NE ARTS DEPTA



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

continually recur.

NEWS and COMMENT

Diary News Astragal's Notes and Topics Letters Societies and Institutions

TECHNICAL SECTION Information Sheets Information Centre Current Technique **Ouestions** and Answers Prices The Industry PHYSICAL PLANNING SUPPLEMENT

CURRENT BUILDINGS HOUSING STATISTICS

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The Architects' JOURNAL for October 2, 1952 HE ARCHIT

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

Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1. SI Institution of Heating and Ventilating Engineers. 75, Eaton Place, S.W.1. IGE Sloane 8266 IHVE Sloane 3158/1601 Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1. Euston 2450 IIRD Institute of Landscape Architects. 12, Gower Street, W.C.1. Institute of Arbitrators. 35/37, Hastings House, 10, Norfolk Street, Museum 1783 ILA I of Arb. . Temple Bar 4071 Museum 7197/5176 Strand, W.C.2. Strand, W.C.2. Temple Bar 40/1 Institute of Builders. 48, Bedford Square, W.C.1. Museum 7197/5176 Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3. Avenue 6851 Institute of Registered Architects. 47, Victoria Street, S.W.1. Abbey 6172 Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1. Sloane 7128 Inland Waterways Association. 11, Gower Street, W.C.1. Museum 9200 IOB IR IRA ISE IWA LIDC Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1. Whitehall 7264/4175 C.1. Museum 3891 London Master Builders' Association. 47, Bedford Square, W.C.1. LMBA Modern Architectural Research Group (English Branch of CIAM) Gontran Goulden, Building Centre, 26, Store Street, W.C.I. Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.I. MARS Secretary Museum 5400 Whitehall 3400 MOA Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1. Whitehall 3400 Ministry of Education. Curzon Street House, Curzon Street, W.1. Ministry of Health. 23, Saville Row, W.1. Ministry of Housing and Local Government. Whitehall, S.W.1. Ministry of Labour and National Service, 8, St. James' Square, S.W.1. Whitehall 4300 Ministry of Supply. Shell Mex House, Victoria Embankment, W.C. Ministry of Transport. Berkeley Square House, Berkeley Square, W.1. Ministry of Works. Lambeth Bridge House, S.E.1. Natural Asphalte Mine-Owners and Manufacturers Council. 94-98 Petty France, SW 1. Abbey 1010 MOE MOH MOHLG MOLNS MOS MOT MOW NAMMC

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 Abbey 1010 94-98, Petty France, S.W.1. NAS NBR NCBMP NFBTE W.1. Langnath 4041/4057 National Federation of Building Trades Operatives, Federal House, Cedars Road, Clapham, S.W.4. Macaulay 4451 National Federation of Housing Societies. 13, Suffolk Str., S.W.1. Whitehall 1693 National House Builders Registration Council. 82, New Cavendish Street, W.1. Langham 4341 Nadesey 1380 NFBTO NEHS NHBRC National Physical Laboratory. Head Office, Teddington. Mo National Sawmilling Association. 14, New Bridge Street, E.C.4. National Smoke Abatement Society. Chandos House, Buckingham Gate, NPL Molesey 1380 NSA City 1476 NSAS S.W.1. Abbey 1359 National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1. Whitehall 0. Holitical and Economic Planning. 16, Queen Anne's Gate, S.W.1. Whitehall 7 Reinforced Concrete Association. 94, Petty France, S.W.1. Whitehall 7 Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh. NT Whitehall 0211 PEP Whitehall 7245 RCA RIAS Whitehall 9936 Edinburgh 20396 RIBA Royal Institute of British Architects. 66, Portland Place, W.1. Langham 5721 Royal Institution of Chartered Surveyors. 12, Great George St., S.W.I. Whitehall 5322/9242 RICS Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1. Royal Society. Burlington House, Piccadilly, W.1. Royal Society of Arts. 6, John Adam Street, W.C.2. Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1. Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19. RFAC Whitehall 3935 RS RSA Regent 3335 Trafalgar 2366 Sloane 5134 RSI Royal Sanitary Institute. 35, Camp Road, Wimbledon, S.W.12, Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.12, Society of British Paint Manufacturers. Grosvenor Gardens, S.W.1. RIB Wimbledon 5101 SRPM Victoria 2186 SCR Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8. Western 1571 Society of Engineers. 17, Victoria Street, Westminster, S.W.1 Society of Engineers. 17, Victoria Street, Westminster, S.W.1. Abbey 7244 School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3. SE SFMA Mansion House, 3921 C.2. Central 4444 Structural Insulation Association. 14, Moorgate, London, E.C.2. Society of Industrial Artists. 7, Woburn Square, W.C.1. Scottish National Housing. Town Planning Council. SIA Langham 1984 SIA SNHTPC Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1. Holborn 2646 SPAB 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. TCPA TDA Town Planning Institute. 18, Ashley Place, S.W.1. Victoria 8815 Timber Trades Federation. 69, Cannon Street, E.C.4. City 4444 War Damage Commission. Devonshire House, Mayfair Place, Piccadilly, W.1. TPI TTF Mayfair 8866 ZDA Zinc Development Association. Lincoln House, Turl Street, Oxford. Oxford 47988

THE ARCHITECTS' JOURNAL for October 2, 1952

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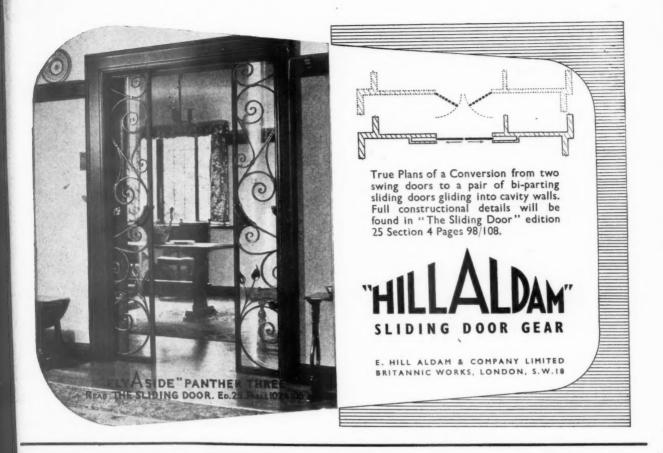
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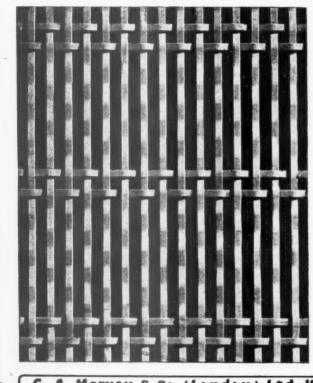
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A

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VINI NIE VIE

This special weathering detail designed for the Margam Cold Strip Mill enabled panes of glass to be butted together without overlap in a neat and weatherproof joint. It enabled the Architect's ''Cascade'' effect to be successfully carried out. WILLIAMS AND WILLIAMS at MARGAM Further examples

of the versatility of Aluminex Patent Glazing

The Abbey Works of the Steel Company of Wales, is the largest rolling mill in Europe and is one of the most outstanding engineering plants designed since the war. Working in conjunction with the Consulting Engineers, Messrs. W. S. Atkins & Partners, and the Architects, Sir Percy Thomas & Sons, Williams and Williams were able to produce glazing of a unique and impressive character, examples of which are shown in these pages. The cascade sidewall lights are of particular interest, being expressly designed to meet the exacting lighting requirements.

CASCADE GLAZING When it had been decided that Aluminex Patent Glazing provided all the features required for the sidewall glazing of the Steel Mills at Margam, certain technical difficulties were discovered. In order to produce even daylighting throughout the building it was necessary that the panels of sidewall glazing should curve inwards at the head. It was inadmissible to break the line of the curve by allowing the panes to overlap in a "lobster-back" fashion and curved glass was out of the question because of cost and difficulty of replacement. The effect had to be achieved by using flat panes of glass set out in a series of chords, and this arrangement presented special weathering problems, as also did the very flat pitch near the top of the cascade.

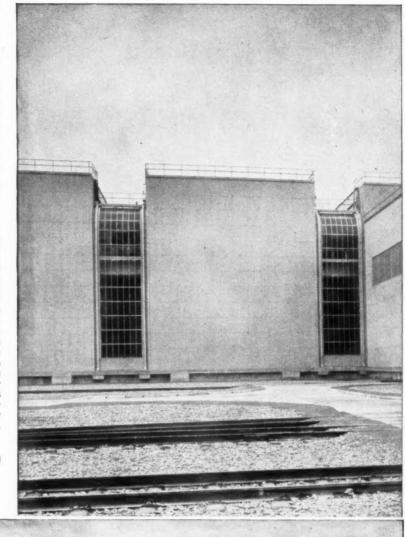
To overcome these the Aluminex engineers designed a new weathering detail which is shown in the drawing and in the photograph at the bottom of the opposite page, and is a development of the standard Aluminex "Z" weathering extrusion which is one of the special features of the Aluminex Glazing system. The remarkable effect achieved resembled cascades of glass and is vividly illustrated in the photographs. The cascades are each fourteen feet wide and range from fifteen feet to fifty-five feet high. The fifty-five foot cascades are composed of seven vertical tiers with a further curved portion of three tiers on a 9' 9" radius. The cascades were glazed in some instances with specially toughened glass in order to resist the thermal shock caused by hot ingots passing within a few feet of them.

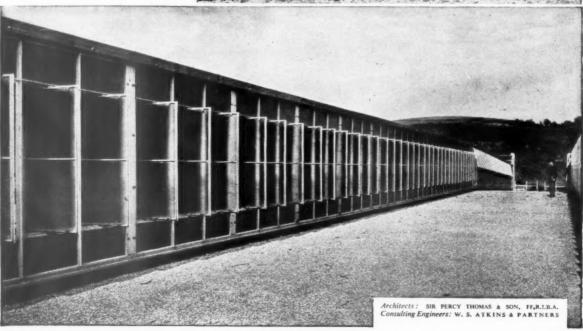
HIGH/LOW ROOF CONSTRUCTION To provide con-trolled ventilation together with even distribution of light, the monitors in the Cold Mill Building are glazed partly with continuous top-hung Aluminex opening lights and partly with aluminium vertical pivot-hung windows made by the Reliance Division of Williams and Williams. Both are operated by Teleflex Gear with handoperators placed so that they can be manipulated from walkways on the crane gantry. The vertical pivot-hung windows are arranged to open 135 degrees and are coupled together in ranges so that one gear operation opens the complete range. Thus ventilation can be controlled quickly to very fine degrees in accordance with either temperature or changes in wind direction.

Williams and Williams Ltd Makers of Metal Windows, Doors and Aluminex Patent Glazing. RELIANCE WORKS * CHESTER

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THE ARCHITECTS' JOURNAL for October 2, 1952

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Architect : A. Mackenzie, L.R.I.B.A., Director of Housing, Manchester Corporation

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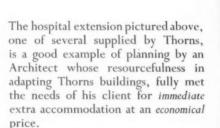
Specifications and notes on surface preparation are given in a booklet which will gladly be sent free on application. This booklet also contains a report on tests carried out by the Building Research Station. Information regarding other Silexine products, particularly S.P.E.C. (Silexine Plastic Emulsion Coating), a durable satin-like finish for interior walls, is also freely available.

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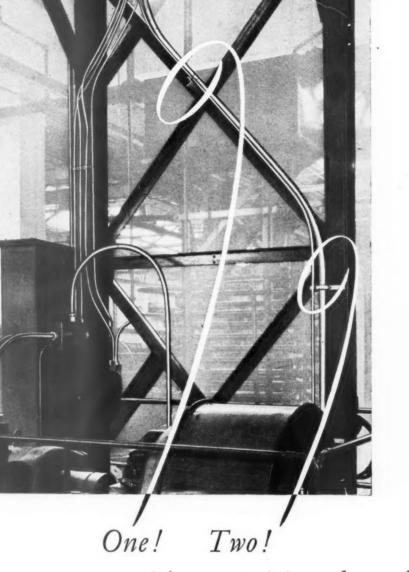
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ST. ANDREWS CHURCH Congresbury, Somerset.

Congressbury, Somerset. The Architects in charge of restoration, Messrs. Burrough & Hannam of Bristol, instructed Messrs. William Cowlin & Son Ltd., the General Contractors, to employ us for the new roofing which took some 6,000 ft. super of copper sheet weighing nearly 2½ tons covering the Nave, North and South Aisles and the Vestry roof. ROOFING

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for kitchens where every foot of space must serve a purpose

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MONOCHROME

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B

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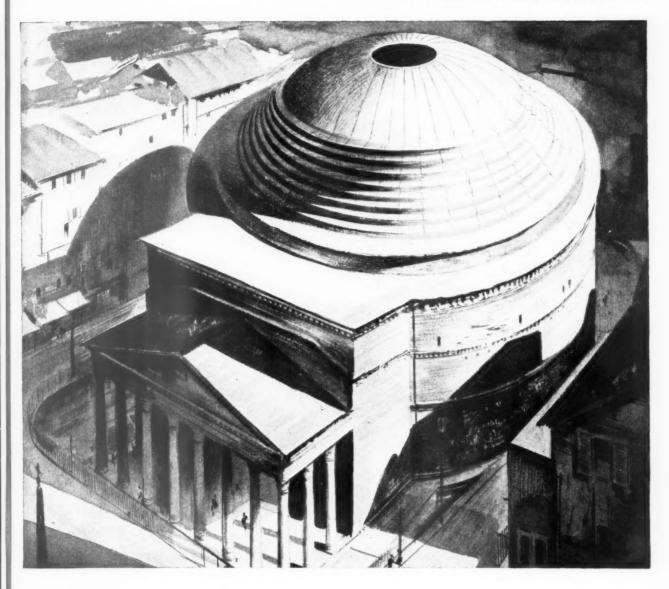
Ferodo Stairtreads SM 50 (TRI) fitted to granolithic stairs at Messrs. N. Corah & Sons, Ltd., works at Leicester. Architects : Symington, Prince & Pike, Leicester. Contractors : W. Blackburn & Sons Ltd., Leicester.

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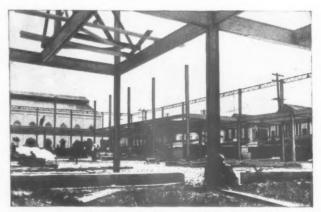


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Top : a general view of the building-for Messrs. Booker Bros., McConnell & Co. Ltd.

Above : the main building under construction, showing 'Duralumin' hollow beams. The structure was designed by J. E. Temple, Whit. Sch., D.I.C., Consulting Engineer, 9a, Seymour Walk, South Kensington, London, S.W. 10, in conjunction with the architects, Messrs. Watkins, Gray & Partners, FF.R.I.B.A., and the sections were fabricated by E. C. Payter & Co. Ltd., Limerick Works, Meeting Street, Great Bridge, Tipton, Staffs. Messrs. John Mowlem & Co. Ltd. were the contractors.

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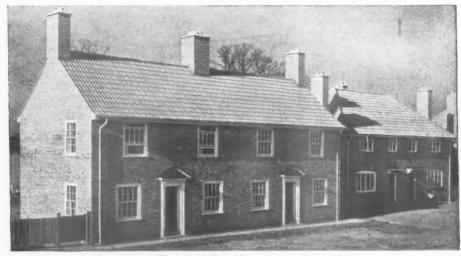
GOOD AS A BOND

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Houses in Merton Village, Ford, Lancs. Architect : Felix Holt, A.R.I.B.A.

A BRICK EXTERIOR takes care of itself



Houses at Bury St. Edmunds. Architects: Messrs. Mitchell & Weston, F/F.R.I.B.A.



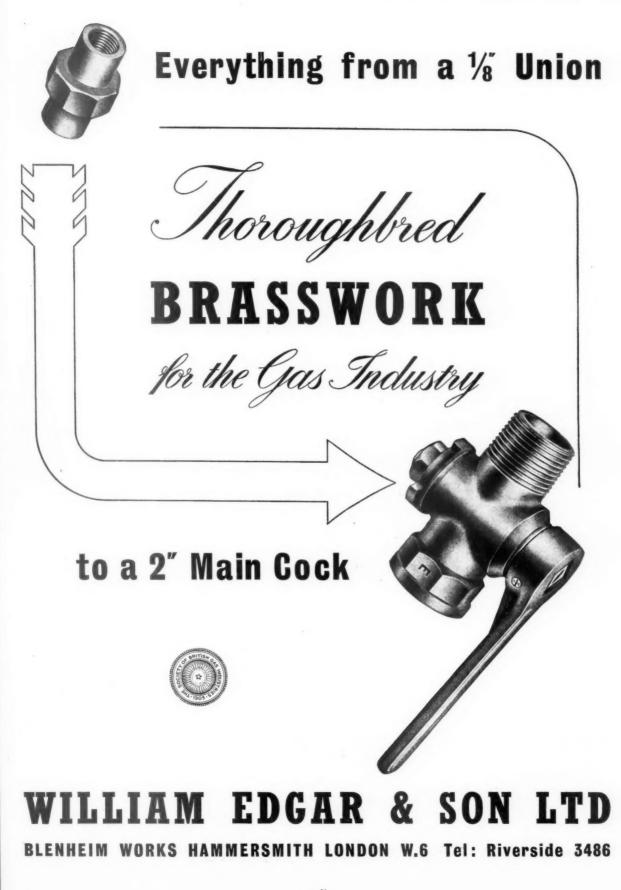
Houses at Leeds. City Architect : R. A. H. Livett, O.B.E., A.R.I.B.A.

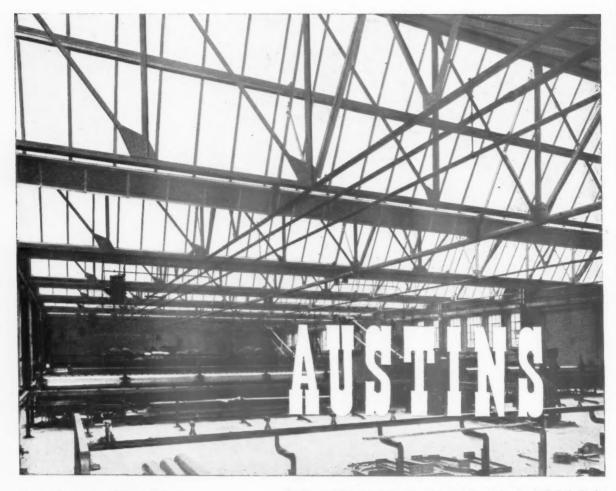
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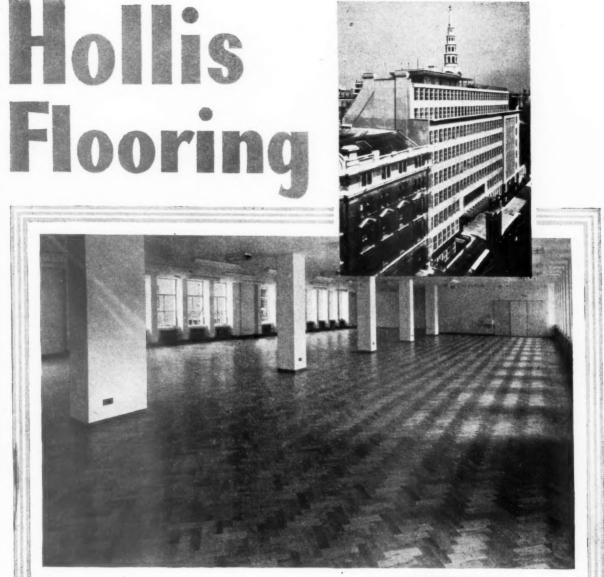
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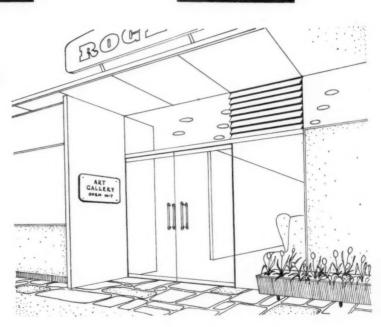
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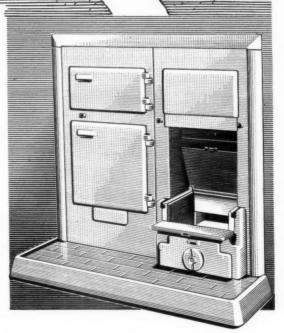
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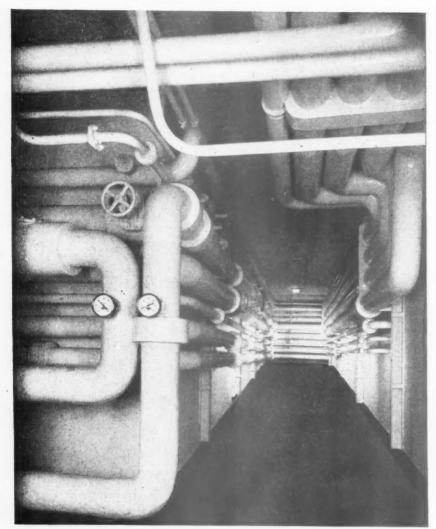
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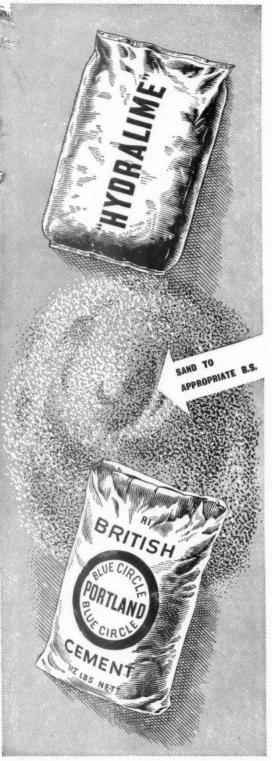
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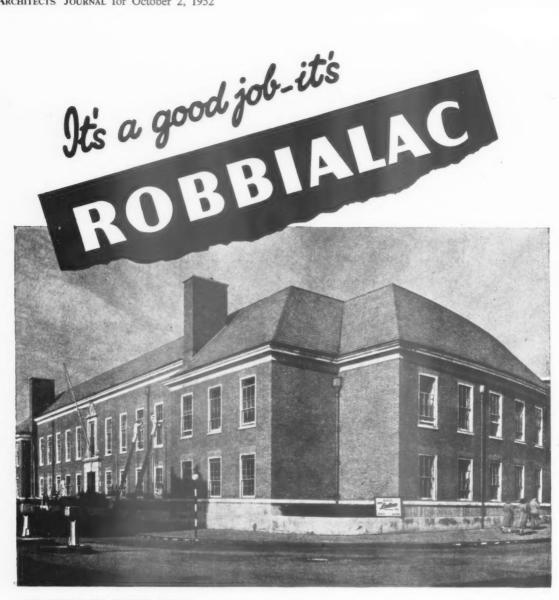
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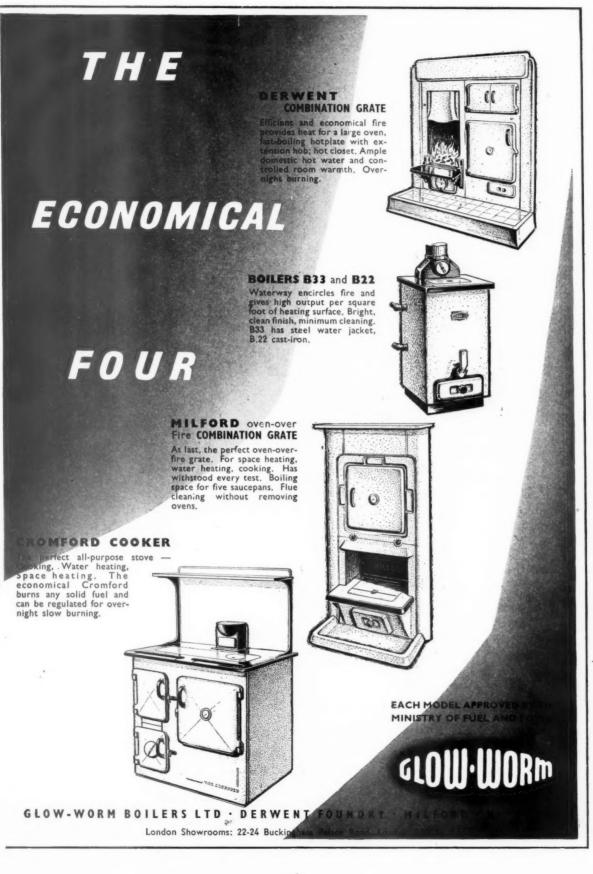
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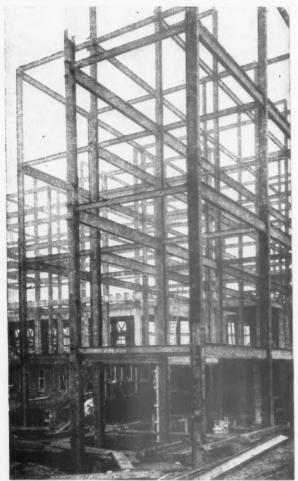
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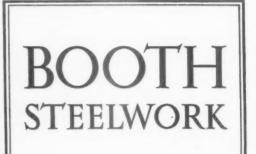
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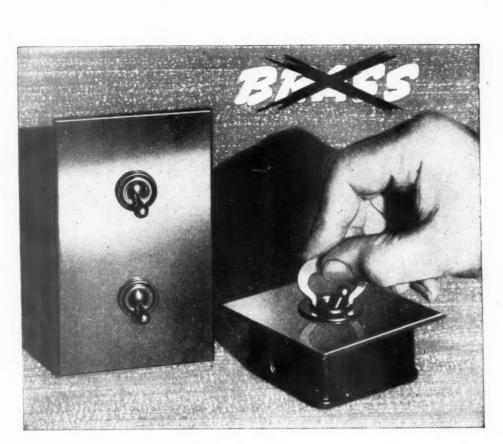


