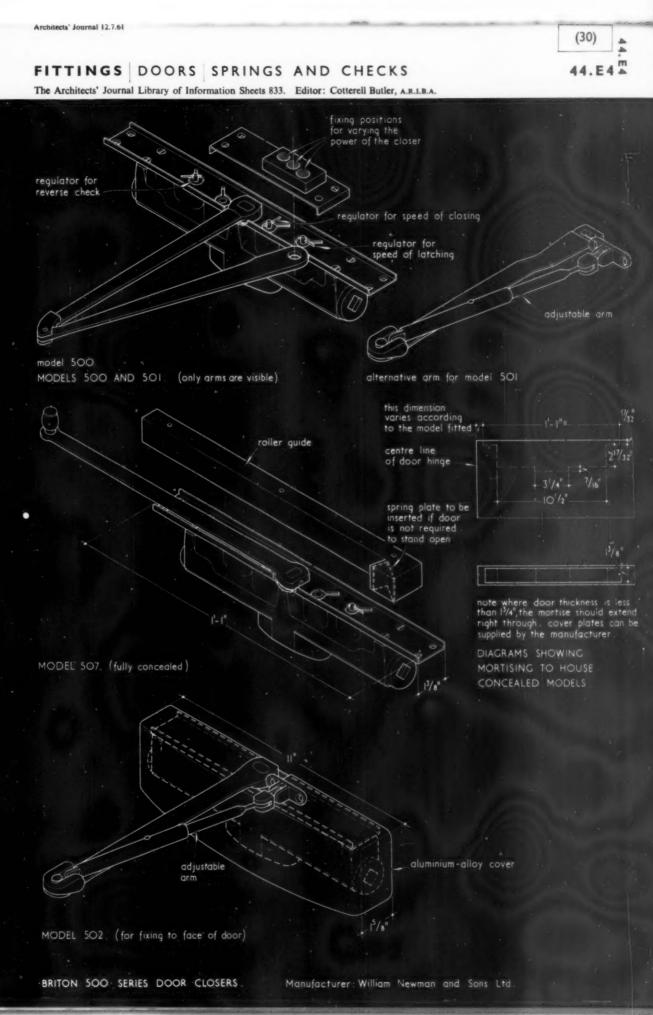
technical section									
PLUMBER—continued		s	d	PLUMBER—continued	s	d	PLUMBER—continued	s	d
Lead pipe to BS 602				Polythene tubing to BS 1972			Copper tube		
Lead pipe at the following sizes and weights (lbs. per				Heavy gauge polythene tubing			Copper tube at the following sizes and gauges		
yd. run). Supply pipe laid in trench (measured separately)	FR			Supply pipe laid in trench (measured separately) FR			Supply pipe, BS 1386, laid in trench (measured separately)		
1/2-in.	7	3 2	8	½-in.	;	7 2	FR 18	*2	0
<del>3</del> -in.	11	5	5	-in.	2	0		1	4
I-in.	16	47	28	1-in.	2	7 6	<b>≵-in.</b> 17	*2	2
I‡-in.	28	12	2		2	1	I-in, 16	*4	33
1 <u>1</u> -in.	35	10	6	Supply or distributing pipe fixed to walls FR			1 <sub>4</sub> -in. 16	*5	7 4
		13	1	1/2-in.	2	5	1 <u>1</u> -in. 15	*7	
Supply pipe fixed to walls	50			<u></u>		11	Supply of distributing pipe	-	
and ceilings 1-in.	FR 7	4	3	I-in.	3	15	Supply or distributing pipe, BS 659, fixed to walls FR		
3-in.	11	26	9 2		2	2	1/2-in. 19	*2	2
I-in.		4	3 5	Galvanised steel tubing to BS 138	7		3-in. 19	*2	10 8
14-in.		6	37	Galvanised steel tubing with			1-in. 18	*3	10
		10	7	screwed red lead joints.			14-in, 18		10
I½-in.	35	17	2	Supply pipe, heavy weight, laid in trench (measured			I <u>1</u> -in, 18	*5 3	7
Distributing pipe fixed to walls and ceilings	FR			separately) FR 1/2-in.	2	10	Extra for brass compression		
1/2-in.		3	28		3	10 3	fittings, copper to copper		
<u></u> ∦-in.	5	3	8		13	0	Coupling No.		
1-in.	7	24	9	1-in.	1	5	1/2-in.	53	3 5
1 <u>‡</u> -in.	. 9	25		l∦-in.	4		≹-in.	6	1 2
1 <u>1</u> -in.	12	37		I <u></u> ±n.	5		I-in.	9	
		5	0				14-in.	11	
Flushing and warning pipe				Supply or distributing pipe,			1½-in.	16	5 0
fixed to softwood	FR 4	3	7	medium weight, fixed to walls FR				11	0
I-in	5	4		½-in.	2	10	Bend No. +-in.	6	5 8
1 <u>1</u> -in.		15	10	<u></u> 4−in.	3		2-in.	4	
		2	4	I-in.	3	5		5	5 9
l≟-in.	. 7	62		l∔•in.	4	0	I-in.	8	8 9
Waste pipe fixed to				14-in.	5	92	I∦-in.	11	
softwood I‡-in	FR 6	5	7		2		1 <u>1</u> -in,	24	
		2	6	Extra for malleable iron			Tee No.		
1 <u>1</u> -in	. 7		11	fittings			140. 1/2-in.		9 9
Joints to fittings	No.			Elbow No.	4	0	}-in.	1	
0	<u></u>		10	I‡-in.	25	04	I-in.	10	6 7
	<u></u> ∔-in.	7	7		3	1		11	11
	I-in.	2	2	l <u>∔</u> -in.	64		l <u>∔</u> -in.	22	7 1
	l‡-in.	38	8	Bend No.			l <u>‡</u> −in.		3 9
	l‡-in.	3	10	I-in.	53		Heat insulation		
Extra for:		4		I‡-in.	8	0	Asbestos plastic insulation, wired, trowelled hard and		
Bend	No.			I‡-in.	10	4	smooth and painted FR		
	l∔-in. l∔-in.		4		7	2	in. Ž-in.		4
Branch joints	No.			Tee No. +-in.	3	6	1-in. 11-in.		4 1
	t-in.	8	11	1-in.	1		l‡-in.		5
	<b>}</b> −in.	9	11		1	8	Sectional insulation with canvas		
	I-in.	10		I-in.	4	5	sheeting and metal bands and painted FR		
	l‡-in.	3		I‡-in.	63	1	in.		4 1
		3	1 10	۱ ا±-in.	7	7	Ĩ-in.		5 3
	1 <u>-</u> in.		1 9		4	9	1‡-in. I‡-in.		5 1

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GLAZIER	5 0	d	PAINTER	s	d	PAINTER-continued	s	đ
Market prices			Market prices			On wood		
D.Q. sheet glass cut to size FS				30		Knot, prime, stop and apply one coat oil colour		
24 oz. 32 oz.		0± 7±	Washable distemper C I General purpose priming	30	0	General surfaces YS Basis price		2
-in. polished plate and float				36	6		1	8
lass, glazing quality in plates not exceeding: FS 2 ft. super	4	14	Emulsion paint Gal.	45	0	Add for each additional coat		8
5 ft. super	5 (	04	Hard gloss paint: Gal. Undercoat	44	0	Margins of treads and risers YS		
45 ft. super 100 ft. super		9		46		Basis price	4	
-in. white figured rolled			Measured rates			Add for each additional coat	1	
ind cathedral glass FS Group one		34	On walls and ceilings					10
Group two Group three		91	Twice whiten plastered			Work not exceeding 3-in.		
-in. Georgian polished wired glass FS	6 1	-	ceilings YS	I	6	girth YR Basis price		7
0			Two costs distorners on		-	Add for each additional coat		12
Attention is drawn to reduction in certain glass prices offered by manufac-			Two coats distemper on plastered walls or ceilings YS	2	4			1
urers for acceptance of pecified minimum quantities			Two coats distemper on			Work 3-in. to 6-in. girth		
of one size and substance delivered to one address at			fair-faced brick or concrete walls YS	2	10	Basis price		10
e time			10	î	4	Add for each additional coat		4
Measured rates			Two coats emulsion paint on walls or ceilings YS		11	Stain and varnish		
Glazing to wood				1	8	Prepare, size, stain and twice		
Slazing with putty in squares FS			Prepare, prime and apply one coat oil colour on plastered			varnish on woodwork		
4 oz. O.Q. sheet glass 2 oz. O.Q. sheet glass		7 2	walls YS Basis price	3	8	General surfaces YS	4	
-in. rolled glass, group one	1	9	Add for each additional coat	i	9	Work not exceeding 3-in. girth YR		1
-in. rough cast glass	2	3			10	girti		1
Prismatic glass	2	9	On metal			Work 3-in. to 6-in. girth YR		1
-in. wired glass	2	6	Prepare, prime and apply one coat oil colour					-
-in. Georgian polished wired glass	9	0	General surfaces YS			Oiling and polishing		
-in. polished plate glass		•	Basis price	3	9	Twice oiling hardwood with linseed oil		
(glazing quality) in squares 2 to 5 ft. super		0	Add for each additional coat	1	810	General surfaces YS	2	1
5 to 45 ft. super	8	7	Windows in squares YS	_			1	1
Glazing to metal			Basis price	5	9	Work not exceeding 3-in. girth YR		
Add to above rates Id. per ft. super			Add for each additional coat	2	25	Work 3-in, to 6-in, girth YR		
Sundries			Bars, angles, etc., not			Work o'ni, to o'ni, girth TK		
Hacking out broken sheet			exceeding 3-in. girth YR Basis price		6			
glass FS		3	Add for each additional coat		23	Staining and wax polishing general surfaces of hardwood		
Black ribbon velvet and bedding to edge of glass FR		8			1	FS	1	
Double glazing			Small pipes YR Basis price	1	0	Staining bodying-in and fully		
Insulight units of two skins			Add for each additional coat		35	French polishing on general surfaces of hardwood FS	2	
of glass with lead spacers and glazing with mastic or			1		2	Debusing		
beads (supplied). In panels 10 to 25 ft. super FS			Large pipes YR Basis price	2		Papering		
	10		Add for each additional coat		10	Preparing and sizing walls and hanging plain lining		
Patent glazing					3	paper Piece	3	
Patent glazing with 1-in.			Prepare, prime and apply one coat heat-resisting paint on			Hanging wall paper, p.c. 10s.		
Georgian wired cast glass suitable for 8-ft. spans FS			heating surfaces of radiators			per piece Piece	21	
Rolled steel lead capped bars	4		Basis price	4	4	Honging borden and to are	14	
Aluminium alloy bars	4	*	Add for each additional coat	!	4	Hanging border, p.c. Is. per yd. YR		



## 44.E4 ·BRITON 500· SERIES DOOR CLOSERS

This Sheet describes the Briton 500 series of door closers. These are designed to affect as little as possible the appearance of the door, being, in all cases except one, recessed in the frame. The model that is not recessed in the door frame is housed in an unobtrusive cover for surface mounting.

### **Design and Construction**

The body of the closer is of close-grain cast grey iron, machined to close tolerances to give maximum efficiency of the check piston. The piston and shaft are made from high-tensile steel, hardened and ground and work together on the rack-and-pinion principle. The shaft is housed at each end in a needle bearing to reduce friction to a minimum. The coil spring, which is used in compression, is immersed in a bath of oil and is not adjustable for pressure. The top fixing plate is a shallow channel of pressed mild steel and is marked "fast" and "slow" for the regulation of the speeds of closing. The arms of the closer are cast malleable iron. Screws are supplied and fixing instructions are included with each unit.

### Types

500: The body of the closer and the fixing plate for the coupling arm are mortised into the door and frame respectively, so that the arms are the only part of the closer visible when it is fixed. The fixing plate for the coupling arm requires a maximum depth of  $\frac{3}{4}$  in. so that a narrow head member is no disadvantage.

501: This type is identical to the 500 except that the coupling arm has a surface fixing (which can be screwed to a vertical, horizontal or splayed surface) and the length of the coupling arm is adjustable for applications in which the door head projects beyond the face of the door up to a maximum of 1 in.

502: Both the closer and the coupling arm are surfacemounted in this type. The body is entirely concealed in an aluminium-alloy cover and the fixing for the coupling arm can be screwed to a vertical, horizontal or splayed surface.

The above three types are designed primarily to control internal doors weighing up to 112 lb. and not exceeding 7 ft. 0 in. high by 3 ft. 0 in. wide. They may be obtained right- or left-handed for single doors opening from 90° to 180°. A device to enable the door to stand open is incorporated and can be brought into operation by a simple adjustment in the top fixing plate.

plate. When the door is required to open to  $90^{\circ}$  and not beyond, owing to some obstruction, a hydraulic reverse check can come into operation which offers resistance when the door reaches the  $90^{\circ}$  position, thus preventing damage to the obstruction if the door is flung forcibly back. Where the door is required to open to  $180^{\circ}$  a modification of the position of the mortise makes this possible.

The speed of closing can be regulated and where extra impetus is required to close the latch on any particular door, it is possible to increase the door speed during the last  $10^{\circ}$  of the closing movement.

507: In this type, both closer and arms are completely concealed from either side of the door when it is closed. The closer is only suitable for internal doors weighing up to 100 lb. and not exceeding 7 ft. 0 in. high and 2 ft. 9 in. wide. It may be obtained right-or left-handed for single doors opening to a maximum of  $105^\circ$ . It is supplied to stand open at  $90^\circ$  but for use where this facility is not required a conversion is also included.

All the concealed models, 500, 501 and 507 are  $1\frac{3}{8}$  in. wide overall the body and can be recessed within the thickness of a timber or metal door. Where the thickness of the door is less than  $1\frac{3}{4}$  in., the mortise should extend right through, and surface cover plates can be supplied on request for such applications.

