THE ARCHITECTS' JOURNAL

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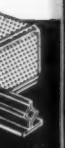
★A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ie one week, Ig to Z the next. In all cases where the town is not mentioned the word LONDON is implicit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

IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1. Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 75, Eaton Place, S.W.1. Sloane 3158/1601
IIBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1. Euston 2450
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1. Museum 1783
I of Arb.	Institute of Arbitrators, 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2. Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1. Museum 7197/5176
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3. Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1. Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1. Sloane 7128
IWA	Inland Waterways Association. 11, Gower Street, W.C.1. Museum 9200
LIDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1. Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square,-W.C.1. Museum 3891
MARS	MARS Group (English Branch of CIAM). Secretary : Gontran Goulden, Building Centre, 9, Conduit Street, W.1. Mayfair 8641
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1. Whitehall 3400
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1. Mayfair 9400
MOH	Ministry of Health. Whitehall, S.W.1. Whitehall 4300
MOLNS	Ministry of Labour and National Service, 8, St. James's Square, S.W.1. Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C. Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1. Mayfair 9494
MOTCP	Ministry of Town and Country Planning. 32-33, St. James's Square, S.W.1. Whitehall 8411
MOW	Ministry of Works. Lambeth Bridge House, S.E.1. Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94-98, Petty Franc , S.W.1. Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W 1. Abbey 4813
NBR	National Buildings Record. 37, Onslow Gardens, S.W.7. Kensington 8161
NCBMP	National Council of Building Material Producers. 10,Princes Street, S W.1.Abbey 5111
NFBTE	National Federation of Building Trades Employers. 82, New Cave dish Street, W.1. Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives, Federal House, Cedars Road, Clapham, S.W.4. Macaulay 4451
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1. Whitehall 1693
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1. Langham 4341
NPL	National Physical Laboratory. Head Office, Teddington. Molesey 1380
NSA	National Sawmilling Association. 14, New Bridge Street, E.C.4. City 1476
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1. Abbey 1359
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1. Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1. Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1. Whitehall 9936
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh. Edinburgh 20396
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1. Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George St., S.W.1. Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1. Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1. Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2. Trafalgar 2366
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1. Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19. Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1. Victoria 2186
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8. Western 1571
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1. Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3. Mansion House 3921
SIA	Structural Insulation Association. 14, Moorgate, London, E.C.2. Central 4444
SIA	Society of Industrial Artists. 7, Woburn Square, W.C.1. Langham 1984
SNHTPC	Scottish National Housing Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Ruthlergen.
SPAB	Society for the Protection of Ancient Buildings. 55 Great Ormond Street, W.C.1. Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2. Temple Bar 5006
TDA	Timber Development Association. 75, Cannon Street, E.C.4. City 4771
TGC	The Gas Council. 1, Grosvenor Place, S.W.1. Sloane 4554
TPI	Town Planning Institute. 18, Ashley Place, S.W.1. Victoria 8815
TTF	Timber Trades Federation. 69, Cannon Street, E.C.4. City 4444
WDC	War Damage Commission. Devonshire House, Mayfair Place, Piccadilly, W.1. Mayfair 8866
WEDA	Welfare Equipment Development Association. 74, Victoria Street, S.W.1. Victoria 5783
ZDA	Zinc Development Association. Lincoln House, Turl Street, Oxford. Oxford 47988



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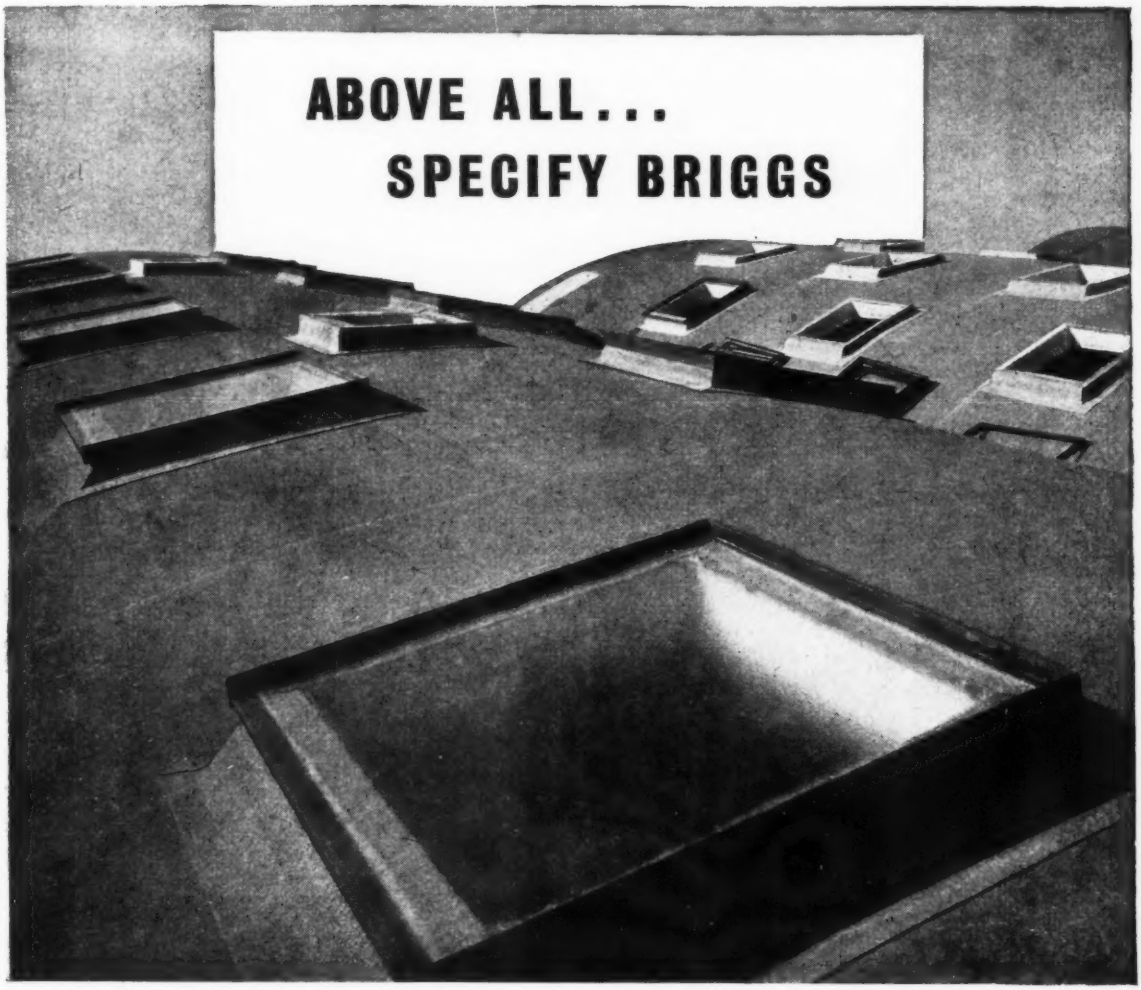

BARREL VAULTED ROOFS, on Bakery at new Trading Estate, Fazakerley, Liverpool. *Designed by Messrs. Mackeith Dickinson & Partners,* FF.R.I.B.A., *Blackpool.*

These Barrel Vaulted Roofs demonstrate the flexibility of BRIGGS ROOFS and how efficiently they adapt themselves to roofs of unusual shape and design.

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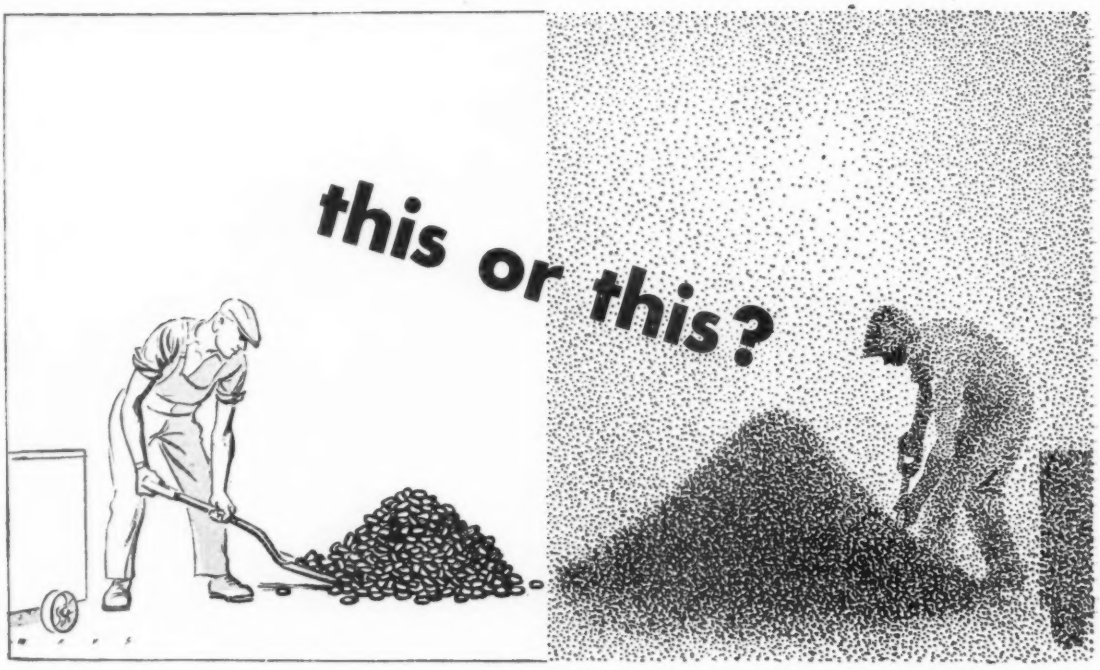

The briquetting of fine pulverent materials and the pressing into special shapes and forms, as a preliminary to other manufacturing processes, is now a matter of increasing importance. The 'Emperor' Press produces as many as 30 pressings per minute. In the manufacture of Coal Briquettes the output is as high as 25 tons per hour, and it is equally efficient in connection with the briquetting of iron, steel, brass, copper and aluminium borings and turnings. Full details are gladly supplied on request.

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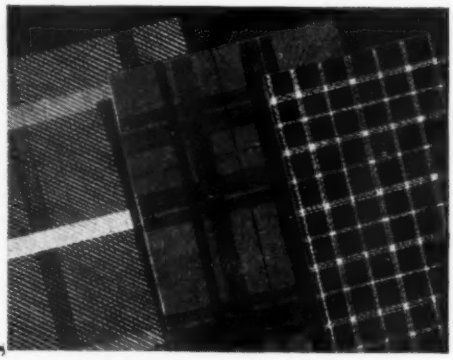
Sutcliffe Speakman & Company, Ltd., Leigh, Lancashire
London Office: Godliman House, Godliman St., E.C.4
Telephone: CITY 2810

Tygan was chosen by Mr. Brian O'Rorke, F.R.I.B.A., *for the upholstery of the chairs in the Tourist "B" Class Café on the Orient Line S.S. Orcades.*

Attractive colours and designs

The lovely clear colours and smart designs in which Tygan is available afford every opportunity for the achievement of successful decorative effects.



Tygan can be sponged clean

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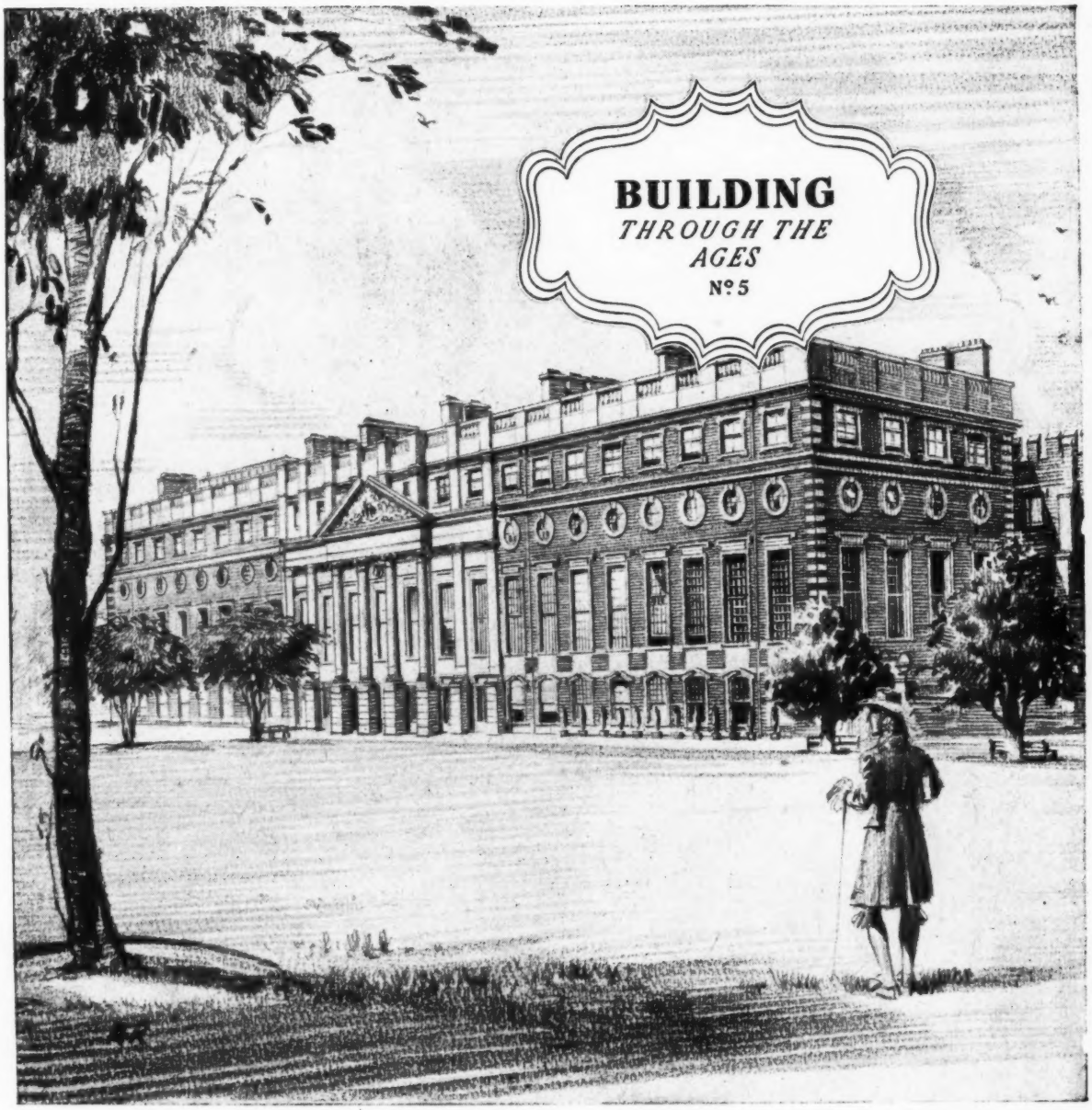


Hampton Court Palace

THIS famous structure probably immortalises more history than any other building in Britain. Not the cold history of figures and dates but the continual rich adventure of a place tenanted for centuries by men and women of renown and notoriety.