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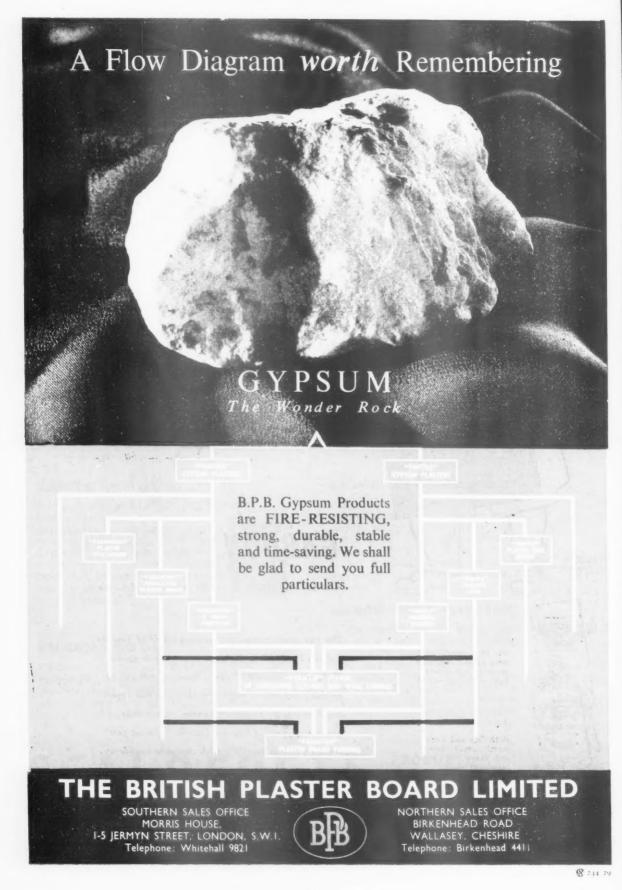
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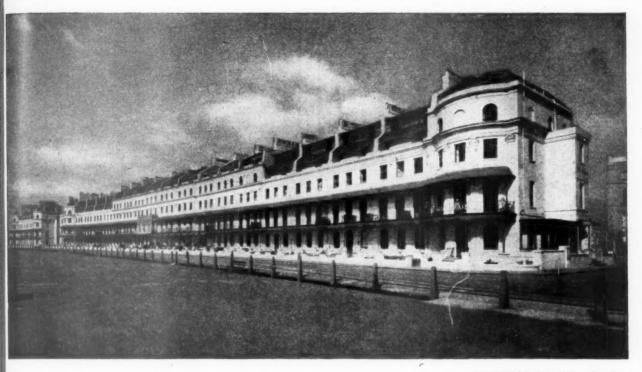
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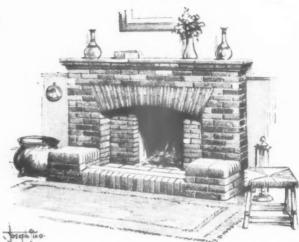
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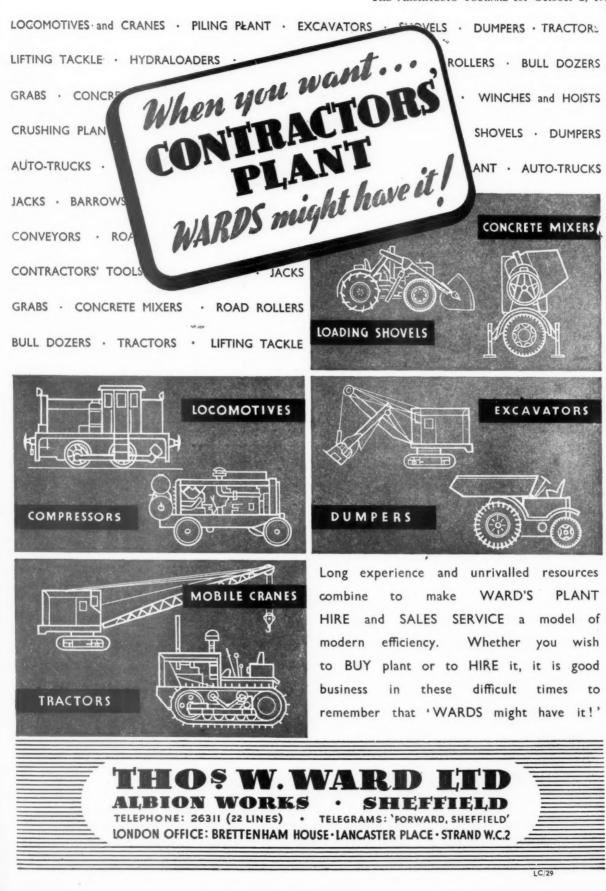


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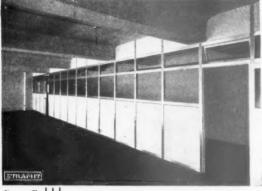
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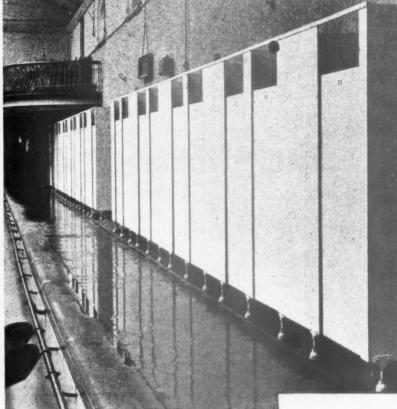


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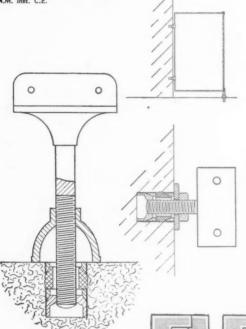
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FLEXOMETAL CUBICLES

As is well known, Flexometal cubicles are hygienic and light, they save a lot of space owing to being thin, yet rigid.

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	THE ARCHITECTS JOURNAL TOT OCTODEL 2, 1932 [391
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STUDENTS AND RIBA

Those who read our leading article of September 18 will be glad to know that on September 24 the Secretary of the RIBA Board of Education wrote to the heads of the schools concerned that those students who passed their Professional Practice Examination in March, 1952, are now eligible "to apply forthwith for election as Associates RIBA."

There seems little more to be said. This is the second time in a year that the Officers of the Board have had to make such a decision, and on both occasions it has been made only under pressure from the Law and the Press. For the second time we are prepared to forgive and forget—we hope the students are too—but the Institute will no doubt put its own house in order. Presumably, for the sake of their careers and records, the students will have their election to Associateship pre-dated.

As the JOURNAL goes to press the Editors tell me that they have letters from both Everard Haynes, the Secretary of the RIBA Board of Architectural Education, and Pembroke Wicks, the Registrar of ARCUK, explaining the tangled—and indeed chaotic—web of regulations that has led to this sad business. These letters will be published in full next week.

Meanwhile, read the letter on page 393, which points out a most significant and somewhat alarming issue.

INDUSTRY AT WAR

Not many of us, I suspect, have managed to keep up to date with the civilian, as opposed to the military, histories of '39-'45. But there is a considerable series in course of production, the latest of which* deals with the building industry. The book describes the gradual development of methods of controlling and reconciling the demands of the services and various Government departments and reminds one of the vast amount of work which the industry had to carry out (£534 million, for instance, on 36 new airfields for the USAF) and about which comparatively little is known. Why, incidentally, did the industry never attempt a comprehensive record of achievement after the fashion of other major industries? Too individualistic and competitive?

* Works and Buildings. By C. M. Kohan. (H.M.S.O. and Longmans, 32s. 6d.) Mr. Kohan is entirely factual and thus makes somewhat heavy reading, but he has done a very thorough piece of work and reminds us of many things we now take for granted. MOW, for instance—how many of us are so used to it that we forget that "Works" is barely 12 years old as a Ministry?

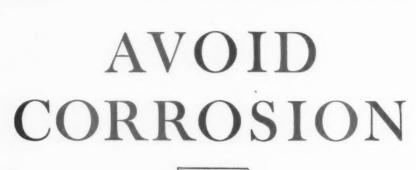
THE ADOUNTEOTS' LOUDNAL for October 2 1052 [201

WARSAW

It is a very great pity that the general Press, on both sides of the Iron Curtain, is so idiotically touchy about giving us genuinely "cultural" news from the other camp. Many of us would like to know much more, for instance, about Soviet canal schemes; and it is fantastic that a front-line report on the rebuilding of Warsaw should come to us only through a twenty-minute broadcast - tucked away on the "Third" of course! (though, in fairness to my Editors, a brief report appeared in the JOURNAL of September 4). Graeme Shankland, however, made the most of his time, both in Warsaw and at the microphone. He was objective enough and yet one was left with the feeling-and indeed the certain knowledge-that here was an enormous project going ahead with (a) popular enthusiasm, (b) some stylistic chaos, (c) great speed and (d) in real accordance with a long-term (20 years) master plan. But we would like to know more.

BASIL SPENCE

Many of us must be feeling rather sorry for Basil Spence; a number of circumstances have combined to produce an extraordinary situation wherein he seems compelled to present his ideas one by one and sometimes not fully



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Fortunately almost everyone will feel that the latest Coventry drawings really do show a greater coherency and consistency than the earlier ones-just that "ironing out" in fact which was bound to happen at some stage or other. It is, moreover, no criticism of Basil Spence to say that the co-operation with Ove Arup is bearing fruit; no criticism, because that is surely just how the cooperation should work . . . the gradual emergence of a clear and crystalline design in which no one can say what is Spence and what is Arup. When that point is well and truly reached, then Coventry Cathedral will be more truly gothic-in the very best sense of that word-than anything Gothic could ever have been. That point-as far as one can judge from sketches-has not been reached yet.

Basil Spence will shortly have a chance to say something about this gothic aspect of modern structure when, on October 22, he is to debate, before the Architecture Club, the proposition "that Modern Architecture has more in common with the Architecture of the Middle Ages than with that of the Renaissance." John Summerson, in opposing, will—in ASTRAGAL'S humble opinion—be on what is commonly known as a sticky wicket.

ASTRAGAL

LETTERS

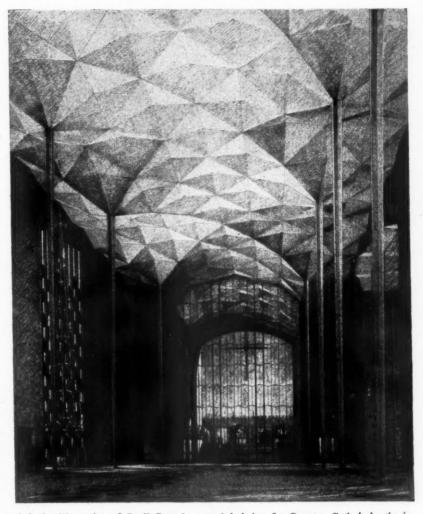
A. E. Ward, Secretary, Institute of Registered Architects G. Grenfell Baines, A.R.I.B.A., A.M.T.P.I.

RIBA or ARCUK?

SIR.—Your leading article of September 18 has disclosed a disastrous state of affairs and indicates a serious position which must be a matter for anxiety to all who are concerned with the welfare of the architectural profession.

The time has come for the RIBA to realize that, after all, ARCUK is the only body set up by Act of Parliament to examine the qualifications of architects and to authorize their registration as architects. It is submitted that the statement in the

It is submitted that the statement in the RIBA Kalendar which states that "admission to the register can now be obtained only by undergoing the system of training and passing the examinations accepted for Associate Membership of the Royal Institute" should be reversed and that the qualification to be



A further illustration of Basil Spence's amended design for Coventry Cathedral—the interior, looking towards the "west" end and the ruins of the old cathedral. Note that the columns supporting the ceiling taper towards the bottom and are to be supported on ball bearings or crystals. The ceiling form is more complex. See ASTRAGAL'S comment and page 369 of last week's JOURNAL.

a member of a private institution such as the Royal Institute of *British Architects* should be that a person is on the Register of Architects.

Your article indicates that the RIBA is setting itself up as a higher authority on architectural education than ARCUK and refuses to recognize the standard of architectural qualifications safeguarded by Act of Parliament, thereby setting up two standards of education in the United Kingdom.

It follows that the above position cannot be tolerated and your disclosure confirms the fact that my Institute has always made clear, that the essential qualification for membership of this or any other private Institution should be registration with the Architects Registration Council of the United Kingdom. A. E. WARD.

London.

Close Tendering?

SIR,—Readers may be interested in three tenders we have recently received for 3-ply roof covering for a school in Lancashire. A well detailed specification and working drawings were issued to three leading firms, the tenders being as follows:—Firm A, for £1,902 14s. 64d; Firm B, for £1,902 14s. 6d.; Firm C, for £1,902 14s. 7d.

Preston. G. GRENFELL BAINES.

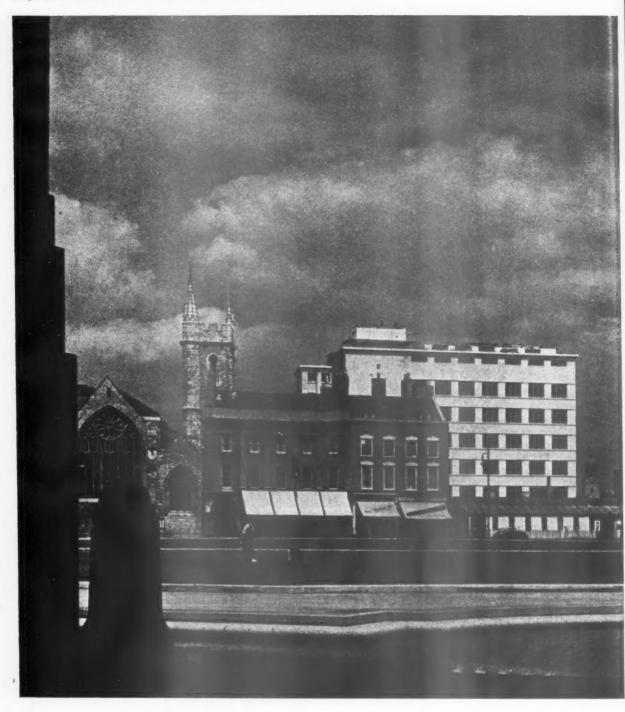
NEWS

MOW

Scheme to Improve Materials' Supply

Building Industry Distributors, in discussion with the MOW, has prepared a "mutual-aid" scheme to help the housing drive. Under the scheme, a contractor who finds that the lack of certain commodities and fitments is holding up the completion of essential work, can approach the appropriate regional office of the Ministry, which will then notify the local panel of BID members. The latter will pool their resources in an endeavour to supply the article or articles in short supply. The scheme is not intended to cover any

The scheme is not intended to cover any general shortages, which builders and plumbers must deal with through trade channels as hitherto, but rather to deal with temporary or local shortages which might delay occupation of otherwise completed buildings.



Bristol Revisited

This week the JOURNAL continues its series on the rebuilding of blitzed cities with a return visit to Bristol—last visited and described in the JOURNAL of June 1, 1950, on the occasion of the RIBA Conference. Bristol's first major post-war building in the city centre is Gaunt House—a nine-storey block of offices designed by the Bristol architect, Alec French. It is seen above, rising behind the eighteenth century houses of Park Street on the farther side of the once tree-filled College Green, which now lies, billiard-table smooth, before the concave curve of the Council House the pre-war design by Vincent Harris, now nearing completion (see illustration on page 401). These two buildings are, perhaps, each typical of their era: the neo-Georgian Council House, with its high-arched porches, steep-pitched copper roof, and ornamental water to double its dignity, is one of the last products of the great town hall and civic building boom of the inter-war period, and is, alas, already too small. Gaunt House, towering over its neighbours in a narrow, winding street, like a clean, newly-styled carton amongst a dusty, shabby litter of rejected wrappings, is typical of the rather heavy, cautious modernity of the better post-war office building.

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MOHLG Minister Calls for Resumption of Slum Clearance

It was time we took up the work of slum clearance again, said Harold Macmillan, Minister of Housing and Local Government, at a press conference at Plymouth last week. Before the war, he said, over 60,000 houses were being demolished each year under slum clearance schemes. The tragedy today was that people still had to live in houses which, but for the second world war, would have been pulled down.

is absolutely vital that local authorities in this country should begin *now* to consider a resumption of slum clearance," continued the Minister. "It is a natural function for them-indeed, it is one of their most important functions—and only they can do it." Slum clearance was, moreover, a way of preventing the waste of agricultural land, said Mr. Macmillan; we should make use of the valuable housing sites which already exist inside our cities and towns. "Wherever we can, let us build on sites that are readymade. Let us start to pull down the worn-out houses and to fill up the toothless gaps in our cities and towns. We have now full planning powers. We must use them."

HASTINGS

Proposal to Build on 1066 Battlefield

At a meeting held in Hastings last week, a motion was adopted protesting against the proposed erection of 60 or more houses by Battle Rural District Council on the 13-acre site which formed part of the battlefield of 1066

A spokesman of the council has stated that alternative sites were considered, but some had no drainage and others would be too far from the site of a proposed school. The council was, moreover, trying to avoid ribbon development.

Swedish Architecture: Exhibition. At the Scottish Building Centre, 425-7, Sauchiehall Street, Glasgow, C.2. Weekdays 9.0 a.m. to 5.0 p.m., Wednesdays until 9 p.m. UNTIL OCTOBER 4

Housing Centre: Annual General Meeting. At 13, Suffolk Street, S.W.1. 4.0 p.m. OCTOBER 7

Installation of President, ISE, E. Granter. At 11, Upper Belgrave Street, S.W.1. 6.0 p.m.

OCTOBER 9

Royal Photographic Society: Annual Ex-hibition. At 16, Princes Gate, S.W.7. Mon-day to Friday, 10 a.m. to 8 p.m., Saturdays, 10 a.m. to 5.30 p.m. Sundays 2.30 to 5.30 p.m. The exhibition will close at 6 p.m. on Tuesdays, so that miniature colour transparencies can be projected, with commen-tary, at 7 p.m.