### Finish

The closers are available sprayed silver or brown bronze, or sprayed silver with the exposed parts satin nickel-plated.

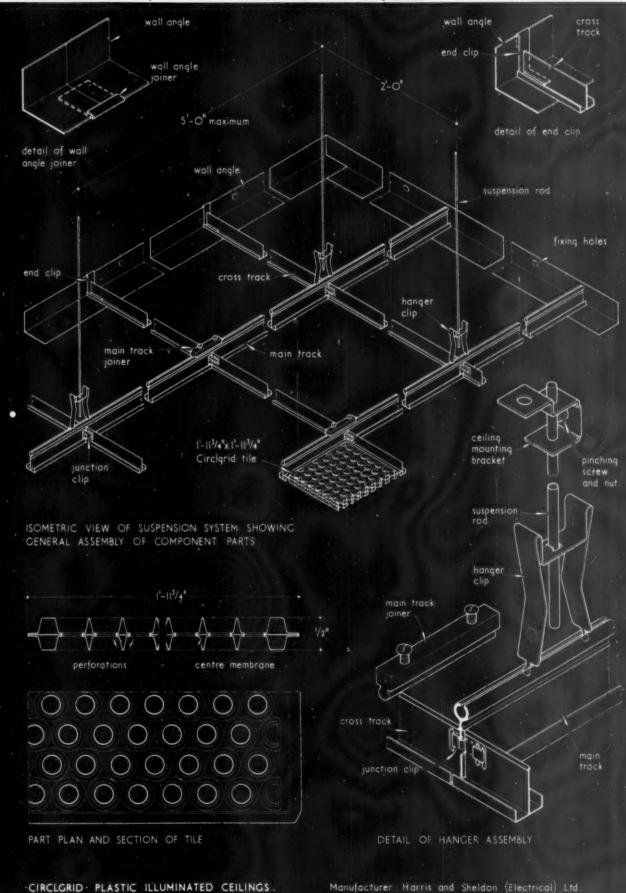
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Architects' Journal 12.7.61

## ILLUMINATION PLASTIC ILLUMINATED CEILING

The Architects' Journal Library of Information Sheets 834. Editor: Cotterell Butler, A.R.I.B.A.



Architects' Journal 12,7,61

(25)

34.Z3 W

## 34.Z3 ·CIRCLGRID· PLASTIC ILLUMINATED CEILINGS

This Sheet describes Circlgrid louvred ceiling panels which can be used for lighting the whole or a section of a ceiling area or which may form part of a lighting installation. They are manufactured from translucent p.v.c. which gives a high degree of light diffusion and the louvres have a neat textured appearance.

### General

Circlgrid panels can provide an illuminated ceiling which conceals services without impairing the effectiveness of sprinklers and air-conditioning systems. It is advisable, however, to enquire into local fire regulations before installing the panels under a sprinkler system: although this has been done successfully, it is sometimes held that the louvres limit the spread of water.

The drawings show the system of suspension which has been designed for Circlgrid panels although any other system designed for 2 ft. 0 in. square tiles can be used. The tiles are readily demountable for access to lighting fittings, etc., and for cleaning.

### **Components and Sizes**

Panels: The panel consists of two vacuum-formed sheets of polyvinylchloride sealed to a centre membrane. They are supplied de-staticised. The 3 full-size details show how the two sheets consist of a series of truncated cones sealed together and pierced at the centre of the area where they join. The panel is also sealed at its outer edges. The panels are 1 ft. 112 in. square and 1 in. deep, with 1-in. diameter

perforations. Each Circlgrid panel weighs 13 oz. Main track: This is an aluminium-alloy extrusion  $1\frac{3}{16}$  in. by  $\frac{1}{2}$  in. in lengths of 8 ft. 0 in. Lengths of track are connected by jointing sections. Slots are provided in the web of the track for fixing the cross tracks and the upstand of the flange is also cut away to enable the cross-track to rest on the flange.

Hanger clip: The main track is suspended by M-shaped steel spring clips which are inserted into the slot in the top of the track by pressing the legs of the clip together, turning them at right angles to the slot and releasing them so that the shaped ends are engaged. The hole for the 1-in. m.s. suspension rod has teeth which grip the rod and is opened by pressing the upper loops of the M together.

Ceiling mounting bracket: This is fixed direct to the ceiling and holds the suspension rod by means of a pinching screw in a spire nut.

Cross track: The cross track sections are 2 in. by 1/2 in. and are in lengths of 2 ft. 0 in. They are slotted at the ends, as shown, to take the soft metal clips which are used to connect the cross track sections through the main track. An end clip is available to position the cross track in the wall-finishing angle.

Wall-finishing angle: 11-in. by 11-in. m.s. or 11-in. by  $\frac{1}{2}$  in. extruded aluminium-alloy angle for finishing at the wall is available in 8 ft. 0 in. lengths. It has t-in. diameter holes drilled at 1 ft. 4 in. centres for fixing. The angle sections are jointed as shown.

### Lighting

The space above the Circlgrid panels should be boxed in and painted white: it should not be too deep or left unpainted, or light will be absorbed. In order to "flash" the illuminated surface evenly the centres of lamps should not exceed three times their distance from the Circlgrid panels: otherwise shadows will appear on the illuminated surface. Any beams or pipes in the plenum are liable to cause shadows and it is normally preferable where deep beams occur to make a design feature of them.

Lamps in trough reflectors are not recommended as they are less efficient than bare lamps mounted in a white-painted cavity and they also cast shadows. The manufacturer can supply two sizes of mounting batten for lamps, one for deep and one for shallow cavities. A system of trunking to take any size of fluorescent lamp is also available.

As it is impossible to obtain accurate coefficients of utilisation for luminous ceilings without considering cavity sizes and lamp spacing, the illumination should be calculated by the lumen method, discounting the Circlgrid ceiling, and the result multiplied by 0.77.

### Fixing

When planning the layout of the panels, it is important to work from a fixed point: this can be a corner or, for small areas especially, it may be preferable to work from the centre of the ceiling to obtain a symmetrical layout. Where it is necessary to cut panels this can easily be done with scissors or a sharp knife and the cut edge should be bound with cellulose self-adhesive tape to exclude dust.

The wall angle is fixed first and accurate levelling is essential. Ceiling mounting brackets should be fixed at 2 ft. 0 in. centres for each main track. The spacing along the run of the main track should not exceed 5 ft. 0 in. but can be varied to suit site conditions. The hanger rods should be adjusted to the correct length before fixing: a standard 2 ft. 6 in. rod gives 2 ft. 8 in. from the structural ceiling to the underside of the main track.

The fixing of the hanger clips and the main and cross tracks is as described under Components and Sizes. The overall level of the ceiling should be checked and that all cross tracks are at right angles to the main tracks. When fixing the panels the pattern of the perforations should be arranged to run in the same direction. This can easily be adjusted where tiles are uncut but great care should be taken at the edges of irregular-shaped openings.

## Finish

The tiles are supplied in white p.v.c. only. Supporting tracks and the narrow wall-finishing angle are in unpainted aluminium: the wide wall-finishing angle is stove-enamelled white.

### Maintenance

The panels can be cleaned by immersing them in a 1 per cent solution of detergent in lukewarm (not hot) water. They should not be rubbed or brushed but agitated gently for about 30 seconds. They should not be wiped or the anti-static film may be destroyed, but should be hung by one corner to drip dry. A nonionic detergent is preferable to an anionic type.

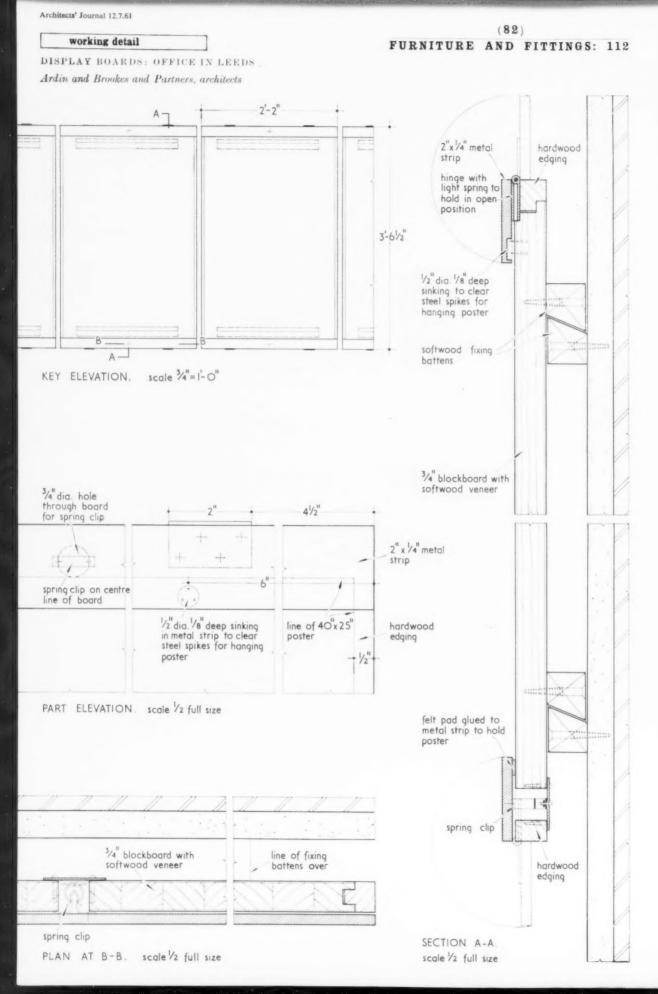
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Architects' Journal 12.7.61	(82)
working detail	FURNITURE AND FITTINGS: 112
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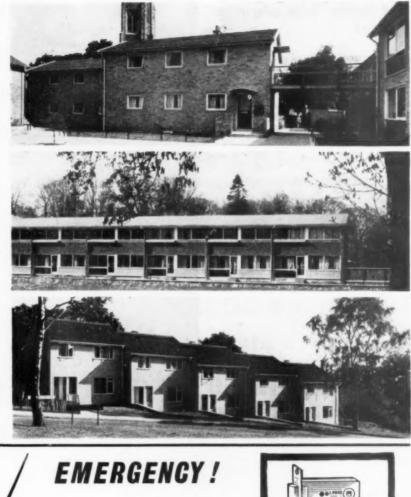
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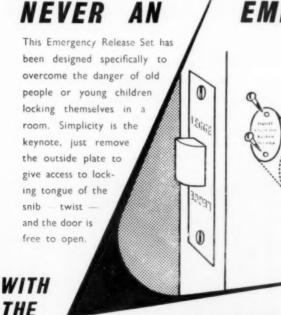
## Good housing design competition 1961 awards

Nine housing schemes, selected out of 463 entered in the MOHLG Good Housing Design Competition, will receive awards from the Minister of Housing this Thursday, July 13, at the RIBA. One award each for Urban Building and Rural Building was made in each of the four areas into which England was divided, except the northern region, for which no rural building award was made, and two for Wales. Two prize winning designs have already been fully illustrated in the AJ: houses at Bergh Apton, Norfolk, designed by Tayler and Green and built by Woolnough & Cogman, for Loddon Rural District Council (AJ 24.5.56 and 22.11.56), and old people's housing, Frenchlands Hatch, East Horsley, designed by Clifford Culpin & Partners for the Architects Benevolent Society and built by Carlton Contractors Ltd. (AJ 24.7.58).

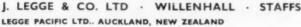
Shown top: Midland Region award for urban building, flats and garages, Alderson Place, Norwich, designed by David Percival, built by W. Ames Ltd., for City & County of Norwich: centre: Welsh Office award for urban building, houses and flats at Cwmbran, Monmouthshire, designed by John West, chief architect, built by Geo. Wimpey & Co. Ltd., for Cwmbran Development Corporation; bottom: Welsh Office award for rural building, flats at Monmouth designed by J. H. Evans for Monmouth Borough Council

The Architects' Journal for July 12, 1951







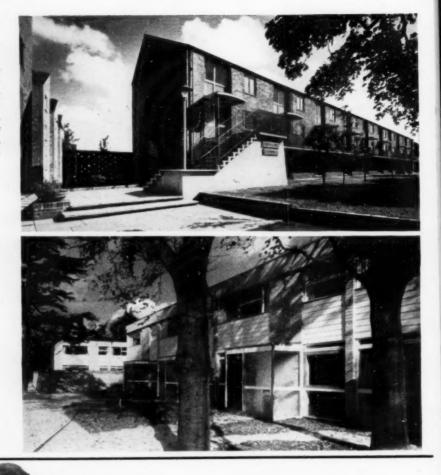


MATCHING RANGE OF 'RENOWN' SETS

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The Architects' Journal for July 12, 1961 72 Good housing design competition (continued

Top: northern region, flats, maisonettes and garages at Birkenhead, designed by James and Bywaters, built by James Goode of Liverpool, for Melville Curlender; below: London region award for rural building, terrace houses with garages at Waldegrave Park, Twickenham, designed by Eric Lyons, built by Myton Ltd., for Priory Hall Ltd.