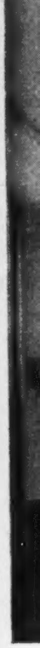
Apart from its long story of human occupation, Hampton Court is unique as an outstanding piece of architecture, linking together two distinctive patterns of building—Tudor and Late Renaissance.

It is unfortunate that to-day a great deal of the lovely Tudor palace, built by Cardinal Wolsey has vanished. Enough is left, however, of its warm, mellow brickwork and oriel windows to indicate the charm of the original building.

William the Third was largely responsible for the extensive alterations which destroyed so much of the earlier Tudor erection. To his credit, however, the reconstruction was placed in the talented hands of Sir Christopher Wren.

The east side of Hampton Court is now a monument to Wren's genius, excelled only by St. Paul's Cathedral. Its wide sweep of classical stonework forms a facade offering perpetual challenge to the simpler but beautiful Tudor construction on the western side.

A



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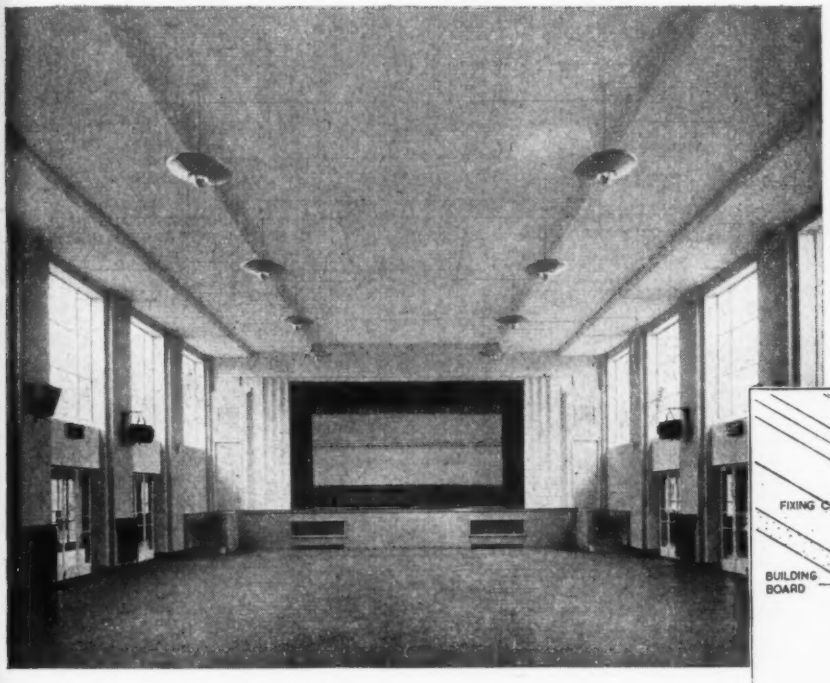
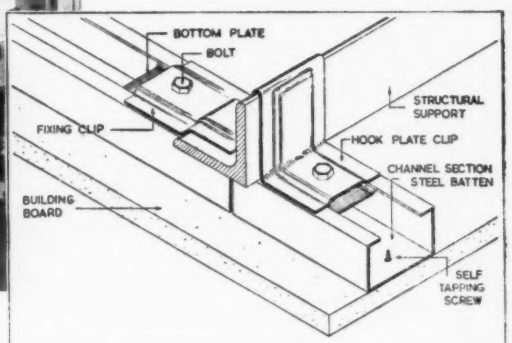
ADJUSTABLE METAL FIXING
IN SCHOOLS



A ceiling in ½" Insulating Board fixed by TenTesT Adjustable Metal Fixing.

Stanley Primary School, Marton, Blackpool
Architect:—Arthur Hamilton, A.R.I.B.A., Borough Surveyor, Blackpool
Contractor:—R. Fielding & Son



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This excellent method is at YOUR disposal. It is tried and tested, and is reasonable in price because it makes a first class job of a FLAT (non-sag) ceiling with no strips showing.

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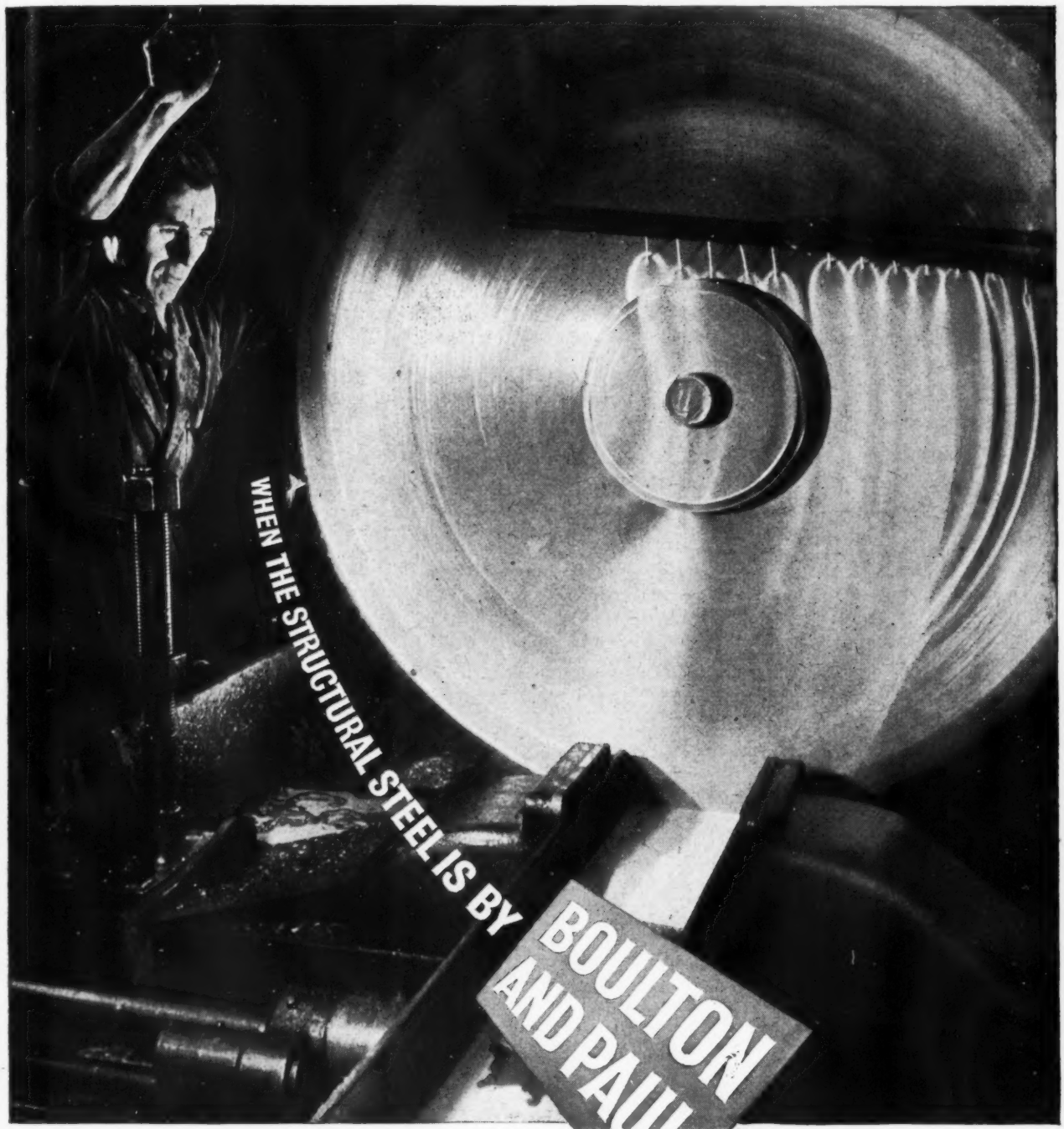
in thousands of homes

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

* Co-ordinating the sales organisation of the three factories producing solid fuel appliances controlled by Radiation Ltd.
They are:
Wilsons & Mathiesons Ltd., Leeds 12.
The Eagle Range & Grate Co. Ltd., Aston, Birmingham 6.
The Park Foundry (Belper) Ltd., Belper, Derbyshire.

SOLID FUEL Radiation APPLIANCES

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



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The shed had to be built on a difficult site
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★ . . . *a perfect plaster finish on both faces.*

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★ . . . *speeds erection, and saves man hours.*

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Easily erected, with ordinary tools, by semi-skilled labour—one man can do the work of two or more. Adaptable to any finish or architectural style . . . flexible to any kind of construction . . . can fit into your existing plans without restriction of design, and materially reduce building costs.

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(See Building Research Station Test 48/c 108/2 MAY 1946)
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(See B.R.S. Test of same date)
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(See National Physical Laboratory Report H.3831/1 MAY 1950)
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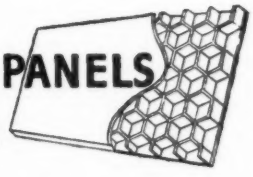

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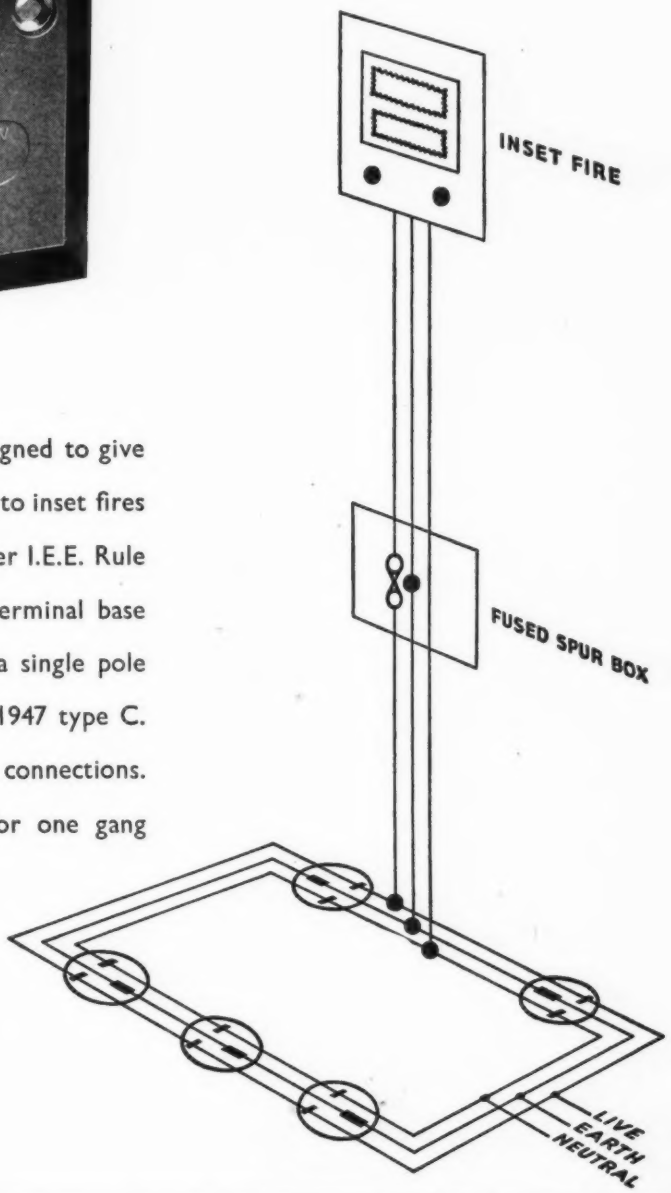

The M.K. fused spur-boxes have been designed to give local fuse protection on ring main circuits to inset fires or other fixed appliances, as required under I.E.E. Rule 201 (d) Twelfth Edition. Consisting of a terminal base with a removable fuse-carrier containing a single pole 13 amp. cartridge fuse-link to B.S. 1362: 1947 type C. Ample provision is made for ring main connections. Flush type as illustrated, are suitable for one gang boxes, B.S. 1299: Part 1: 1946 and B.S. 1363: 1947. Also made in surface type.