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UNTIL OCTOBER 12

Essentials of Good Concreting. E. E. H. Bate. At Croydon Polytechnic, Selhurst Road, South Norwood, S.E.25. (Sponsor: MOW.) 7.30 p.m. OCTOBER 13

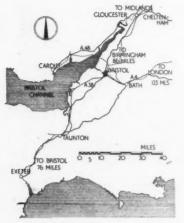
Landscape Gardening. Dorothy Stroud. At 66, Portland Place, W.1. (Sponsor: RIBA Library Group.) 6.0 p.m. OCTOBER 13



The Editors

STILL WAITING TO START

THIS," the long-memoried reader will exclaim, on catching sight of the photograph above, " is where I came in." And so, very nearly, it is. Two years and a few months ago this photograph of Bristol architect Alec French gazing over the city's centre served to introduce an article on the architects in Bristol and their work. (The JOURNAL'S RIBA Conference Number, June 1, 1950.) Two years have passed and in the fourth article in the JOURNAL'S series on the rebuilding of England's blitzed cities we record the major changes which have taken place in this city's centre since then. Only one large building has thrust itself into the broken and rolling skyline which Mr. French surveys, and that is a design by himself for a massive block of offices, shown opposite, and on page 401. Otherwise, except for a sprinkling of small factories and warehouses, a burst of activity in a proposed shopping street and tremendous endeavours on the perimeter of the ant-heap, the larger of the barren holes of bombed desolation in the centre remain barely changed, and function nobly as convenient and efficient car parks. If the rebuilding of the city's centre is slow and perhaps not too sure, the house and school building rate on the outlying estates has been considerable. Therein lies a danger. The rebuilding of the city centre, as does rebuilding everywhere, hangs on the granting of licences by the Government. Since the war everyone has been waiting for the priority work-houses and schools-to be finished, and for the economic crises to end, so as to allow the rebuilding of the blitzed and decaying centres. What is being slowly forced on us is the realization that there is no foreseeable end to the priority work, or to the economic crises. If the country's wealth does not markedly increase there may be no possibility of rebuilding the town centres and we, or our children, may watch, for a change, not the growth but the galloping decay of a city, in terms of property, not from the outside in, but from within outwards to the perimeter.



The City and County of Bristol is fourth in the series of special articles to appear in the JOURNAL on the reconstruction and planning of our blitzed cities. Bristol, with nearly half a million inhabitants, is the sixth largest English city and is the largest surveyed so far in this series of articles. With an extremely wide range of industrial interests, it is, as shown in the map, left, closely

related to the industries of London, the Midlands and South Wales, with the West Country, and, via its port, with the world overseas. The City Planning Officer is H. M. Webb and the City Architect, J. Nelson Meredith.

BRISTOL

SURVEY BY D. RIGBY CHILDS & D.A.C.A. BOYNE

The creation of a new centre for blitzed Bristol has begun with the building of a new shopping precinct in the street called Broadmead, shown in process of transition above, right. Appropriately enough the City Architect's office designed the first shop, the corner building on the right in the photograph, for Swears & Wells, clothiers. The other three photographs are of the floating harbour, Royal York Crescent, Clifton, and St. Michael's Hill. They symbolize perhaps the most attractive features, and also, unfortunately, the most neglected features, of this city: the maritime excitements of the docks and wharves ; the high, eighteenth century terraces which run ribbon-like across Clifton hill ; and, lastly, the narrow, hilly, streets with odd picturesque corners and varied styles.



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Is it worth the architects' and town planners' time attempting to control shop elevations? The photograph above of Bristol's first post-war attempt at creating coherent street architecture poses the question with all the dreary force of a descending sales curve. Should a shopping street be a jerky series of competing, visual, advertising yells or an orderly superstructure of architecture over a number of discrete, civil, "do-comeins"? On page 404 readers will find an example of the latter —in a modernized version of the neo-Georgian style similar to many shopping layouts of the inter-war period. For the more contemporary-minded basically the same technique has been used for the shops in Lupus Street, Pimlico, shown on page 406 of this week's JOURNAL. The comparison is not exact, of course, because these two examples are of shops which require only ground floors and basements, leaving upper floors for living accommodation. They can entreat the customers only with mouth and lips, so to speak, while in the example

above of Broadmead shopping centre the whole face can be used to attract the passing eye because in most cases each structure consists entirely of the sales and office space of an organization devoted only to salesmanship.

What is there to tell the passer-by that these shops have come under planning control? The most obvious thing is the near uniformity of height—only the more discerning would note that the curves of the initial letters of the words Dorothy Perkins on the shop bearing that name are not allowed, as they do normally on their shop fascias, to encircle the remainder of the word, and that Woolworth's have lost their distinctive bright red fascia. [See photographs on page 398.]

It is impossible for the passer-by to guess what discords in design have been avoided by planning control. He is confronted merely by the finished articles each sitting cheek by jowl and forming, when seen as an entity—what? An orderly whole? A series of interesting and individual architectural units? Hardly either category fits the case.



THE ARCHITECTS' JOURNAL for October 2, 1952 [397





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But ignoring the visual side, let us consider the effect of planning on the economic utilization of space. The model illustrated on page 400 shows how the final scheme may look. While all the buildings present a tidy façade to the street, the areas inside each block seem almost as chaotic, and as densely packed, as unplanned shopping centres are. Daylighting conditions have obviously been slightly improved, but visual conditions not at all. True to form, the salesman displays a gleaming and showy façade at the expense of what he hopes -so erroneously—is hidden out of sight in the rear. It is, of course, fakery, shallow façadism and also, to be blunt, immoral. The root of the evil is, of course, the desire to front all floors of a building on to a street, irrespective of the fact that window display and entrances alone are compelled to line the street and irrespective of the fact that they can only occupy the ground floor. If the facades above ground floor level were not in line, if some were set back, some turned at right angles to the street and of varying heights, the incongruity of the



various types of façade might not be so noticeable, as the eye would be more interested in the silhouettes and massing of the buildings. It is this haphazard variety which has produced some of our most attractive mediæval streets. But line the buildings up, and equalize their heights and one automatically expects an orderliness, and a rhythm in the elements which compose the façade—a classic composition, in effect. Shorn by economy and fashion of classic orders to dress the façade, the shop architect resorts to three things; contrasting his solids and voids in vertical and horizontal strips, patterning the solid façade with windows and, the latest fashion, playing with receding solid and transparent planes, as has been done so sophisticatedly by Mr. Somake in his shop for Dolcis shown on page 399.

Oddly enough there is a factor common to all these buildings—or, at any rate, most of them—and that is the steel or concrete frame. This structural element in almost every instance has been disguised, or obscured, but nevertheless is

THE NEW SHOPPING CENTRE

On this and the opposite page are views of the seven new shops which have been completed or nearly completed, in the new shopping precinct. Right, shop for Messrs. Montague Burton Ltd., designed by the staff architect, N. Martin. It comprises ground floor shop and two upper floors, giving a total floor area of approximately 8,928 sq. ft. Steel framed, the building is carried on pressure piles and load bearing beams. Facings to Broadmead: artificial stone. Other facings: stock brick.



Below, left, shop for Dorothy Perkins, designed by Messrs. Browett Taylor & Co., a reinforced-concrete framed building with Bath stone facade. Below centre, existing premises altered by the lessees, Alexandre, Ltd. Below right, a new shop designed by W. H. Watkins and Partners, for Messrs. H. Samuel Ltd. The building consists of ground, first and second floors with a total area of 3,500 sq. ft. It is of steel framed construction with reinforcedconcrete raft foundations, brick panel walls and precast concrete floors.





Left, shop for F. W. Woolworth & Co. Ltd., designed by H. Winbourne, the staff architect. This building is not yet finished so no information on it is available. On the right of it can be seen the shop for Swears & Wells, designed by the City Architect, J. Nelson Meredith. It is a steel-framed structure. The front elevation is of Bath stone with polished grey granite and bronze in the shop front. Below, Marks and Spencer Ltd., designed by James M. Monro & Son.



A night view of the Dolcis shoe shop in Broadmead, designed by the staff architect, Ellis E. Somake. This design will be illustrated more fully in a future issue of the JOURNAL. It is constructed with a reinforced concrete frame with hollow tile floors and wall panels of 11-in. cavity brickwork externally and 9-in. and 41-in. internal partitions. The front elevation is faced with reconstructed Clipsham stone and polished Portland stone panels.

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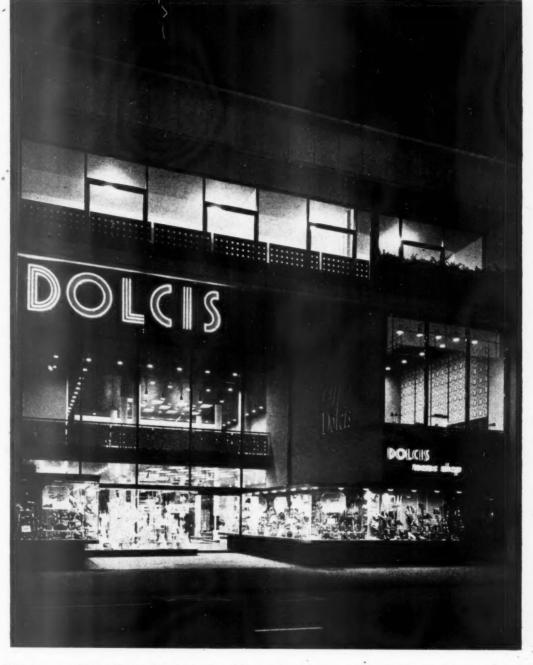
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there. Might not this, then, provide a solution for obtaining unity in the street? Let the City Corporation erect the structural frame—preferably on a module—for the whole, or part, of a street, and let each shop lease the number of bays it requires and fill in the floors and roof, and, within the concrete frame, design its own, brazenly self-advertising façade. Then, however discordant the elements, they would be partially disciplined by the repetitive three-dimensional pattern of the frame.

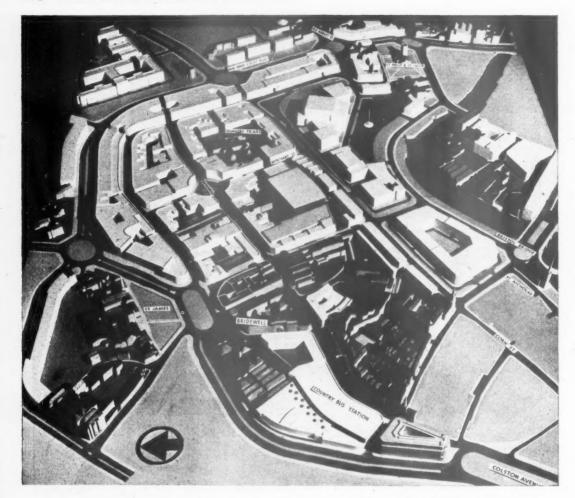
There is, of course, another policy to adopt, that of complete laisser faire. To select a site, pack in the various firms and let unbridled commercial display win the day. To cordon off, so to speak, a shopping hell-hole and concentrate design and planning efforts on more amenable subjects.

Certainly either of these two courses would be preferable to having responsible and eminent planners and architects in our major cities concentrating their considerable energies on persuading a shopowner to smarten up his fasçia-board.

The reader will have noticed that for a city of nearly half a million inhabitants the number of shops built since the war (even including the two or three not illustrated) is not nearly as large as in Plymouth or Exeter. One reason for this was the refusal of the Board of Trade to grant licences on the grounds that, compared with other blitzed cities, Bristol, although its shopping centre in Wine Street had been wiped out, had still enough shops outside the centre to be able to make do. The BOT maintained that there was little common demand for shops in the city centre. On the other hand, the city authorities increasingly realized that people were tending to shop in Bath and Cheltenham for special purchases.

Compared to the progress made in other cities, the city authorities of Bristol, for so large, and, in many ways, a progressive-minded authority, may appear to have been extraordinarily dilatory in the handling of reconstruction. But the story of Bristol reconstruction goes back a long way.

A whole decade has passed since completion of immediate





THE FUTURE SHOPPING CENTRE

Above, a model of the part of the central area redevelopmen showing in particular the proposed shopping centre. In the foreground can be seen the proposed bus station with, to the right, the existing main office area centred round Corn Street. The shopping centre consists of the buildings to the east of the offices, quartered by the roads named Merchant Street and Broadmead which intersect at a roundabout. The suggested treatment for this intersection is shown in the City Architect's sketch, left. The shop heights are increased from three to five storeys for this central feature. In the centre of each shopping quarter can be seen dark blocks representing preserved buildings.

first aid repairs to bomb-damaged property. Before they started building, or, indeed, before they were allowed to start building, the Corporation spent eight years in planning and

building of the city. This was the town-planners' vision. 1944—Parliament provides for rebuilding of Britain's bombed cities (TCP Act, 1944).

1945-Under Section 1 of that Act the City Council applied for a very large declaratory area. Application rejected by Ministry, at that time the MOTCP.

1946-47. First compulsory purchase order applied for. Area of only 41 acres allowed to the Corporation to purchase. This was not enough, according to City Planners, in which to create anything new.

Then the real battle began. It was the tussle between the Corporation and the traders. The planners' case was that the old shopping centre based on Wine Street was too

restricted in size and layout for the rebuilding of shops on modern lines.

It was unpracticable to extend the pre-war site to any extent, due to difficult levels to the north, the existence of the Floating Harbour to the south and the existence of the main office area in Clare Street and Corn Street to the west. In the end, they argued, it will be to everybody's advantage if the rebuilding takes place in a more commodious area alongside to the northward around Broadmead. They had in mind, too, that the site of the old shopping centre would be a splendid site for a new civic centre. At present this site is serving as a car-park—free to all—and before the building of the civic centre can be started a multi-storey car park will have to be erected in the new shopping centre. It can be seen in the model on page 400. (The largest block in the south shopping quarter.) But the shop keepers wanted to return to their old haunts-those where people were used to going. It appears that the planning Ministry was doubtful about the





wisdom of the Council's plan until the then Minister, Lewis Silkin, visited Bristol. Since then realization of the Council's plan has slowly gone ahead.

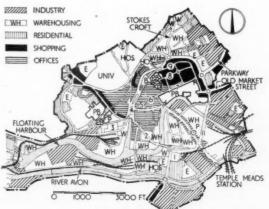
In illustrating the new shopping development in Broadmead and discussing the problems of the design of shopping-street architecture, we have begun the article with the core of the post-war commercial redevelopment. Our next task is to describe briefly the position of this redevelopment in relation to the other types of redevelopment which go to make up the city centre and then to relate this to the city as a whole. The diagrammatic and much simplified plan, right, of the city centre shows the proposed comprehensive development area. The northern half of this area is a steep hill running down, south, to the level of the floating harbour (the original limits of which spread past the figure 4 on the plan) and the area now known as St. Augustine's Parade, the subject of some controversy on account of the road-engineer's merrygo-round which dominates the layout, as can be seen in the

OFFICE BUILDING

Left, the Council House, College Green, designed by E. Vincent Harris. Erection of this building started before the war and is at present continuing.



Above and left, offices in Denmark Street, designed by Alec F. French and Partners, and built by the Pearl Assurance Co. for lease to Government departments. It consists of a basement, ground, and eight upper floors, with a total floor area of 87,000 ft. super. It is of steel frame construction with hollow tile floors. The main elevations and returns are faced in Bath stone. Floors are surfaced with wood block, except in the lavatories and on stairs where terrazzo has been used. The consulting engineer was R. Travers, Morgan & Partners, and the quantity surveyors Messrs. Gleed.



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INDUSTRIAL BUILDING

Above, left and right, two views of new factories on the Bedminster Trading Estate. Above, left, foreground, factory with offices occupied by Messrs. Exide and designed by the City Architect's department for the Planning and Reconstruction Committee of the Corporation; and, left, background, factory designed by Alec F. French & Partners for Finch & Godwin. Above, right, foreground, factory for the Printing and Stationery Committee of the Corporation designed by the City Architect's department. Beyond, the rear elevation of the Exide factory.

Left, offices for W. T. Avery, designed by Alec F. French and Partners. The building has a ground and two upper floors, with a total floor area of approximately 8,000 superficial feet. The construction is of steel frame with hollow tile floors.



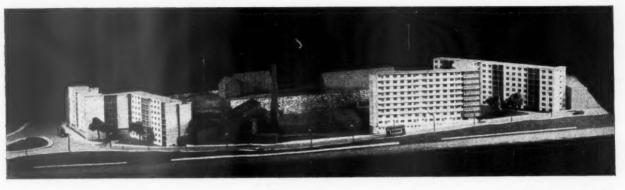
photograph on page 395. Areas marked E are the educational zone for Bristol University. The letters P, B, and PB stand, respectively, for parking space, bus station, and public buildings. I denotes St. Mary Redcliffe, the lovely Perpen-dicular church shown in the model illustrated above; 2 is Queen's Square, the Georgian square which, cut diagonally in half by a wide road, is ruined as a Georgian square, but, to the car driver (though not to the pedestrian) is still an interesting composition of two receding, quiet, residential corners; 3 is the cathedral; 5 and 6, Clare and Corn Streets, the heart of the office and business area; 7, Wine Street, the road which will separate the shopping centre from the proposed public buildings area-which may include a conference hall, an art gallery and museum and a central health clinic; 8 and 9 are Broadmead and Horsefair, two of the shopping centre streets; 10 is Victoria Street, the easterly limit of the warehouse estate illustrated in the model above; 11 is the line of the proposed inner circuit road.

There is nothing at all clear cut about the layout of this central area. The presence of the floating harbour, the river and the many steeply sloping sites undermines any attempt to make a neat and tidy plan. In the recent past practitioners in civic design—townscape—have not markedly improved the layout and appearance. The most important change which the City Council are proposing making in the Central area is the completion of an inner circuit road. Only one important traffic route will traverse the enclosed area; that is Victoria Street linking Temple Meads Station to the commercial and civic centres and its continuation to St. Augustine's Parade.

A most interesting development is taking place between Broadmead and Horsefair. The city corporation have taken over a slummy Regency arcade and are redecorating and generally improving the conditions in the arcade shops. The result of the Corporation having increased the rents is that the former tenants with very second-rate type of businesses are leaving to trade elsewhere in the city and a tenant with a Of zon gro Re apj an sho

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C H R H CENTRAL AREA REHOUSING



Above, a proposed scheme of flats and maisonettes designed by the City Architect's department at the junction of Hotwell Road and Jacob's Wells Road at the foot of Brandon Hill near the city centre. The design of the lefthand block has been altered to the design for six-storey maisonettes shown at the top of the page.

Opposite page, the proposed warehouse zone at Redcliffe Street. In the foreground, right, is the church of St. Mary Redcliffe. The layout and design would appear to have the same lack of clarity and integration as the shopping layout shown on page 400.

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e taken ng and s. The is that sinesses with a more lucrative type of business is being attracted in their stead. Here is a difference: the usual trend is for an area to go down; in Bristol the Corporation is pushing one up. It is refreshing to hear of old areas which are being appreciated in value. The next subject is the peripheral development. The city has already spread far enough. We would say, too far. Its

has already spread far enough. We would say, too far. Its sprawl, attenuated by the docks at Avonmouth, is further extended by suburban development outside the city boundary. As travel gets dearer, people are beginning to demand that places of work go with the houses. There are many snags to this idea, however. In Bristol there is a tradition for diversity of employment. New industrial trading estates at Brislington and Bedminster (see plan, right) are begun. Both are factors which mitigate against the planting of a single factory in a residential neighbourhood so that some people may go to work round the corner. A model prepared by the City Planning Office of proposed housing redevelopment in the Barton Hill area. Below, plan of Bristol.









The first local authority health centre, designed by the City Architect's department, at the Leinster Avenue housing estate.

HOUSING

Top, a general view of the Lawrence Weston estate and right, the site of the neighbourhood centre. This is one of the seven new estates shown in the plan on page 403. The shops, above, and right, were designed by Lionel H. Fewster & Partners.



The great majority of houses which have been built since the war are sited in the outer city. One of the new estates is at Lawrence Weston (see illustrations on this page), where more houses have already been built (2,600) than stand in any new town up to date. Unfortunately, however, the neighbourhood centre has yet to be developed. According to the plan, the minimum programme over the next five years is for the local authority to build 2,000 dwellings and private enterprise 1,000 dwellings each year, *i.e.*, a total of 15,000 dwellings over the next five years. This is nearly as much again as they have already built—together with 10,600 places in 20 schools.