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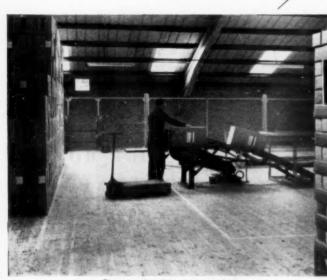
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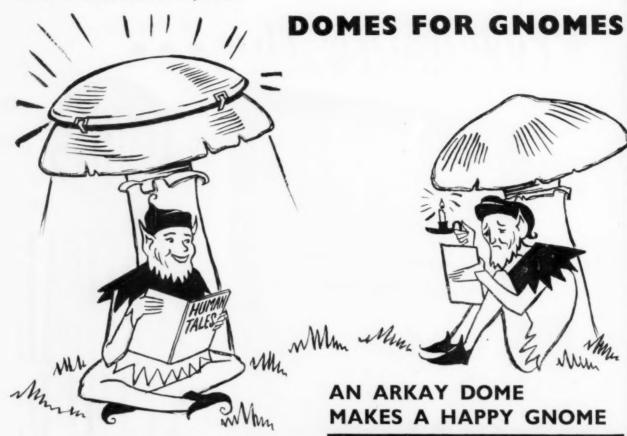
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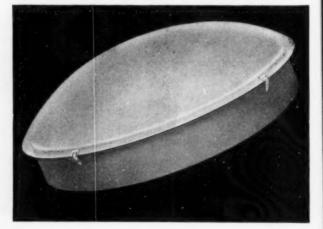
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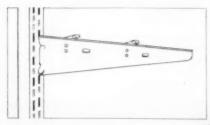
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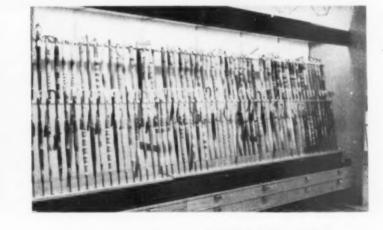
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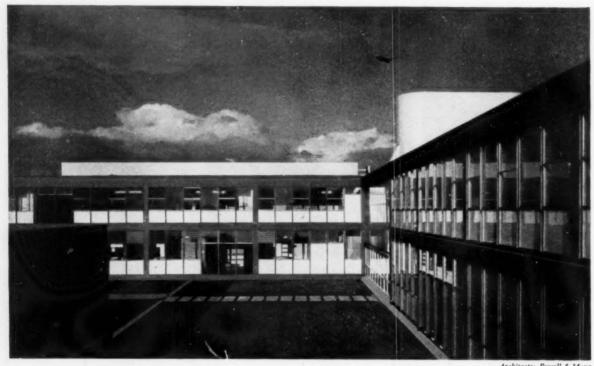
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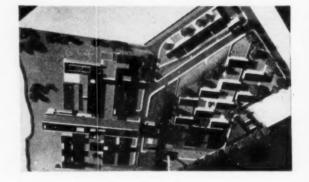
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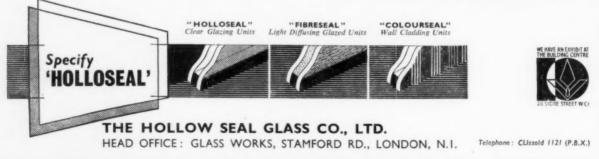


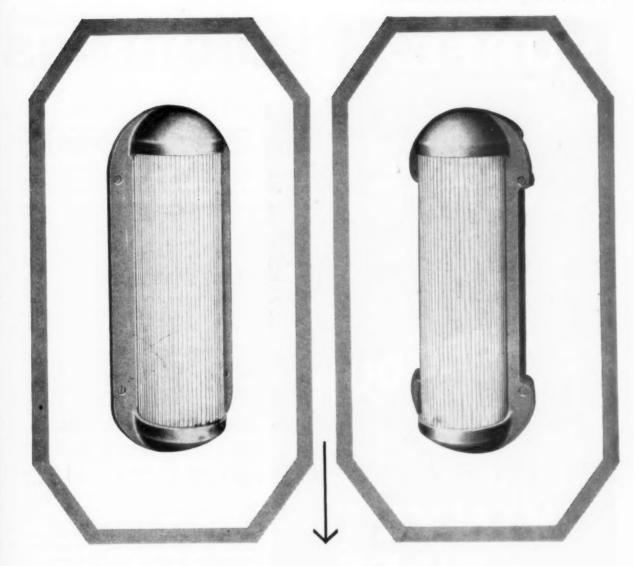
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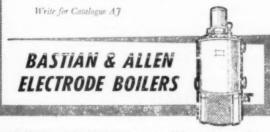
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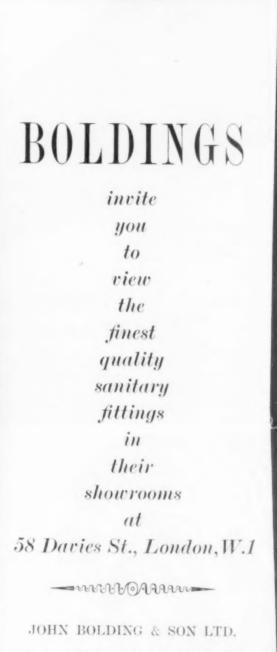
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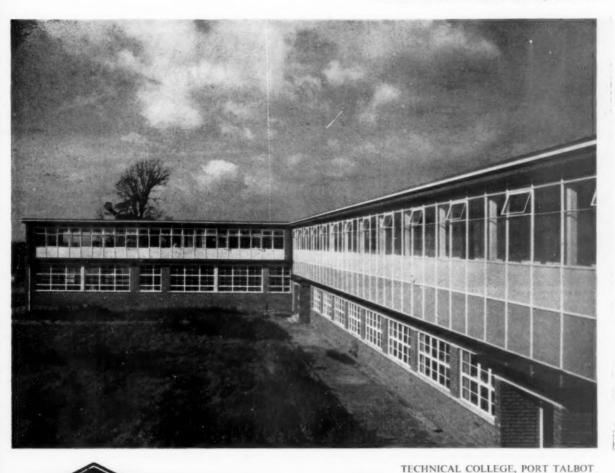
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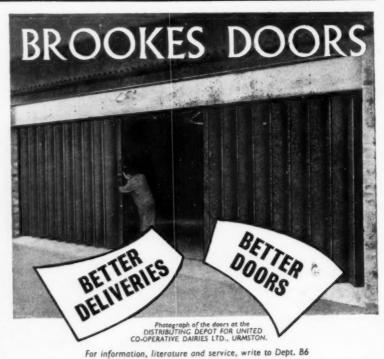
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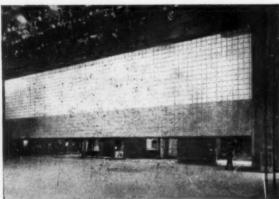
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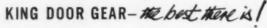
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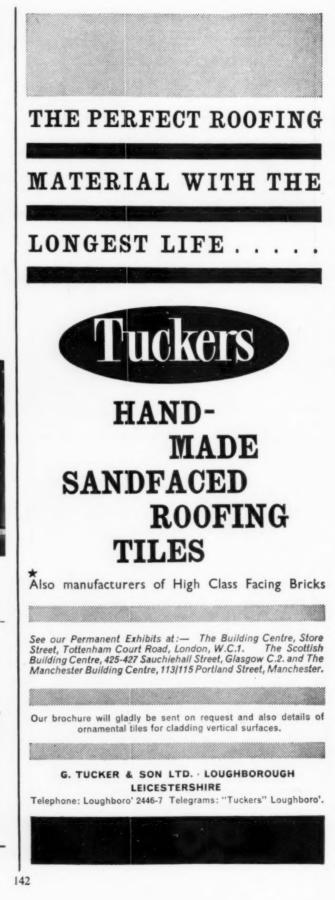
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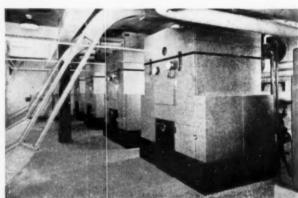
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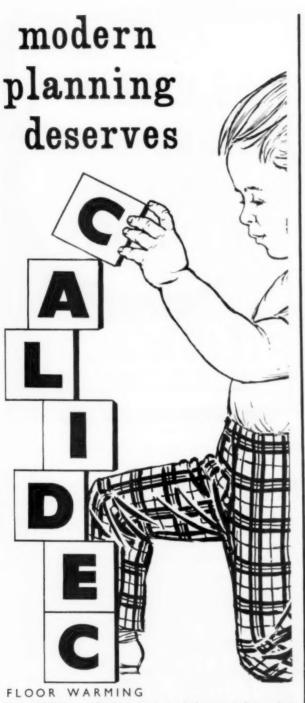


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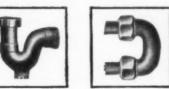
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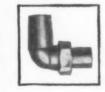


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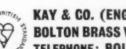


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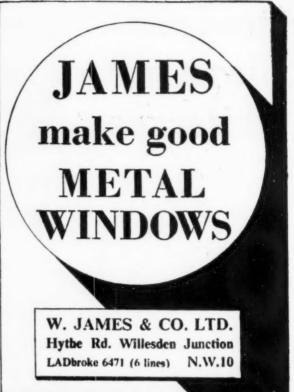
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THE ARCHITECTS' JOURNAL for July 12, 1961





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### NORTH EAST METROPOLITAN REGIONAL HOSPITAL BOARD

40, Eastbourne Terrace, London, W.2 W. G. Plant, Dip.Arch.(L'pool), F.R.I.B.A.,

**Regional** Architect

## ARCHITECTURAL ASSISTANT

The Board have a vacancy in their Architect's Department for an ARCHITECTURAL ASSIS-TANT to organise the Department's technical library and to provide a technical information service for a staff of over 50 Architects engaged in a large and interesting programme of hospital development.

The applicants should be prepared to specialise in research, particularly in the use of materials and building methods, and must have passed the Intermediate examination of the Royal Institute of British Architects, or an examination giving exemption therefrom.

Salary, according to age and experience, from  $\pounds 645 - \pounds 940$ .

Applications, giving age, details of education, professional training, qualifications, experience and past and present appointments, present salary and other relevant details, together with the names and addresses of two referees, should be sent to The Secretary, North East Metropolitan Regional Hospital Board, 40, Eastbourne Terrace, London, W.2, within 14 days.

## ARCHITECTS FOR THE SCOTTISH DEPARTMENTS OF THE SECRETARY OF STATE

ARCHITECTS are required in Edinburgh for the Chief Architect's Division of the Secretary of State's Departments which carries overall responsibility for work on Hospitals, Housing, Schools, Colleges and other Institutions, and which offers important opportunities for development work and research. Salary range £936 to £1,430. Starting pay according to age and experience. Five-day week. Four weeks annual leave. Prospects of promotion and permanency. Write for application form to T. A. Jeffryes, Esq., A.R.I.B.A., A.M.T.P.I., Chief Architect, Department of Health for Scotland (Room 30), St. Andrew's House, Edinburgh, 1.



SHEFFIELD REGIONAL HOSPITAL BOARD

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SENIOR ASSISTANT ARCHITECT £1,300 £1,600 ASSISTANT ARCHITECTS AND SURVEYORS (BUILDING) £905-£1,310\* ARCHITECTURAL AND SURVEYING £625 £900\* (BUILDING) ASSISTANT

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The Board is to carry out an expanding Capital Works programme of Hospital Building expected to cost over £50 millions during the next 10 years. It will include new and interesting projects, as well as reconstruction schemes, affording wide scope for Architects with keenness and initiative and design ability and experience.

Previous hospital experience is not essential and applications will be welcomed from newly qualified Architects and those about to qualify.

Senior ; and Assistant Architects must be Registered Architects and Building Surveyors, A.R.I.C.S. (Building).

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Newly-built offices in congenial surroundings within the green belt on the outskirts of Sheffield. Five-day week. Canteen facilities available. Mileage allowances payable to approved car users. Application forms to be returned by 31st July and further information obtainable from:-

### The Secretary, Sheffield Regional Hospital Board, Fulwood House, Old Fulwood Road, Sheffield 10

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The Company operates an excellent Pension Scheme with substantial widows' benefits on death, before or after retirement, available immediately on joining.

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Applicants must have a clean driving licence and be willing to fly (usually in the Company's own aircraft).

Brief personal details, please, and full details of professional qualifications to be addressed to:-

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HOSPITAL BUILDING PROGRAMME

## APPOINTMENT OF ARCHITECTS

North East Metropolitan Rus 40 Eastbourne Ter London, W.2 oolitan Regional Hospital Board Теггасе

W. G. Plant, Dip.Arch.(Liverpool), F.R.I.B.A. Regional Architect

ARCHITECTS are urgently required for the Board's expanding Architectural Department in London. A considerable programme of building is now getting under way offering scope for research, imaginative design and progressive thinking, and excellent opportunities for young architects, including those just qualified, for gaining experience in a wide field ranging from specialised hospital structures to Nurses' Teaching Schools, Domestic Residential Buildings, Recreational Centres, Workshops, Nurses' Homes, etc.

from specialised hospital structures to Nurses' Teaching Schools, Domestic Residential Buildings, Recreational Centres, Workshops, Nurses' Homes, etc. Architects will either be allocated jobs of their own and be responsible under limited supervision for work involving all stages from sketch plans and office administration to site supervision, or will work, as members of teams, on the larger projects and share in the work of research design and detailed drawings. The Region which comprises the City of London, and parts of the administrative County of London, parts of Middlesex, and Hertford-shire, and the County of Essex, serves a population of over 3,000,000and is responsible for over 130 hospitals. Applicants should have passed the final R.I.B.A. examination, and registered architects would be appointed on the basic professional (assistant) scale  $5945 \times £55(1) \times £45(6) \times £50(2) - £1,360$  inclusive, the commencing salary depending on age and experience; the salary for architects avaiting registration is £905. Mileage allowance paid for use of private car when visiting sites. Promotion prospects are good and the maximum of the senior grade is £1,650 per annum. Previous Hospital experience is not essential.

Is 21,630 per annum. Previous Hospital experience is not essential. Leave 20 days rising to 23 days per annum. Five-day week. Posts are permanent and participate in superannuation benefits. Applications giving age, details of education, professional training, qualifications, experience and past and present appointments (with dates), present salary and other relevant details, together with the names and addresses of two referees, should be sent to The Secretary, North East Metropolitan Regional Hospital Board, 40 Eastbourne Terrace, London, W.2, within 14 days.

### CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Adver-tisement Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.J. and must reach there by first post Friday worning for inclusion in the following Wednesday's paper. Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

given above. AIR-MAIL SERVICE available on request. In response to requests from a number of Overseas subscribers for air-mail delivery of Public and Official Appointment details and Other Appoint-ments Vacant, we have been pleased to arrange that cuttings of all such classified advertisements appearing in the A.J., shall be despatched by air-mail each week. The cost of this special aervice to Overseas subscribers will be 5s. for four weeks (1s. 3d. for each additional week) and prepay-ment should be service. The charge we are making represents only the actual cost of the postage involved.

## **Public and Official Announcements**

Public and Official Announcements 368. per inch; each additional line 38. METROPOLITAN BOROUGH OF POPLAR ASSISTANT ARCHITECTS required by Poplar Borough Council for immediate appointment. Salary scale A.P.T. III/IV (£960/£1,140 p.a.; £1,140/£1,310 p.a., plus £45 p.a. weighting "). Commencing salary according to qualifications and experience. Projects include multi-storey flats and maisonneties, etc., in redevelopment areas, and municipal buildings. Application forms from Borough Engineer and Surveyor. Poplar Towa Hall, Bow Road, E.3 ADMINISTRATIVE COUNTY OF LEICESTER (a) PRINCIPAL ASSISTANT ARCHITECT, £1,410-£1,565

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w. C.1. A. G. JURY, City Architect and Director of Planning. 88092

88092 CORPORATION OF THE CITY OF ABERDEEN Applications are invited for the post of SENIOR ASSISTANT. TOWN PLANNING DEPART. MENT, from candidates qualified in Town Plan-ning and 'or Architecture, and having appropriate experience. Salary Scale £1.202-e1.309 per annum, with placing in accordance with qualifications and experience. Applications by letter, with usual particulars and annes of two referees, should reach the Director of Town Planning, 5 Bon-Accord Crescent, Aberdeen, on or before 24th July, 1961. J. C. RENNIE, Town Clerk. Town House,

Town House, Aberdeen. June, 1961.

 June. 1961.
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 WEST SUPFOLK COUNTY COUNCIL AREA PLANNING OFFICER (Scale A: £1,320-£1,565)

 Based at Bury St. Edmunds. Responsible for planning South East area of County and control of development. Candidates must be A.M.T.P.I. Commencing salary according to qualifications and experience. N.J.C. Conditions. Car allowance payable for use of own car. Removal expenses. separation allowance and possibility of staff house. Applications giving qualifications, previous ex-perience and names of two referees to the County Planning Officer, Shire Hall, Bury St. Edmunds by 24th July, 1961.

AMENDED ADVERTIGEMENT BOROUGH OF ENFIELD BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT (Population 110,000-Area 12,400 acres) Applications are invited for the following established positions within the Grades shown:---(a) SENIOR ASSISTANT ARCHITECT-A.P.T. V (6.130-6.1480 p.a.).

(a) SENIOR ASSISTANT ARCHITECT -A.P.T. (a) SENIOR ASSISTANT ARCHITECT -A.P.T. V (£1,310-£1,480 p.a.). (b) ARCHITECTURAL ASSISTANTS-A.P.T. III (£950-£1,140 p.a.). The commencing salary will be fixed at a point within the Scale commensurate with qualifica-tions and experience. The appropriate London weighting allowance will be paid in addition to the above salaries. Candidates for post (a) must be Associates of the Royal Institute of British Architects; for post (b) applicants must have passed the Inter-mediate Examination of the R.I.B.A. The Council are prepared to consider the pro-vision of Housing Accommodation if required, or Houseng Accommodation if required, for house purchase within the Borough.

for house purchase within the Five-day week. Details of appointments and application forms obtainable from Mr. H. D. Peake, M.Sc.(Eng.), Borough Engineer and Surveyor, 7, Little Park Gardens, Enfield, Middx. CYRIL E. C. R. PLATTEN. Town Clerk.

## Civic Centre, Enfield, Middx

Enfield, Middx. 8352 CITY OF CARLISLE CITY SURVEYOR'S DEPARTMENT BUILDING SURVEYOR Applications are invited for the above post on a salary grade up to A.P.T. IV (£1,140-£1,310 per annum) according to qualifications and experience. Applicants must be able to deal with all types of property and small building work including adaptations, alterations end additions. They should have a good practical knowledge of building and be able to prepare the necessary plans, specifications and estimates for the work.

knowledge of burners, specifications the necessary plans, specifications for the work. Applications, stating age, married or single, qualifications, present and past appointments, salary and experience, to be received by the City Surveyor not later than 24th July, 1961. II. D. A. ROBERTSON. Town Clerk. S3359

8352

AMENDED ADVERTISEMENT BOROUGH OF ENFIELD BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT (Population 110,000-Area 12,400 acres) Applications are invited for the following established positions within the Grades shown:-(a) CHIEF PLANNING ASSISTANT-A.P.T. V (C1310-C1460 p.a.)

The commencing salary will be fixed at a point within the Scale commensurate with qualifica-tions and experience. The appropriate London weighting allowance will be paid in addition to the above salaries. Applicants for post (a) must have passed the Final Examination of the Town Planning Insti-tute and membership of another related pro-fessional body will be considered an advantage. Applicants for post (b) should have passed the Institute.

Applicants for post 19, and the Town Flatting Institute. The Council are prepared to consider the pro-vision of Housing Accommodation if required, or 100 per cent advances to successful applicants for house purchase within the Borough. Five-day week. Details of appointments and application forms obtainable from Mr. H. D. Peake, M.Sc. (Eng.). Borough Engineer and Surveyor, 7, Little Park Gardens, Enfield, Widdx. CYRIL E. C. R. PLATTEN. Town Clerk.

## Civic Centre. Enfield.

COUNTY ARCHITECT'S BEASTST OVFORDSHIRE COUNTY COUNCIL. COUNTY ARCHITECT'S DEPARTMENT Applications are invited from suitably enalised persons for the position of GROUP ARCHITECT (salary J.N.C. Scale "C." 21.560-21.825) to work on an interesting and varied building norramme. The Council will pay 50 per cent. of any removal excenses. Five-day working week. The appointment is permanent, superannuable and subject to a medical examination. Annlications on forms to be obtained from the undersigned to be returned by 24th July 1961. ALBERT E. SMITH. County Architect. Park End Street Offices.

## Park End Street Offices. Oxford.

Oxford. 88,000 CITY OF LONDON The City Planning Office has interesting plan-ning projects on hand and others in active pre-paration, e.g. large scale redevelopment is pro-ceeding in Barbican Commercial zone where senarated pedestrian walkways are planned for a large area

Large area. A onconce now exists in the Civic Design Section of the Denartment for a qualified Architectural or Planning Assistant to join a small group working on the present important phase of re-building in the Civ. Salary: up to £1420. Local Act Superannuation. Salary: up to £1420. Local Act Superannuation. Section 28469 S9469

BOROUGH OF ACCRINGTON A vacancy exists in the Borough Engineer and Surveyors. Department for an ARCHITECTURAL ASSISTANT with good experience in design and construction. Preference will be given to those who have passed the final examination of the R I B A

R.I.B.A. Salary within A.P.T. III/IV (£960-£1,310); commencing salary according to qualifications and experience. An interesting programme of work includes new covered market; swimming baths; bus terminal; transport garage, housing, etc. Housing accommodation if required. Detailed applications, with mames of two referees, to Town Clerk, Town Hall, Accrington, not later than the 26th July, 1961. S8400

CITY OF PERTH Applications are invited for the post of ASSIS-TANT ARCHITECT in the Burgh Surveyor's De-partment at a salary within the scale £1.50 × £50 to £1.350 per annum with placing according to qualifications and experience. Applicants must be Associate Members of the Royal Institute of British Architects. Full details of the post may be obtained from the Burgh Surveyor, 16 Tay Street, Perth, with whom applications should be lodged within 14 days of this advertisement. 8517

LINDSEY COUNTY COUNCIL PLANNING DEPARTMENT Applications are invited for the appointment of SENIOR ASSISTANT (Architectural) A.P.T. Grade IV, £1,140-£1,310 at Headquarters in Lin-coln. Commencing salary will have regard to qualifications and experience in architec-tural control, estate layouts and central area re-development. Officer to provide own car for official journeys for which an allowance will be paid at essential user's rate for car not exceeding 10 h.p.

at essential user's rate in 10 h.p. Superannuation and N.J.C. conditions of service as approved by the County Council. Canvassing will disqualify. Relationship to any member or senior officer of the Council to be disclosed in training

Based and the second second

The Council House, Solihull, Warks, 28th June, 1961.

Town Hall. Rawtenstall, Rossendale, Lancs.

ROROUGH OF RAWTENSTALL, (AMENDED ADVERTISEMENT) APPOINTMENT OF CHIEF ARCHITECT Aonlications are invited for the above permanent appointment at a salary within A.P.T. V (21,310 -Cl.480 per annum). Applicants should be mem-bers of the R.I.B.A. The appointment will be subject to the provi-sions of the Local Government Superannuation Acts, the National Scheme of Conditions of Service and the termination by one month's notice by either side. Housing accommodation will be available.

Applications including names and addresses of Applications including names and addresses of Inter than Monday, the 24th July 1961. Canvas-sing will dissualify. Any relationship to members or senior officers of the Council must be disclosed. (Signed) COLIN CAMPBELL. Town Clerk.

68335

\$8418

BOROUGH OF WORKSOP APPOINTMENTS IN THE BOROUGH ENGINEER'S DEPARTMENT Applications are invited for the follow

## Town Hall, Worksop.

 Town Hall, Worksop.
 8331

 BOROUGH OF RICHMOND (SURREY) JUNIOR ARCHITECTURAL ASSISTANT

 Applications are invited for the above appoint-ment on the staff of the Borough Engineer and surveyor at a salary within A.P.T. Grade II

 (265-2596) p.a. plus London Weighting).

 Applications must have passed the Intermediate Bramination of the Royal Institute of British Architects.

 Applications giving particulars of age, quali-fications, experience and the names of two referees should be sent to the Borough Engineer and Surveyor, King's Road, Richmond, Surrey, by the 18th July, 1961.

 Canvasing will disquality. Relationship, if may, to members of the Council or Senior Officers must be stated. No assistance with housing. CLIFFORD HEYWORTH\_ Town Clerk.

 Town Hall,

8331

68347

88370

8479

Town Hall, Richmond, Surrey.

Richmond, Surrey. 88347 BOROUGH OF HESTON ANR ISLEWORTH APPOINTMENT OF DRAIGHTSMAN Applications are invited for the appointment of a DRAUGHTSMAN in the Architect's Section of the Borough Engineer and Surveyor's Depart-ment, Saiary Grade A.P.T. I (2645-2815 D.S.), plus London weighting. Candidates must be capable and expeditious draughtsmen and preference will be given to those with architectural experience. The Council are unable to assist the successful candidate with housing accommodation. Applications, on forms to be obtained from the Borough Engineer and Surveyor, 88, Lampton Road, Hounslow, must be retarned to him not later than noon on 24th July. D. MATHIESON, Town Clerk.

Town Hall. Hounslow, Middlesex

Muddesex. OXFORDSHIRE COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT pplications are invited from suitably qualified sons for the following appointments:-(a) SENIOR ARCHITECT, J.N.C. Scale "B"

(a) SENIOR ARCHITECT, J.N.C. Scale "B" (£1,410-£1,670).
(b) ASSISTANT ARCHITECT, Grade A.P.T. V (£1,310-£1,480).
(c) QUANTITY SURVEYOR, Grade A.P.T. V/ J.N.C. "A" (£1,310-£1,565).
(d) QUANTITY SURVEYOR, Grade A.P.T. IV (£1,140-£1,310).
(c) Cuancil will pay 50 per cent, of any removal exnenses. Five-day working week.
The Council will pay 50 per cent, of any removal exnenses. Five-day working week.
The appointments are permanent. super-annuable and subject to a medical examination. Applications on forms to be obtained from the undersigned to be returned by the 24th July, 1961.

## ALBERT E. SMITH. County Architect.

Park End Street Offices, Oxford. 98360

Oxford. Bosov WORCESTERSHIRE COUNTY COUNCIL ARCHITECTURAL ASSISTANT required, Grade A.P.T. II (2815-2960) in the Section con-cerned with major School projects. The County Council owns some housing accommodation for which a successful candidate may apply Application forms and further particulars can be obtained from L. C. Lomas, F.R.I.B.A., County Architect. 14, Castle Street, Worcester, not later than 21st July, 1961. (0.218). BOROUGH OF NUNEATON

than 21st July, 1961. (0.218). BOROUGH OF NUNEATON APPOINTMENT OF JUNIOR ARCHITECTURAL ASSISTANT Applications are invited for this post. Salary A.P.T. 11 (2604-2660). The post will provide scope and opportanity for a varied experience as the Borough Council have much architectural work in hand. Further details and forms of application, which must be returned not later than 22nd July, 1961, may be obtained from me. A. A. CRABTREE. Town Clerk.

A. A.	UKABTREE.
	Town Clerk.

Council House, Nuneaton. July, 1961.

LANCASHIRE COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT ASSISTANT ARCHITECT A.P.T. IV (£1,40-£1,310) (Starting salary according to experience) Applications are invited from qualified Archi-tects of initiative, keen on design and modern constructural methods, to work on a large and varied programme. If appointed, applicants will be able to claim a disturbance allowance up to a maximum of f125, a facility offered by the County Council to cover the expenses of removal and other asso-ciated costs.