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

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

*** MAGNET**

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

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

*** IBEX**

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

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

*** COOKSON'S CRESCENT**

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

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

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

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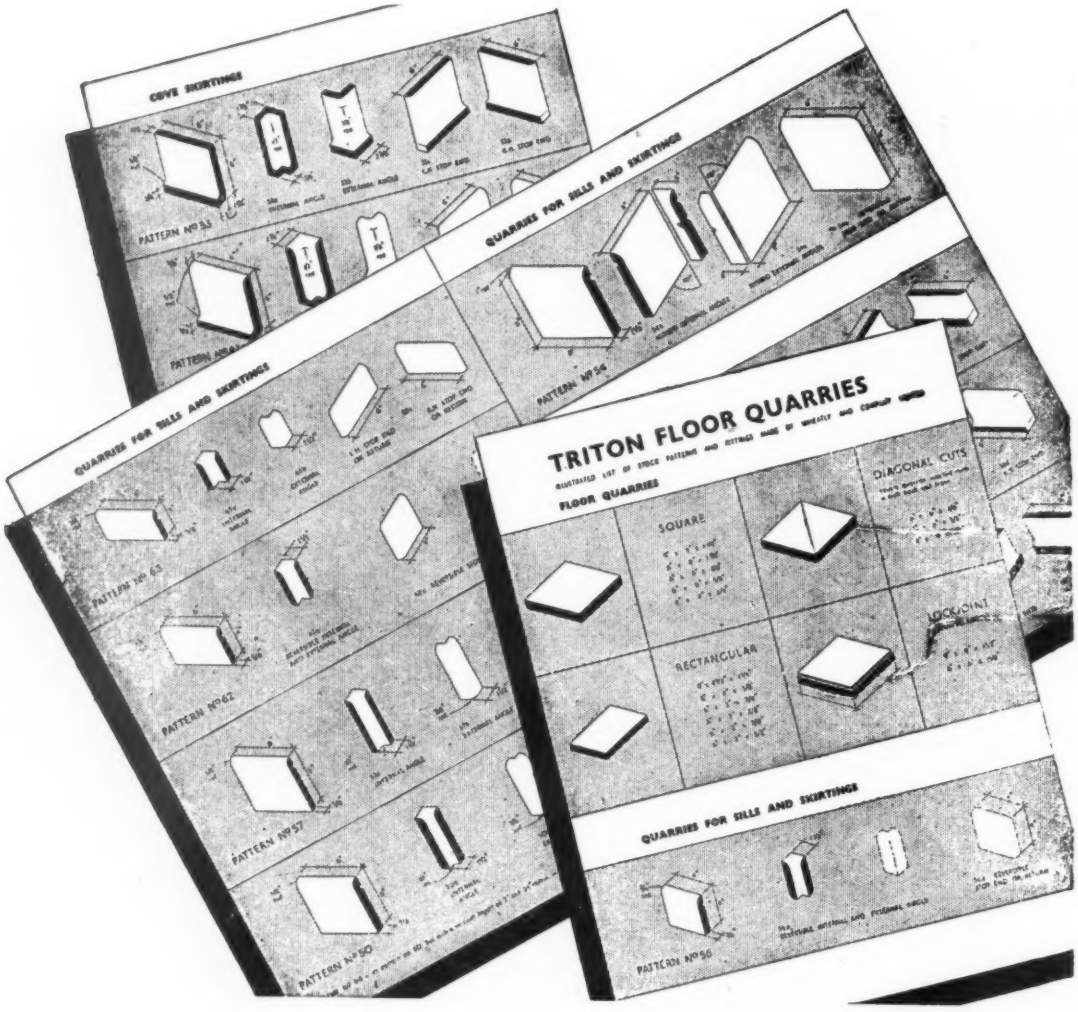

This **Wheatly** leaflet gives all necessary information for the detailing of **"TRITON" QUARRY FLOORS**

Specimens of Wheatly Tiling may be seen at the Building Centre, London. Wheatly products include Single-lap Roofing Tiles, Ridge Tiles (blue and red), Floor Quarries and Briquette Fireplaces.

Full details of the wide range of "TRITON" quarries and fittings which are available are given in this leaflet. Each pattern is illustrated with a ⅛th scale isometric drawing, and correct descriptions, key numbers and principal dimensions are included. The leaflet should prove of great assistance to architects. It has been specially designed to simplify the problems of detailing in the drawing office and of ordering.
A copy will be forwarded on request.

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LIVERPOOL. Messrs. Williams & Watson Ltd., 77/79 Victoria Street, 1.
NOTTINGHAM. Mr. R. Peel, 259 Loughborough Road, West Bridgford.
BRISTOL. Baileys (Bristol) Ltd., 107/115 Gloucester Road.
PLYMOUTH. Mr. Dohoo, Woodrow Metals Ltd., Tweedside Place, Stonehouse.
POOLE. Mr. J. E. Holden, 20 Branksea Avenue, Hamworthy, Dorset.

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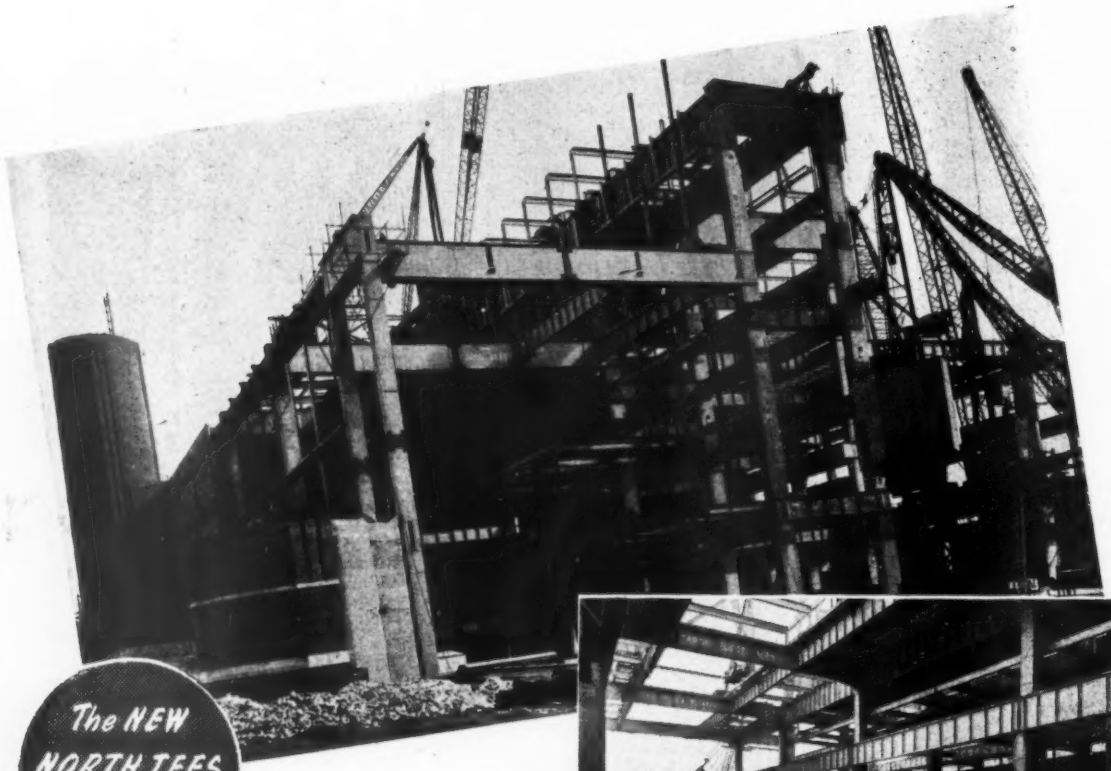
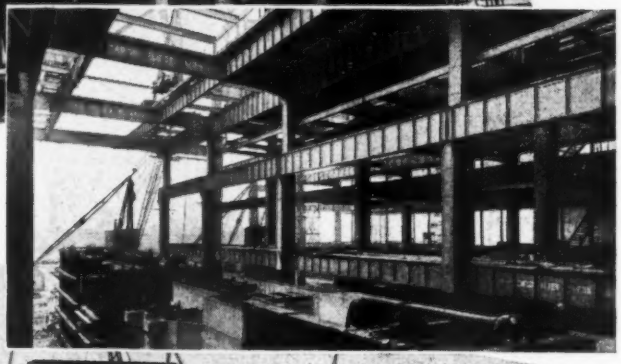


The NEW NORTH TEES POWER STATION



As sub-contractors to the Cleveland Bridge & Engineering Co. Ltd. of Darlington, The Constructional Department of the Cargo Fleet Iron Co. Ltd. has been responsible for the fabrication of some fifty per cent of the steelwork for the new North Tees Power Station at Billingham.

STEELWORK BY **CARGO FLEET**

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MOST Architects and Local Authorities, if permitted complete freedom, would invariably insist on *Clay* Roofing Tiles, but with restrictions on building costs and the desire to provide the maximum of amenities, there has been a tendency to economise on the roof.

Today, however, the integrity of the Clay Roofing Tile is again asserting itself, and good houses, roofed with Clay Tiles, are being built within permitted figures in all parts of the country.

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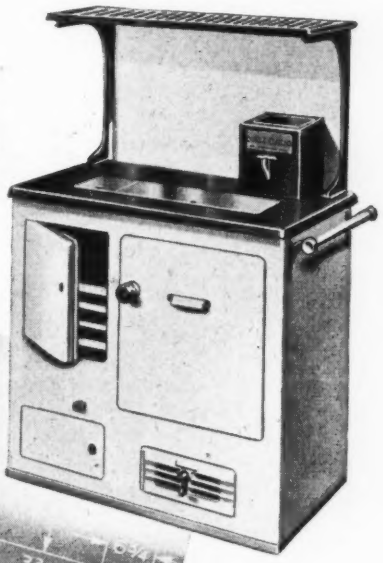

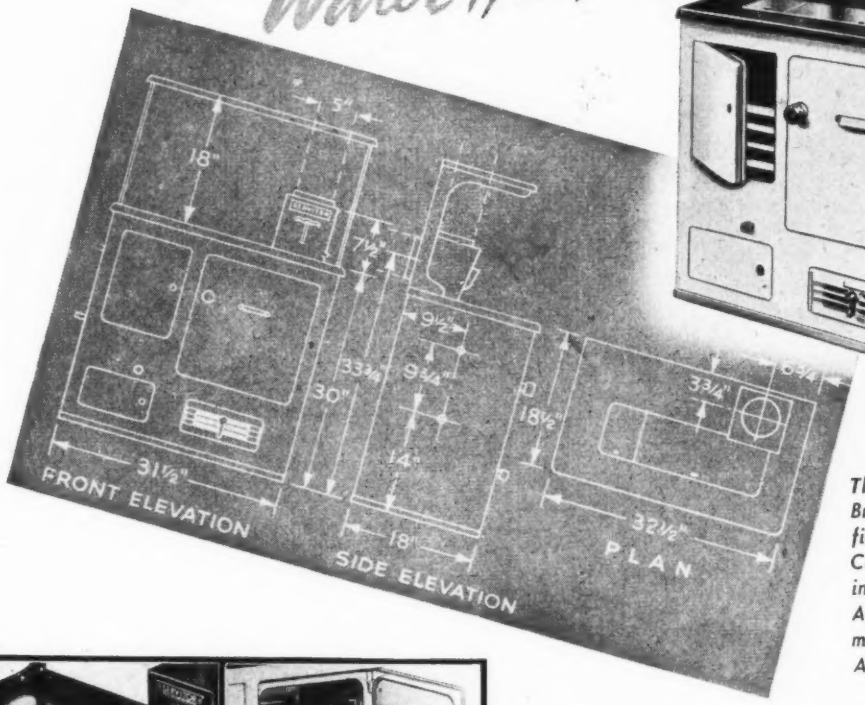

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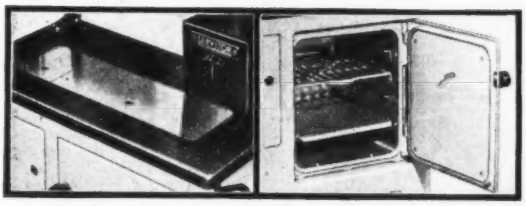

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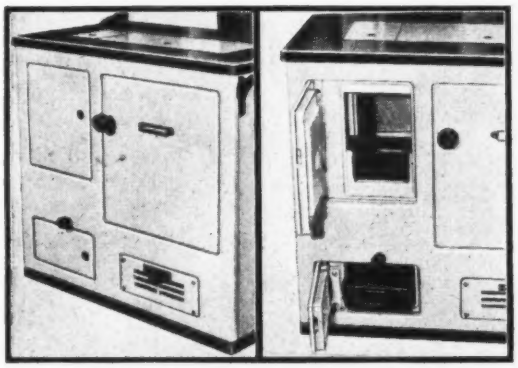