Most important is the consequence of the Corporation following the only practicable course of rapidly expanding the City's urban area before the rebuilding of the worn-out areas can begin. It is so much cheaper and quicker to build on new land than to rebuild on old sites. Apart from this, the housing list shows that about 16,000 people are wanting new homes, and as the years pass by, the list, we understand, does not get shorter. No one appears to know how much longer this situation will continue, and, whilst it continues, can it be expected that city councillors will have the courage to embark upon a housing redevelopment scheme, save where the existing houses are already absolutely uninhabitable? For the city council to procure temporary accommodation for people whilst their homes are being rebuilt at a time when thousands are wanting any kind of home of their own at all is practically unthinkable. Sooner or later, if the redevelopment of worn-out areas is to be tackled on a bold scale, the council and ratepayers will have to face up to the necessity for having a housing estate where people who will return to the old areas can live whilst the new blocks of flats and houses are being built in the inner areas. Complete rebuilding will not always necessarily be entailed. For instance, the question of whether many of the Clifton terrace houses can be preserved by conversion into flats is becoming urgent. Maintenance is at a standstill; in many cases the low

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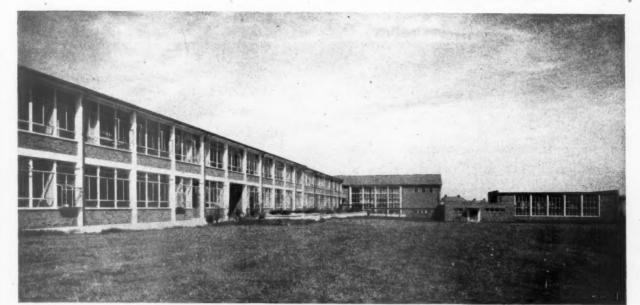
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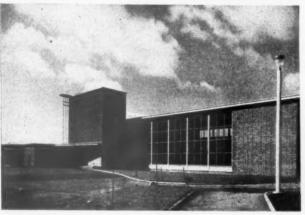
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SCHOOLS

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Five typical schools out of a total of seventeen built by the City Architect's department since the war. Top, Greenway Secondary School, occupied in April, 1951. Above, Novers Lane Junior School, occupied in August, 1950. Above right, Embleton Road Junior and Infants' School, occupied in May, 1949. Right, Ronney Avenue Infants' School, occupied in March, 1951. Below right, Ashton Vale Primary School, occupied in November, 1949.

rents will not allow this. If too long delayed, conversion will only be possible by extravagantly high outlay—needless to say by the city council. In the meantime the suburban peri-phery expands. Owing to expected population increases the longer , can it rage to overspill of population to be housed outside the city boune where dary is about 51,000-the equivalent of a new town. Harold bitable? Macmillan, Minister of Housing and Local Government, has odation recently pressed for more slum clearance. Does this appeal a time eir own provide an opportunity to reduce overspill by more high , if the a bold density housing in the centre? Although administratively, as regards financial and legal arrangement between authorip to the ties, the situation may be more or less under control, we have seen no evidence that there exists any authority who who will has a clear picture of the consequences of the sprawl outlocks of wards, or of the effects upon the lives of the Bristolians and their neighbours in Gloucester and Somerset. Bristol is a omplete For romantic, picturesque, part-maritime, part-industrial city. terrace ecoming But it is also a rambling, untidy, sprawl. It is time some hard thinking was done. the low







406] The Architects' Journal for October 2, 1952

HOUSING

at CHURCHILL GARDENS, PIMLICO

designed by POWELL and MOYA

assistant architect, S. P. SKINNER; consulting engineers, for seven-storey block, SCOTT and WILSON; for four-storey blocks, H. IORYS HUGHES; district heating consulting engineer, S. B. DONKIN; heating consultants, J ROGER PRESTON and PARTNER; quantity surveyors, E. C HARRIS and PARTNERS

These old people's flats, maisonettes and shops form the second contract in the first of the four stages of the Churchill Gardens Housing Scheme—as this development at Pimlico for the Westminster City Council is now called. One of the four blocks of flats which formed the first contract was illustrated in the JOURNAL of December 7, 1950, and is shown on the left, opposite page, in the view of the completed portion of a site which is deservedly becoming the most highly-praised example of high-density development in the country.

The shops, with maisonettes over, in Lupus Street, from the northeast (block 7). Opposite page, a general view from the south with block 7 in the background and block 9 in the centre.

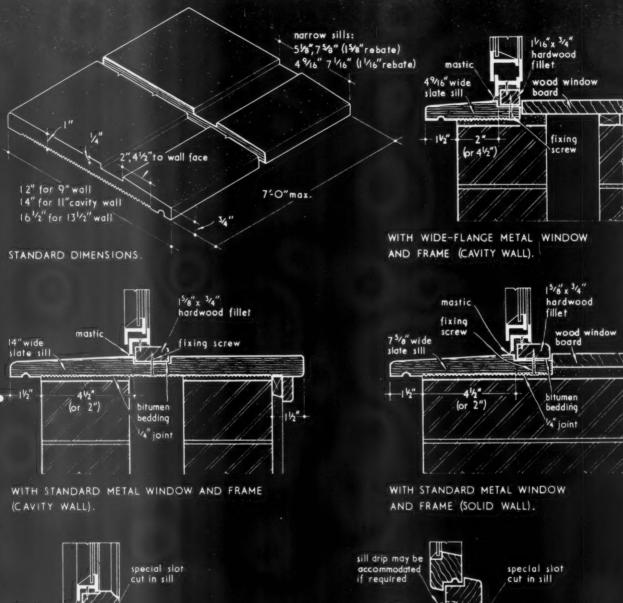


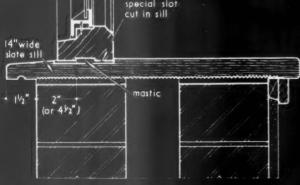




WINDOWS SILLS SLATE

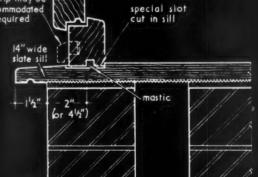
The Architects' Journal Library of Information Sheets 383. Editor: Cotterell Butler, A.R.I.B.A.





WITH STANDARD WOOD SURROUND (CAVITY WALL).

TYPICAL FIXING DETAILS.



WITH STANDARD WOOD WINDOW AND FRAME (CAVITY WALL).

Architects' Journal 2.10.52

24.Z1 · WINCILATE · SLATE WINDOW SILLS

This Sheet describes slate window sills and gives typical examples of their use with various types of window.

Material

Slate is a particularly suitable material for window sills as it is chemically inert, non-porous and dampproof and does not warp, shrink or rot.

Description

Two types of sill are available, a combined sill and window board and a sill only, for use with a wood, tile, metal or glass window board. Each type is available in sizes to suit various wall thicknesses and positions of glazing. There is a groove along the top surface of the sill to take the window fixing and the underside is scored to give a key for bedding. The sills may be obtained in straight lengths or mitred at one or both ends; curved ends are also available.

Sizes

The sills are 1 in. in thickness, tapering to $\frac{3}{4}$ in. at the front edge. The combined sill and window board type may be 12 in., 14 in. or $16\frac{1}{2}$ in. wide (to suit 9 in., 11 in. and $13\frac{1}{2}$ in. walls respectively) and the groove in the top may be at 2 in. or $4\frac{1}{4}$ in. from the wall face when fixed. The type that are sills only vary in width dependent on the distance of the glazing from the wall face and the size of the rebate in the sill to take the hardwood fixing fillet. (See details on the face of the Sheet.) Sills are normally made in lengths to suit any standard metal window size plus 4 in. to allow for building in unless otherwise requested. The maximum length available is 7 ft. Sills of widths other than the above can be supplied if required.

Fixing

The fixing details on the face of the Sheet show how the sills may be used with standard and non-standard metal and with standard wood windows.

Finish

The sills are supplied in their natural blue-grey slate colour. They may be painted if required.

Further Products

Slate coping: Copings are available in lengths of up to 7 ft. They may be 2 in. thick, weathering to $1\frac{1}{2}$ in. thick or $1\frac{1}{2}$ in. thick, weathering to 1 in. thick. Drip grooves are provided near both long edges on the underside, which is also scored to provide a key for bedding.

Slate creasing: This is available 6 in. wide and in lengths of up to 7 ft. It is designed for setting $4\frac{1}{2}$ in. into the wall and the thickness of the front edge is $\frac{1}{2}$ in. to correspond with the line of the slate sill.

Compiled from information supplied by :

The Bow Slate and Enamel Company Limited.

Address: British Railways Bow Depot, Old Ford Road, Bow, London, E.3. Telephone: Advance 2203-5.

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Architects' Journal 2.10.52

TIMBER CARPENTRY CONNECTORS

The Architects' Journal Library of Information Sheets 384. Editor: Cotterell Butler, A.R.I.B.A.

TYPE OF CONNECTOR	Buildog circular toothed- plate timber connectors	Teco double-bevelled split-ring timber connector	Teco shear-plate timber connector
SIZES AVAILABLE	double-sided Bulldog connector for timber-to- timber joints	2 ¹ / ₂ " internal diameter only split-ring connector for timber-to-timber joints	25% external diameter only shear-plate connector for timber-to-metal or timber-to- concrete joints
BOLTS AND WASHERS	2" dia. : $\frac{1}{2}$ " dia. bolt, $\frac{1}{2}$ " sq. washers $\frac{2}{2}$ " " " " " " $\frac{3}{4}$ " " " " 2 $\frac{1}{2}$ " " " $\frac{3}{4}$ " " $\frac{3}{4}$ " " 3 $\frac{3}{4}$ " " 3" " " all washers $\frac{1}{4}$ " thick mild steel	¹ /2" dia. bolt 2" x 2" x ¹ /8" thick m.s. washers	³ /4" dia. bolt 2" x 2" x ¹ /8" thick m.s washers
	2" dia. 2½" dia. 3"dia.	load parallel load perp. to grain to grain	load parallel load perp. to grain to grain
EDGE DISTANCE (centre of bolt to	1 ¹ / ₂ " 1 ¹ / ₂ " 1 ³ / ₄ "	1 3/4 23/4	1 ³ / ₄ " 2 ³ / ₄ "
èdge of member) END DISTANCE (centre of bolt to end of member)	3 ¹ /2" 3 ¹ /2" 3 ¹ /2"	51/2" 51/2"	51/2" 51/2"
SPACING (crs.of bolts parallel to grain)	3" 3 ³ 4" 4 ¹ / ₂ "	6 ³ 4" 3 ¹ / ₂ "	6 ³ 4″ 3 ¹ ⁄2″
SPACING(crs. of bolts perp. to grain)	2 ¹ ⁄ ₂ ″ 3″ 3 ¹ ⁄ ₂ ″	31/2" 41/4"	3 ¹ / ₂ " 4 ¹ / ₄ "
	tightening nut embeds connector	connector fits in grooves cut in timber joint with split-ring connector	connector fits into recess cut in timber timber-to-metal joint with shear-plate connector
ASSEMBLY	connector connector drill holes in timber ¹ /16 ⁴ larger than	drill ⁹ /16 [°] dia holes	drill ^{13/} 16 [°] dia hole
OF JOINTS	dia. of bolt assemble components and tighten nut to embed connector if timber is dense or there are more than 3 connectors on the same bolt use special high-tensile steel bolt and iarge washers: after tightening remove special bolt and insert permanent bolt for demountable structures use 2 single-sided connectors back-to-back	in timber cut grooves in timber with special tool (note: drilling and grooving can be done in one operation if hole is not more than 4" deep) ossemble components and tighten nut °	In timber cut recess in timber with special tool assemble components and tighten nut for demountable structures use 2 shear plate connectors back to-back

TIMBER CONNECTORS: TYPES AND SIZES AVAILABLE AND METHODS OF ASSEMBLY. Compiled by R.T. Walters, A.R.I.B.A., A.M.I.Struct, E., Dip.Arch. (L'pool)

11.C1 TIMBER CONNECTORS : GENERAL DATA

This Sheet describes three types of timber connector. Joints made with these connectors will develop a higher proportion of the strength of the members themselves than is possible with nails, screws or bolts alone. Their use thus leads to economy in the choice of timber sections and improves the efficiency of the structure as a whole.

Choice of Connector

Double-sided and single-sided Bulldog connectors are suitable for use with softwoods in structures carrying light or medium loads. Split-ring and shear-plate connectors can be used with any species of timber and in any type of timber structure, heavily loaded or otherwise.

Allowable Loads

The load which a connector will carry partly depends on the kind of timber with which it is used.

For practical purposes the common structural softwoods are divided into two groups as follows :---

Group 1: Douglas fir (coast); longleaf pitch pine; shortleaf pitch pine.

Group 2: Canadian spruce ; European larch ; European redwood ; European whitewood ; Western hemlock.

The loads given in the following tables may be used where the edge distances, end distances and spacings are as shown on the face of this Sheet. Where these are less than those shown the loads must be reduced in accordance with more detailed information which is available from the suppliers. Where the distances are greater than those shown no increase in load is permissible.

Dia. of connec- tor		ness of mber		ad parallel Load pe grain (lb.) grain (
	Connector on one side of member	Connectors on both sides of member (on same bolt)	Group	Group 2	Group	Group 2	
2*	1" 1½" 1½" 2" 1½" 3" 2" and 4" and over over		1,150 1,225 1,280 1,280	830 905 1,010 1,010	880 925 1,065 1,135	640 670 750 820	
23*	1" 1½" 2" and over	2" 3" 4" and over	1,385 1,440 1,440	1,035 1,140 1,140	1,085 1,225 1,295	800 880 950	
3" 1 ["] 1 ¹ / ₂ " 2" and over		2° 3° 4° and over	1,550 1,605 1,605	1,165 1,270 1,270	1,250 1,390 1,460	930 1,010 1,080	

BULLDOG CONNECTORS

SPLIT-RING CONNECTORS (21 IN. DIA.)

Arrangement	Thickness	Load p to gra	barallel in (lb.)	Load perp. to grain (lb.)		
connectors	member	Group I	Group 2	Group I	Group 2	
Connector on one side of member.	1 <u>5</u> " 1"	2,975 2,480	2,500 2,080	2,105 1,750	1,750 1,460	
Connectors on both sides of member (on same bolt)	2° 1§″	2,975 2,480	2,500 2,080	2,105 1,750	1,750 1,460	

SHEAR-PLATE CONNECTORS (2% IN. DIA.)

Arrangement	Thickness	Load p to grai		Load perp. to grain (lb.)		
connectors	member	Group 1	Group 2	Group 1	Group 2	
Connector on one side of member	13"	3,155	2,630	2,210	1,840	
Connectors on both sides of member (on same bolt)	2" 11"	2,980 2,455	2,485 2,045	2,085 1,715	1,740 1,430	

Duration of Loading

Joints made with timber connectors will sustain greater loads for short periods than if the load is permanently applied. Where part of the loading is due to snow or wind, or a combination of both, the connector value may be increased. In such cases the loads given in the tables should be multiplied by the appropriate factor as follows:---

Dead load +	- superi	mposed	load				1.00
Dead load +	- super	imposed	load	+ snow	load		1.125
Dead load +	- super	imposed	load	+ wind	load		1.25
Dead load +	- super	imposed	load	+ snow	load	+	
wind load							1.25

Loads Acting at Angle to the Grain

Where the angle between the direction of the load and the direction of the grain is between 0° and 90° allowable loads may be found by using the following formula :—

Allowable load =
$$\frac{PQ}{PQ}$$

where P = allowable load parallel to grain,

- Q = allowable load perpendicular to grain,
 - θ = angle between direction of load and direction of grain.

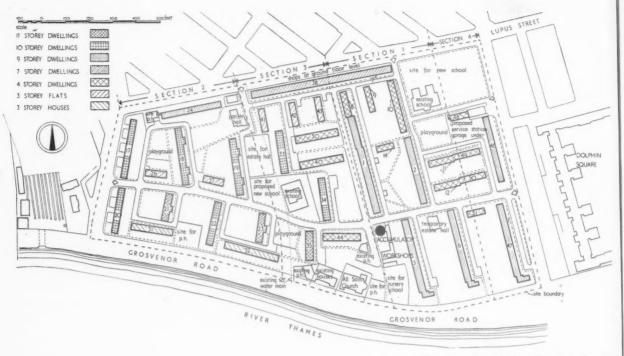
Further Information

The suppliers maintain a technical advisory service prepared to deal with problems on this subject generally.

Compiled from information supplied by a MacAndrews & Forbes Ltd. Address: 2, Caxton Street, London, S.W.1. Telephone: Abbey 4451-3.

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Site plan. The blocks referred to in this article can be distinguished by their numbers being alongside instead of superimposed on top of the blocks, i.e., numbers 7, 8, 9, 10, 11, 12 and 14

b

HOUSING

at CHURCHILL GARDENS, PIMLICO designed by POWELL and MOYA

> GENERAL.—The site plan for this estate is a fairly familiar one to readers. The buildings now completed in the second contract of the first stage of development are in the north-east corner and consist of 125 dwellings and a number of shops. The dwellings are made up of 113 four-room maisonettes, which are arranged as superimposed terrace houses in four and seven-storey blocks, and 12 one-room flats, all in one four-storey block.

> PLAN (of seven-storey block).—This consists of three tiers of two-storey maisonettes, with shops at ground floor level, a communal basement for pram stores, and private basements for the shops.

There are 39 maisonettes and 13 shop bays. Below each shop bay is a basement for the shop, except in two instances, where the basements are used for district heating equipment and laundry. Most shops occupy one bay each, but a few occupy two bays.

CONSTRUCTION (of seven-storey block).—In part cross-wall and in part cross-frame of reinforced concrete. The alternate, or party, floors and the roof are of solid reinforced concrete. The floors within each maisonette are of timber. Walls are of cavity construction, consisting of an external skin of yellow flint-lime facing bricks and an internal skin of 4-in. light-weight concrete blocks. The



Detail of shops in the seven-storey block fronting on to Lupus Street.



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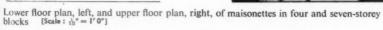
external

internal

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bays.







Plan of old people's flats on ground floor and first floor of block 8

HOUSING

at CHURCHILL GARDENS, PIMLICO designed by POWELL and MOYA

apron panel below the living room windows is of cavity construction, consisting of 1-in. rough-cast glass, externally (in the wooden window sub-frames), and an inner leaf of 9-in. light-weight concrete blocks. The partitions are of 212-in. light-weight concrete blocks.

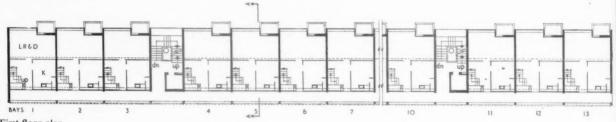
COLOUR (external, main items only) .- Exposed reinforced concrete frame and walls : dark grey. Facing brickwork : yellow flint lime bricks. Facing



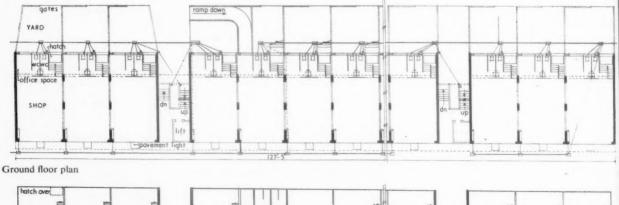
Above, night view from Lupus Street of the seven-storey block. Opposite page, the south facade of the block.

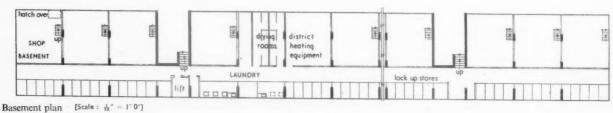


Second, fourth and sixth floor plans, showing fire escape on latter

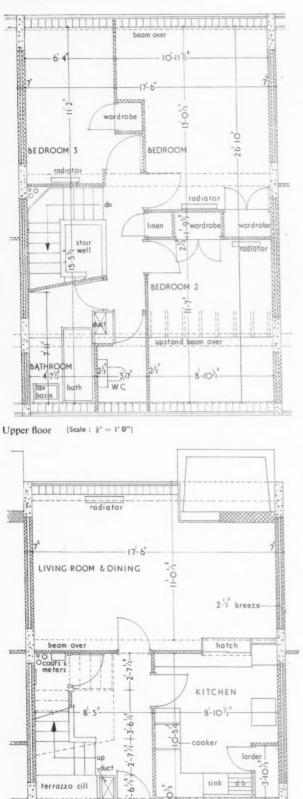


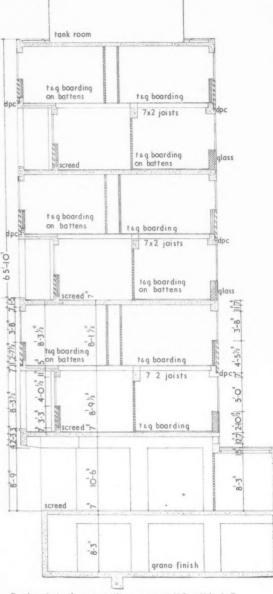
First floor plan











B

to

G

Section A-A, shown on plans on page 410, of block 7 [Scale : $\frac{1}{12}^{*} = 1' 0''$]

brickwork at the back of the shops : yellow-grey concrete bricks. Facing bricks forming plinth of access galleries at alternate floor levels : blue engineering brick. Front doors : crimson. Duct access panels : dark green. Back wall of private balconies : dark red. Tank rooms : white. Windows, generally : white. Opening lights to window in wood frames : black. Staircase window frames : black.

Lower floor of typical maisonette in block 7 .

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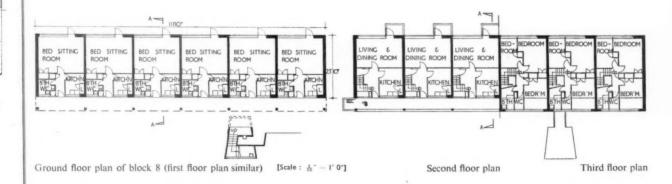
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Block 8, with one tier of maisonettes on the top two floors and single-room flats on the ground and first floors. From the south-east.

1' 0"]

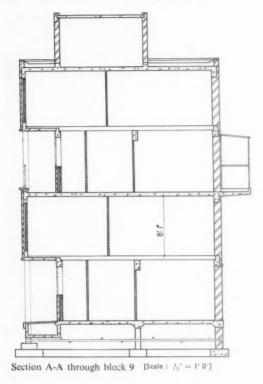
HOUSING at CHURCHILL GARDENS, PIMLICO designed by POWELL and MOYA



PLAN (of four-storey blocks).—There are six four-storey blocks of varying lengths. Block 8 consists of one tier of two-storey maisonettes on the top two floors, one-room flats on the ground and first floors. There are six maisonettes and 12 flats in this block. Blocks 9, 11 and 12 consist of 12 maisonettes. Block 10 is similar but consists of 24, and block 14 of 8 maisonettes. walls are of 9-in. brickwork, and end walls of $13\frac{1}{2}$ -in. brickwork. Main external wall infilling: cavity construction, consisting of an external leaf of $4\frac{1}{2}$ -in. rendered brickwork and an internal leaf of 4-in. light-weight concrete blocks. The external rendering is painted with chlorinated, rubber-based, enamel paint. The floor construction is as for the sevenstorey block. Roof construction : hollow tile, reinforced concrete slab. Finishes generally : as for seven-storey block.