Content costs. Application forms and details of appointment obtainable from the County Architect, P.O. Box 26, County Hall, Preston, returnable by the 8318 26, County Ha 28th July, 1961

28th July, 1961. 28th July, 1961. COUNTY ARCHITECTS DEPARTMENT ANSASHTRE COUNTY COUNCIL COUNTY ARCHITECTS DEPARTMENT ASSISTANT ARCHITECTS, A.P.T. V (Starting salary according to experience) Applications are invited from qualified Archi-tects of initiative, keen on design and modern constructural methods, to work on a large and varied programme. If appointed, applicants will be able to claim a disturbance allowance up to a maximum of fi25, a facility offered by the County Council to cover the expenses of removal and other asso-ciated costs. Application forms and details of appointment obtainable from the County Architect, P.O. Box 26, County Hall, Preston, returnable by the 28th July, 1961. EANCASHIEF COUNTY

26. County Hall, Preston, returnable by the 28th <u>S8319</u>
 <u>LANCASHIRE COUNTY COUNCIL</u> COUNTY ARCHITECT'S DEPARTMENT SENIOR ASSISTANT ARCHITECTS (N.J.C. Scale "B." £1,505-£1,670)
 Applications are invited from experienced Architects for posts on the permanent staff. The County Council has a large and extremely varied building programme, and posts will be filled by men of initiative, imagination and a fair for sensitive design. Applicants are expected to be Registered Architects, as well as Associates of the Royal Institute of British Architects and, if appointed, will be able to claim a disturbance allowance up to a maximum of £125, a facility offered by the County Council to cover the expenses of removal and other associated costs. Application forms and conditions of appoint-ment are obtainable from the County Architect, P.O. Box 26, County Hall, Preston, returnable by the 28th July, 1961. COUNTY BOROUGH OF ROTHERHAM ARCHITECTS Applications are invited for the following appointments:--(a) SENIOR ASSISTANT ARCHITECT-A.P.T.

(a) SENIOR ASSISTANT ARCHITECT-A.P.T.

(a) SENIOR ASSISTANT ARCHITECT-A.P.T. V (£1.310-£1.480).
(b) ARCHITECTURAL ASSISTANTS-A.P.T. III/IV (£960-£1.310).
The department has a varied and expanding programme of architectural work including schools and large central redevelopment areas. Candidates for (a) are required to be Associate Members of the R.I.B.A. and with a good general experience in design and construction. (b) are required to have passed Parts I and II of the R.I.B.A. Final Examination. The commencing salary in the grades will be according to capabilities and experience. Housing accommodation will be available if necessary.

Applications to be endorsed "ARCHITECTS," Applications to be endorsed "ARCHITECTS," stating age, qualifications and details of experi-ence, together with names of two referees, should be received by me not later than Thursday, 20th July, 1961. Canvassing will disqualify. JOHN S. WALL. Town Clerk.

Municipal Offices.

Rotherham. June, 1961.

June, 1961. 55314 LANCASHIRE COUNTY COUNCIL COUNTY ARCHITECTS DEPARTMENT ARCHITECTURAL ASSISTANTS (within the salary range 2645-2960 according to experience and ability) Applications are invited from Architectural Assistants for appointments to the permanent staff of the County Architect's Department, which is engaged on a large and varied pro-gramme of major projects. Applicants should have attained at least Intermediate R.I.B.A. standard and, within this stage of qualification, have a reasonably varied experience.

State of quantication, have a reasonably varied Annication forms and details of appointment obtainable from the County Architect, P.O. Bax 26. County Hall, Preston, should be returned by 28th July, 1961. 88322

 28th July, 1961.
 88322

 COUNTY BOROUGH OF FAST HAM

 SENIOR ASSIGNAT PLANNING OFFICER

 Grade A.P.T. II £815—5960 (plus London

 Weighting)

 Vacancv in Borough Engineer's Department.

 Salarv above minimum payable according to

 qualifications and experience.

 A subsistence allowance may also be paid over

 a reasonable period to the person appointed if

 unable to obtain suitable housing accommodation.

 further details and application form (returnable within 10 days) from the Town Clerk, Town

 Hall, East Ham, E.6.

158

FIFE COUNTY COUNCIL Applications are invited from QUALIFIED ARCHITECTS to fill a vacancy in the COUNTY ARCHITECTS DEPARTMENT. COUNTY BUILDINGS. CUPAR. Candidates should be associates of the R.I.B.A. This appointment is superannuable and housing needs may be met. Salary Scale: £1.230-£1.535 per annum and placing may be given according to age, experience, etc. Applications, present position and salary, accom-panied by copies of recent testimonials, to the undersigned not later than 24th July 1961. No canvassing. MATTHEW POLLOCK.

## MATTHEW POLLOCK. County Clerk.

County Buildings. Cupar, Fife.

8481

County Buildings. Cupar, Fife. 2000 CUL OF THE COUNTY OF ABERDEEN COUNCIL OF THE COUNTY OF ABERDEEN COUNTY ARCHITECTS DEPARTMENT Applications are invited from qualified Architects (A.R.I.B.A.) with experience for the following appointments in the above Department:— (a) ASSISTANT ARCHITECTS (Grade I) Salary scale e1,320 × 25 (3) to 21,485. (b) ASSISTANT ARCHITECTS (Grade II) Salary scale e1,220 × 25 (3) to 21,485. The Department is at present engaged on an extensive and varied programme of architectural work comprising Housing, Schools, Police and other buildings. The appointments are super-annuable. Application forms and Conditions of Appointment may be obtained from the under-signed. Closing date for applications Thursday, 25th July, 1961. JAMES L. CRAGE.

## JAMES L. CRAIG, County Clerk.

JAMES L. CRAIG. County Buildings. 22 Union Terrace, Aberdeen. 24 MAINTENANCE SURVEYORS WAR DEPARTMENT WORKS ORGANISATION This new civilian organisation, concerned with major works projects, including the design, con-struction and maintenance of a variety of build-ings at home and overseas, offers 13 pensionable posts to Maintenance Surveyors (men) who are gualified by examination for such membership. One Senior Grade posts, £1,506 (or more)-£2,452. Five Main Grade posts, £1,506 (or more)-£2,452. Five Main Grade posts, £1,506 (or more)-£2,452. Note Senior Grade posts, £1,506 (or more)-£2,452. Note London salaries quoted. Promotion pros-metrasterred. Write Civil Service Commission, 17 North Audley Street, London, W.1, for full particulars and an application form, quoting 8,5331/61. Closing date 9th August, 1961. CORPORATION OF GREENOCK

Application form, quoting S/5331/61. Closing 2441 2007 CORPORATION OF GREENOCK Applications are invited from persons possessing the qualifications A.R.I.B.A. and A.M.T.F.I. for the post of BURGH ARCHITECT AND TOWN PLANNING OFFICER, the salary applicable being on the scale 22,125 to 22,560 per annum. The person appointed to this position will be directly responsible to the Corporation for all architectural, housing and town planning work undertaken by the local authority. The appointment will be subject to the provisions of the Local Government Superannuation (Scot-quired, be offered to the successful applicant for a tentorary period. Applications, giving details of age, experience, the enferes should be lodged with the under-signed on or before Tuesday, 1st August, 1961. JOHN LIDDELL, Town Clerk. Municipal Buildings.

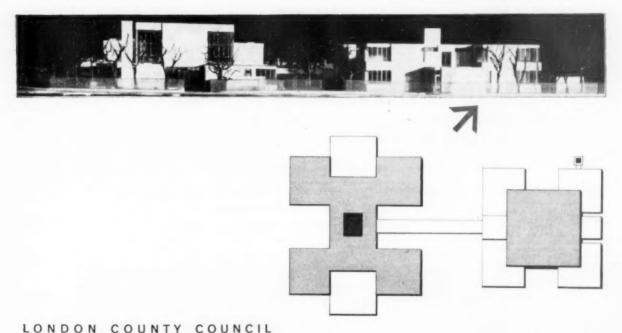
8431

88314

Municipal Buildings. Greenock. 30th June, 1961.

30th June, 1961. 8431 CORPORATION OF LONDON ADDIVISION OF LONDON ADDIVISION OF LONDON ADDIVISION OF LONDON ADDIVISION OF LONDON appointments in connection with large scale redevelopment. including construction of shops and offices, within the London Central Markets, Smithfield. Estimated cost £350,000, duration of contract approximately 3 years. (4) SITE ARCHITECT-salary up to £1,480. Experience required in preparation of working drawings, details and supervision of large contracts.

drawings, details and supervision of large contracts. (b) CLERK OF WORKS-salary up to £1,195. Applicants should have experience of large building contracts in the London area and possess a thorough knowledge of reinforced concrete construction and structural steelwork. Write, giving age and full details of previous experience, with names of two referees, within fourteen days, to the CITY SURVEYOR, GUILD-HALL, E.C.2. HALL, E.C.2 8492 UNIVERSITY COLLEGE OF NORTH STAFFORDSHIRE Applications are invited from Registered Architects for the post of SENIOR ASSISTANT ARCHITECT on staff of Architect and Buildings Officer in scale £1.310 × £55 (2) × £60-£1.480 p.a. Duties may include work on buildings for teaching and research, students' residential colleges, general purpose buildings and services. Post superannu-shle-local government superannuation rights retainable. Further particulars may be obtained from the Architect and Buildings Officer. The College. Keele Staffs, to whom three copies of application giving age, qualifications and ex-perience, etc., and names of three referees should be sent not later than July 31st, 1961. 8493



# ELFRIDA RATHBONE SCHOOL · Camberwell

This special school for 180 educationally sub-normal children is to be built on the site of a late 19th century school totally destroyed during the war. Set in an area shortly to be re-developed with L.C.C. housing, the site is featureless and almost flat. As the southern half is to be acquired later, the main building complex had to be restricted to that nat of the site sizeavie in the Council's possession.

tricted to that part of the site already in the Council's possession. Children come from a wide area. Those of primary school age are brought by school bus. Attendance is for the whole of the school life from five to sixteen years old. All classes are mixed and none exceeds twenty children. Great stress is laid on practical subjects and academic knowledge is imparted as far as possible through practical instruction.

The main teaching block contains classrooms and practical rooms on two floors. The admission class for the younger children is organised like a nursery class in an ordinary school. Children move into the senior classes between the ages of 11+ and 12+. The age of transfer depends on various factors such as mental age, social development and attainments. This has specialised rooms for housecraft and needlework and a small workshop mainly for woodwork and metalwork on the ground floor, and for art and pottery with large studio-like windows on the first floor linking the upper and lower schools. The assembly hall block also of two storeys has the assembly hall/gymnasium on the upper floor over a central dining space to seat the entire school in two sittings, with kitchen, library, changing rooms, staff and medical inspection cooms and heating chamber in the flanking corner pavilions.

Large paved outdoor teaching areas adjoin ground floor classrooms and further practical accommodation, in the form of a greenhouse adjacent to children's garden plots, is provided. Simple site treatment includes extensive tree planting and the formation of an artificial mound.

Straightforward construction with few applied finishes has made it possible to include with the cost limit laid down a dining area which can be used for school activities before and after the mid-day meal. Load-bearing brick walls are externally of a whitish-grey flint brick and internally of common brickwork mainly fair finished and decorated with emulsion paint. The ground floor is solid; first floor and roofs are reinforced concrete slabs with beams. The assembly half roof of timber joists and woodwool slabs is supported by reinforced concrete beams. All roofs are finished with chippings on asphalt on screed. The board shuttered soffit of the concrete slabs forms the ceilings to the rooms below. Windows are aluminium patent glazing with galvanised mild steel opening lights.

Careful cost planning has been done from the earliest stages of the job. The estimated gross cost is £74,450 (net £56,700) making a foot super cost of approximately 79s.6d. If you are interested in working for the L.C.C. write now for application

If you are interested in working for the L.C.C. write now for application form and further particulars to Hubert Bennett, F.R.I.B.A., Architect to the Council (EK/1876/7), County Hall, London, S.E.I. Architect to the L.C.C. Deputy Architect Schools Architect

Assistant Schools Architect Assistant Senior Architect Job architect

Chief Engineer

Chief Officer of the Parks Department Planning Officer Principal Quantity Surveyor Senior Structural Engineer

Heating Consultants

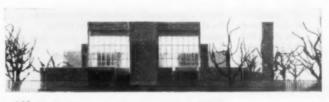
Hubert Bennett, F.R.I.B.A. F. G. West, F.R.I.B.A. Michael Powell, B.A.(Cantab.), A.R.I.B.A., A.A.Dipl.

Peter Jones, A.R.I.B.A. A. E. Miller, F.R.I.B.A. F. J. Bancroft, A.R.I.B.A.

J. Rawlinson, C.B.E., M.Eng., M.I.C.E., M.I.Mech.E.

L. A. Huddart, F.I.L.A., F. Inst. P.A.

L. W. Lane, A.R.I.C.S., M.T.P.I. M. F. Rice, F.R.I.C.S. J. W. Humphreys, M.I.C.E., M.I.Struct.E., M.S.C.E. (Fn.) Laurence Oliver, M.I.H.V.E.



CONCOLCH OF MENDON DEPARTMENT ASSISTANT ARCHITECT ASSISTANT ASSISTANT ARCHITECT ASSISTANT ASSIST

will disqualify. R. H. WILLIAMS, Town Clerk.

Town Hall, Hendon, N.W.4.

N.W.4 BOROUGH OF HENDON BOROUGH ENGINEER AND SURVEYOR'S DEPARTMET MANGENEER AND SURVEYOR'S ASISTANT ARCHITECT ASISTANT ARCHITECT MANGENEE, while Grade A.P. III (1960-12,100) MANGENEE, WILL BE AND SURVEYOR'S ADDICATES MUST AND SURVEYORS SURVEYORS ADDICATES AND SURVEYORS ADDICATES AND

Town Hall, Hendon, N.W.4.