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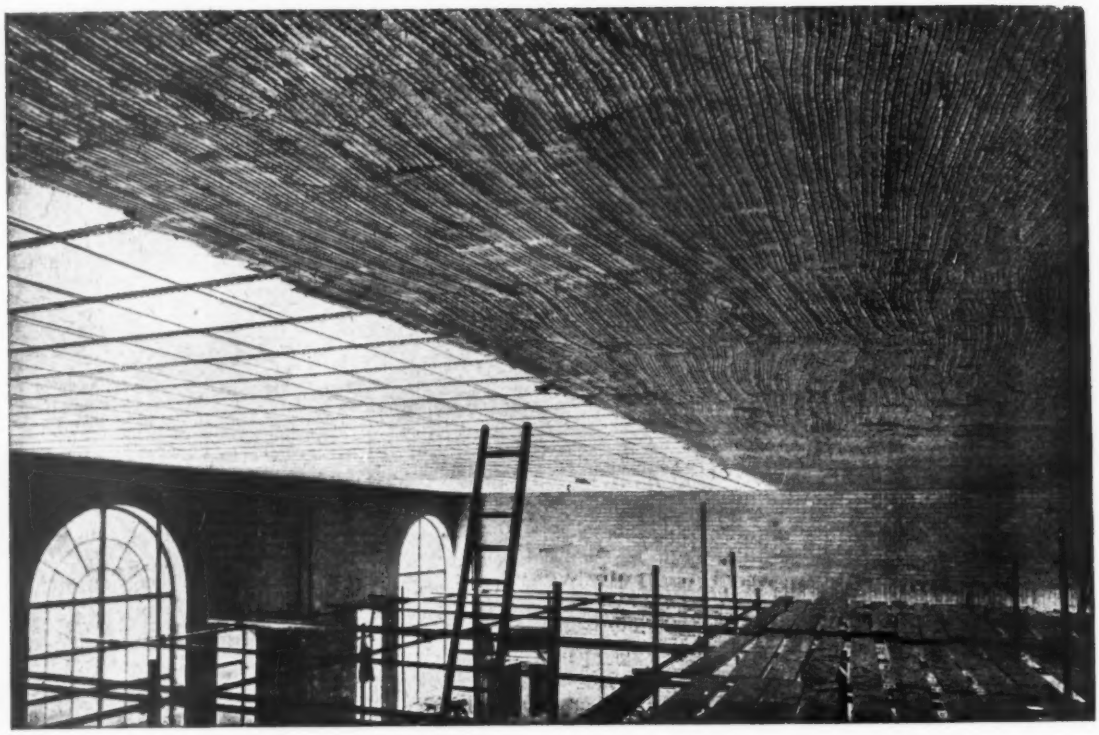

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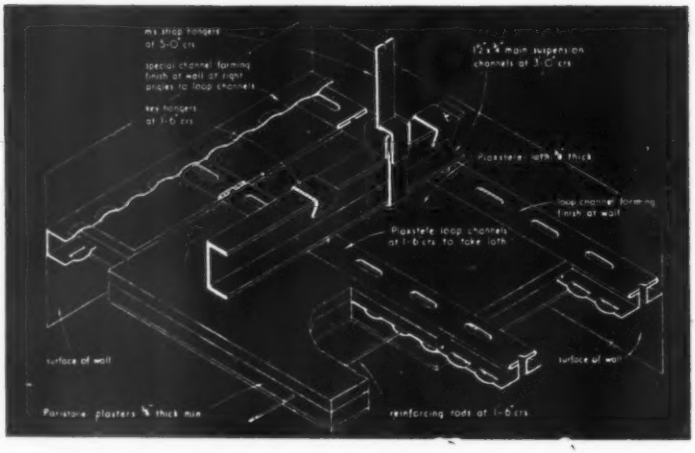

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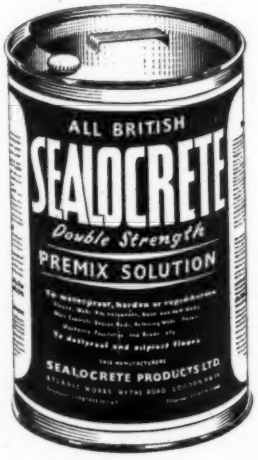

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THE ARCHITECTS' JOURNAL

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WRENCOTE AGAIN

A few weeks ago I wrote about Wrencote House—the early Georgian building which stands in Croydon High Street—and urged that something should be done to restore it. (It is very shabby and neglected at the moment.) I am glad to hear that efforts are being made to persuade the Croydon Council to buy the house. A recent issue of *The Croydon Advertiser* reports that a deputation consisting of 16 local organizations (with the signed support of 3,000 residents) recently approached the council under the leadership of Lord Euston, deputy chairman of the SPAB. Lord Euston said it had been estimated that the building could be restored for about £3,000. Only £135 has been raised locally for the purpose of restoration, and some members of the Council seem to think this shows a lack of public interest. *The Croydon Advertiser* (which is one of the finest local newspapers I know) points out that the sum was subscribed with no official encouragement or support and rightly calls attention to the 3,000 signatures as a better testimony of public opinion.

*

All over the country architectural and historical treasures are disappearing. (A particularly sad case is reported on page 174.) But Croydon has proved itself to be an enlightened borough and its hesitancy in this instance is surprising. There are few things of beauty in the town. The council should lose no time in ensuring that they are preserved.

OTHER TOWNS PLEASE COPY

Croydon is also concerned in what is, perhaps, the most important news for architects this week. Somewhere in this issue you will find a letter from A. E. Ward, secretary of the Institute of Registered Architects. This tells of the Institute's proposal to organize exhibitions in the London area and, later, in the provinces, with a view to letting the public know more about the work of the architect. The JOURNAL has long urged that such exhibitions should be arranged. (In fact Mr. Ward refers, in his letter, to a recent leading article on the subject of public relations.) I congratulate the Institute on its enterprise in starting something that the older body, the RIBA, should have done long ago. And I hope the RIBA will not be slow in following the IRA's example.

*

But where does Croydon come into this? It is, in fact, the town in which the IRA's scheme will be launched from August 7 to August 21. The Croydon Council has generously loaned the Institute two rooms in the town hall. The exhibition will consist of photographs, models and drawings of many types of building. IRA members all over the country are submitting work. It will therefore be possible to change the exhibition as it moves from town to town, so that residents may learn something of the work that has gone into local buildings they know well.

*

It will not be easy to design an exhibition which will capture the interest of the layman. But that is not the Institute's greatest problem. The real difficulty is that suitable halls for such a display are not always obtainable. Where there is a good hall, owned by the town, the local council should make it available to the Institute free of charge. (Fees for halls are, of course, sometimes as much as £100 per week.) Nevertheless, the Institute is prepared to put a large sum of money into this work if it has to. It should not be necessary. Other local authorities should copy the example set by Croydon. If they take a long term view of this propaganda for architects they will realise that ultimately the appearance of their own districts may well benefit.

ASPLUND MONOGRAPH

Svenska Arkitekters Riksförbund, the Swedish equivalent of the RIBA, has published a large monograph on Gunnar Asplund*. It is a generously illustrated English version of the original edition in Swedish and French issued in 1943 and, being superbly printed and bound, it forms a suitable memorial to one of the leading architects of the last generation. The text is written by another famous, and still living, Swedish architect, Hakon Ahlberg.

*

Asplund died in 1940, at the early age of 55, and though his productive life

* *Gunnar Asplund Architect*. Edited by Gustav Holmdahl, Sven Ivar Lind, Kjell Odeen, with an essay by Hakon Ahlberg (A.B. Tidskriften Byggmästaren, Stockholm, 1950).

ran for only 25 years he did an astonishing amount of work. The Stockholm Library, the Skandia Cinema, the 1930 Stockholm Exhibition and the Woodland Crematorium are his best known jobs, but he also created a great number of smaller buildings in which his genius is, perhaps, best expressed—for example, the Woodland Chapel in the Stockholm South Cemetery of 1918, and the delightful house he built for himself at Sorunda in 1937.

*

In those 25 years of activity, Asplund went through several phases of rapid change. Through all these phases he was in the lead and always with a fighting sincerity. In spite of his supple adaptation to changing ideas, his youthful and often fanatical belief in the new fashions, Asplund's work was never just *à la mode*; it was always creative in a fresh, adventurous and personal way. This was so even when his individualism was under the functional curb, for in his 1930 exhibition and his small Bredenberg Store, which were in the uncompromising international style, some individual quality of gaiety and fantasy came bubbling through.

*

To judge by the work revealed in this beautiful book, Asplund lived a full, rich life of creative pleasure. He was lucky in having been of a period which did allow great freedom to the artist (though, indeed, he often had to fight stubbornly for his ideas). Perhaps one could say that, in a purely æsthetic sense, he was lucky also to die when he did, because not only had he just completed his dramatic monument to death, but the year 1940 rounded off an age when personal expression such as he enjoyed was still possible. One wonders how Asplund, if he had lived, would have reacted to the frustrations of this austere, futilitarian post-war world.

CRITIC'S PICK

Among all his other responsibilities, ASTRAGAL generally finds time to keep an avuncular eye on the doings of Critic, whose "London Diary" is what the *New Statesman* reader gets in lieu of "Notes and Topics." Fine young fellow in many ways, this Critic. But when he ventures his opinions on the visual arts I sometimes feel that he lets the family down.

It happened the other day. I opened my NS & N to find Critic extolling a London Transport poster; subject, Piccadilly Circus. "It's a fascinating poster," I read, "beautifully designed to include a wide variety of London types and London events from the tourists and shoppers to the little girl led by a little dog and the mail van and the beer wagon and the coster's barrow ablaze with oranges and the lorry full of flowers and fruit for Covent Garden."

Well, my own view—as you know—is that London Transport poster design has worn a pretty wintry aspect lately. Can this, I wondered, be a herald of the spring—or is it merely a stray bloom from a St. Martin's summer? Investigation showed that it certainly wasn't the former; but to save myself the trouble of pursuing any further a metaphor which is getting out of hand I show you the poster itself. Other questions apart, I still believe that the right answer to the good old nursery riddle, "When is a poster not a poster?", is "When the lettering isn't an integral part of the design." (A prose-poem alongside doesn't make it one.)

*

In the same paragraph Critic wrote well about the originator of the poster policy of the old LPTB. In short, his Pick was better than his pick.

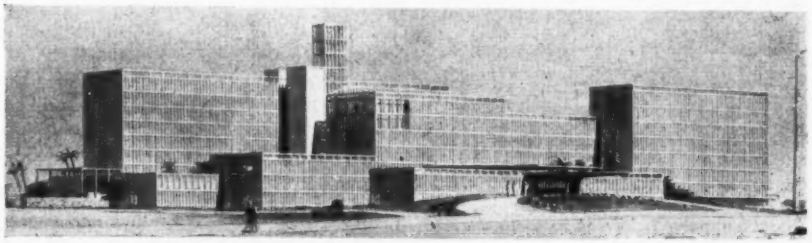
ASTRAGAL'S NIGHT OUT

Platitudinous after dinner speeches, with all those far from subtle political Party jokes by Ministers and others, are never worth enduring for the sake of the most excellent meal. What I like, therefore, about the NFBTE's annual dinner at the Dorchester, which I went to last week, is the emphasis on brevity in the speeches. Certainly we had a little government-ragging the other night, but most of the speeches were lively enough and the great matter for concern seemed to be the Minister of Work's eligibility for marriage.

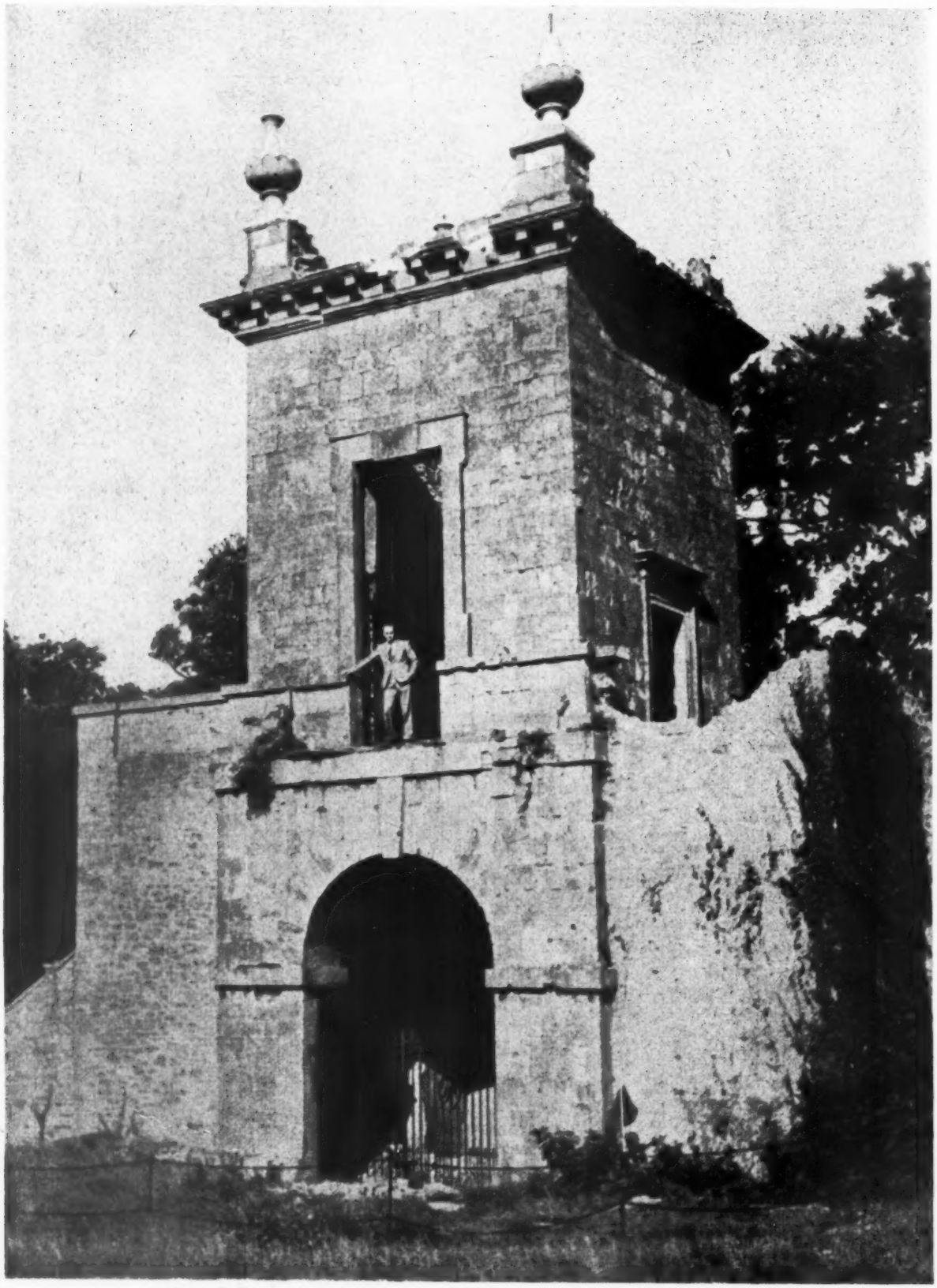
The new London Transport poster (designed by Molly Moss) which Astragal refers to on this page. Incidentally, there is an error in this picture; can you spot it?