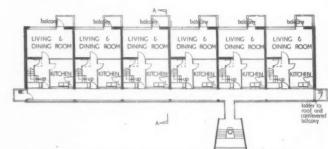
CONSTRUCTION (of four-storey blocks) .- Cross

414] The Architects' Journal for October 2, 1952





Third floor plan of block 9. The first floor is similar [Scale: $\frac{1}{2\pi}$ " = 1' 0"]

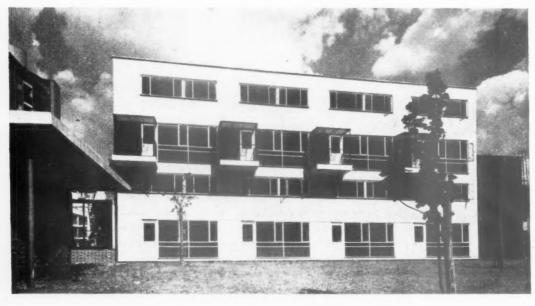


Second floor plan of block 9, showing fire escape and typical arrangement of maisonettes in blocks 9 to 14. The ground floor is similar

HOUSING

AT CHURCHILL GARDENS, PIMLICO designed by POWELL and MOYA COLOUR (external, main items only).—Rendered wall faces and concrete staircases : green-grey. Back of private balconies : dark red. Back of access balconies : dark blue-grey. Duct access panels : dark brown. Front doors : black. Window frames : generally as seven-storey block. Tank rooms : alternate wall faces of black and white. The general contractors were Rowley Bros., Ltd. For list of sub-contractors, see page 420.





Above, block 14 from the northwest, and left, from the south. The staircase in this block is different from the others. N N N

block 14 ne northand left, he south. aircase in block is t from the with architecture. Licence seeking and waiting . . . shortage of the materials that he needs . . . costs rising before the job has started . . . and so often too little money to design a worthy building. Sometimes is an architect When he comes to consider floors, however, there is no difficulty: For Housing, Schools and Factories, Bison is readily available –

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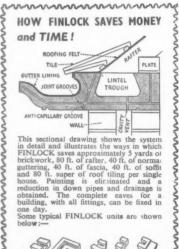
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"a" shows the trough in which lintels can be cast

in situ if required, "b"

ne day. ome typical FINLOCK units are shown







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. The buildings shown are in accordance with the winning design in the £1,000 low cost housing competition organised by "THE BUILDER". By courtesy of J. L. Womersley, Esq., A.R.LB.A., A.M.T.P.I., Borough Architect for Northampto

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The Architects' Journa! for October 2, 1952 [415

TECHNICAL SECTION

Professor Bowen makes two important points in his analysis below of the Board of Trade's quarterly index of building materials' prices. The first, a point very often overlooked, is that, although the increases in the prices of building materials are a heavy burden on the industry, they are by no means as severe as the increases which have taken place in the prices of the raw materials used in other industries, such as mechanical and electrical engineering. The second point which Professor Bowen makes is less encouraging. He warns that the comparatively favourable position of building materials' prices may not last much longer. Although, for the first time since early 1950, the index has stayed level for several months, and may be expected to fall in the coming quarter, the prices of basic materials and the materials used in other industries are falling far more rapidly, so that, compared with materials generally, building materials will become more and more expensive.

It seems that the importance of economy in the use of materials and general efficiency in the building industry will become more, not less, important in the future, even if, as Professor Bowen predicts, building materials' prices become fairly stable.

This week's special feature

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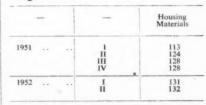
The number preceding the week's special article or survey indicates the appropriate subject heading of the Information Centre to which the article or survey belongs. The complete list of these headings is printed from time-to-time. To each survey is appended a list of recently-published and relevant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

8 ESTIMATING index of materials' prices

In reviewing the Board of Trade's quarterly index of building materials' prices, Professor Bowen points out that the average price of building materials has, during the second quarter of 1952, remained level; the drop in the price of imported materials just balancing the rise in the price of home-produced materials.

Movements in the Board of Trade's Index of Materials' Prices are shown in the table and graph on page 416. Since my last article analysing these figures (JOURNAL for February 28, 1952), the figure for the quarterly average of all materials has gone up four points—from 131 in the third quarter of 1951 to 135 in the second quarter of 1952. The figure for the third quarter of 1952 is not yet available, but it will probably be two points lower than the average for the second quarter. The prices of housing materials (*i.e.*, the same set of materials' prices "weighted" specifically for

housing) have risen slightly less steeply, the averages for the last six quarters being: —



Materials' prices generally have risen by over a third since 1949, while house-building materials have risen 7 New scrpic.

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in price by slightly less. It is seldom realized, however, that the price of building materials has not risen as steeply, since 1949, as the prices of other materials. For example, the index for the price of materials used in the mechanical engineering industry is 52 per cent. above its June, 1949, level. and the materials used in the electrical engineering industry now cost about 69 per cent. more than they did in 1949. The index for all basic materials, except those used in food manufacture, was, in the second quarter of 1952, about 60 per cent. above its 1949 level. A year earlier it had been even higher, having reached a peak, 120 per cent. above the 1949 level, in March, 1951.

Two points emerge from these figures: first, that building materials' prices are not so expensive, compared with the prices of other materials, as we sometimes assume; although, when the rise in price is considered in relation to fixed subsidies and predetermined rents, it is still a serious problem. Second, that because the prices of basic materials have started to decline very sharply and the prices of other materials have also begun to fall, the present relatively favourable position of building materials' prices is not likely to be maintained, even though building materials' prices will probably drop, too.

THE INDEX BY GROUPS

In addition to the index for all materials, figures can be calculated for four groups of materials: "im-ported," "metal," "quarried" and primary " products. This grouping is, necessarily, somewhat arbitrary (joinery, for example, being included among the "imported" items, on the grounds that its price varies mainly as the price of timber changes), but the broad picture gained from the figures is fairly accurate. The steepest rises, since 1949, have been those of the prices of imported items, but the sub-index for this group seems now to have passed its peak. Paint and distemper declined by 10 per cent., and softwood by 6 per cent., between April and July, 1952, and these falls may

continue. The prices of imported metals, being linked with world market conditions, are still uncertain. By June, 1952, the price of copper had risen (since June, 1949) by 120 per cent, and the price was still rising. Zinc, which had had a similar peak early in 1952, is now considerably lower in price, and lead, which, in December, 1951, cost twice what it cost in 1949, is also falling in price. In general, the prices of imported metals seem due for a further slight fall, and then some stability may be expected.

Manufactured metal articles are not much dearer now than they were in 1949, the price of metal windows being only 18 per cent. above its 1949 level; electrical appliances, 17 per cent. up; gas appliances, only 5 per cent. up. There is unlikely to be much further decline in the prices of these articles, but it should be remembered they are already relatively cheap.

Quarried and primary products have risen in price less steeply than building materials generally, and, presumably, their indexes resemble more closely those of fuel, labour and transport costs than any other factors: It is, however, difficult to relate accurately the rises in the prices of these materials to these three factors. For example, from April, 1949, to October, 1952, earnings per hour in the brick and cement industries rose by about 15 per cent., and they have risen by roughly another 5 per cent. since then (figures have not yet been published); meanwhile, however, bricks and cement have risen in price by 23 per cent. and 30 per cent. respectively. Increases in direct labour costs cannot, therefore, be said to have accounted for this rise, especially as the average number of hours worked per week in the two industries increased, during the period we are considering, so that, presumably, capital equipment was more fully employed. Moreover, since 1949, the index for coal prices has gone up by only 21 per cent. The reasons for the size of the rises in the prices of primary materials have never

TECHNICAL SECTION

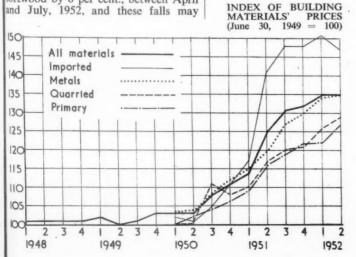
been clearly explained; perhaps the high level of demand has necessitated the use of expensive production units, and, in the case of cement, changes in the price of paper bags affect the price considerably. Whatever the reasons, however, reductions in the prices of the materials in this group are not out of the question, even though these prices have risen less steeply than those for materials generally.

FUTURE OUTLOOK

It seems possible, for the first time since the end of 1947, to foresee a period of relatively stable, and perhaps slightly declining, building materials' prices. How long this will last will depend on future developments in the general economic situation, but the factors which have special relevance to building indicate a period of at least another eighteen months. There is some evidence that the high peak of demand for building has been passed; for example, the number of vacancies for building labourers outstanding at labour exchanges at the end of each month has fallen, and the number of vacancies for craftsmen is beginning to fall too. Unemployment, although not high, is 10,000 higher than it was a year ago, and the government's credit restriction policy is bound to have its effect upon the funds available for new construction.

The intention of the government's economic policy seems to be to bring about some changes in the fields of employment and investment. If these changes take place (and the policy will have failed if they don't), it is likely that the demand for building will be further reduced, but any such reduction will be very gradual in view of the high level of defence and other government orders, and the possibility of further easing in the issue of building licences.

IAN BOWEN.



-	All Materials	I Imported	II Metals	III Quarried	IV Primary
1948 March June Sept Dec	101 101 101 101				Î I I I
1949 March June 3 4	102 100 101 103	100	100	100	100
1950 1 2 3 4	103 103 108 111	102 101 105 111	103 104 108 112	100 100 111 108	100 102 104 106
1951 1 2 3 4	114 125 131 132	117 141 148. 148	115 120 127 130	110 117 120 121	109 116 119 122
1952 . 1 2	135 135	151 147	134 135	126 129	122 127

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THE ARCHITECTS' JOURNAL for October 2, 1952

rominent on the London scene are the new Whitehall offices being constructed by Richard Costain Ltd., the first stage of which is now approaching an advanced state of completion as can be seen by the illustration adjoining. The drawing reproduced below shows how this fine Government building will look when fully completed.

Architect : E. VINCENT HARRIS, R.A. Consulting Engineers : R. TRAVERS-MORGAN & PARTNERS



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The Architects' Journal for October 2, 1952 PREFAB.

TECHNICAL SECTION

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Like the " Riley-Newsum " house being exported to Australia (see JOURNAL for January 3 1952), this new house, designed for the Canadian market, has only one-storey. There are four types-with two or three bedrooms and with or without basement. The plan below (scale : $\frac{1}{16}$ in. = 1 ft.) is of the three-bedroom house with basement; the photographs below show three stages in the erection of a two-bedroom prototype-the raising of the first group of wall panels (four panels held together by temporary timber battens); the fixing of aluminium sheeting to the roof; the completed house. External wall panels are 8 ft. high and

TIMBER

"RILEY-NEWSUM"











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3 ft. 4 in. wide (there is a 40-in. module) ; they are stud framed and consist of a sandwich of 2-in. glass wool between two sheets of 3-in. gypsum plasterboard, clad externally with 1-in. V-jointed vertical weatherboarding on building paper and faced internally with another skin of plasterboard also on building paper. The windows and external doors are built into the panels in the factory ; the windows have double hung sashes with spring balances and are factory glazed. Top-hung storm sashes are provided to combat Canadian weather conditions. Partition units are also 8 ft. by 3 ft. 4 in., stud framed and faced both sides with plaster-

EXPORT

FOR

board; doors are built in, and draw wires are provided for installing the electric wiring. The roof has folding timber trusses (made in two halves and bolted together on the site) at 3-ft. 4-in. centres. They are located on notches on the peripheral wall plate. Ceiling joists, in short lengths (pre-cut, as are all components), span between the trusses. The ceiling is plasterboard; the roof covering, 22-gauge aluminium sheeting on heavy building paper; and a 3-in. glass silk quilt is laid, on a layer of waterproof paper, on the ceiling-for thermal insulation. Fascia boards are profiled to the section of the aluminium sheeting, to keep out driving snow (see photograph of roof). Plumbing is prefabricated; all copper tubes being pre-cut, bent and prepared for compression jointing. These houses are not available in this country, on account of their timber content (although there is no reason why a similar house, made of unlicensed hardwood, could not be built), but the firm-H. Newsum Sons & Co., Ltd.-is supplying the LCC with two-storey timber-framed houses, faced with resin-bonded plywood, for erection on its estates. The photographs on the left show, from top to bottom, David Eccles, Minister of Works, (i) starting the erection gang off, when a prototype was erected recently in one day; (ii) watching work proceed; (iii) opening the house; Stephen Kent Biggs (right), who designed the house, talking to Ian Leslie, the editor of The Builder.

[417

CANADA



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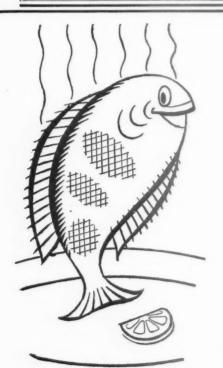
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lix

TECHNICAL SECTION

EXHIBITION HALL AT LAUSANNE

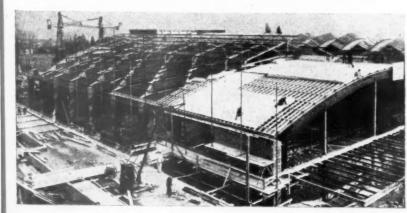


The Comptoir Suisse has for years suffered from a shortage of space. This new hall, erected for them in 1950, has a floor area of 76,500 sq. ft., of which 10,800 sq. ft. are in a gallery. The work had to be completed within nine months of its commencement and steel construction was, therefore, chosen, so that the fabrication of the framework could proceed while excavation and foundation work was in progress. The roof consists of a series of intersecting arches; it has a clear span of 147 ft. 6 in. In order to emphasise the structural elements, the roof has been painted in very light colours. The hall is intended to serve several purposes. It is used as an exhibition hall for trade fairs and also for musical festivals, gymnastic displays, congresses and other large gatherings. Heating and air conditioning is provided and good lighting has been achieved by using roof lights in a number of the spaces between the intersecting arches; the remainder being filled with panels of compressed glass silk, which, in addition to its acoustical and heat-insulating properties, has a pleasant appearance. A patent flooring was used, consisting of small pieces of wood fixed to the sub-floor with a powerful adhesive. This has good thermal insulating properties and is both warm and resilient. The hall is equipped with electric wiring at various voltages, telephone connections, gas points, water pipes, all laid on to the positions for stands through ducts in the ground floor. These installations are, however, concealed when the building is in use as an assembly hall. Architects, C. and C. F. Thevenaz (Lausanne). Consulting engineer, M. Cosandey (Lausanne).

Top, interior; below, exterior during construction; right, plan of entrance and ancillary rooms:

- EY Entrance hall Booking office Post room
- Post room
 Police
 Police
 Police
 Committee room







[419

3065 COST OF OFFICE BUILDINGS

Q Can you tell me the current cost, in shillings per cu. ft., of first-class, stone-faced office buildings, such as the new Government offices in Whitehall?

A No general information exists regarding the current cost of such buildings, but, immediately before the war, first-class, stone-faced office buildings probably cost between 2s. and 2s. 6d. per cu. ft., and it would be reasonable, therefore, to assume that the cost would now be between 6s. 3d. and 7s. 9d. per cu. ft.

We cannol, of course, take any responsibility for these figures, as clearly the basis of calculation is very approximate. It may well be that no office building built today would be as lavish as a first-class block built before the war, even if the licensing authority consented to the use of stone facing.

PAINTING IN TWO COLOURS Addendum to Q and A 3053)

It should be noted that the painting of sashes one colour and frames another colour is not normally considered parti-colour work.

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

ENQUIRY FORM

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

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Buildings Illustrated

Buildings Illustrated Store for Messrs. Montague Burton Limited. 74/76, Broadmead, Bristol. (Page 398,) Architects: staff Architect, Montague Burton Ltd. General Contractors: M. Harrison & Co. (Leeds) Ltd. sub-contractors: Piling in foundations, The Pressure Piling Co. (Parent) Ltd.; root lights, J. A. King & Co. (Ltd.; structural steelwork, Gardner Sons & Co. (Ltd.; floor and roof slabs, The Rapid Floor Construction Co. (Bath) Ltd.; steel windows, Henry Hope & Sons Ltd.; asphalte roots, The General Asphalte Co. Ltd.; antifary ware, The Leeds Fireclay Co. Ltd.; wood block floors, J. A. Hewison & Co. Ltd.; momongery, Netlefold & Moser Ltd.; metal escape staircases. S. W. Almer & Son Ltd.; Morague Burton Ltd.; suspende plaster ceiling to shop, Gyproce Products Ltd.; electrical work, Montague Burton Ltd. Shop for Dorothy Perkins at Broadmead, Bristof.

Shop for Dorothy Perkins at Broadmead, Bristol. (Page 398.) Architects: Browett Taylor & Co. Main Contractor: William Cowlin & Sons, Ltd. Sub-contractor: Shop-fitings, Sycamore & Co. Ltd.

Main Contractor: Winnam Cowin & Sons, Edu.
Sub-contractor: Shop-filings, Sycamore & Co. Ltd.
Re-constructed premises, 85, Broadmead, Bristol, for Alexandre Ltd. (Page 398.). General Con-tractors: Shop front and fittings, Win. Mason & Son Ltd.; lift, Marryat & Scott.
Shop for Messrs. H. Samuel Ltd., Bristol. (Page 396.) Architects: W. H. Watkins, F.R.I.B.A. & Partners. Quantity Surveyors: Faithful & Gould. General Contractors: Henry Willcock & Co. Ltd.
Sub-contractors: Sheelwork, Gardiner Sons & Co. Ltd.; precast concrete floors, Concrete Ltd.; metal windows, Brunswick Metal Casement & Engineer-ing Co. Ltd.; Bath stone, Bath & Portland Stone Firms Ltd.; heating and ventilating, Spry & Hoiman Ltd.; shop front, E. Pollard & Co. Ltd.; interior shop fittings, A. Edmonds & Co. Ltd.; electrical installation, Electra Ltd.
Shop for Marks & Spencer, Bristol. (Page 398.)

Shop for Marks & Spencer, Bristol. (Page 398.) Architect: James Monro & Sons. General Con-tractors: Bovis Ltd. Engineer: D. W. James-Carrington. Quantity Surveyor: Gleedes.

Carrington. Quantity Surveyor: Gleedes. Housing at Churchill Gardens, Pimlice (pages 406 to 414). Architects: Powell & Moya, A./A.B.L.B.A.; assistant architect, S. P. Skinner. Director of housing: E. J. Edwards. Consulting Structural Engineers for 7-storey blocks: Scott & Wilson; for 4-storey blocks, H. Iorys Hughes. Consulting Engineer for district heating: S. B. Donkin. Consulting Engineers for heating installation inside the flats: J. Boger Presson & Partners. Quantity Surveyors: E. C. Harris & Partners. Resident Engineer: R. C. Buchanan.

Der 2, 1952
Clerk of Works; E. A. Perry. General contractor; Rowley Bros. Ltd. Sub-contractors; Reinforced concrete work, The Helical Bar & Engineering Co. Ltd.; heating and hot water, G. N. Haden & Sons; electrical services, Troughton & Young Ltd.; wood windows, Boulton & Paul Ltd.; kitchen fittings, Kandya Ltd.; metal windows and private balcony fronts, Williams & Williams Ltd.; access balconies, H. & C. Davis & Co. Ltd.; lifts, The Express Lift Co. Ltd.; pressed steel tanks, Braithwaite & Co.; bricks (Uxbridge Flint Lime, Staff, Blue Engineering & Dunbriks, Richard Parton (Builders Merchants); cill tiles, McKenzie Brytiles Ltd.; sanitary fittings, Stitsons Ltd.; metal door trims, John Thompson Beacon Windows Ltd.; basement dampproofing, Wm. Briggs & Sons; cork insulation, Elisol Ltd.; internal paint, Jenson & Nicholson; distemper, The Walpamur Co.; relay wireless Ltd.; terrazo shelves, W. B. Simpson & Sons Ltd.; terrazo shelves, W. B. Simpson & Sons Ltd.; tareato shelves, W. B. Simpson & Sons Ltd.; terrazo shelves, Sons Ltd.; terrazo shelves, Sons Ltd.; terrazo shelves, W. B. Simpson & Sons Ltd.; terrazo shelves and shelves based shelv

Announcements

Messrs. Llewellyn Smith & Waters, F/F.R.J.B.A., announce that the address of their associated firm, Messrs. Willis, Llewel-lyn Smith & Waters is now 33, Foregate Street, Worcester (Tel.: Worcester 4245); the London address, 103, Old Brompton Road, S.W.7 (Tel.: Kensington 4477) remains unchanged.

Mr. Henry Nimmo, M.I.C.E., M.I.MECH.E., M.I.E.E., who has been chairman of the general council during the past two years, has been elected president of the Engineers' Guild in succession to Mr. Robert Chalmers, o.B.E., B.SC., M.I.C.E., M.I.MECH.E., whose term of office evvices on Sentempter 30. office expires on September 30.

Henry Carlyle Wilson Bennetts has been appointed director of sales to Allied Iron-founders Ltd., in place of W. T. Wren, who has now become assistant managing director. Mr. Wilson Bennetts started work with F. G. Minter Ltd., contractors, Putney. He was engaged as a surveyor's assistant on reconstruction work in St. Paul's Cathedral, after which he joined Messrs. R. & A. Main, gas appliance manufacturers. He joined the staff of Allied Ironfounders Ltd. in 1938 and was appointed a director of General Gas Appliances in 1942. He became chairman and managing director of this company in 1945. In addition, he is managing director of two other subsidiary companies of Allied Ironfounders—Allied Steel Pressings Ltd. and Falco Electrical Appliances Ltd.

Metropolitan-Vickers Electrical Co. Ltd. and the Edison Swan Electric Co. I td announce that they have opened a district office in Birmingham. The address is 10, 12, Hospital Street. The district manager is Mr. A. F. Bock.