A.W.A. 000 BOROUGH OF HENDON BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT SENIOR ASSISTANT ARCHITECT Applications are invited for the above appoint-ment at a commencing salary, according to experience, within Grade A.P. V (£1,30-£1,480) per annum, plus London Weighting. Applicantis must be Associate Members of the Applicantis must be Associate Members of the Applicantis to act as Group Leaders. Previous experience in school work, housing and redevelop-ment, or civic buildings, will be an advantage. Previous and the context of the solution of the solution experience in school work, housing and redevelop-ment, or civic buildings, will be an advantage. Tensionable post. National Scheme. Medical Examination. Appointment terminable by one month's notice on either side. Applications stating age, education, qualifica-tions, experience, present appointment and salary, together with the names and addresses of two surveyor, Town Hall, Hendon, X.W.A. by Monday Leavers. Town Hall, Hendon.

8485

Town Hall, Hendon, N.W.4.

CITY OF CARDIFF CITY ARCHITECT'S DEPARTMENT APPOINTMENT OF ASSISTANT ARCHITECT A.P. GRADE III/IV, 4960-42,310 Applications are invited for the appointment of an Assistant Architect, A.P.T. Grade III/IV, 4960-21,310 per annum, the point of entry in the grades subject to qualifications and experience. General Conditions of Appointment may be obtained from the undersigned. Applications stating age, qualifications, details of experience and the names of two persons to whom reference can be made should be delivered to me not later than the 31st July, 1961. S. TAPPER JONES. Town Clerk.

City Hall, Cardiff. July, 1961.

8483

9494

ARCHITECTURAL ASSISTANT An ARCHITECTURAL ASSISTANT is required by the West Midlands Divisional Coal Board at their Divisional Headquarters, Himley Hall, Dudley, Worcs. Salary within a scale rising to 935 per annum. Applicants must preferably have passed the Intermediate R.I.B.A. or have had considerable practical experience

Intermediate R.I.B.A. or have had considerable practical experience The Office is engaged on a programme of varied and interesting work of industrial, office and welfare nature and offers scope for applicants with a progressive outlook. Application forms from Divisional Chief Staff Officer, Quote Ref. AJ, National Coal Board, Himley Hall, Dudley, Worcs., to be returned by 28th July, 1961.

CORBY NEW TOWN SENIOR ASSISTANT ARCHITECT There is a vacancy for a Senior Assistant Archi-fect within the department of the Chief Architect a salary within the Grade A.P.T. V (£1,310– (1,430 per annum). The appointment offers ex-cord with continue for many years. Thusing is available and removal expenses are add. There is an obligatory Superannuation for an obligatory Superannuation for the original sector of the Local dovernment Superannuation Act or under the Year Town's Pension Fund. The pefore Monday, 17th July, 1961, stating qualifications and experience and the names of the Architecture and Salary, details of use referees, to R. P. Brooks Grundy, General Manager, Corby Development Corporation, Spencer House, Corby, Northants. 8422

CITY OF SALFORD Applications are invited from appropriately outsided persons for the following posts in the Department of the City Engineer and Surveyor, G. Alexander, McWilliam, B.Sc., A.M.I.C.E., A.R.I.C.S., M.I.Mun, B. (a) SENIOR TOWN PLANNING ASSISTANT, A.P.T. Grade V (£1,310-£1,480 p.a.). (b) TOWN PLANNING ASSISTANT, A.P.T. Grade IV (£1,140-£1,310 p.a.). The Department is undertaking programmes of redevelopment and urban renewal and the posts will afford a wide variety of interesting experience. The onemencing salary will be dependent upon qualifications and experience. Moning accommodation may be provided in approved cases. A five-day week is in operation. Applications stating age, education, qualifica-tions and details of experience, together with the names of two referees should be sent to the City Engineer and Surveyor, Town Hall, Salford, 3, Lancs., to arrive by Monday, 31st July, 1961. 8505

COUNTY BOROUGH OF ROCHDALE

COUNTY BOROUGH OF ROCHDALE Applications are invited for the following per-manent appointment in the Borough Engineer and Surveyor's Department: SENOR QUANTITY SURVEYOR Grade A.P.T. V. The commencing salary will be in accordance with experience and qualifications, present and previous appointments and experience together with the names of two referees to Borough Engi-neer and Surveyor by 24th July. Canvasing will disgnalify, relationship to any member or senior official of the Council must be disclosed. Appointment may be subject to medical examination. K. B. MOORE.

K. B. MOORE, Town Clerk.

8513

MIDDLESEX COUNTY COUNCIL COUNTY PLANNING DEPARTMENT (a) Two DEPUTY AREA PLANNING OFFI-CERS (A.P.T. V. 61,355-61,525), Responsible under Area Planning Officer for Development Control, survey and Plan. Must be Chartered Town Plan-

Survey and Plan. Must be Chartered Town Plan-ner with experience. (b) PRINCIPAL PLANNING ASSISTANT (RE-SEARCH) (A.P.T. V. £1,355–£1,325). Suitable qualifications and good experience. Supervision of Survey and Research. (c) SENIOR PLANNING ASSISTANT (A.P.T. III-IV, £1,005–£1,355). Preference given to candi-dates with architectural qualifications and/or ex-perience, able to do preliminary work on urban redevelopment schemes. Posts (a) and (b): Car Allowance normally granted.

granted.

granted. All posts: Prescribed conditions. Further par-ticulars and application forms from County Plan-ning Officer, 25, Buckingham Gate, S.W.I., return-able by 28th July. (Quote G.760 A.J.) 8521

able by 28th July. (Quote G.760 A.J.) 8521 WINSFORD URBAN DISTRICT COUNCIL ARCHITECTURAL ASSISTANT ENGINEERS AND SURVEYOR'S DEPARTMENT Applications are invited for the appointment of an ARCHITECTURAL ASSISTANT from persons holding at least the Intermediate Examination of the R.I.B.A. and having suitable experience, preferably with a local authority or develop-ment corporation. The Council has agreed to take 15,000 popula-tion from Manchester and besides building the necessary houses an Industrial Estate is being developed and extensive redevelopment is taking place in the town. The appointment creates scope for unique experience over a wide range of activity. Salary Scale-A.P.T. III. Casual user travelling allowance payable. Housing accommodation available, if required. Applications on forms to be obtained from the Engineer and Surveyor, Council Offices, Winsford, Cheshire, must be received by the Clerk of the Concil, appropriately endorsed, by not later than Monday 31st July, 1961.

BRACKNELL DEVELOPMENT CORPORATION Applications are invited for the post of OUANTITY SURVEYOR. Salary range £1,40-£1,310 according to age and experience. Candi-dates must be Corporate Members of the R.I.C.S. Duties embrace Housing, Town Centre and In-dustrial Buildings. Superannuation schemes, medical examination.

Superannuation schemes, meaner examined Housing available Apply by 20th July, 1961, giving age, education and qualifications, experience and appointments held (with dates), and names of two referees to: General Manager (Q.S.), Bracknell Development Corporation, Farley Hall, Bracknell, Berks. 8450

### recommended for students: two books by SIR HOWARD ROBERTSON A.R.A., PP.R.I.B.A., S.A.D.A.

The Principles of Architectural **Oomposition** 

> Size 81 × 5% ins. 180 pages, over 160 line drawings by the author. 8th Impression. Price 15s. net. (Postage 1s.)

This book fills a very real gap in the literature on the theory of architectural design and has been adopted as a standard textbook in many of the leading architectura schools. Architectural composition is an extremely difficult subject to write about; but in his text and in his numerous drawings Sir Howard (who used to lecture on design when he was the Principal of the Architectural Association School of Architecture) has succeeded in explaining his points with the utmost clarity.

### Modern Architectural Design

Size 9 × 6 ins. 228 pages thoroughly illustrated in half-tone and line. 2nd Impression of 2nd Edition. Price 25s. net. (Postage 1s. 3d.)

This new edition of the companion volume to Principles of Architectural Composition bas been very largely re-written, entirely reset and newly llustrated. It is a penetrating and constructive analysis of the design problems now confronting architects and students. The author combines theory and practical experience in a lively and stimulating discussion of contemporary problems of planning, structure, materi ls, lighting and decoration and shows successful architectural design, good building, to be the outcome of logical method supported by certain acknowledged principles.

The Architectural Press 9-13 Queen Anne's Gate Westminster S.W.1.

Town Hall. \$8518 Rochdale, 6th July, 1961

## MIDDLESEX COUNTY COUNCIL ARCHITECT'S DEPARTMENT

Vacancies exist in the following qualified grades:-

SENIOR ARCHITECTS APT V. — £1,355 - £1,525 p.a. (6 POSITIONS) ASSISTANT ARCHITECTS APT III.-IV.—£1,005-£1,355 p.a. (18 POSITIONS)

There are excellent opportunities for both newly-qualified and experienced architects to work on a full and varied programme including:----

PRIMARY AND SECONDARY SCHOOLS TECHNICAL COLLEGES HEALTH CLINICS

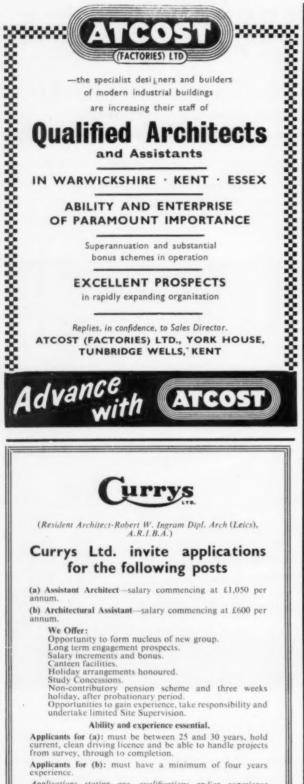
YOUTH AND COMMUNITY CENTRES OLD PEOPLE'S HOMES FIRE STATIONS



The department is organised on a group basis under the direction of WHITFIELD LEWIS, F.R.I.B.A., and every opportunity is given to architects of ability to take full responsibility for the design, construction and management of projects. The architectural groups are supported by ancillary divisions; Quantity Surveying and Cost Analysis, Heating and Mechanical Engineering and Structural Engineering, and vacancies also exist in these sections.

Full details and application forms can be obtained from

COUNTY ARCHITECT, I, QUEEN ANNE'S GATE BUILDINGS, DARTMOUTH STREET, S.W.I.



Applications stating age, qualifications and/or experience should be addressed to:

Resident Architect, Currys Ltd., 77, Uxbridge Road, Ealing, W.5

## **Professional Indemnity**

100

The claims made against Architects in recent years *alleging professional negligence show a striking increase* both in number and size. It is found, of course, that many of these claims prove to be without foundation, but inevitably legal expenses—often very substantial—are incurred in rebutting the charges made. Experience shows that costs awarded against an unsuccessful claimant may, in fact, be irrecoverable.

In conjunction with Underwriters at Lloyds the Agency offers comprehensive Indemnity to Architects covering any amounts the Architect may be required to pay in the event of a claim against him succeeding as well as the full cost of legal defence whatever the outcome of the case. The costs incurred in litigation in recovering or attempting to recover professional fees are also covered. This policy affords the widest protection at a competitive rate of premium. Write for particulars to:—

> The Manager, A.B.S. Insurance Agency, Ltd., 66, Portland Place, London W.1. Telephone: Langham 5533.

> > WO23

### NORTH EAST METROPOLITAN REGIONAL HOSPITAL BOARD

40, Eastbourne Terrace, London, W.2
W. G. Plant, Dip.Arch.(L'pool), F.R.I.B.A., Regional Architect

## ARCHITECTURAL ASSISTANTS AND DRAUGHTSMEN

The Board have vacancies in their Architect's Department, which is engaged on a large programme of hospital development, including the provision of new hospitals, for a number of ARCHITECTURAL ASSISTANTS AND DRAUGHTSMEN.

Applicants for appointment as ARCHITECTURAL ASSISTANTS should be good Draughtsmen, interested in design, and must have passed the Intermediate examination of the Royal Institute of British Architects or an examination giving exemption therefrom.

Salary, according to age and experience, from £645-£940.

Applicants for appointment as DRAUGHTSMEN should have had suitable training, including three years' experience in architectural drawing.

Salary, according to age and experience, from £485-£715.

All the above posts are pensionable and offer good prospects of promotion. Five-day week.

Applications giving age, details of education, professional training, qualifications, experience and past and present appointments, present salary and other relevant details, together with the names and addresses of two referees, should be sent to The Secretary, North East Metropolitan Regional Hospital Board, 40, Eastbourne Terrace, London, W.2, within 14 days.

## STAFFORDSHIRE COUNTY COUNCIL COUNTY PLANNING AND DEVELOPMENT DEPARTMENT

COUNTY PLANNING AND DEVELOPMENT DEPARTMENT Applications are invited for the following appointments in the County Planning and Development Department:— (a) Appointment of PLANNING ASSISTANT on either A.P.T. Grade III (2960-21,140 p.a.) or A.P.T. Grade IV (21,140-21,310 p.a.) in the Central Area Planning Office at Niaford. The successful candidate will be engaged in Development Plan work and Development Control. and will have the opportunity for varied experi-ence in the work of a Planning Department. (b) Appointment of JUNIOR PLANNING ASSITANT on either A.P.T. Grade II (2950-42,140 p.a.) in the Headquarters Office at Stafford. Applicants should either have a university degree in geography or professional training in an architect's, surveyor's or planning office. A qualification in planning will be an advantage. The commencing salary and grading in respect of both posts will depend on qualifications and experience.