*

Apart from Richard Stokes the speakers were Robert O. Lloyd, the Federation's president, the Dowager Marchioness of Reading and Stephen Hudson, whose election to the presidency took place the following morning. I don't know Mr. Hudson, but those who do tell me that the Federation could have no better man at the head of its affairs. I wish him good luck during what promises to be an arduous year of office. And let me remember my manners and thank the Federation for a very pleasant evening.



On this page Astragal reviews a monograph on Gunnar Asplund which has recently been produced in English by the Swedish Architects' Society. The author of the text of this monograph is Hakon Ahlberg, who is carrying on Asplund's great tradition in Sweden. Above is a perspective of a job on which Ahlberg is now engaged—a hospital for 600 beds with medical school and outpatients' department to be built in reinforced concrete at Maracaibo in Venezuela.



A Monument to Vandalism

When Penpole Lodge, Kingsweston (believed to be the work of Sir John Vanbrugh) became the property of the Bristol Corporation six years ago, it seemed reasonable to suppose that its preservation was guaranteed. Its recent demolition has been followed by a deservedly fierce letter to a local newspaper, written by the Council for the Preservation of Ancient Bristol. This describes the Corporation's action as a pitiful testimony to civic inadequacy.

THOSE SECRETIVE GEORGIANS

St. Anne's church, in the Worcestershire canal town of Bewdley, is a pleasant early Georgian building whose architect until recently was anyone's guess. Until, to be precise, a motor lorry ran into it and uncovered in the thickness of the wall, a stone inscribed "Woodward, Campden, Glos." (If you've heard of Woodward before, it will be as one of the architect-builders —they were father and son—of that real prize among Georgian churches, St. Swithin's, Worcester.)

*

The Miracle of Bewdley, as the event has come to be called by architectural historians, prompts various reflections. Motor lorries are not likely to become customary aids to historical research, I take it. But how many inches high may the letters of an architect's name be, if the stone in which they are cut is —barring bombs, acts of God, and motor lorries—to be invisible? I don't think the RIBA code has an answer.

Answer to Astragal's picture quiz on page 173. A number 9 bus has broken away from the stream of traffic around Eros and is careering in the wrong direction down a one-way street. Surely a serious error for a London Transport poster.

DEAFNESS TO ORDER

I wonder if the Beveridge Committee, which reported on the future of the BBC, has heard of the admirable invention of an ingenious American. This gentleman has designed a filter which will discriminate between speech and sound and will thus cut the plugs out of a sponsored music programme. Just how it will deal with singing, I don't know. Incidentally, have you noticed how some television programmes can be improved by turning off the sound?

ASTRAGAL

No. 2: Legal Editor

LESSONS FROM THE SQUIRE CASE

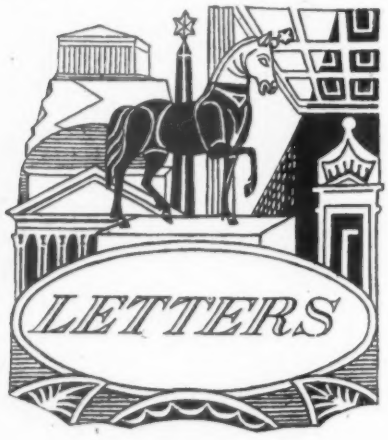
THE prosecution of Raglan Squire and of Messrs. Wates for an offence under Defence Regulation 56A, which was reported in the JOURNAL last week, was an unusual case in many respects. Architect and builder were charged with doing considerably more work in the conversion of Gatti's old restaurant in the Strand for use as the Nuffield Centre for the Forces than had been authorized by the MOW licence. The building owner was not charged. The reasons for that are perfectly understandable in this case, but the fact itself marks the prosecution as one well out of the ordinary. The prosecution alleged no improper motive against either of the defendants. It accepted the fact that they were, and are, of the highest repute. Indeed, if the building owner himself is so innocent as not to deserve to be put on trial, it is difficult to see what improper motive either its architect or its builder could possibly have. The sole ground behind the prosecution was the fact—a fact beyond dispute—that work not covered by an existing licence had been done, and the sole defence open to the defendants was that, when this work was done, they had reasonable grounds for believing that its cost would not run beyond the figure included in the existing licences. They were able to satisfy the jury on that and an acquittal followed.

What prompted the MOW to prosecute in this case? And why did this happen only after a very long investigation? (It took the Ministry some fifteen months of work.) This cannot have been the first case in which the Ministry has found the total cost of a job has exceeded the estimates made before the job started—which is, after all, the only figure that can ever appear in a licence, since the licence, too, must be in existence before the work starts. Was the Ministry shocked by the amount by which the total cost over-ran the figure it had allowed for? In that case, what margin of error is allowed to the architect? The publication of the figure would be a reassurance to a profession which lives, so to speak, under the shadow of the Old Bailey. Or must the profession work on the assumption that the Ministry is now set on checking any form of optimism, any lapse from the most strict of daily checks on the running cost of the work? In that case, too, it would be helpful to the profession if the Ministry was to say so as soon as possible. If the assumption that any deviation from the highest standard of care means a criminal prosecution, then, again, let the Ministry, in all justice, make that clear.

But there is another aspect of this prosecution; one to which we have referred before. Has not the time come when the profession itself, through its official organs, should begin to press for a re-casting of the present form of control of building operations? Today, with a colossal programme of defence expenditure hanging over the country, it is clear that there must be some limitation on building and construction. Neither

resources nor money are unlimited—they never have been—and now both are likely to be even more scarce. But the experience of the past six years has surely shown that the plan of controlling building activity by a system which is partially based on cost has ceased to be either just or practicable. The devices of the supplementary licence and of the endorsement on the original licence are devices, nothing less, and poor ones at that. It is certainly for the Ministry—*a* Ministry—to say what work shall be undertaken, but it is no longer just for the Ministry to say as well that that work must cost a certain amount and no more. The Government is not in control of prices. Nor are the builder and the architect.

Surely the time has come when the Ministry could content itself with licensing the job and leaving it at that. That is its real function. It is the function of the builder and of the architect to see that money is not wasted in the carrying out of the job. If the officials of the Ministry claim enough knowledge to know what work is essential enough to be licensed and what is not, they should also have experience enough to know to a degree what the work licensed will use in the way of material, labour and money. If they lack that experience, they need a refresher course in the hard field of practical building and construction under the prevailing conditions.



A. E. Ward

"Veritas"

J. E. Boddington

Propaganda for Architects

SIR,—Members of the Institute of Registered Architects will be as delighted as were its principal officers by the tone and substance of your editorial on "Public relations" (January 25).

Although devoted to a particular appointment in the RIBA, the implications of your comments go far beyond this: indeed, they extend to that point where the ultimate interests of the profession meet the vital concerns of civilized society. If one may be permitted to say so, your argument begins with the essence of the matter when you say "Even today the public has little appreciation or understanding of the architect's value in society either as a practical man or as a creative artist" and again, "... he will have to relate the architect's work and ideals to the workaday world ..." The painful fact of public ignorance or indifference must be faced.

This has, for some time, been apparent to my Council but, as you truly say, the job is not an easy one and adequate funds are required. Sheer hard work will surmount the first difficulty and, as to the second, we are making a start this year with such resources as are available to us. We are holding, in as many suburbs as possible, exhibitions designed to show the part played by the architect in the day to day life of the community. Afterwards, it is hoped to go to the provinces.

These exhibitions are not intended for the delectation of the profession: first and all the time they are to be devoted to the simple theme, briefly stated as "The architect and the people." It may well be that they will appear in some halls quite unsuited to such exhibitions but if they are held in places to which the public are accustomed to go and where they feel at home, some part, at least, of the mission may be accomplished. The first need is to make an impact on the public mind. It is, perhaps, not a coincidence that our table of interest-priorities appears to agree with your own. We begin with housing and pass through industrial and commercial buildings, food production, agriculture, etc., education, welfare and community services and places of worship to entertainment and recreation. That seems to be the right approach if our propaganda—I am glad you do not shirk the word—is to result in the man-in-the-street consulting his architect as naturally as, in appropriate circumstances, he consults his dentist, doctor or lawyer.

A. E. WARD,
Secretary,
Institute of Registered Architects.
London.

[See ASTRAGAL's note : page 171—ED.]

Buildings for the Gas Industry

SIR,—J. M. Richards, in his review of building of the year (Jan. 18), refers to the welfare building for the North Thames Gas Board (page 82), as "welcome evidence that a newly nationalized industry is trying to set a standard of decent design." Surely this is a rather extravagant deduction.

It would seem logical to expect that any client at all interested in obtaining a good standard of design in his buildings would in the first place employ an architect, not a consulting engineer. The fact that the North Thames Gas Board have acquired a very fine welfare building is due to a combination of fortunate but exceptional circumstances.

In the first place it happened that they chose an eminent firm of consulting engineers who employ an architect on their staff (and incidentally give him full credit for his designs); in the second place it happened that this architect possesses great ability and produced a first class design.

It is obvious where the praise should be bestowed, and I question the credit given to "the newly nationalized industry"—the result of their action might have been very different, and indeed has been so in other parts of the country.

The reference to the tradition set by the Miners' Welfare organization might have reminded the author that the consistent high standard of their buildings was due to wisdom in employing qualified architects; the gas industry would be well advised to follow that tradition rather than turn to civil engineers for their buildings.

VERITAS.

Improvements in Bath

SIR,—I have noted with interest ASTRAGAL's note, headed "Bouquets and Railings," in the JOURNAL for January 25, and I can assure you that his criticisms will receive immediate consideration.

There is one point, however, which I must make clear. My committee has already expressed its gratitude to the Georgian Group for the advice given in connection with the redecoration of the Pump Room. This advice was sought as soon as it had been decided that the Pump Room should be decorated and I assure you that no-one ever had in mind what is indicated in ASTRAGAL's remark that it should be "done up" in brown and two shades of green. The Georgian Group alone was consulted and its recommendations gladly accepted.

J. E. BODDINGTON.
Spa Director
Bath

[In his note, referred to above, ASTRAGAL made a plea for the restoration of the railings in Bath's squares and circuses and the removal of allotments in front of the Royal Crescent.—ED.]

COLONIAL OFFICE

Government Reconsidering Plans

Most of the peers who spoke in last week's House of Lords debate on the proposed Colonial Office building on the Westminster Hospital site agreed that the building, as at present planned, would destroy the beauty of the Abbey approaches. Lord Silkin, a former Minister of Town and Country Planning, was among those who pressed the Government to reconsider their plans.

Although Lord Morrison, Parliamentary Secretary, MOW, could offer no prospect that the Government would look favourably at the idea of abandoning the site altogether, he said that the question of the height, frontage, and accommodation of the building were under active consideration. Lord Chorley had said earlier that the Prime Minister had had more than one meeting about the matter in the last few days, and Lord Morrison said that if it had not been for the recent wide discussion of the issue, the Minister would have been within 10 days of calling for tenders. A decision would be announced as soon as it had been reached.

RIBA

President Reviews Past 50 Years

A brief comparison between conditions in architectural training and practice fifty years ago with those existing today was made by A. Graham Henderson, president of the RIBA, when he presented prizes to students at a general meeting of the Institute on Tuesday.

The greatest handicap to architectural students at the beginning of the century was, he said, the lack of systematic instruction in design. This led many would-be architects to follow the mannerisms of some of the leaders of the profession.

After referring to the growth of the schools of architecture, Mr. Henderson discussed practical training. Being in direct touch with actual working drawings and with work in progress from early entry to the profession was undoubtedly a great advantage, he said. The technical side of the profession was absorbed almost subconsciously. Students learned that the first essential of a working drawing was that the tradesman (not necessarily very intelligent) who was to build from it could understand it, and that there was a business side to architecture which the client, at least, considered to be of some importance. By the time they had passed their professional examinations they were more fully qualified than the student of today who had completed a five-year course at a school of architecture with little or no office experience. They had a more evenly balanced, if less thorough, knowledge of certain aspects of the profession.

In the days he was talking about, said the president, tradition still dominated design, though there were some signs of revolt. Low building costs permitted the elaboration of detail which the client demanded as the outward symbol of his prosperity, or which the architect considered as essential evidence of his skill and knowledge. Constructional methods were still traditional. Under these conditions it required men of exceptional talent to produce works of any significance, work where function, proportion and detail were harmoniously related. However, a large proportion of the work done was copybook stuff.