Rooster Publicity Limited announce that a photographic team is now making a 12,000 mile tour of India. 133 towns are to be visited. Photographs are being taken of engineering plant, machinery and installations and other items of interest. The photographs will be exhibited in London after the tour. They will be made available to exporters for advertising purposes. A similar tour of certain parts of Africa is to be made in 1953. Enquiries should be addressed to in 1953. Enquiries should be addressed to Walton House, Peterborough (Tel: Peterborough 4279 and Werrington 3773).

Correction

The announcement on page 390, JOURNAL or Sentember 25, reading "Messrs. reading "Messis," should read for Chamberlin, Powell & Son & Bon ..

To the photo, caption concerning St. Peter's Cathedral, on page 220, JOURNAL for August 21, add: Godfrey Allen FRIBA FSA 21, add: Godfrey Allen F.R.LB.A., F.S.A., acted as consultant architect and was re-sponsible for the initial stages of the work.

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THE ARCHITECTS' JOURNAL for October 2, 1952

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.... we use them to solve drainage problems for Architects and Sanitary Engineers.

Econa tubular copper traps,* tees, elbows, and preformed waste ranges are more practical, cheaper and nearly as smooth as glass.

Consult us about soil and waste disposal (above ground) because...



ECONA MODERN PRODUCTS LTD. Phone: ACOcks Green 2211 WARWICK ROAD, TYSELEY, BIRMINGHAM 11

* Econa traps now have outlets with the correct gradient to prevent self-syphonage in single and one-pips plumbing.

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The Sarco E.T.O. is a self-contained fully automatic control for accelerated hot-water heating systems.

Its three-ported thermostatic Blending Valve is under the master control of a second thermostat located outdoors. Variations in the temperature of flow from the Blending Valve to the heating system are made directly by the outdoor thermostat in anticipation of the effect indoors of any external temperature change. Thus:

1 The E.T.O. provides equable indoor temperatures under conditions of changing outdoor temperatures ;

2 It controls heat supply at the minimum required to balance heat losses whatever the outside temperature conditions, giving maximum fuel economy;

3 It can be designed to suit the heat emission curves appropriate to the type of heating surface installed;

4 It can, after installation, be corrected to allow for any variation between design and site conditions;

5 A boiler is subjected to less strain, and corrosion troubles avoided, because the boiler can be operated at a constant water temperature,

6 The E.T.O. is non-electric, entirely self-operating and direct-acting. It has packless glands which eliminate the trouble so commonly experienced with ordinary glands.

7 It is reasonable in cost, easy to install, and easy on maintenance.

For more information, please send the request slip (below) to SARCO THERMOSTATS LTD., CHELTENHAM, GLOS.

SARCO E.T.O CONTROLLER

REQUEST SLIP FOR ADDITIONAL INFORMATION NAME: ADDRESS:

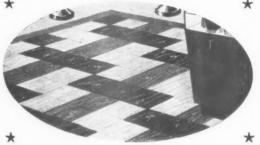


THE ARCHITECTS' JOURNAL for October 2, 1952



puts business on a better footing

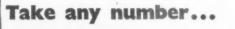




In banks and offices, factories and shops, hotels and restaurants—in all places where traffic is heavy and smart appearance essential—Phenco puts business on a better footing. And with its non-slip surface and sound-deadening resilience Phenco is the natural choice for schools and hospitals as well. Furthermore, as Phenco is proof against a wide range of chemical attack, schemes incorporating labs and kitchens also fall within its wide range of applications. Colour? Well, there are over twenty to choose from—plain and marbled—and, with Phenco being available in rolls or tiles, the design possibilities are virtually endless. Write now for fully descriptive literature and *put your foot down—insist on Phenco !*

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

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

METROVICK LAMPS

Quality controlled throughout manufacture

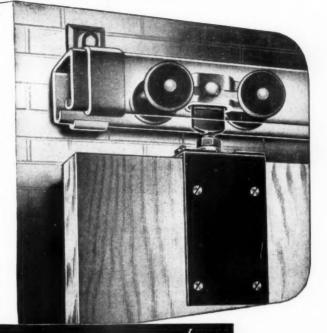
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THE COBURN SYSTEM

SLIDING DOOR GEAR

In order to avoid you wasting your time we place at your disposal a staff trained to detail a suitable specification for any particular application.

Write for catalogue, prices and advice :-



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For over forty years the Jackson Electric Stove Co. Ltd. have been specialists in large scale Electric Cooking Equipment. Consult us for individual items or complete installation, whether you are cooking for two or two thousand.

BOILING PANS CHEFS' RANGES COOKERS FISH FRYERS GRILLS HOT CUPBOARDS PASTRY OVENS ROASTING OVENS, STEAMING OVENS URNS

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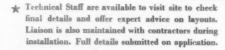
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DUCT COVERS

Specially designed

POWER STATIONS, HOSPITALS SCHOOLS, KITCHENS LABORATORIES, BOILER HOUSES, ETC.

"Broads Trucast' Duct Covers are available in widths from 6" to 36", with Cast Iron Sectional Frames for bolting together to form continuous runs, with necessary angles and branches of various sizes. The Cast Iron Covers and Frames have machined seatings and the covers are recessed for filling on site to match the surroundings.



MANUFACTURING CO. LTD. 4 SOUTH WHARF, PADDINGTON, LONDON, W.2. Tel.: PAD. 7061 (20 Lines)

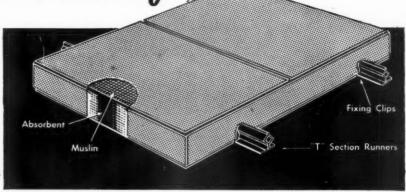
THE ARCHITECTS' JOURNAL for October 2, 1952

N.P.L Tests prove amazing efficiency of **Acoustic Tiles**

Soundproofing takes a step forward ! Burgess have produced-and the National Physical Laboratory have tested (Report Ref. 1015 of 12th June 1950) an Acoustic Ceiling Tile with an exceptionally high sound absorption coefficient. (See N.P.L. chart under diagram). Construction-a specially perforated metal tray, size 24in. by 12in. by Igin., fitted with clips containing a noninflammable, non-hygroscopic, sound absorbent pad. The clips make for rapid and easy attachment to the specially shaped tee bar runner. The Tiles are stove enamelled which gives this treatment an exceptionally uniform and neat appearance.

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Frequency c.p.s.	125	250	500	1000	2000	4000	6000	8000
"A" 3/32in. dia. hole.	0.15	0.50	0.75	0.80	0.75	0.75	0.75	0.75
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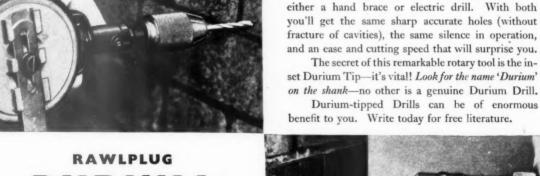
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Durium-tipped Drills are suitable for use in

The secret of this remarkable rotary tool is the in-

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CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

Fublic and Omicial Announcements 25s. per inch; each additional line, 2s. The engagement of persons answering these advertisements must be made through a Local Uffice of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-69 inclusive unless he or she, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

oj Vacancies Order, 1952. RURAL DISTRICT COUNCIL OF NEWMARKET. ARCHITECTURAL ASSISTANT. Applications are invited for the above appoint-ment, which will be subject to the National Conditions of Service and to the Local Government Superannuation Act, 1937. The salary will be in accordance with Grade III of the A.P.T. Division (#525-4570). The Council The Service and Service and

(£525-£570). The Council will give sympathetic considera-tion to the question of housing accommodation for the successful applicant. Applications, stating age, qualifications and ex-perience, together with names of two referees, must reach the undersigned not later than 13th October, 1952.

H. W. EVANS. Clerk to the Council.

Council Offices, Park Lane, Newmarket, Suffolk.

Newmarket, Suffolk. BOROUGH OF WREXHAM Applications are invited for the fo ppointments in connection with Capital following tal Works

 BOROLOGIE C.

 Applications are invited for the following appointments in connection with Capital Works (Housing).

 (a) ARCHITECTURAL ASSISTANT-Salary A.P.T. Grade V, (£956 to £645 per annum).

 (b) ENGINEERING ASSISTANT - Salary A.P.T. Grade IV or V, (£555 to £600 or £535 to £645 per annum), according to qualifications and experience.

 applicants for appointment

 (a) Should be Associate Members of the R.I.B.A. or hold equivalent qualifications and have a general architectural experience.

 (b) Bhould hold appropriate qualifications and have a general architectural experience in Municipal Engineering, and the supervision of the construction of radas and sewers.

 The Council is prepared to offer housing accommodation to the successful applicants, if married.

 Particulars and conditions of service may be obtained from the Borough Engineer & Surveyor, 31. Chester Street, Wrexham.

 Aprications on the prescribed form together with the names and addresses of two persons from whom reference may be obtained should be delivered to the undersigned in an envelope bearing the appropriate endorsement not later than the first post on Monday. 13th October, 1962.

 Meilverd, Wrexham.
 Town Clerk.

 Guidhall, Wrexham.
 Tawn Clerk.

Guildhall, Wrexham. 7336 BOROUGH OF MANSFIELD TEMPORARY QUANTITY SURVEYING ASSISTANT Applications are invited from suitably qualified persons for the appointment of Temporary Quantity Surveying Assistant in the Borough Engineer and Surveyor's Department. (The period of employment is not expected to be less than two years.) Salary will be in accordance with Grade A.P.T. I, 4495–615–6540, and applicants should be experienced in abstracting and billing, measuring on site, preparation of Final Accounts and taking of Quantities for varied works. Applications stating age, marital state, training quantities for varied works. Applications the testimonials, must be sent to the undersigned not later than Monday, stat. October, 1952, endorsed 'Quantity Surveying Assistant.'' The appointment is subject to the following

appointment is subject to the following

conditions conditions: - 1. National Joint Council's Scales of Salaries and Conditions of Service
 2. Residence within the Borough.
 A. C. SHEPHERD, *Town Clerk.* Carr Bank, Mansfield.

7411

Carr Bank, Mansfield. 10th September, 1952

10th September, 1952. 7411 MIDDLESEX COUNTY COUNCIL—COUNTY PLANNING DEPT. PLANNING ASSISTANT required, possessing good honours degree or other full qualification in Planning, Economics, Commerce or Geography, and capable of taking charge of group of Assis-tants engaged in statistical and territorial amalysis. Salary A.P.T., VI, 2700 p.a., rising to 6765 p.a. (if 26 years or over). Established, pensionable, subject to medical assessment and prescribed conditions. Written applications, stating age, experience, qualifications, etc., with copies of three testimonials, to the undersigned by 16th October (quoting L250 A.J.). Canvassing disqualifies. We DETURING disqualifies

C. W. RADCLIFFE, Clerk of the County Council. Guildhall, Westminster, S.W.1. 7449

LONDON ELECTRICITY BOARD. SENIOR DRAUGHTSMAN. Applications are invited for the above position in the Design and Planning Branch of the Northern Sub-Area, at Aldersgate Street, E.C.1. Applicants should have had training and ex-perience in building construction and the design of steelwork and reinforced concrete structures, and be capable of preparing drawings and making calculations for the alteration of existing premises and the conversion of basements into sub-stations and transformer chambers. Experi-ence in the layout of electrical equipment up to 11 kV., whilst not essential, would be an advantage.

11 kV., whilst not essential, would be an advantage. The post is graded under Schedule "D" of the National Joint Board agreement as Senior Draughtsmaan, Grade V, £574 78. to £663 118. per annum, inclusive of London allowance. Application forms obtainable from Establish-ments Officer, 46, New Broad Street, E.C.2, to be returned completed within 10 days of the publica-tion of this advertisement. Please enclose addressed foolscap envelope and quote ref. V/1468/A on all correspondence.

WINGOA ON AN CONTENDATION OF A CONTENDATION OF A CONTENDATION OF A CONTROLOGY WEST SUFFOLK COUNTY COUNCIL. JUNIOR QUANTITY SURVEYING ASSISTANT. N.J.C. service conditions, salary 2465-2540 (A.P.T., I-II). Post pensionable; medical ex-amination. Should be Student of Royal Institute of Chartered Surveyors studying for Intermediate Examination and with not less than two years' office expressions. experience

office experience. Application forms obtainable from Clerk of the County Council, Shire Hall, Bury St. Edmunds, to be returned by 11th October, 1952. TA47 COUNTY BOROUGH OF BOURNEMOUTH. BOROUGH ARCHITECT'S DEPARTMENT. Applications are invited for the following appointment: JUNIOR ASSISTANT QUANTITY SUR-VEYOR. Unestablished post. Salary, Grade A.P.T., III, £500.£545 per annum. Applicants must have passed the Intermediate Examination of the R.I.C.S. The successful candidate will be appointed at

must have passed the Intermediate Examination of the R.I.C.S. The successful candidate will be appointed at his present salary is within the incremental scale of the advertised post. The above appointment will be terminable by one month's notice, in writing, on either side, and subject to the provisions of the Local Govern-ment Superannuation Act, 1937, also the condi-tions of service in accordance with the National Necheme.

successful candidate will be required to pass a medical examination. No assistance can be offered regarding housing

No assistance can be obtained from the accommodation. Applications, on forms to be obtained from the Borough Architect, Town Hall, Bournemouth, accompanied by copies of three recent testi-monials, to be returned to the undersigned in envelopes endorsed "Staff Architectural," not later than 10 a.m. Saturday, 11th October, 1952. A. LINDSAY CLEGG, Town Clerk. 7446

Town Clerk. 7446 CITY OF WAKEFIELD. CITY ENGINEER'S DEPARTMENT. SENIOR QUANTITY SURVEYOR, GRADE A.P.T. Va-VI (2025-2735). Applications are invited for the above super-annuable appointment. Candidates must be Members of the Royal Institution of Chartered Surveyors (Quantities) or the Institute of Quantity Surveyors. Applications, endorsed "Senior Quantity Surveyor, "stating age, qualifications, present and previous appointments and details of experience, together with the names of two referees, should be sent to me not later than the 17th October, 1952. Canvassing will disqualify. Consideration will be given to the provision of housing accommodation for the successful applicant if married. W.S. DES FORGES. Town Clerk.

				Town	Clerk.
		Wakefield			
18th	Sente	mbor 1050	b		7450

Town Hall, Wakefield. <u>18th September</u>, 1952. NETH THAMES GAS BOARD ARCHITECTURAL ASSISTANT is required in the Architectural Section, Chief Engineer's Department, Westminster. Applicants, who must be Registered Architects and who should have passed, or be studying for, the Final Examination of the R.I.B.A., should be capable of preparing working and detailed drawings and specifications, and supervising and controlling the work on contracts. Experience in design and planning on age and quali-fications, will be within the range £650–£725 per annum, and pension arrangements will be discussed with short list candidates. Applications, stating age, qualifications and sperine, should be sent to the Staff Controller. North Thames Gas Board, 30, Kensington Church Street, London, W.8, quoting reference 66/48. 2459

COUNTY BOROUGH OF CROYDON TEMPORARY CLERK OF WORKS Applications are invited for this appointment from persons accustomed to housing contracts. Salary £11 for 44-hour week. Applications on forms from the Borough Engineer, Town Hall, Croydon, must be sent to him by 11th October, 1952. roydon, mass. 182. Canvassing will disqualify. Town Clerk, 70

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COUNTY BOROUGH OF TYNEMOUTH HOROUGH SURVEYOR'S DEPARTMENT APPOINTMENT OF ASSISTANT ARCHITECT Magnetic and the server of the s

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Town Clerk. 7451 DERBYSHIRE COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT Applications are invited for the appointment of an ARCHITECT on A.P.T. Grade V, in accordance with the National Joint Council scheme, on the permanent staff for which position appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination. Canvassing either directly or indirectly will disgualify candidates for consideration. Forms of application may be obtained from the undersigned to whom they should be returned, duly completed, not later than October 11th, 1952. F. Hamer Crossley. County Architect, County Offices, St. Mary's Gate. Derby. 745 Derby. 2nd October, 1952.

2nd October, 1952. BOROUGH OF ILFORD APPOINTMENT OF TWO CLERKS OF WORKS Aplications are invited for the following appointments on the temporary staff of the Borough Engineer's Department:— (a) ONE CLERK OF WORKS—salary in accordance with Grade A.P.T. II commencing at £495 per annum plus London Weighting. Applicants must have had considerable experience in a similar capacity, have a sound knowledge of building construction and be capable of supervising housing contracts including three storey flate.

of building construction and be capable of supervising housing contracts including three storey flats. (b) ONE ASSISTANT CLERK OF WORKS-salary ±6 58. 0d. per week. Applicants should possess a good knowledge of building construc-tion and be capable of assuming control in the absence of the Clerk of Works. The appointments will be superannuable and subject to one month's notice on either side, to the National Conditions of Service and to medical evamination.

Applications, on forms obtainable from the Town Clerk, Town Hall, Ilford, should be returned by the 11th October, 1952. 7453

Town Clerk, Town Hall, Hiord, should be returned by the 11th October, 1952. 7433 NIGERIAN COLLEGE OF ARTS, SCIENCE AND TECHNOLOGY ADDICATIONS are invited for appointment as LECTURER in ARCHITECTURE. Person appointed will initially be required to assist in designing and supervising construction of College buildings. Teaching duties, which will develop as the College buildings are completed, will include instruction in the Department of Architecture. There will be opportunities for research in design for the Tropics. Candidates should be Fellows or Associates of the Royal Institute of British Architects or hold an equivalent appointment of architecture. There will be opportunities for research in design for the Tropics. Candidates should be Fellows or Associates of the Royal Institute of British Architects or hold an equivalent approved qual-fication in any Dominion and should preferably have had teaching experience in a Technical College or University. The College is to te developed along the general lines of a U.K. Technical College and will probably have branches at Ibadan. Engu and Zaria. Post is pensionable but appointment on contract or secondment might be arranged. Salary scale. Including overseas allowance : £870-£1560 p. 21.290, Free first class passages once each way for each tour of service for person appointed and wife : either a passace allowance or maintenance allowance for children under eighteen up to two n number. Income tax rates much lower than in U.K. Leave on full pay at rate of seven days for each completed month of resident service. Toms of service likely to be ten to eighteen months. Terther information concerning the College and method of application obtainable from the Sec-

in U.A. Leave of anoth of resident service. Tours of service likely to be ten to eighteen months. Further information concerning the College and method of application obtainable from the Sec-retary. Advisory Committee on Colonial Colleges. 15. Victoria Street, London, S.W.I. to whom encuiries should be addressed in time for appli-cations to be submitted before 27th October, 1952. 7478

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ON. wen Clerk. 7476

GOLD COAST GOVERNMENT-PUBLIC WORKS DEPARTMENT ications are invited for the fo Applications following

£1,950 per annum (consolidated) according to age, qualifications and experience. QUANTITY SURVEYOR Duties: The officer will be responsible for the preparation of Bills of Quantities and Specifica-tions in respect of works arising in connection with the Government's development programme, analysis of prices from Architect's plans and preparation of approximate estimates for develop-ment works.

preparation of approximate comment works. Qualifications: Candidates must be members of either the Royal Institute of Chartered Surveyors or the Institute of Quantity Surveyors and must have had considerable practical

Surveyors of the institute of Quality Surveyors and must have had considerable practical experience. Salary: This will be in the range of £1,035--£1,950 per annum (consolidated) according to age, qualifications and experience. Terms of Service: The appointments will be on contract/gratuity terms for one tour of 18 months with a possible extension to two tours. A gratuity at the rate of £37 108. for each completed three months of satisfactory service will be payable on final termination of the contract.

will be payable on final termination of the contract. Free passages on first appointment and on leave will be provided for the officer and his wife once each way during each tour of service. Officers will normally be required to travel by air. Free air passages will also be provided for a maximum of 3 children under 13 years of age. Vacation leave with pay: six days for each month of service. Free medical and dental atten-tion provided for officer and family. Furnished quarters available at low rental. Income tax to local rates. Kit allowance on first appoint-ment 350-269 according to salary. The poster "Development Posts" for implementation of specific projects under the fold Coast. On termination of the contract, the o apply for appointment but would be able to apply for appointment but would be able to apply for appointment but would be able Infinding candidates should apply in writing

officer would not be eligible for transfer to any other Government appointment but would be able to apply for appointment to another post if desired. Thending candidates should apply in writing to the Commissioner for the Gold Coast, Melbourne House. Aldwych, London, W.C.2, giving brief details of their age, qualifications and experience, mentioning employments with years stated and names of persons to whom reference might be made regarding technical experience. Birth certificate (or other proof of age), which will be returned promptly, should be sent with the application. 7457 COUNTY EOROUGH OF BIRKENHEAD Applications are invited for the following apointments: (a) ARCHITECTURAL ASSISTANTS. A.P.T. Grade VIII, 4750-4355 per annum. (b) ARCHITECTURAL ASSISTANTS. A.P.T. Grade VIII, 4750-4355 per annum. (c) ASSISTANT QUANTIY SURVEYOR, A.P.T. Grade VII, 4570-4735 per annum. (c) ASSISTANT QUANTIY SURVEYOR, General Division, 2160-4450 per annum. (c) ASSISTANT QUANTIY SURVEYOR, General Division, 2160-4450 per annum. (c) ASSISTANT QUANTIY SURVEYOR, General Division, 2160-4450 per annum. (c) ASSISTANT QUANTIY SURVEYOR, General Division, 2160-4450 per annum. (c) ASSISTANT QUANTIY SURVEYOR, General Division, 2160-4450 per annum. (c) ASSISTANT QUANTIY SURVEYOR, General Division, 2160-4450 per annum. (c) DUNG QUANTIY SURVEYOR, General Division, 2160-4450 per annum. (c) DUNG QUANTIY SURVEYOR, General Division, 2160-4450 per annum. (c) During ADANTIY SURVEYOR, General Division, 2160-4450 per annum. (c) During ADANTIY SURVEYOR, General Division, 2160-4450 per annum. (c) During ADANTIY SURVEYOR, General Division, 2160-4450 per annum. (c) During ADANTIY SURVEYOR, General Division, 2160-4450 per annum. (c) During ADANTIY SURVEYOR, General Division, 2160-4450 per annum. (c) During ADANTIY SURVEYOR, General Division, 2160-4450 per annum. (c) During ADANTIY SURVEYOR, General Division, 2160-450 per annum. (c) During ADANTIY SURVEYOR, General Division, 2160-450 per annum. (c) During Divising and/or Schools. (c) During Divisions and vari

Town Hall, Birkenhead. 7456 URBAN DISTRICT COUNCIL OF STANLEY (YORKS). ENGINEER AND SURVEYOR'S DEPARTMENT. APPOINTMENT OF ARCHITECTURAL ASSISTANT. Applications are invited for the appointment of an Architectural Assistant for housing work. Applicates must be registered Architects and have sound experience, particularly in housing.