The commencing salary and grading in respect to both possible will depend on qualifications and many series of the provided including financial massistance to enable persons appointed to under the further studies in accordance with the concerner. The Council are prepared to grant lodging allowing Post Entry Training Scheme The Council are prepared to grant lodging allowing post of the initial six months on married applicants maintaining a home outside be given to the granting of financial assistance. Applications, present and previous appointments, were the the granting of financial assistance in the sand second class railway travel home over the degraphical county. Consideration will also be given to the granting of financial assistance in the count county. Consideration will also be given to the granting of financial assistance in the grant of the previous appointments, were near the names of two persons to whom files. County Planning and Development Officer, at. Eastgate Statiord, not later than the count of the county council must be disclosed. Canvassing will disguality. The EVANS. Clerk of the County Council. 2020

CORPORATION OF BARKING DEPARTMENT OF THE BOROUGH ARCHITECT PAPOINTMENT OF ASSISTANT ARCHITECT Salary £1.385 per annum Scale Members of the Royal Institute of British Architects are invited to apply for the above appointment. Work in hand includes: Large pro-gramme of housing redevelopment, education work and other public buildings. The department has attractive modern offices and most Saturday mornings are free of duty. The department has attractive modern offices and most Saturday mornings are free of duty. The days of the appearance of this advertisement. E. R. FARR. Town Clerk.

Town Hall, Barking, Essex.

THE CITY SURVEYOR'S DEPARTMENT of the CORPORATION OF LONDON

CORPORATION OF LONDON has vacancies for ASSISTANT BUILDING SURVEYORS (2). Salary range: £1,65-£1,310. Candidates must have passed Final examination R.I.C.S., possess a sound knowledge of building construction and ability to prepare specifications and supervise works on site. ARCHIECTURAL OR SURVEYING ASSIS-TANTS (2). Salary scale: £630-£1.095. Applicants should be studying for or have passed Intermediate R.I.B.A. or R.I.C.S. and should possess a sound knowledge of building construction. Write, giving age and full details of previous experience, with names of two referees, within fourteen days, to The City Surveyor, Guildhall. ERACKINEL DEMENDIO

ARCHITECTURAL ASSISTANT required in office in London (Marylebone). Work primarily concerned with road transport depois and includes offices, transit buildings, vehicle workshops and ancillary facilities. Projects in various parts of country may involve some travel. Salary within the range £1.150-£1.350 according to qualifications and experience. Contributory superanunation fund. Applications giving age, qualifications and ex-perience to Personnel Officer, British Road Ser-vices Limited, Melbury House, Melbury Terrace. London, N.W.1.

161

MUNICIPAL COUNCIL OF DAR ES SALAAM APPOINTMENT OF TOWN TLANNING'ARCHITECTURAL ASSISTANT Applications are invited from suitably qualified persons for the post of a Town Planning'Archi-tectural Assistant in the Department of the Municipal Engineer. Applicants who will be an another the performance of the second second and the planning Scheme for Dar es Salaam must be avantage. The provide the second second second second advantage. The provide the second second

O. T. HAMLYN. Town Clerk.

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Dar es Salaam, 3rd. July, 1961.

 and. July, 1961.
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 COUNTY BOROUGH OF SMETHWICK BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT APPOINTMENT OF SENIOR ASSISTANT ARCHITECT

 Applications are invited for the above appoint-ment, salary A.P.T. IV-V (£1,140-£1,480 per annum). The commencing salary will be accord-successful applicant.

 The post is subject to the provisions of the successful applicant.

 The post is subject to the provisions of the successful applicant.

 The post is subject to the provisions of the successful applicant.

 The post is subject to the provisions of the successful applicant.

 The post is subject to the provisions of the stational Scheme of Conditions of Service: the cond Government Superannation Acts 1937.53: the passing of a medical examination and to ter.

 Form of application may be obtaind from the suitably endorsed, to reach him not later than 28th July, 1961.

 E. L. TWYCROSS, Town Cleak

E. L. TWYCROSS, Town Clerk.

Council House, Smethwick.

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 BOROUGH OF HESTON AND ISLEWORTH APPOINTMENT OF SENIOR ARCHITECTURAL ASSISTANT

 Applications are invited for the permanent appointment of a Senior Architectural Assistant in the Borough Engineer and Surveyor's Denartment. Salarv in accordance with A.P.T. Grade IV (£1,140 –11.30 plus London weighting).

 Applications must have had good experience in architectural design and building work under con-struction, and, other things being equal, prefer-ence will be given to applicants who have passed the examination for Associate R.I.B.A. or hold a University Degree or Diploma in architecture accepted by that Institute.

 The Council is unable to assist the successful candidate with housing accommodation.

 Applications are to be submitted by 31st July. 961. on forms to be obtained from and returned to the Borough Engineer and Surveyor, 88, Lamp-ton Road, Hounslow.

 D. MATHIESON. Town Clerk.

D. MATHIESON, Town Clerk.

Town Hall, Hounslow, Middlesex

Town Hall. Keighley.

8445

URBAN DISTRICT COUNCIL OF BASILOON (Population 90,000-27,000 acres-rapidly developing district) ESTABLISHED POSTS (a) ARCHITECTURAL ASSISTANTS - up to

£960 p.a. (b) ARCHITECTURAL DRAUGHTSMEN - up

(b) ARCHITECTURAL DRAUGHTSMEN -- up to 6825 p.a.
 (c) JUNJOR ASSISTANT--up to 6685 p.a. Applicants for (a) should preferably be partially qualified and have had practical experience; (b) and (c) be competent draughtsmen with ex-perience of architectural work.
 The starting and maximum salary in each case will depend upon qualifications and experience. Housing available or 100 per cent. mortgage for purchase of own accommodation. Removal ex-penses payable subject to conditions. Five-day week, Good working conditions.
 The positions offer excellent opportanities to gain experience with a large authority under-taking a full range of works including delegated functions for Education, Health and Weifare.
 Particulars and forms from Engineer and Sur-vesor. 18 Towa Square, Basildon, Essex. Closing 24th July.

sing 8468 24th July

24th July. BOROUGH OF KEIGHLEY BOROUGH ACHITECT'S DEPARTMENT Applications are invited for the appointment of a qualified SENIOR ASSISTANT ARCHITECT. Grade A.P.T. IV (salary range £.1/40-£1.310), who will be responsible for a small section of the office. Applicatis must have had experience on education work and the supervision of contracts. Applications to be made upon the prescribed form to be obtained from the Borough Architect, College Street, Keiphley, to be returned not later than first post, Friday, 28th July, 1961. J. A. CAESAR. Town Clerk.

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THE ARCHITECTS' JOURNAL for July 12, 1961

FERMANAGH COUNTY EDUCATION COMMITTE NORTHERN IRELAND ARCHITECT'S DEPARTMENT (a) ASISTANT ARCHITECT BARY Scale £935 to £1,430. (a) ASISTANT ARCHITECT BARY Scale £935 to £1,430. (b) ACREMENTING (c) ARCHITECTURAL ASSISTANT: Salary Scale £645 to £1,040. (c) ARCHITECTURAL ASSISTANT: ARL ASSISTANT: ARL ASSISTANT: ARCHITECTURAL ASSISTANT: ARL ASSISTANT ASSISTANT: ARL ASSISTANT ASSISTANT ARL ASSISTANT ASSISTANT ASSISTANT ARL ASSISTANT ASSISTANT ASSISTANT ARL ASSISTANT ASSISTANT ASSISTANT ASSISTANT ARL ASSISTANT ASSISTANT ASSISTANT ARL ASSISTANT ASSISTANT ASSISTANT ARL ASSISTANT ASSISTANTANTA ARL ASSISTANTANTANTANTANTANTANTANTANTANTAN

J. MALONE, Chief Education Officer.

Education Office, County Buildings, Enniskiller, Northern Ireland. 27th June, 1961

Northern Ireland. 27th June, 1961 COUNTY BOROUGH OF CROYDON ARCHITECTS are required to deal with an ex-tensive and varied building programme compris-ing : Housing including high flats, swimming baths, hostels, libraries, abattoir, health clinics, specialist centres for handicapped persons, central area re-development incorporating municipal offices and invanik contra-

development incorporating municipal offices and juvenile courts. Scale B. £1,405-£1,670 p.a. A.P.T. III/IV/V, £1,005-£1,525 p.a. Pensionable posts. five-day week, assistance with housing accommodation will be considered. Essential user car allowance A.P.T. V and over with R.I.B.A. Final. The section (H. Thornley, A.R.I.B.A., principal architect) is organised on a group basis. Application forms from A. F. Holt, M.I.C.E., Borough Engineer, Town Hall, Croydon, Surrey. 8339

DEPARTMENT OF HEALTH FOR SCOTLAND Applications are invited for a non-pensionable post of Investigator of buildings of architectural or historic interest. Duties involve survey in Scot-land in connection with listing of such buildings under the Town and Country Planning (Scotland) det 1047

under the Town and Country Planning (Scotland) Act, 1947. Applicants should hold a qualification in archi-tecture or town planning, or a degree in history or the fine arts, or other comparable qualification, and be prepared to show evidence of special interest in Scotlish architectural history. Headquarters Edinburgh or Glasgow, or as may be arranged. Salary range £1.326-£1.477. Further particulars and application form from Establishment Officer, Department of Health for Scotland, Room 30, St Andrew's House, Edinburgh or L.

AMENDED ADVERTISEMENT WHISTON RURAL DISTRICT COUNCIL tophications are invited for the following sition in the office of the Engineer and Sur-4.

position in the office of the Engineer and Surveyor: CHIEF ANSISTANT ARCHITECT. A.P.T. IV (£1140-£1,310 p.a.). Applicants must be A.R.I.B.A. and have had ex-perience in Local Authority housing design and maintenance and other public building works. Housing accommodation available if required on appointment. Fixed sum car allowance of £108 p.a. 50 per cent. of removal expenses. The Conneil operate a five-day week. Applications. stating age, qualifications, training and experience, present appointment and salary with the names of two referees to A. J. Bebbing-ton, R.Sc.Tech., A.M.I.C.E., A.M.I.Mun.E., Engi-neer and Surveyor, by 19th July, 1961. J. R. HENLEY, Clerk of the Council. Council Offices.

Council Offices, Delph Lane, Whiston, Prescot, Lancs.

8462



TAYLOR WOODROW HOMES LIMITED

require an

## Assistant Architectural

up to Intermediate standard, capable of handling contracts from start to completion in a department working on varied housing development, including large estates; town development and private houses. This post offers opportunity for appreciable individual responsibility and experience in one or more of the above would be an advantage.

Interviews can be arranged at any time with travelling expenses paid.

Write in first instance to:

Chief Architect, Taylor Woodrow Homes Ltd., Western House, Western Avenue, Ealing, W.5

## SOUTH-EAST METROPOLITAN REGIONAL HOSPITAL BOARD

## Architects and Quantity Surveyors

are required, within a wide range of salaries up to  $\pounds 2,225$ , to work in the smaller type of office on a rapidly expanding programme of building in the Board's area (South East London, Kent and East Sussex). Men or women of ability, able to work on their own initiative and in close collaboration with members of other professions, are invited to get in touch with

Charles Scott, A.R.I.B.A., Dip.T.P., Regional Architect, South East Metropolitan Regional Hospital Board, 40, Eastbourne Terrace, London, W.2. County Architect's Department Edinburgh QUALIFIED

MIDLOTHIAN COUNTY COUNCIL

# ARCHITECTS

Salary Scale £1,135-£1,345-£1,595

Placing according to experience and ability. Applications, giving full details of experience together with names of two referees, should be submitted to The County Clerk, County Buildings, George IV Bridge, Edinburgh I, by Wednesday 26th July 1961.

## The Bryant Group of Companies requires

## ASSISTANT ARCHITECTS and ARCHITECTURAL ASSISTANTS

for a variety of work comprising: Multy storey flats, Offices, Industrial and Commercial Buildings, Private enterprise housing.

Salary range **£900-£1550** 

- \* Housing Accommodation
- ★ Generous Increments
  ★ Profit sharing scheme
- \* Pension scheme
- \* Car purchase assistance

dependent upon ability

Sports club facilities
 Interview expenses
 refunded.

Applications marked confidential giving full particulars of age, experience, qualifications, salary required, to.

Chief Architect BRYANT DESIGN GROUP Whitmore Road, Small Heath Birmingham 10 BOROUGH OF RUGBY APPOINTMENT OF ASSISTANT ARCHITECT Applications are invited for the above appoint-ment in the Borough Engineer and Surveyor's Department, which has an interesting and varied programme of work. Salary A.P.T. Grade IV (£1,140 - (1,310). Commencing salary will depend on qualifications and experience. Housing accommodation will be provided if required and a car allowance on the essential user scale will be paid. Turther particulars and form of application may be obtained from the Borough Engineer and Sur-veyor, Town Hall, Rugby, to whom completed applications must be sent not later than 25th July, 1961.

T. L. DUFFY, Town Clerk 8423

STEVENAGE DEVELOPMENT CORPORATION Applications are invited for appointment as ASSISTANT ARCHITECTS in the Chief Archi-tect's Department within New Towns salary grades A.P.T. II-V, starting salary on one or other of these grades will be commensurate with experience

ASSISTANT ADDITION IN THE CONSTANT ADDITION TO ADDITION ADDITION ADDITION ADDITION ADDITION ADDITION ADDITION ADDITION ADDITION ADDITIONAL ADDITION ADDITIONAL ADDITION ADDITIONAL AD

Candidates must be professionally well qualified and possess appropriate experience in architectural stars: 21,550 - 250-21.750 per annum. Further particulars and forms of application are obtainable from the Registrar. Nature obtainable from the Registrar. ASSISTANT ARCHITECTS required for British condon, R.I.B.A. qualifications or equivalent degree preferable. Commencing salary within range of 2945-21,145 per annum. Apply in writing, thotels and Catering Services. St. Pancras Cham-bers. London, N.W.1. Received the start of the salary start hotels and Catering Services. St. Pancras Cham-bers. London, N.W.1. Received the salary start of the salary condon, N.W.1. Received the salary start of the salary start of the salary start of the salary start for the salary start of the salary start hotels and Catering Services. St. Pancras Cham-bers. London, N.W.1. Received Start of the salary start (1,700 Architects, Grade II, 21,500 to 21,700 Architects, Grade II, 22,500 to 21,700 Architects, Grade II, 23,500 to 21,700 Architects, Grade II, 25,500 to 21,700 Architects, Grade II, 25,500 to 21,700 to 21,700

### Architectural Appointments Vacant

 per line; minimum 12s. Box Number, including forwarding replies. 2s. extra. BRYAN & NORMAN WESTWOOD require ASSISTANT A R C H I T E C T S and DESIGNERS. Salaries up to c1,200, Apply to 21, Suffolk Street, S.W.1. Trafalgar 1106. TC7932 £850-£1,600. ARCHITECTURAL **4850-£1.600**. ARCHITECTURAL ASSISTANTS re-pension and life assurance schemes. Five-day week. Telephone or write: Ronald Ward & Partners. 29. Chesham Place, Belgrave Square, 8.W.1. Belgravia 3361. TC6106 S. W.L. Belgravia 3361 TC6105 SENIOR ASSISTANTS required. Please apply to F. G. Frizzell, A.R.I.B.A., 80, Portland Place, W.I. LANgham 1732. TC4943 Place, W.1. LANgnam 1732. TC4943 A RCHTFECTURAL ASSISTANTS of all grades Good salaries to right applicants. Pension Cheme. Accommodation. Apply with full

details to: Ruddle & Wilkinson, F/L/A.R.I.B.A., Long Causeway Chambers, Peterborough.