What, in comparison, was the position of architecture today? The social and economic conditions, particularly the latter, had completely changed. Scientific progress had changed methods of construction. We had to construct with materials which were available and not with those we would like to use. We could not afford elaborate detail. It followed inevitably, therefore, that architectural quality and the expression of this has to rely on new factors, or, rather, it should be said on basic factors which was evidenced in the best work of the past, but without the traditional trimmings which the past permitted or demanded. It was not necessary for him to catalogue these basic factors. They, no doubt, formed the framework of the instruction given in schools. Today's conditions were a challenge to skill, which would help, and not hinder, the future development of architecture.

Because the new generation of architects would be more or less forced to express themselves in such basic forms, it did not mean that their work, as architecture, would be superior to the work of past generations, or that nothing was to be gained by study of the best work of the past.

NFBTE

Housing and Defence: A Warning by the President

The provision of houses should be regarded as part of our country's defence programme, said Robert O. Lloyd, speaking last week at the annual general meeting of the NFBTE. Mr. Lloyd, who has now been succeeded as president of the Federation by Stephen Hudson, also spoke of the danger of a reduction in the licensing limit driving work into the black market.

One of the lessons of the last war, he said, was that if there was a shortage of living accommodation, schemes such as those for the evacuation of mothers and children, for the billeting of troops and transferred war-workers, and for the finding of shelter for those whose homes were destroyed by air-raids, could not be carried out properly. The need for accommodation was serious, and unless housing was speeded up we might well find ourselves in an impossible position in the event of war.

This was no time for political prejudice. We not only wanted more houses but we wanted them at the lowest possible cost to the rates and taxes. This could be done if Mr. Dalton, who had taken over the responsibility for housing from Mr. Bevan, made it one of his first jobs to sweep away the 4:1 ratio and to give the private builder the scope to build estates instead of building piece-meal. To force families whose need for homes was fully established, and who were willing to get them built privately at no cost to public funds, to live in heavily subsidized municipal dwellings was false economy. There must be a change, and an early one, in housing policy.

During 1950, the efforts made by the Federation to increase productivity had been retarded. Not only had output been restricted by Government action but, despite the good work of the manufacturers who had increased production, there had been serious shortages of materials throughout the year. Work all over the country had been slowed down. Indeed, on some sites, it had been brought almost to a standstill. Some degree of control might be necessary but the Government should realise that the industry could only give of its best if emphasis was shifted from what could not be done to what could be done. A far more positive outlook was wanted.

Until the materials pipelines were full, efforts to achieve greater efficiency and reduced costs, by means of better planning in advance, of improved site organization, of the better training of all from the management down to the operative, and of the introduction of payment by results schemes on a wider scale, would be seriously handicapped. No operative could be expected to give of his best when he realised that by so doing he was working himself out of materials and possibly out of a job. The defence programme would make heavy demands on those materials most urgently needed, such as bricks, steel, cement and timber. But we must have these essential materials. To take timber as an example, we had only to look at the report of the Anglo-American Productivity Team, which stated: "It is not necessary to emphasize the increased efficiency and economy which can be secured by adequate supplies of timber at a reasonable price. The use of unsuitable timber and substitute materials substantially increases the cost of British building."

Building costs were high—largely because of steady increases in the prices of materials. The second Girdwood Report showed clearly that success in reducing the cost of building work, through improved output and economies in design and specification, had been more than offset by rises in the prices of materials. Building costs could be kept down only if the prices remained reasonably steady.

IUA

Second International Conference

The International Union of Architects is to hold its second congress and exhibition at Rabat, Morocco, from September 23 to 30. The theme of the congress will be "How the Architect is Tackling His Task." New building, rebuilding, redesigning and the outlook for the future will be discussed.

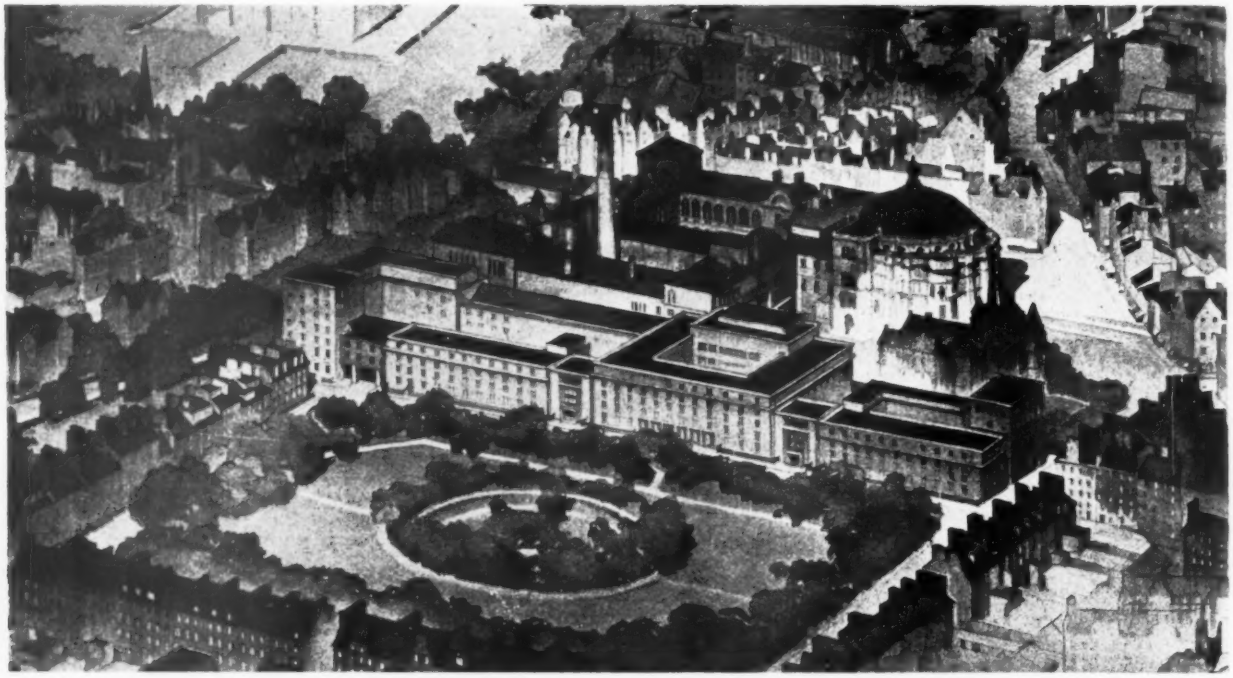
COMPETITION

College for Poole, Dorset

The Dorset County Council invites architects to submit designs in competition for a college of further education to be erected at Poole, Dorset. The prizes will be: first, £1,000; second, £500; third, £300. The assessors will be: J. Leatheart S. A. W. J. Johnson-Marshall, H. E. Matthews, J. Haynes, H. J. Shelley. The last day for the receipt of designs will be September 30: Questions will be received up to April 30.

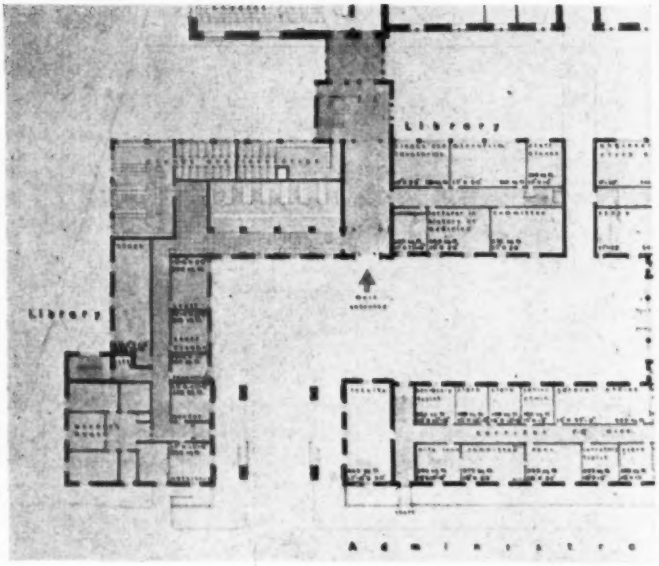
Conditions may be obtained from the County Education Officer, County Hall, Dorchester, Dorset. A deposit of £1 1s. to be made payable to the County Treasurer, will be returned on receipt of the design.

FIRST PRIZE WINNING DESIGN FOR MEDICAL



Sketch showing proposed building in relation to domestic architecture of George Square

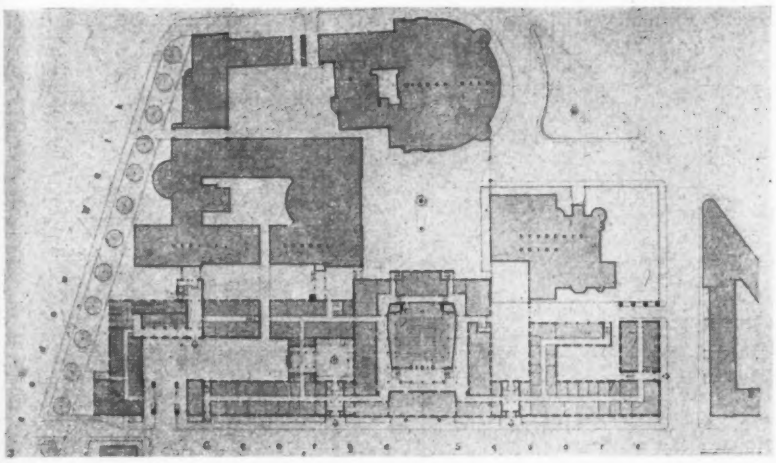
Existing buildings on north side of George Square which are to be demolished



Administration

The proposed extension to medical buildings which form part of Edinburgh University has caused a great deal of controversy. Without commenting at this stage we publish the design of the first (1,000 guineas) prize-winner, W. N. W. Ramsay, of McNair, Elder and Ridley, 529, Sauchiehall Street, Glasgow. Following is the report of the assessor, A. G. R. MacKenzie :— The conditions admittedly presented a very difficult problem in as much as they envisaged the designing of a building to give the maximum accommodation on that part of the site already available, which at the same time would not be out of harmony in form, materials and scale with the remainder of George Square, whether that remainder was re-designed (as proposed by Dr. Holden) or not. Many otherwise well considered schemes have failed by neglecting to give due stress to one or other of these somewhat conflicting requirements. I find that alone among the competitors, the author placed first has designed a facade to George Square which, while not in any way reproducing the existing 18th century domestic architecture, yet is entirely in harmony with it, so that the general character of the Square may be maintained whether the remainder is re-designed or not. I consider it fortunate that as a result of the competition a design has been obtained which goes far to restore the architectural unity

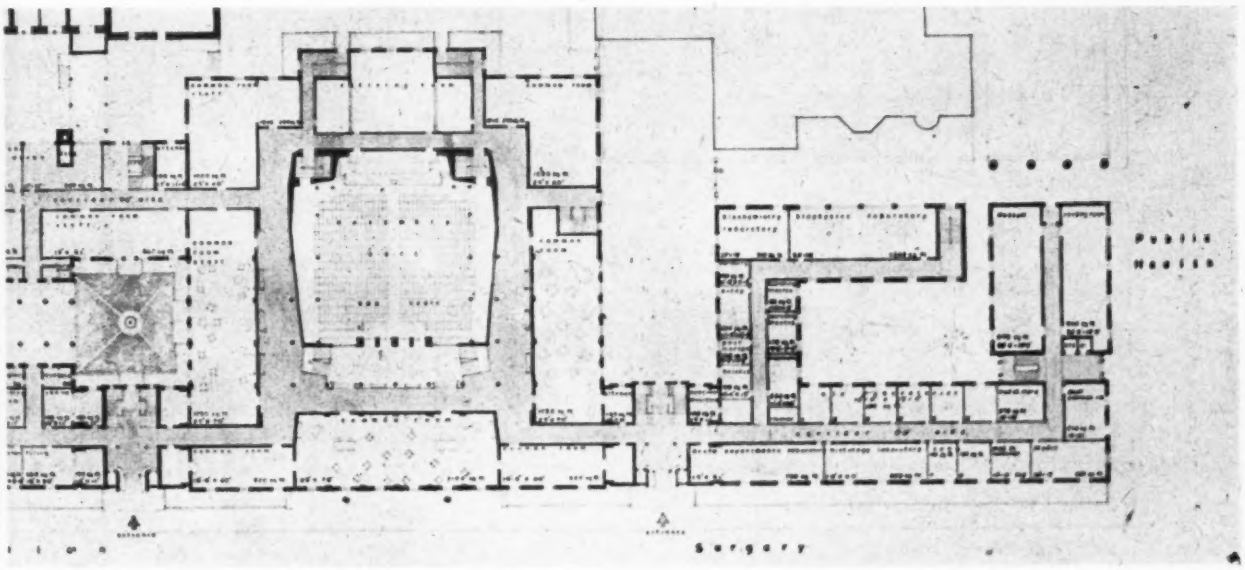
SCHOOL EXTENSION, EDINBURGH UNIVERSITY



Left, Block Plan

Below, Elevation to George Street

Bottom, Ground Floor Plan



Assembly Hall and Common Rooms

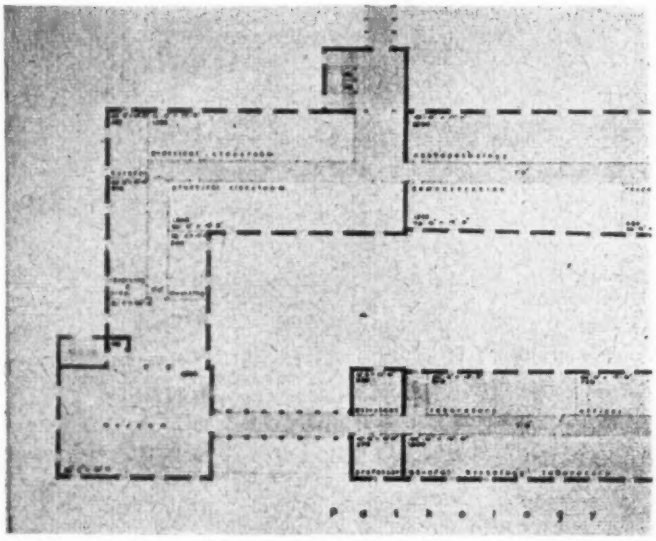
Laboratories, Reading Room, etc.