Salary will be in accordance with Grade VI Division, £670-£735. The successful applicant will be required to pass a medical examination. Applications, endorsed "Architectural Assis-tant," stating age, present and past appointments and experience, with three references, to be re-ceived by the undersigned by 18th October, 1952. R. BLAKEY, Clerk of the Council.

R. BLAKEY, Clerk of the Council. Council Offices, Coach Road, Outwood, near Wakefield. 7475 LUTON RURAL DISTRICT COUNCIL APPOINTMENT OF ARCHITECTURAL APPOINTMENT OF ARCHITECTURAL Surveyor, for work in connection with Salary in accontance with A.P.T. Grade Ya Salary in accontance with A.P.T. Grade Va Salary in accontance with A.P.T. Grade Va Salary in connection with Housing Schemes, and must hold a recognised Architectural quification. The appointment is subject to the provisions of the Local Government Superannuation Act, 137.

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1637. The Council will assist in the provision of housing accommodation. Applications, endorsed "Architectural Assistant" stating age, qualifications and experience, together with the names of three persons to whom reference may be made, should be sent to the undersigned, not later than 13th October, 1950.

EVAN A. C. EVANS, Clerk to the Council.

Rural Council Offices, 42, Bute Street, Luton, Beds. 22nd September, 1952.

is also held. Good experience in Town Planning and Redevelopment Work. a built-up areas is necessary. (b) ONE JUNIOR TOWN PLANNING ASSISTANT, Grade IV (255-4500), who should have had experience in the application of Town Planning Regulations and development control. Preference will be given to candidates holding the Intermediate examination of the Town Plan-ning Institute or possessing an approved equivalent qualification. The above appointments which are terminable by one month's notice on either side, are sub-ject to the Local Government Superannuation Acts, and the successful candidates will be required to pass a medical examination. Applications, stating age, qualifications, train-ing, experience, present and past appointments, and accompanied by copies of not more than three recent testimonials, must be sent to Mr. A. J. McGregor, Borough Surveyor, Municipal Buildings, Swinburne Street, Gateshead, 8, by Saturday, 18th October, 1952. Candidates must ceclare their relationship, if any, with any member or senior official of the Council. J. W. PORTER, Town Cleark

J. W. PORTER, Town Clerk.

 J. W. PORTER, Town Clerk.

 Annow Construction

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J. W. PORTER, Town Clerk.

7467

Town Hall, Gateshead, 8. 24th September, 1952.

24th September, 1952. 7467 SUDAN GOVERNMENT The Public Works Department, Sudan Govern-ment require an ARCHITECTURAL ASSISTANT for service in the Stadan under the Chief Architect, for the preparation of working drawings for general building work. Candidates should have a sound Architectural Training and experience of general building work and be capable of the preparation of working drawings required. Are 25-55 years. Salary between EE750 and £E1.400 on probation for Short Term Contract, (with bonus) for two years. A starting rate of pay higher than the minimum but not higher than £E1.650 may be offered if justified by age, qualifications and experience.

A variable Cost of Living Allowance is now payable in the Sudan and is reviewed quarterly. No income tax is at present payable in the Sudan. Annual home leave on a generous scale after initial tour of approximately 18 months. Free passages by air both ways for official and family. Duty transport provided. Government accom-modation, as available, provided at low rent. An Outfit Allowance of £E50 is payable when contract is signed.

Outfit Allowance of LEDU IS payable when contact is signed. Further information and application form will be sent on receipt of a posteard only addressed to the Sudan Agent in London, Wellington House, Buckingham Gate, London, S.W.I, quoting "Architectural Assistant 1808" and name and address in block letters.

HAMPSTEAD BOROUGH COUNCIL require ASSISTANT ARCHITECT (TEMPORARY). Salary ±570-±620 (A.P.T. V) plus London weight-ing. Qualified. Age limit 45. No housing pro-vided. Applications giving three referees, to the Town Clerk, Town Hall, Hampstead, N.W.3. Closing date 4th October, 1952. 7455

THE IRAQ DEVELOPMENT BOARD (Chair-man: Prime Minister of Iraq) require:--(a) METEOROLOGY AND HYDROLOGY SPECIALIST. (b) SOILS CLASSIFIER. (c) ESTIMATOR. (d) SOIL MECHANICS SPECIALIST. (e) CONCRETE DESIGN ENGINEER. (f) CHIEF, Civil Engineering Research Laboratory.

(1) URLEF, URL DADATORY, UNDERATIONS ENGINEER.
 (a) IRRIGATION OPERATIONS ENGINEER.
 (b) JUNOR ENGINEERS (10 posts).
 Salary for posts (a)-(g) will be I.D.150-250, and for post (h) I.D.80-150 per month. (1 Iraqi Dinar=

Satary for posts (2)(9) will be 1.D.20-20, and for post (b) 1.D.80-150 per month. (1 Iraqi Dinar= £1 sterling.) Duties: Assist in the design, construction and supervision of numerous irrigation and drainage works. Candidates for all posts except (b) should have a degree in Civil Engineering with appro-priate experience. For post (b) a degree is re-quired from a college or university which specialises in training soils scientists. Appoint-ments are for two years, renewable. Free passages for appointees and dependants; home and local leave; free medical attention; provident fund; high cost of living allowance. Write to A.S.12 (Iraq Development Board), Almack House, King Street, St. James's Square, London, S.W.J, for application forms and further details, stating which post, as soon as possible. 7477

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

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

A RCHITECTURAL ASSISTANTS required immediately at Head Office for preparation of working drawings and details for Housing and other contracts in non-traditional construction. Commencing salaries up to £600 per annum accord-ing to experience. Applications, giving brief particulars of experience to: Staff Architect, George Wimpey & Co., Limited, 27, Hammersmith Grove, London, W.6. 7437

OLD-ESTABLISHED Mutual Life Assurance House wants a few men of initiative and integrity to act as AGENTS. Architects and Sur-veyors have the necessary knowledge and contracts to make business most profitable to us and them. Further details from Box 6734.

SUSSEX PRACTITIONER requires services of ARCHITECTURAL ASSISTANT, experi-enced in design of Country Cottages and small Houses, for part-time work. State rate per hour and full particulars of experience, in confidence, Box 7461.

SENIOR ASSISTANT ARCHITECT urgently required at Head Office for leading work on design and working details for multistorey flats; sound prospects for suitable applicant; commencing salary according to experience. Other vacancies exist for Architectural Assistants experienced in preparation of working drawings and details for housing and flats. Write, giving brief particulars of experience, to Staff Architect, George Wimpey & Co. Limited, 27, Hammersmith Grove, London, W.6. 7479

JOHN E. BEARDSHAW & PARTNER, A./A.R.I.B.A., 186, Oxford Road, Man-chester, 13, require a Junior Architect-designer Draughtsman. Must be first-class draughtsman and colourist, also capable of making accurate building surveys. Salary according to experience. 7480

A BCHITECTURAL ASSISTANT required by qualified and with experience in planning, design and construction of factory buildings. The appointment is permanent and pensionable, and the salary will be in accordance with age, experi-ence and qualifications. Applicants should be between 30 and 45. Please reply, giving full details of age, experience, etc., to Box No. L5356, A.K. Advg., 212a, Shaftesbury Avenue, W.C.2. 7484

K UWAIT OIL COMPANY invites applications for the post of ASSISTANT ARCHITECT for service in Kuwait. Must have recognised school training and be an A.R.I.B.A. Preference given to candidates with experience in design of modern hospitals. Age 30-35. Salary starting 4950 p.a. clear, plus generous allowances, pension scheme and kit allowance. Write for application form, giving personal details and quoting K.1518, to Box N/73, c/o 191, Gresham House, E.C.2. 7472

CHERRER & HICKS, of 19, Cavendish Square, London, W.1, require a JUNIOR DRAUGHTSMAN, aged 17-18 years, who should be a probationer of the R.I.B.A. Write, stating experience and salary required. 7421

experience and salary required. 7421 JUNIOR ARCHITECTURAL ASSISTANT re-quired in busy country office dealing chiefly with Agricultural and Domestic work. Smith-Woolley & Partners, Collingham, Newark, Notts.

Architectural Appointments Wanted

R.I.B.A., accustomed to being in charge of ence in the office has had excellent experi-ence in the office and on the site. Can take charge from sketch to final settlement; specifica-tions, perspectives, layout. Can work in his own West End office if necessary. Box 7301.

A.R.I.B.A. A.A. Dip., (38), single, requires a responsible position in England or overseas. 10 years' experience in private and L.A. offices. Available now. Box 564.

 Available now.
 Box 564.

 A. R.I.B.A. (27) requires position as SENIOR ASSISTANT in Central London area.

 7 years' varied experience in private practice and L.A. schools, including administration and super-vision of contracts. Box 565.

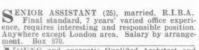
 ASSISTANT, Intermediate standard, requires post in Architect's office, City or West End.

 5 years' office experience. Box 567.

 CHIEF ARCHITECTURAL
 ASSISTANT, Market and a standard.

5 years' office experience. Box 567. CHIEF ARCHITECTURAL ASSISTANT (Regd.) seeks change, preferably to North-West. 39, married. 17 years' Local Government experience, housing, shops, estate layout, site supervision, sketch plans to completion. Adminis-tration and control of staff. Car owner. Would commission basis; present salary £760 p.a. Box 7466.

ARCHITECTURAL ASSISTANT, with good general experience, neat and capable draughtsman, seeks position in London office. Box 7445.



ment. Box 570. YOUNG and energetic Qualiñed Architect and Surveyor requires a position, either permanent or temporary, in an architect's or surveyor's office; good knowledge of quantities. Seaside town only. Box 563. RCHITECT'S ASSISTANT, A.R.I.B.A., acapable of handling medium contracts to final account; three years' varied experience; requires progressive position in small London office, preferably one with contemporary outlook. Box 571.

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

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-69 inclusive unless he or she, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

Vacancies Order, 1952.
 CIVIL ENGINEER required by The Steel Com- Department at large modern Steel Plant. Good anow of Wales, Ltd., to take charge in new Department at large modern Steel Plant. Good anowedge of Civil and Structural Engineering sesential—general knowledge of building construc-tion an advantage. The successful candidate should have recognised technical qualifications. Salary over £1,000 per annum, commensurate with experience and ability. Applications in own handwriting should be addressed to: The Personnel Superintendent, The Steel Company of Wales, Ltd., Box No. 3, Port Taibot. 7460

 Assistant QUANTITY SURVEYOR required by large Industrial Organisation, preferably qualifications. Appli- cand the salary will be in accordance with as of age, experience, etc., to box No. 5032, A.K. Advg., 212a, Shaftesbury Avenue, W.C.2. 7483

Avenue, W.C.2. 7483 RÉPRESENTATIVE with first class connection known firm manufacturing high quality flush doors and partitioning. Salary and expenses. Permanent and progressive position for right man. Box 7399.

Partnerships

6 lines or under, 12s. 6d.; each additional line, 2s. CHARTERED ARCHITECT (36), diplomas in CArchitecture and Town and Country Plan-ning, with varied experience, and own small practice, seeks Partnership with established Architect in London. Capital available. Box 7454,

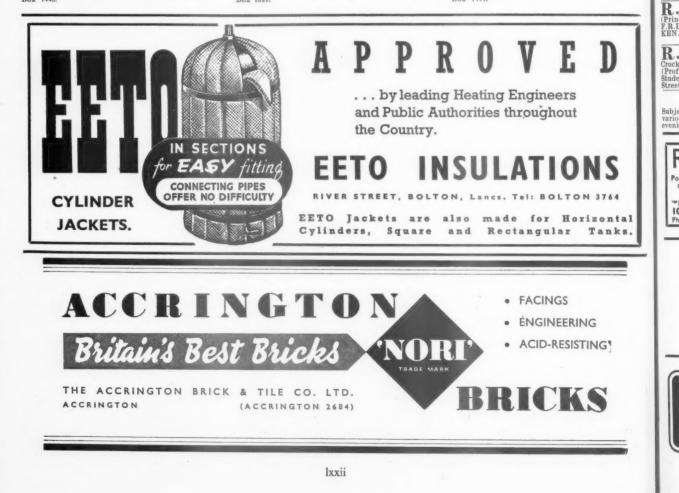
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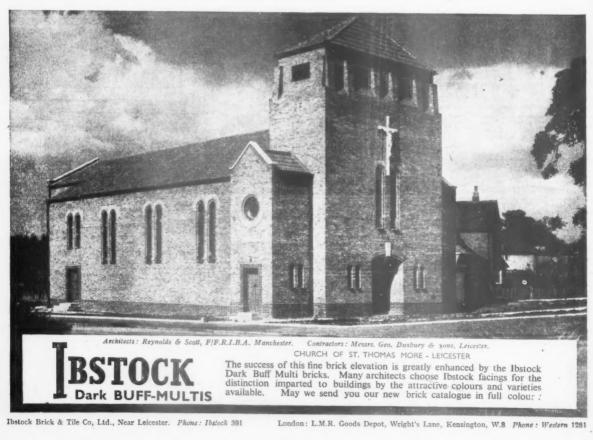
Alphabetical Index to Advertisers

	PAGE
Abbey Building Supplies Co.	lxxiii
Accrington Brick & Tile Co	Ixxii
Aidas Electric, Ltd. Airscrew Co. & Jiewood, Ltd.	X
Airscrew Co. & Jiewood, Ltd.	xlix
Allied Guilde	
Architectural Press Ltd., The	Managerer Streamer on Managerer 10
Armstrong Cork Co., Ltd.	xi, lx
Austins of East Ham, Ltd	XXX
Austin, James, & Sons (Dewsbury) Ltd.	xviii
Automatic Pressings, Ltd.	lxiv
Baldwin Son & Co Ltd	lxix
Booth James & Co. Ltd.	xiv
Booth John & Sons (Bolton) Ltd	xxxiv
Booth, James, & Co., Ltd. Booth, John, & Sons (Bolton), Ltd. Boulton & Paul, Ltd.	Ixxiii
Briggs, Wm., & Sons, Ltd	xxiv
British Dointe I.td	xxxviii
British Paints, Ltd. British Plaster Board, Ltd., The	xlii
British Trolley Track Co., Ltd.	lxiii
Britmac Electrical Co., Ltd.	li
Brand & Co. Itd	lxiv
Droad & Co., Ltd.	
Broad & Co., Ltd Bryce White & Co., Ltd Burgess Products Co., Ltd	lxxiii
Burgess Products Co., Ltd.	lxv
Carron Company	ii
Celotex, Ltd. Cement Marketing Co., Ltd., The	
Cement Marketing Co., Ltd., The	xxvii
Chance Bros., Ltd. Clark, James, & Eaton, Ltd.	xxxiii
Clark, James, & Eaton, Ltu.	
Claygate Fireplaces, Ltd.	xlvi
Cole, E. K., Ltd College of Estate Management	Indian
Colt Ventiletion I td	lxix
Colt Ventilation, Ltd	mladili
Conthurst-Symons & Co., Ltd.	xlviii
Concrete, Ltd Costain, Richd., Ltd	lv
Costain, Riend., Ltd.	lviii
Coverite (Asphalters), Ltd.	lxxiii
Crabtree, J. A., & Co., Ltd.	XXXIX
Croggan & Co., Ltd.	
Docker Brothers	xxi
Docker Brothers Dow-Mac (Products), Ltd. Du Bois Co., Ltd.	
Du Bois Co., Ltd.	Ixvii
Econa Modern Products, Ltd.	lxi
Edgar, Wm., & Son, Ltd	xvii
Eeto Insulations Ellis School of Architecture, The	lxxii
Ellis School of Architecture, The	lxxiii
Ellison, George, Ltd.	
Evode, Ltd. Farmer, S. W., & Son, Ltd.	
Farmer, S. W., & Son, Ltd.	lxviii
Farmilee, T. & W., Ltd.	XV
Ferodo, Ltd.	xii
Fibreglass, Ltd.	Automatical Street
Finlock Gutters, Ltd.	lvi
Flexo Plywood Industries, Ltd	lii
Furse, W. J., & Co., Ltd	

ctical Index to Glow-Worm Boilers, Ltd. Greenwood's & Airvac Ventilating Co., Ltd. Gyppoe Products, Ltd. Halden, J., & Co., Ltd. Hangers Paints, Ltd. Harvey, G. A., & Co., (London), Ltd. Harvey, G. A., & Co., Ltd. Hill, E. Aldam, & Co., Ltd. Holoyaay Metal Roofs, Ltd. Holoyaay Metal Roofs, Ltd. Holoyaay Metal Roofs, Ltd. Holoyae, Ltd. Hostock Brick & Tile Co., Ltd. Instock Brick & Tile Co., Ltd. Johnston Brothers (Contractors), Ltd. Johnston Brothers (Contractors), Ltd. Johnston Brothers (Contractors), Ltd. Kay, William (Bolton) Ltd. Lead Industries Development Council. Leigh, W. & J., Ltd. Lamg, John, & Sons, Ltd. MacAndrews & Forbes, Ltd. Magnet Timber, Ltd. Marley Tile Co., Ltd., The Nether Shere Products Agencies, Ltd. (Wasted or Yacant), Competitions Open, Jouces Miscellaneous, Property, Land, and PAGE ii lxxv xlviii xxxi 111 xix viii xiii liv lxxiv lxviii lxiii xxviii ix ix lxxv xxxii xliii lxxv XX lix XXXXV Ixxiii lxxiii lxii lxxvi xvi lxvii lxviii lxviii xxii, xxiii