TC6984

Equired to assist with large and important new developments in the central London Area. Tchearne & Norman, Preston & Partners, 83, Kingsway, W.C.2. HOLborn 4071.

SENIOR AND JUNIOR ASSISTANTS. Only those who prefer a small office and an interesting variety of work on both old and new buildings should apply to: L. H. Bond A R. W. Read, 44, Castlegate, Grantham. TC6404

A RCHITECTURAL ASSISTANTS of all required on varied and interesting projects. High salaries will be paid in accordance with skill or experience of applicant. Lewis Solomon, Kaye & Partners. City 3811. TC5970 BRYAN & NORMAN WESTWOOD & PARTNERS require ASSISTANT ARCHI-TECTS. Salaries up to £1,200. Apply is 21, Suffolk Street, S.W.1. TRAfalgar 1106. TC6736 A BUST BLOOMSDUTY office with varied prac-tice. Good salary and prospects for suitable of suitable of the right men. salary £1,000-£1,400. Luncheon Youchers and five-day week. Write grung Hospital programme, excellent oppor-unities for the right men. salary £1,000-£1,400. Luncheon Youchers and five-day week. Write grung full particulars to W. H. Watkins, Gray and Partners, 57, Catherine Place, S.W.1. TC5637

L EICESTER. SENIOR ARCHITECTS AND ASSISTANTS required for general practice. Appropriate salary paid. Apply by telephone or in writing for an interview to Herbert, Son & Sawday, 18 Friar Lane, Leicester. Tel. 56476 TC5307

TC5307 **ELIE** MAYORCAS requires ARCHITECTURAL ASSISTANTS with a minimum of three years' office experience in this country. Write, giving brief particulars of architectural educa-tion and experience, and salary required, to: 13. David Mews, Baker Street, W.I. TC7014 CENTARY ASSISTANTS required immediately tion and experience, and salary required, to: 13. David Mews, Baker Street, W.I. TC7014 SENIOR ASSISTANTS required immediately Salary by arrangement. Theo, II. Birks, 38, Portland Place, London, W.I. LAN. 7236. TC1486 YORKE, ROSENBERG AND MARDALL have Some vacancies for experienced STAFF. Starting salary according to qualifications and experience, in the range 4950–41,200. Ring AMBassador 4521 for appointment. TC6200 SIR JOHN BURNET, TAIT & PARTNERS have vacancies for ARCHITECTURAL ASSISTANTS of all grades. Salaries from 21,000 per annum upwards. Non-contributory pension. Ife assurance, medical schemes and luncheon vonchers, five-day week, generous holidays. Apply 10. Bedford Square, London, W.C.I. TC7640 L ANCHESTER & LODGE urgently require arades. Work includes hospitals. laboratories, universities, offices, housing, etc. Write full par-ticulars or ring for interview: 10, Woburn Square, W.C.1. MUS 0845-6-7. TC7248

Square, W.C.1. MUS 0845-6-7.

SENIOR and JUNIOR ASSISTANTS urgently required for busy City Office. Excellent modern facilities and long term engagements. Holdiays with pay this year. Salary increments and bonus. Luncheon Vouchers. Qualifications unnecessary but experience and ability impera-tive. Salaries varying from £1,000 to £1,650 according to ability. Box \$7642.

**£1,000** / £2,000 p.a. will be paid to experienced competent ARCHI-TECTS by a private practice in the City of London. The work will be primarily on the drawing hoard on new and interesting projects of magnitude. A high standard of design and detailing ability is required. Please apply in writing to Box TC9350.

SENIOR ASSISTANT ARCHITECT required in private practice South East Coast town. Must be experienced with ability to handle con-tracts from sketch plan to completion. Work consists of industrial, flats, schools, shops, etc. Starting salary £1,200 or according to ability, Housing accommodation available. Apply in own handwriting. Box TC7452.

A RCHITECTURAL ASSISTANTS required immediately for interesting work in private practice situated 12 miles south of Birmingham. Five-day week and luncheon voocher scheme in operation. Apply Hasker & Hall, Longdon House, High Street, Knowle, Solihuil, Warwick-shire. Telephone Knowle 3502. TC7538

A RCHITECTS' ASSISTANTS required, Final A and Intermediate standard, to work on large and interesting projects. Salary £850 to £1.000. Applicants must be good draughtsemen, with sound knowledge of detailing. Please write giving full particulars of experience, age, etc., to: F. W. Beech & E. Curnow Cooke, F./L.R.I.B.A., 15, Dix's Feld, Exeter. TC6945 **E** DWARD D. MILLS & PARTNERS require additional qualified STAFF for a variety of new work including housing, schools, indus-trial and churches. Enthusiasm and initiative important. Five-day week. Write giving full details to 9/11, Richmond Buildings, Dean Street, London, W.1. TC7051

London, W.1. FEW vacancies still left for experienced and confident ARCHITECTS to fill positions of responsibility in a growing and varied practice with industrial and commercial work throughout the southern half of the country. Applicants must have initiative as well as architectural ability to carry through contracts up to £100,000, working directly with Principals but with minimum super-vision. Apply in writing to Thomas Mitchell & Partners, 20 Bedford Square, London, W.C.1. TC7443

### THE ARCHITECTS' JOURNAL for July 12, 1961

A SSISTANTS and ASSISTANT ARCHITECTS required within the salary range £1,10-£1,50 on a variety of projects. Qualifications in landscape architecture an advantage which would affect salary. Large progressive office offering outstanding opportunities for people of ability, both at home and overseas. Excellent working conditions; five-day week; three weeks? leave; lunch vouchers; bonus scheme and generous sick pay provisions. Write or telephone Norman & Dawbarn, Architects and Consulting Engineers. 7, Portland Place, London, Wi. LANgham 8011. TC8088

## GEORGE, TREW & DUNN

Hospitals, University, Prestige Office, Ships. We need your help.

Please write to us at 50, Eastbourne Terrace, W.2.

GOTCH AND PARTNERS, Architects, of City Road, London, E.C.1, have vacancies in their London, Brighton, Bournemouth and Bristol Offices for keen and energetic ASSIS-TANTS. Salary range between £13/1700 per annum, according to ability. Write or telephone for appointment. Monarch 3235. SB073 ACCULECTUDAL ASSETANTS OF ALL

for appointment. Monarch 3235. S6173 A CRHITECTURAL ASSISTANTS OF ALL GRADES required to work in design/con-struction groups on comprehensive Town Centre planning, also flats, factories, interior designs and shops and offices. Salaries up to £1,500 p.a. accorda-ing to age and experience. Holiday in accordance with service, minimum two weeks, Luncheon vouchers. Five-day week, overtime paid extra. J. SEYMOUR HARRIS & PARTNERS, id. Greenfield Crescent, Edgbaston, Birmingham 15. S8130

SENIOR ARCHITECTURAL ASSISTANTS. Large Office has a limited number of vacancies for Senior Architectural Assistants, salary range 4900-41,500, to undertake work of a varied and interesting character. Reply with particulars of experience to Box TC6875.

R OBERT MATTHEW & JOHNSON-don office for ARCHITECTS at all levels of experience for a variety of interesting jobs. Apply to Robert Matthew & Johnson-Marshall, 24. Park Square East, N.W.1. TC6547 Lon-

## A RCHITECTURAL ASSISTANT

OF

Intermediate or Finals standard fair for planning, required leading prefabricated building manu-factarers WITH

- develop building systems friendly, congenial surroundings.
- SALARY RANGE £700-£1,100 p.a.

PLUS ... bonus, superannuation, five-day week, etc.

PLUS ... bonus, superannuation, five-day week, etc. Apply in writing, giving details of experience and salary required, to: Sales Director, Middleese Prefabricated Buildings Ltd., Green Lane, Honnslow, Middleese TOTRAT INTERESTING jobs in a small, informal office and MEDIUM GRADE ASSISTANTS. Preferred sets between 18 and 25 with a salary range of 550-41,100 depending upon capabilities. Work in hand includes supermarkets, flats, shops, offices, etc., and offers considerable scope for site supervision. Also opportunities for part-time or evening work. Write to Gray, Birch & James, Donington House, Norfolk Street, W.C.2, or telephone TEM, 1346 during the day or Michael James at HAM. 1848 in the evenings. SENIOR and JUNIOR ASSISTANTS required Senior with office experience preferably with pubs, capable of running own jobs from start to puish, 21,000 or more according to experience, Junior approaching Intermediate standard, 2400-ESO. Phone HOLDON 9867. CTTTP PICHARD SHEPPARD, ROBSON 4

Junior approaching International Transformer Processor Transformer and the processor of the

TC8149 YOUNG ARCHITECT, with minimum five years' office experience, required in London office for senior position with good salary. Apply Box TC8064.

Not TC8054. **DETEE EDNIE & PARTNERS**, Chartered Architects. of 4, Gray's Inn Square, W.C.1, require ASSISTANTS for permanent staff. Qualifications not essential. Life and Pensions Scheme operating. Salary and bonus according to experience. TC8015

A SSISTANT ABCHITECT, with good experi-ence and ready to assume responsibilities, required for well-established medium-nize office in London. Good salary. Apply Box 708955. S MALL, PROGRESSIVE AND CONTEM-PORARY LONDON OFFICE REQUIRES ASSISTANTS. GOOD OFFORTUNITY FOR PEOPLE WISHING TO GAIN EXPERIENCE IN ALL ASPECTS OF A VARIED PRACTICE. BOX S8195.

BOX 58195. SIR HUGH CASSON, NEVILLE CONDER AND PARTNERS, 35, Thurloe Place, S.W.7, require qualified and Intermediate ASSISTANTS to work on a variety of interesting project

A RCHITECTURAL ASSISTANTS required in A CONTRACT ASSISTANTS required in Schools, Hospitals, Public Buildings, etc. Salary up to £1,250 for qualified men and 2900 for Students, according to experience. Annual bonus, Write full details to George Lowe & Partner, 79, George Street, Croydon. 8192

George Street, Croydon. 5192 SENIOR ASSISTANT to take charge of interesting work in young expanding prac-tice. Experience of job management and con-sultant co-ordination in advanced design tech-niques gains starting salary up to £1,500 p.a. and special benefits in architecturally ambitions office. Excellent opportunity for right man with MICHAEL LAIRD. 22, MORAY PLACE, EDINBURGH. 8207

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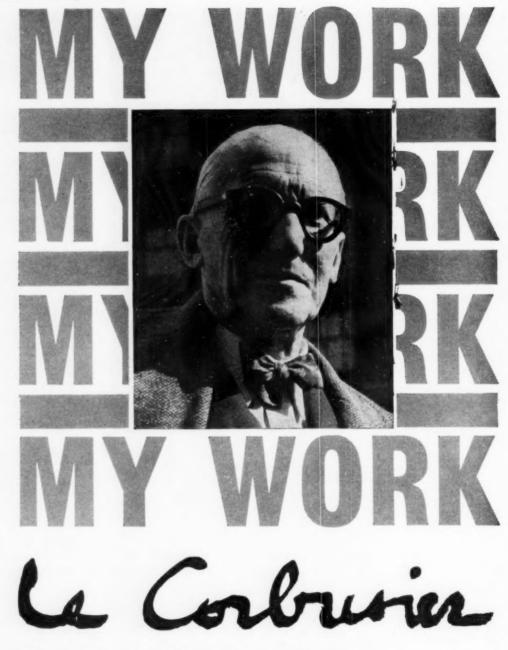
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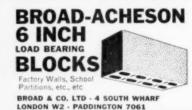






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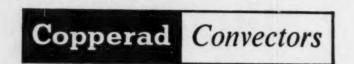
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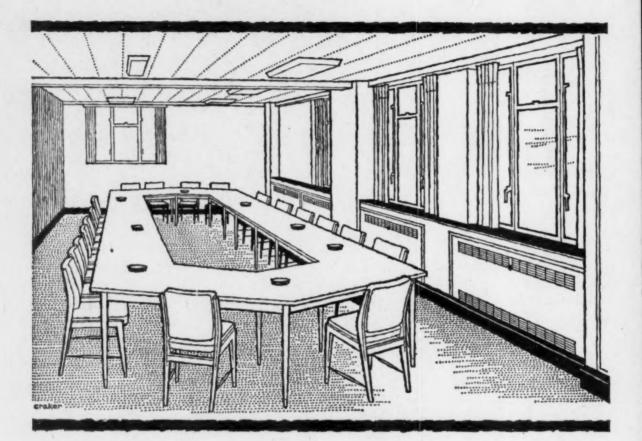
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