of the Square, referred to by Sir Patrick Abercrombie in his report on the City of Edinburgh as having been destroyed by the existing 19th century buildings on the site. All the accommodation required has been provided, though this cannot be said to have been carried out in the most efficient manner. I refer particularly to the circulation, the adoption of a uniform width of 15 ft. for classrooms, laboratories, etc., the planning of the physiology practical classroom and the placing of dissecting room No. 2. Many of these faults appear to be due to lack of familiarity with the requirements of a medical school and they would no doubt be eliminated, after further consultation with the Heads of Departments. The plan, however, is of a very flexible character, its well-lit blocks arranged round well-ventilated courtyards have certain advantages over the closed light-wells shown on many of the designs, and I consider that within the general framework, the planning could be amended to meet all the reasonable requirements of the University. Upon checking the author's statement of cubic contents of the building, it was found that the estimated cost should be £1,296,413. I consider the design could be carried out within 10 per cent. of this amount; plus any increase due to rise in cost of material and labour since December, 1949. *(See overleaf for the winner's report.)*

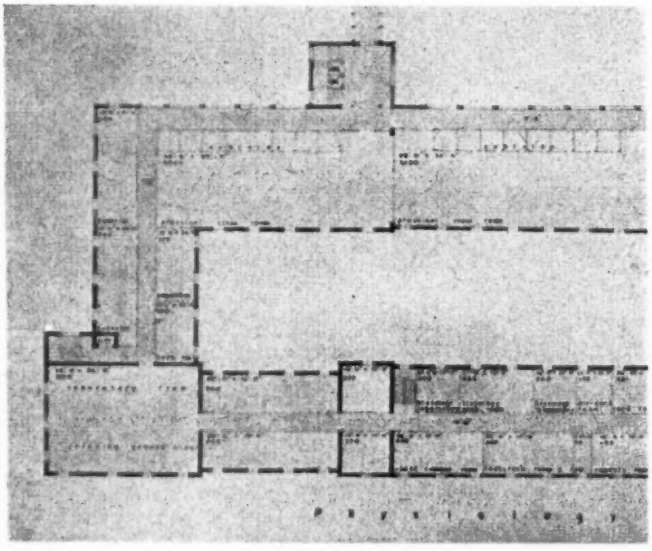
FIRST PRIZE WINNING DESIGN FOR MEDICAL

(*Continued from previous page.*)

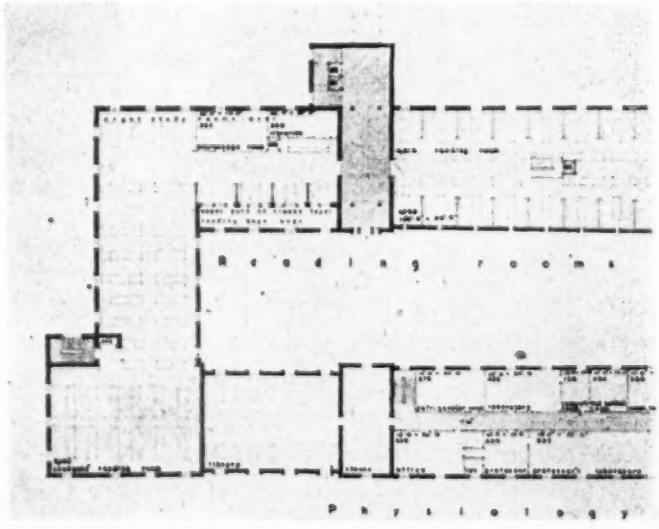
Following are extracts from the winning competitor's report :—It is considered that a main characteristic of the existing buildings in George Square is the extent to which interest is achieved by variations of plane on an otherwise flat facade. The new facade to George Square is therefore an essay in recessed and projected surfaces of varying materials on a building which preserves the existing building line and the existing sunk areas in front. The remainder of the Square gains in interest from the diversity and number of small separate buildings in the length of each side. Owing to the size of the planning units in the new building no attempt has been made to copy these variations superficially and the new facade is in three sections only. A screen of new buildings is built to the height of the existing medical block (see block plan on previous page) and is carried forward to the building line at George Square at the Meadow Walk end. This not only bolsters up the composition to the Square where it is weakest but also provides, to the Meadow Walk elevation, a bulk which is strong enough to fit the existing medical block. In elevational treatment it is made quite self contained, the link with the existing block being in the nature of a glass screen. The street to the west side of George Square (the medical school frontage is on the north side) is extended into the new site as a quadrangle forming a break between the high portion of the new building and the section to the George Square frontage. The drop in height between the two sections has been made in one step to emphasise this height difference, an effect which is quite typical of the Edinburgh massing. Two blocks facing George Square are four storeys in height to agree with the remaining sides of the Square. The centre block is carried up another storey to the same height as the centre portion of the existing medical block. This allows the centre portion of the George Square elevation to be raised enough to dominate the form of the Square slightly. Blocks behind that which faces George Square are the same height as the roof of the existing medical block. In general the students' classrooms and large laboratories, in part, have been kept to the rear of the quadrangle and the staff rooms and laboratories to the George Square frontage. The students' common rooms are grouped round the assembly hall on the ground floor of the centre block facing George Square. The lecture theatre block has been placed to the rear of this block, with exits to the court-yard. This position is central and quiet. To simplify the arrangement of these theatres, four have been supplied instead of three. (Also on the ground floor are administration rooms, laboratories and reading rooms.) The anatomy receiving department has been so arranged that the reception and preparation may all be done in the existing building with access to the existing and the new tank rooms. If this is not desired, accommodation is available in the new block for an additional receiving room. The physiology lecture theatre has been placed in the ground floor physiology laboratory near a new main cloak-room and on the vertical circulation to the physiology classrooms. This has been done to get the necessary height for a steeply graded floor without the necessity for utilising two floors of the new building. The existing laboratory has been transferred to the first floor of the new block.



Third Floor Plan. Classrooms, demonstration and research rooms and laboratories.

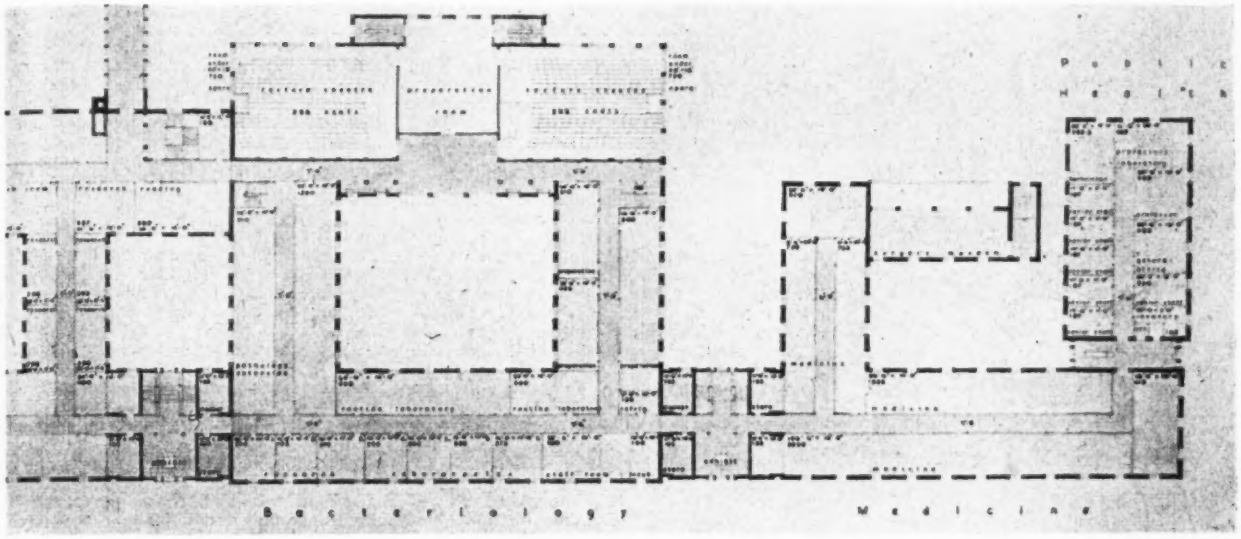


Second Floor Plan. Practical classrooms, laboratories, staff common room, lecturer's, reader's and tutorial rooms and workshops.



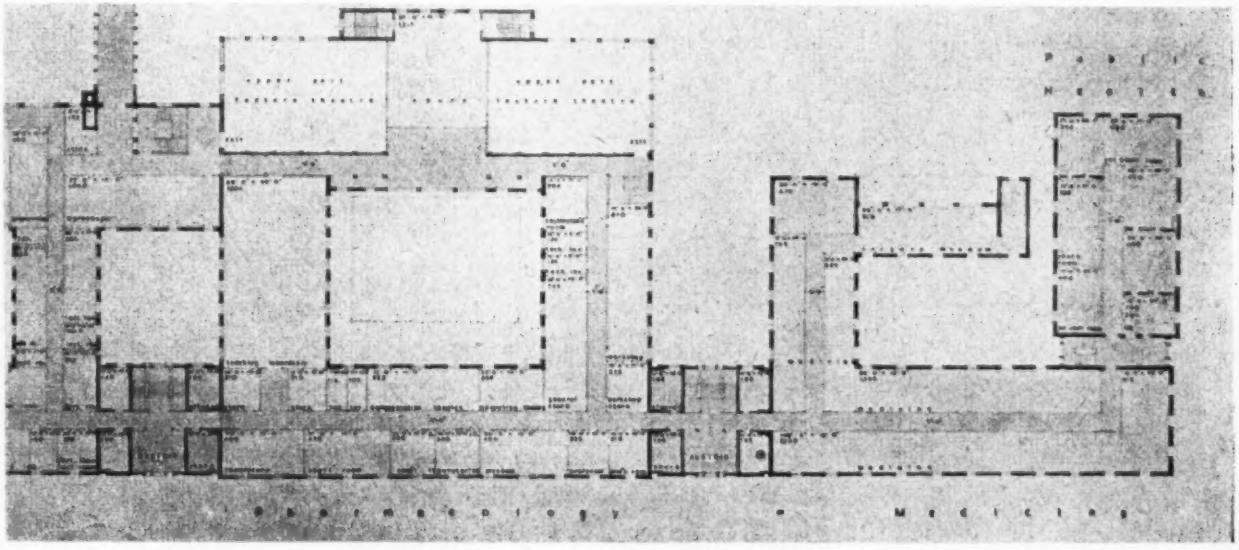
First Floor Plan. Library, reading rooms and laboratory.

SCHOOL EXTENSION, EDINBURGH UNIVERSITY



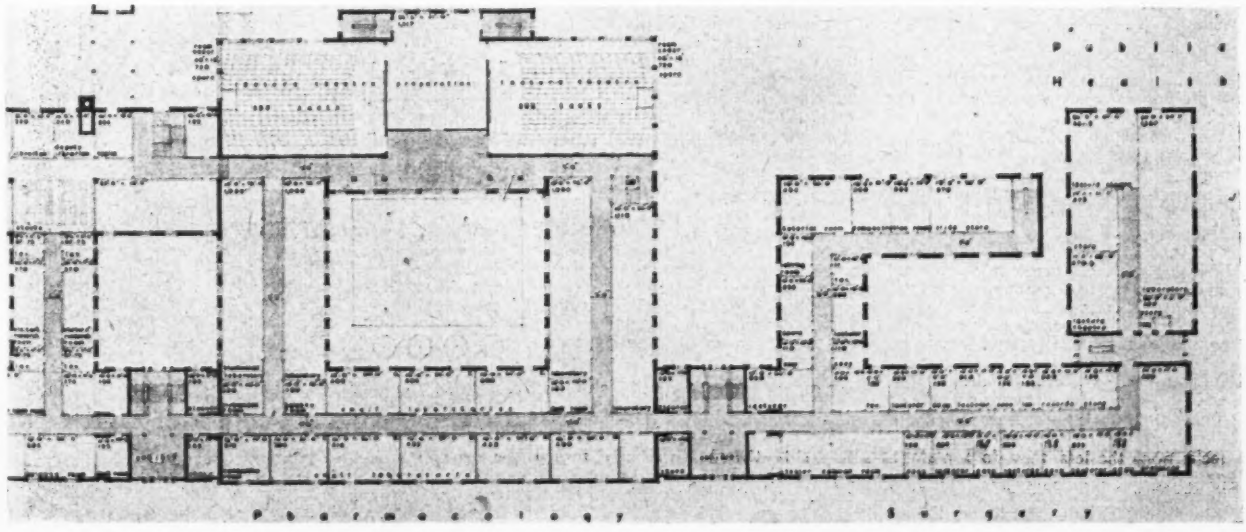
Demonstration and operating theatres, staff room, technician's room, professor's room and stores.

Medicine, surgery museum, staff rooms and photo room.



Laboratories, preparation rooms and lecture theatres.