Poles, Ltd. xitt Race Upholstery Unit, The lxxifi Radiation Group Sales, Ltd. xxxr Range Boilers, Ltd. xxxr Rampe Boilers, Ltd. xxxr Rampe Boilers, Ltd. xxr Rawlping Co., Ltd. lxr Rowe Brothers & Co., Ltd. lxr Ruberoid Co., Ltd., The lxr Sankey-Sheldon, Ltd. lxr Sankey Joseph, & Sons, Ltd. lxr Sealacor (St. Helens), Ltd. lxr Sealacor (St. Helens), Ltd. lxr Sealacor (St. Helens), Ltd. lxr Sign Service lxr Sissons, W. & G., Ltd. lxr Sissons, W. & G., Ltd. lxr Simith & Pearson, Ltd. lxr Southerns, Ltd. lxr Sundeala Board Co., Ltd		PAGE
Radiation Group Sales, Ltd. xxtrift Radiation Group Sales, Ltd. xxxvrft Rampe Boilers, Ltd. xxxvrft Rawlphug Co., Ltd. txvrft Rowe Brothers & Co., Ltd. txvrft Ruberoid Co., Ltd., The xxvrft Ruberoid Co., Ltd., The xxvrft Sankey-Sheldon, Ltd. xxvrft Sankey-Sheldon, Ltd. xxvrft Sankey-Sheldon, Ltd. xx Sealacor CSt. Helens), Ltd. xx Sealacor CSt. Helens), Ltd. xx Sealacor CSt. Helens), Ltd. xxxvrft Sign Service lxxlii Sign Service lxxlii Sissons, W. & G., Ltd. xxxvrft Simith & Pearson, Ltd. xxxvr Sontherns, Ltd. xxxvr Sontherns, Ltd. xxxvr Southerns, Ltd. xxxvr Southerns, Ltd. xxvr Stort, Jas., & Co. (Engineers), Ltd. lxvi Stramit Boards, Ltd. xxvr Sunder Brothers (London), Ltd. xxvr Tarmae, Ltd. xiti Technicrete Sales xiti Trenchicre	Poles, Ltd.	
Range Boilers, Ltd. xxr Range Boilers, Ltd. xx.xrift Range Boilers, Ltd. xx.xrift Ruberoid Co., Ltd. xr Ruberoid Co., Ltd. xr Ruberoid Co., Ltd. xr Ruberoid Co., Ltd. xr Samkey. Joseph, & Sons, Ltd. xr Samkey. Joseph, & Sons, Ltd. xr Same Premostats, Ltd. ixi Sealanco (St. Helens), Ltd. ixi Seancerte Products, Ltd. ixi Siestorete Products, Ltd. ixi Siestore Partice, Ltd. ixi Siestore, K. & G., Ltd. ixi Simith & Rodger, Ltd. ixi Southerns, Ltd. ixi Southerns, Ltd. ixi Southerns, Ltd. ixi Sulzer Brothers (London), Ltd. ixi Sulzer Brothers (London), Ltd. ixi Sulzer Brothers (London), Ltd. ixi Tramac, Ltd. ixi Tramac, Ltd. ixi Tretol, Ltd. ixi T	Prodorite, Ltd.	
Rame Boilers, Ltd. xxxrtfi Rawlphug Co., Ltd., The. xxrtfi Ruberoid Co., Ltd., The. xxrtfi Ruberoid Co., Ltd., The xxrtfi Ruberoid Co., Ltd., The xxrtfi Sankey-Sheldon, Ltd. xxrtfi Sankey-Sheldon, Ltd. xxrtfi Sankey-Sheldon, Ltd. xxrtfi Sankey-Sheldon, Ltd. xxrtfi Saraco Thermostats, Ltd. xxrtfi Sealacor (St. Helens), Ltd. xxxrtfi Seentaco (St. Helens), Ltd. xxxrtfi Sim Service lxxiii Sign Service lxxxiii Sissons, W. & G., Ltd. xxxrtfi Simblex Electric Co., Ltd. xxxrt Simth & Pearson, Ltd. xxxrt Solignum, Ltd. xix Southerns, Ltd. lix Southerns, Ltd. lix Southerns, Ltd. lix Stramit Boards, Ltd. lix Statil Boards, Ltd. lix Stramit Boards, Ltd. lix Stramit Boards, Ltd. lix Teohla Board Co., Ltd. lix Thompson, John (Beacon Windows), Ltd. lix Thorn, J., & Sons, Ltd. lix Thorn, J., & Sons, Ltd. lix Thorn, J., & Sons, Ltd. <td< td=""><td>Race Upholstery Unit, The</td><td></td></td<>	Race Upholstery Unit, The	
Richardson & Starling, Ltd. Ixviii Rowe Brothers & Co., Ltd. xvi Ruberoid Co., Ltd., The xvi Sankey-Sheldon, Ltd., The xiii Sankey-Sheldon, Ltd. xiii Sankey-Sheldon, Ltd. xiiii Sankey-Sheldon, Ltd. xiiiii Sankey-Sheldon, Ltd. xiiiii Sealanco (St. Helens), Ltd. xiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	Radiation Group Sales, Ltd.	
Richardson & Starling, Ltd. Ixviii Rowe Brothers & Co., Ltd. xvi Ruberoid Co., Ltd., The xvi Sankey-Sheldon, Ltd., The xiii Sankey-Sheldon, Ltd. xiii Sankey-Sheldon, Ltd. xiiii Sankey-Sheldon, Ltd. xiiiii Sankey-Sheldon, Ltd. xiiiii Sealanco (St. Helens), Ltd. xiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	Range Bollers, Ltd.	
Rowe Brothers & Co., Ltd. xvi Ruberoj, Owen & Co., Ltd.	Rawiping Co., Ltd., The	
Sankey Sheldon, Ltd. Sankey Joseph, & Sons, Ltd. Sarkey Joseph, & Sons, Ltd. Sealanco (St. Helens), Ltd. Senlocrete Products, Ltd. Sign Service Sign S	Down Drothows & Co. Ltd.	
Sankey Sheldon, Ltd. Sankey Joseph, & Sons, Ltd. Sarkey Joseph, & Sons, Ltd. Sealanco (St. Helens), Ltd. Senlocrete Products, Ltd. Sign Service Sign S	Rubory Owon & Co. Ltd	TAL
Sankey Sheldon, Ltd. Sankey Joseph, & Sons, Ltd. Sarkey Joseph, & Sons, Ltd. Sealanco (St. Helens), Ltd. Senlocrete Products, Ltd. Sign Service Sign S	Ruberoid Co. Ltd. The	
Sankey, Joseph, & Sons, Ltd. ixt Sareo Thermostats, Ltd. ixt Sealanco (St. Helens), Ltd. ixt Semorter Products, Ltd. ixt Signservice ixt Songreefeld's, Ltd. ixt Southerns, Ltd. ixt Sudignum, I.td. ixt Sudignum, I.td. ixt Sudignum, I.td. <t< td=""><td>Sankey-Sheldon Ltd</td><td></td></t<>	Sankey-Sheldon Ltd	
Sarao Thermostats, Ltd	Sankey, Joseph, & Sons, Ltd.	
Sealanco (St. Helens), Ltd. x Semborce Products, Ltd. lxix Sign Service kxiii Simplex Electric Co., Ltd. xxxvi Simith & Pearson, Ltd. xxxvi Smith & Pearson, Ltd. xixvi Solignum, Ltd. xiii Sonthers, Ltd. kiii Southerns, Ltd. kiii Southerns, Ltd. kiii Sutherns, Ltd. kiii Tarmac, Ltd. kiii Teompon, John (Beacon Windows), Ltd. mii Thompson, John (Beac	Sarco Thermostats, Ltd	İxi
Senlocrete Products, Ltd. xi Semtex, Ltd. kxiii Sign Service kxiii Silexine Paints, Ltd. kxiii Silexine Paints, Ltd. kxiii Simplex Electric Co, Ltd. xxxv Siskol Machines, Ltd. xxiv Sissons, W. & G., Ltd. xxxv Smith & Pearson, Ltd. xxxv Smith & Rodger, Ltd. kxiv Solignum, Ltd. kxiv Solignum, Ltd. kxiv Southerns, Ltd. ki Southerns, Ltd. ki Southerns, Ltd. ki Southerns, Ltd. kxiv Statit Boards, Ltd. kxiv Statit Boards, Ltd. kxiv Stamie Boards, Ltd. kxiv Statik Boards, Ltd. kxiv Sundeala Board Co., Ltd. kxiv Taylor, R. & Co. (Ironfounders), Ltd. kxiv Trechnicrete Sales ki Thompson, John (Beacon Windows), Ltd. kiv Tretol, Ltd. kxiv Tretot, Ltd. kxiv Venesta, Ltd. kxiv Venesta, Ltd. kxiv Venesta, Ltd. kxiv Walpamur Co., Ltd. kxiv Sulf State State kxiv Walpamur Co., Ltd. kxiv State State State kxiv Walpamur Co., Ltd. Kxiv State State Kxiv State	Sealanco (St. Helens), Ltd.	
Sign Service Ixxiii Silexine Paints, Ltd. v Silexine Paints, Ltd. v Siskol Machines, Ltd. Ixxiii Simplex Electric Co, Ltd. xxxv Sissons, W. & G., Ltd. xxxv Smith & Pearson, Ltd. xxxv Smith & Rodger, Ltd. Ixiv Sonignum, Ltd. xiv Sonuchers, Ltd. Ixiv Southerns, Ltd. Ixiv Southerns, Ltd. Ivi System Boards, Ltd. Ivi Sulzer Brothers (London), Ltd. xxvi Sundeala Board Co., Ltd. Ixvi Taylor, R., & Co. (Ironfounders), Ltd. Ixvi Technicrete Sales xili Theompon, John (Beacon Windows), Ltd. Vi Theort, J. H., & Co., Ltd. Ixvi Tretol, Ltd. Ixvi Truerer, C. H., & Co., Ltd. Ixvi Tretol, Ltd. Vi Theore, J. H., & Co., Ltd. Ixvi Walpamur Co., Ltd. Xi Weingtan, Ltd. Xi Weingtan, Co., Ltd. Xi Stramingtan, Co., Ltd. Xi	Sealocrete Products, Ltd	xl
Silexine Paints, Ltd. vi Siskol Machines, Ltd. lxxiii Simplex Electric Co., Ltd. xxxvi Sissons, W. & G., Ltd. xxxvi Smith & Pearson, Ltd. xxxvi Smith & Rodger, Ltd. xxvi Smith & Rodger, Ltd. xxvi Smith & Rodger, Ltd. xiv Solignum, Ltd. xiv Solutherns, Ltd. kxiii Southerns, Ltd. lvi Southerns, Ltd. lvi Southerns, Ltd. lvi Stott, Jas., & Co. (Engineers), Ltd. lvi Stramit Boards, Ltd. lvi Stramit Boards, Ltd. lxvi Taylor, R., & Co. (Ironfounders), Ltd. lxvi Technicrete Sales xIw Thompson, John (Beacon Windows), Ltd. vi Tretol, Ltd. lxv Truett & Steel, Ltd. lxv Twiner, Charles, & Son, Ltd. lxvi Tretol, Ltd. lxvi Turner, Charles, & Son, Ltd. lxvi Walpamur Co., Ltd., The xi Walpamur Co., Ltd., The xi	Semtex, Ltd	
Siskol Machines, Ltd	Sign Service	
Sissons, W. & G., Ltd. XXXV Smith & Pearson, Ltd. XXXV Smith & Rodger, Ltd. XXXV Smith & Rodger, Ltd. XXXV Solignum, Ltd. XIV Soluterns, Ltd. XIV Southerns, Ltd. XIV Southerns, Ltd. Vil Spethorne Metals, Ltd. XXV Stramit Boards, Ltd. XXV Stramit Boards, Ltd. XXV Stramit Boards, Ltd. XXV Stramical Board Co., Ltd. XXV Taylor, R. & Co. (Ironfounders), Ltd. XXV Taylor, R. & Co. (Ironfounders), Ltd. XXV Technicrete Sales XIV Technicrete Sales XIV Thompson, John (Beacon Windows), Ltd. XIV Tretot, Ltd. XIV Tretot, Ltd. XIV Tretot, Ltd. XIV Tretot, Ltd. XIV Turker, J. H., & Co., Ltd. XIV Turker, J. H., & Co., Ltd. XIV Turker, J. H., & Co., Ltd. XIV Venesta, Ltd. XIV Venesta, Ltd. XIV Walpamur Co., Ltd. XVI Walpamur Co., Ltd. XVI Ward Thos W Ltd. XVI Yvenesta, Ltd. XVI XVI de Travers Asphalte Paving Co., XVI Venesta, Ltd. XVI XVI de Thos W Ltd. XVI XVI de XVI XVI de XVI XVI de XVI de XVI de XVI XVI de XVI de XVI XVI de XVI XVI de XVI de XVI	Silexine Paints, Ltd.	
Sissons, W. & G., Ltd. XXXV Smith & Pearson, Ltd. XXXV Smith & Rodger, Ltd. XXXV Smith & Rodger, Ltd. XXXV Solignum, Ltd. XIV Soluterns, Ltd. XIV Southerns, Ltd. XIV Southerns, Ltd. Vil Spethorne Metals, Ltd. XXV Stramit Boards, Ltd. XXV Stramit Boards, Ltd. XXV Stramit Boards, Ltd. XXV Stramical Board Co., Ltd. XXV Taylor, R. & Co. (Ironfounders), Ltd. XXV Taylor, R. & Co. (Ironfounders), Ltd. XXV Technicrete Sales XIV Technicrete Sales XIV Thompson, John (Beacon Windows), Ltd. XIV Tretot, Ltd. XIV Tretot, Ltd. XIV Tretot, Ltd. XIV Tretot, Ltd. XIV Turker, J. H., & Co., Ltd. XIV Turker, J. H., & Co., Ltd. XIV Turker, J. H., & Co., Ltd. XIV Venesta, Ltd. XIV Venesta, Ltd. XIV Walpamur Co., Ltd. XVI Walpamur Co., Ltd. XVI Ward Thos W Ltd. XVI Yvenesta, Ltd. XVI XVI de Travers Asphalte Paving Co., XVI Venesta, Ltd. XVI XVI de Thos W Ltd. XVI XVI de XVI XVI de XVI XVI de XVI de XVI de XVI XVI de XVI de XVI XVI de XVI XVI de XVI de XVI	Siskol Machines, Ltd.	lxxiii
Smith & Pearson, Ltd. xxxvf Smith & Rodger, Ltd. lxvi Solignum, Ltd. xiii Solignum, Ltd. xiii Sonomerfeld's, Ltd. lxviii Southers, Ltd. lxviii Southers, Ltd. lviiii Speithorne Metals, Ltd. lviiii Stramit Boards, Ltd. lviiiiii Stramit Boards, Ltd. lix Stramit Boards, Ltd. lxviiiiiiiii Sulzer Brothers (London), Ltd. xxv Sundeala Board Co., Ltd. lxviiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	Simplex Electric Co., Ltd.	
Smith & Rodger, Ltd. lxiv Smith, & Rome, Ltd. xliv Solignum, Ltd. xliv Southerns, Ltd. xliv Southerns, Ltd. lxiv Speithorne Metals, Ltd. lxiv Stout, Jas., & Co. (Engineers), Ltd. lix Studzer Brothers (London), Ltd. lxxiv Sundeala Board Co., Ltd. lxxiv Taylor, R., & Co. (Ironfounders), Ltd. lxxiv Technicrete Sales lxxiv Thompson, John (Beacon Windows), Ltd. rintret, Ltd. Theore, J. H., & Co., Ltd. lxvi Tretol, Ltd. lxvi Turner, Charles, & Son, Ltd. lxvi Venesta, Ltd. lxvi Venesta, Ltd. lxvi Walpamur Co., Ltd. lxvi Thompson, John (Beacon Windows), Ltd. minable Theore, J. H., & Co., Ltd. lxvi Walpamur Co., Ltd. lxvi Walpamur Co., Ltd. lxvi Walpamur Co., Ltd. lxit Walpamur Co., Ltd. lxit		
Smith, Samuel, & Sons, Ltd. xliv solignum, Ltd. xliv sonterms, Ltd. lxxiii Southernes, Ltd. lxxiii Spelthorne Metals, Ltd. lxiii Stramit Boards, Ltd. lxiii Stramit Boards, Ltd. lxxiii Surger Brothers (London), Ltd. lxxiiii Surger Brothers (London), Ltd. lxxiiii Taylor, R., & Co. (Ironfounders), Ltd. lxxiiii Technicrete Sales xliv Thompson, John (Beacon Windows), Ltd. minore, co. Tretol, Ltd. lxvi Tretot, Ltd. lxvi Truct & Steel, Ltd. lxvi Turner, Charles, & Son, Ltd. minore, Ltd. Turner, Charles, & Son, Ltd. minore, Ltd. Walpamur Co., Ltd. minore, minore, ltd. Walpamur Co., Ltd., The minore, minore, minore, ltd. Walpamur Co., Ltd. minore, minore	Smith & Pearson, Ltd.	
Solignum, Ltd. xliv Sommerfeld's, Ltd. lxxii Southerns, Ltd. lvi Speithorne Metals, Ltd. lvi Stott, Jas., & Co. (Engineers), Ltd. lix Stramit Boards, Ltd. lix Sulzer Brothers (London), Ltd. lix Sulzer Brothers (London), Ltd. lix Taylor, R., & Co. (Ironfounders), Ltd. lix Technicrete Sales lix Thompson, John (Beacon Windows), Ltd. minoreal Tretol, Ltd. lix Tretot, Ltd. lix Turner, C. J. H., & Co., Ltd. minoreal Tretot, Ltd. lix Turner, Charles, & Son, Ltd. minoreal Venesta, Ltd. minoreal Walpamur Co., Ltd. minoreal Strait lix Strait minoreal Strait lix Strait minoreal Strait minoreal	Smith Samuel & Song Ltd	LXIV
Southerns, Ltd	Solignum Ltd	vliv
Southerns, Ltd	Sommerfeld's, Ltd.	
Speithorne Metals, Ltd. III stott, Jas., & Co. (Engineers), Ltd. III Sulzer Brothers (London), Ltd. Xxv Sundeala Board Co., Ltd. Ixvi Tarmae, Ltd. Ixvi Taylor, R., & Co. (Ironfounders), Ltd. Ixvi Technicrete Sales Xilv Thompson, John (Beacon Windows), Ltd. Ixvi Thompson, John (Beacon Windows), Ltd. Ivi Tretol, Ltd. Vi Truett & Steel, Ltd. Vi Turner, C., J. H., & Co., Ltd. Ivi Tretol, Ltd. Vi Turner, Carles, & Son, Ltd. Ivi Val de Travers Asphalte Paving Co., Ltd., The Venesta, Ltd. Xi Wapamur Co., Ltd., The Xi Wapamur Co., Ltd., The Xi	Southerns, Ltd.	
stort, Jas., & Co. (Engineers), Ltd	Spelthorne Metals, Ltd.	
Sulzer Brothers (London), Ltd. xxv Yarmac, Ltd. Ixvii Tarmac, Ltd. Ixvii Taylor, R., & Co. (Ironfounders), Ltd. xiii Technicrete Sales xiii Templer, C. G. Ixxii Thompson, John (Beacon Windows), Ltd. ixxi Thorn, J., & Sons, Ltd. vi Tretol, Ltd. vi Turner, Charles, & Son, Ltd. ixxi Val de Travers Asphalte Paving Co., Ltd., The Venesta, Ltd. xi Walpamur Co., Ltd., The xi	Stott, Jas., & Co. (Engineers), Ltd	lix
Sundeala Board Co., Ltd. Tarmae, Ltd. Tarmae, Ltd. Technicrete Sales Thames Plywood Manufacturers, Ltd. Thompson, John (Beacon Windows), Ltd. Thorn, J., & Sons, Ltd. Tretol, Ltd. Turner, Charles, & Son, Ltd. Val de Travers Asphalte Paving Co., Ltd., The Venesta, Ltd. Wapamur Co., Ltd., The Ward Those W Ltd. The	Stramit Boards, Ltd	1
Tarmae, Ltd. Ixvi Taylor, R., & Co. (ironfounders), Ltd Ixvi Technicrete Sales Xiii Templer, C. G. Ixxi Thompson, John (Beacon Windows), Ltd. Ixxi Thorn, J., & Sons, Ltd. Vi Tretol, Ltd. Vi Trucker, J. H., & Co., Ltd. Vi Turner, Charles, & Son, Ltd. Vi Val de Travers Asphalte Paving Co., Ltd., The Venesta, Ltd. Xi Walpamur Co., Ltd., The Xi	Sulzer Brothers (London), Ltd.	XXV
Technicrete Sales xin Templer, C. G lxxx Thompson, John (Beacon Windows), Ltd Tretol, Ltd Tretol, Ltd Turker, J. H., & Co., Ltd Turner, Charles, & Son, Ltd Val de Travers Asphalte Paving Co., Ltd., The Venesta, Ltd Walpamur Co., Ltd., The Walpamur Co., Ltd The Charles, With Venesta, Ltd Venesta, Ltd The Co., Ltd Venesta, Ltd Venesta, Ltd The Co., Ltd Venesta, Ltd	Sundeala Board Co., Ltd	
Technicrete Sales xin Templer, C. G lxxx Thompson, John (Beacon Windows), Ltd Tretol, Ltd Tretol, Ltd Turker, J. H., & Co., Ltd Turner, Charles, & Son, Ltd Val de Travers Asphalte Paving Co., Ltd., The Venesta, Ltd Walpamur Co., Ltd., The Walpamur Co., Ltd The Charles, With Venesta, Ltd Venesta, Ltd The Co., Ltd Venesta, Ltd Venesta, Ltd The Co., Ltd Venesta, Ltd	Tarmac, Ltd.	Ixvii
Templer, C. G. Lxx: Thames Plywood Manufacturers. Ltd Lxx: Thompson, John (Beacon Windows), Ltd.	Taylor, R., & Co. (Ironfounders), Ltd	
Thames Plywood Manufacturers, Ltd Thompson, John (Beacon Windows), Ltd. Thorn, J., & Sons, Ltd. Tretol, Ltd. Truckt & Steel, Ltd. Turner, Charles, & Son, Ltd. Val de Travers Asphalte Paving Co., Ltd., The Wengsta, Ltd. Walpamur Co., Ltd., The Walpamur Co., Ltd., The Walpamur Co., Ltd., The	Technicrete Sales	
Thompson, John (Beacon Windows), Ltd. Thorn, J., & Sons, Ltd. Tretol, Ltd. Truett & Steel, Ltd. Turner, Charles, & Son, Ltd. Val de Travers Asphalte Paving Co., Ltd., The Venesta, Ltd. Walpamur Co., Ltd., The Ward Thos W Ltd.	Thomas Divisional Manufacturans 1 td	IXXV
Thorn, J., & Sons, Ltd. vi Tretol, Ltd. vi Tructt & Steel, Ltd. vi Tucker, J. H., & Co., Ltd. vi Turner, Charles, & Son, Ltd. vi Val de Travers Asphalte Paving Co., Ltd., The view view view view view view view vie		
Tretol, Ltd. lxv. Tructk & Steel, Ltd. lxv. Tucker, J. H., & Co., Ltd	Thorn I & Song Ltd	vi
Tructt & Steel, Ltd Tucker, J. H., & Co., Ltd Turner, Charles, & Son, Ltd Val de Travers Asphalte Paving Co., Ltd., The Venesta, Ltd Walpamur Co., Ltd., The Ward Theo W Ltd	Tretol Ltd.	
Turner, Charles, & Son, Ltd. Val de Travers Asphalte Paving Co., Ltd., The venesta, Ltd. Walpamur Co., Ltd., The Ward Thes	Truett & Steel, Ltd.	lxv
Turner, Charles, & Son, Ltd. Val de Travers Asphalte Paving Co., Ltd., The venesta, Ltd. Walpamur Co., Ltd., The Ward Thes	Tucker, J. H., & Co., Ltd.	
Ltd., The	Turner, Charles, & Son, Ltd.	
Venesta, Ltd. xl Walpamur Co., Ltd., The	Val de Travers Asphalte Paving Co.,	
Word Thos W Ltd vivi	Ltd., The	
Word Thos W Ltd vivi	Venesta, Ltd.	X
Ward, Thos. W., Ltd. Xivi Warerite, Ltd. Xivi Wheeler, F. W., & Co., Ltd. Xivi Whittle, R. W., Ltd. Xivi Williams & Williams, Ltd. Xiv, Xiv, Xivi	Walpamur Co., Ltd., The	
Warering Brothers XXXI Warerite, Ltd. XXXI Whiteler, F, W., & Co., Ltd. XXI Whitele, R. W., Ltd. XXI Williams & Williams, Ltd. iv,	Ward, Thos. W., Ltd.	
Wheeler, F. W., & Co., Ltd Whittle, R. W., Ltd Williams & Williams, Ltdiv, v	Wareing Brotners	XXXI
Whittle, R. W., Ltd.	Wheeler F W & Co Ltd	Inte
Williams & Williams, Ltd iv, v	Whittle R W Ltd	LAD
TO ADDRESS SAL TE ADDRESS & BENGE FOR THE FILL FRE	Williams & Williams, Ltd.	iv.

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