Medicine, surgery museum and senior staff rooms.



Lecture theatres and laboratories.

Small lecture theatre and staff rooms.

Last week Ernest Watkins reported on the proceedings at the Old Bailey when Raglan Squire and Messrs. Wates (South Western Estates) Ltd. were charged with an offence under the licensing regulations. This week he examines the circumstances which led to the prosecution.

ERNEST WATKINS

Problems Arising from the Squire Case

This article is intended to examine the circumstances of the contract with the Nuffield Trust and Messrs. Wates, which led in the end to the prosecution of the architect and the builder under Defence Regulation 56a, in the hope that it may be possible to extract from them some practical points of guidance to the profession. While the present system of licensing lasts, no one can feel certain that he may not slip over the ill-defined border of what in the opinion of the Ministry is, or is not a crime.

The contract on which Raglan Squire was engaged was a special case. There was pressure from the client and from the circumstances of the whole undertaking to have the job completed by the end of July, 1948, to avoid any break in the facilities which the Nuffield Centre makes available for the Forces. That was emphasized by the Trust at the very start and it influenced everyone's thinking throughout. Then there is the status of the Nuffield Trust. Everyone, rightly or wrongly, seems to have treated the Trust as the equivalent of a public body, with a public body's exemptions from some of the restrictions imposed upon the private citizen (in fact, the Nuffield Trust is a large but still private charitable organization carrying out, in effect, many of the semi-public responsibilities that the public bodies themselves cannot or do not do). Everyone assumed that there would be no difficulty over licences. There was no difficulty over the licences that were applied for. The crux of the case was that the final licence was never applied for at all. These facts make the case one which offers no clear-cut rule for the future guidance of architects; none the less, they do contain, or suggest, some valuable lessons to the architect in practice.

The first is that it must be for the architect to accept—deliberately and consciously—responsibility for the whole job, including the task of making the work legal, by seeing that a licence is obtained, and of keeping it legal by seeing that the licence figure is not exceeded. That may seem too obvious to need re-statement; but is it? It means, for instance, as Messrs. Arcon realized, that the client should be told at the start all that is involved in our present system of building control. It means that a client must be told that he may not be able to have all his own way. It may mean seeing that he doesn't get it. In addition, it means that the architect can only start on a safe footing when he has prepared bills of quantities and plans for all the work, when he has checked their pricings and when he has seen the licences that cover them.

The second phase of his responsibility begins when the contracting and the sub-contracting is arranged, for here again it is he who must make certain that the sub-contractors will only be working within his bills of quantities and that he has a system adequate enough to check that they do so in fact and that no one can give them a valid order without his approval and without that variation in fact coming at once within his own system of cost control. The third field of his responsibility covers the work on the job itself.

THE ARCHITECT'S GREATEST DANGERS

The day never existed when the architect had any excuse for sharing the final responsibility for the work on the job with anyone else, but there was a time when, if the client demanded a modification, at least no criminal prosecution was likely to follow it. That day has gone. No architect today can afford to allow any client to make any variation in any part of a contract before the architect himself has made certain that the licence position will not thereby be varied. And then, of course, the architect must be on his guard against time. Time, overtime and idle time are among his greatest dangers.

Even so, there may still arise the case, such as this, in which the proper calculations cannot be made beforehand, at the time when the application for the licence is still under discussion. They are rare, but they may still crop up. In such a case the architect is in serious danger. The fact that he has no sure guide in what is to be done may be no help in subsequent trouble; on the contrary, it invites the comment that he remains, as the man with the professional experience and qualification, the one man capable of keeping the operation within the law. He must make his mind up before he starts whether he is prepared to run this risk. If he decides that he will, he must make the most careful precautions to eliminate as much risk as possible, just as he would if he decided to make a difficult ascent without a guide. The actual precautions to be taken will vary with the job, but one suggestion does present itself; a sight of the weekly wage sheets of the contractor and of each sub-contractor may prove the most useful and the most prompt guide to the work actually done, for the wages sheets are the one set of records that no contractor can allow to fall into arrear and there is usually a reasonably close and constant relationship between wages paid and the total cost of the work done.

WHEN IS A LICENCE NEEDED?

There is also the problem of what work needs a licence and what does not. This case gives little fresh guidance in the matter. The rough working rule that licensable work is the equivalent of landlord's fixtures and fittings, and non-licensable work the equivalent of tenants' fixtures and fittings was accepted, but only as a working rule. There have been no court decisions on this of a kind which have any application beyond the facts peculiar to the one case. With all respect to the MOW and its staff, no one outside the Ministry can regard the existing Orders as models of clarity. There was, for instance, the position of the architects' fees themselves; that has been cleared up—or at least made definite—by Ministry circular. They should be included as part of the total to be licensed, but, if the Ministry claims that this fact is made clear by the original Defence Regulations themselves, their appreciation of the English language far outranges that of the ordinary layman. The Regulations have not the clarity that a part of the penal code of the country should have, and it is a matter for regret that the profession's own bodies have not done more to induce the Ministry to re-write this all-important Regulation.

PRUDENCE—THE ARCHITECT'S GUIDE

For the architect in doubt, there is the Ministry itself as a possible guide; but the process may take some time, and the more difficult the point the more time it will take to extract an opinion that can be relied on. In the end, the architect will probably be compelled to make his own decision and to stick to it. He is entitled to do that and he cannot be criticized for not having asked the Ministry first. The only useful advice is the familiar advice to be prudent. It is not for the architect to give himself, or his client, the benefit of the doubt. A jury may not.

The final point to bear in mind is that the question of whether a job is properly licensed or not governs whether the contract under which it is done is legal or not, and no one can recover any moneys due to be paid under a contract which a court has found to be illegal.

DIARY

Competition for Medical Buildings, Edinburgh University: Exhibition of three winning designs. Monday to Friday, 10 a.m. to 7 p.m. Saturday, 10 a.m. to 5 p.m.
FEB. 13 TO 19

Furniture and Allied Trades' Exhibition. At Earls Court, London. (Sponsor, British Furniture Manufacturers' Federated Association.) Open to public: Feb. 17, 10 a.m. to 7 p.m.; Feb. 19-22, 2 p.m. to 7 p.m.; Feb. 23, 10 a.m. to 5 p.m. Open to trade from Feb. 13-23.
FEB. 13 TO 23

The Construction of an Extension to a Factory at Silvertown. F. G. Etches. 11, Upper Belgrave Street, S.W.1. (Sponsor, ISE.) 6 p.m.
FEB. 8

Thoughts on Architecture Today. Michael Waterhouse. At the University of London: Senate House. A course of two lectures. 5.30 p.m.
FEB. 8 AND 15

Five Years' Housing in a Country District. Mrs. Spurgin. At 13, Suffolk Street, S.W.1. (Sponsor, HC.) 1.15 p.m.
FEB. 13

Midlands Building Exhibition. At Bingley Hall, Broad Street, Birmingham. 11 a.m. to 7.30 p.m. (except Sunday).
FEB. 14 TO 24

Lamps and Lighting—A Record of Industrial Research. L. J. Davies. At Central Hall, Westminster, S.W.1. (Sponsor, IEE.) 6.30 p.m.
FEB. 14

The Architecture of Transport. Exhibition at the RIBA, 66, Portland Place, W.1, showing projects in this country and a selection of material from abroad. Weekdays 10 a.m. to 7 p.m. Saturdays 10 a.m. to 5 p.m.
FEB. 22 TO MAR. 22

Floor Finishes. (Architectural Science Board Lecture.) F. C. Harper. At 66, Portland Place, W.1. (Sponsor, RIBA.)
FEB. 27

The Work of the Northern Ireland Trust. Sir Lucius O'Brien. At 13, Suffolk Street, S.W.1. (Sponsor, HC.) 6 p.m.
FEB. 27

FLATS

in BROMLEY ROAD, LEWISHAM

designed by FRY, DREW and PARTNERS

assistant architect J. B. SHAW

Passfields, a group of 77 flats and 24 maisonettes, lies to the east of the main Bromley Road on a 4-acre site. The proposed widening of this road meant that the space available for building was reduced and, as the road carries very heavy traffic, it was desirable to avoid rooms facing in this direction on the western edge of the site. To guard against noise disturbance the children's playground is placed as far as possible from living rooms and bedrooms.

East facade of Block D looking north-west.

Block A on the left, with the junction of blocks E and D beyond.

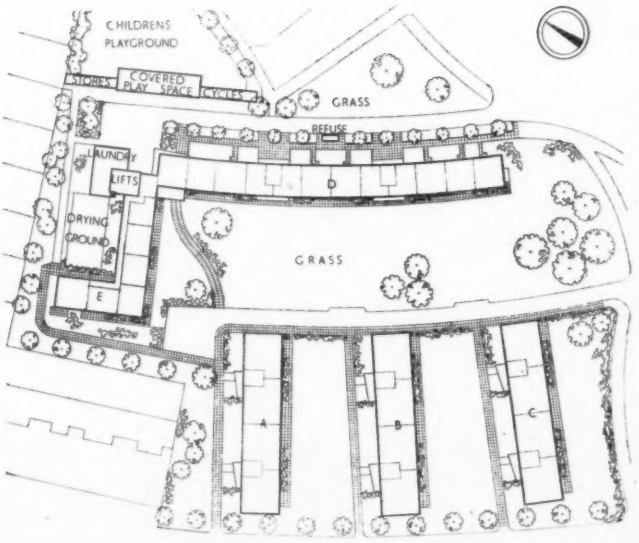
FLATS

in BROMLEY ROAD, LEWISHAM
designed by FRY, DREW and PARTNERS

SITE.—The site is almost level and without trees, but trees will be planted along the main road frontage and to screen the children's playground from the surrounding semi-detached houses. The shape and aspect of the site and the position of the main road suggested the long L-shaped block (to the permissible height) along the north and east, and three-storey blocks on the west, at right-angles to Bromley Road.

PLAN.—The three-storey blocks are identical and contain a total of thirty-six flats of two- and three-bedrooms, each with staircase access. Private stores and a refuse room are provided at the bottom of

Site Plan



Blocks A, B and C, typical ground and first floor flat plans. [Scale $\frac{1}{8}$"—1'0"]

each staircase. The short wing of the L-shaped block has balcony access and contains single room flats and flats with one bedroom. The long wing contains eleven flats on the ground floor and twenty-four maisonettes with three or four bedrooms on the upper floors. All the balconies in this block give direct access to one passenger lift and to three staircases, two of which occur within the wing itself and are structurally independent.

CONSTRUCTION.—The three-storey blocks have outer walls of 13½-in. solid brickwork and 9-in. brick spine walls carrying the concrete floor slabs. The five-storey block is a reinforced concrete box frame; external wall panels are of cavity construction with 4½-in. brickwork externally and 4-in.

Block E, typical upper floor flat plan

Looking north-east from the Bromley Road with block D in the centre, flanked by two three-storey blocks.

clinker concrete blocks internally. These panels are supported by a continuous projection of each floor slab, which is covered on the face by a course of brick tiles 1 in. thick.

FINISHES.—Floors are insulated against sound transmission with screeds of lightweight concrete 2 in. thick, and living rooms have floating floors of boarding on battens with glass quilt insulation. Externally, the main wall surfaces are buff coloured flint facing bricks with rendered panel walls.

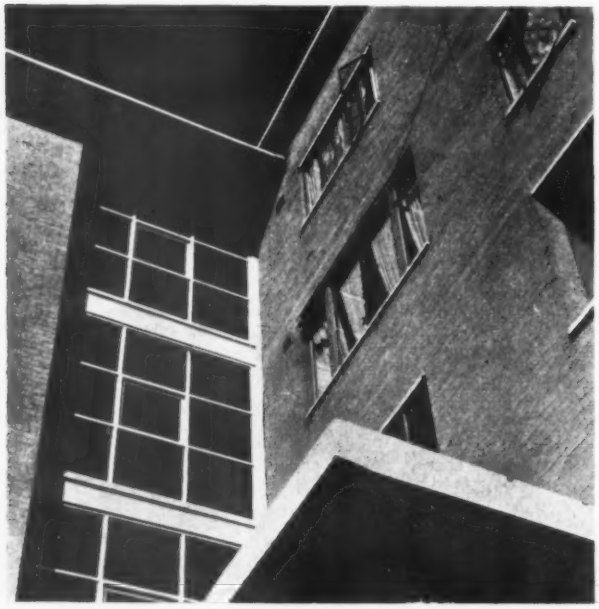
SERVICES.—Central heating and hot water are supplied from one boiler room below the five-storey block and a gas fire is provided in each living room.

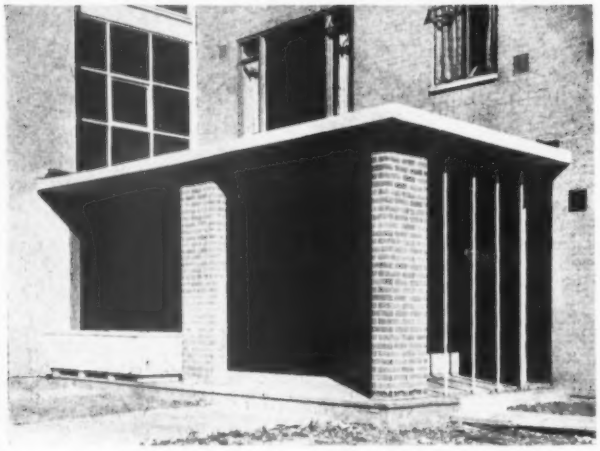
The contract price was £158,000. The general contractors were Wates, Ltd. For sub-contractors, see page 200.

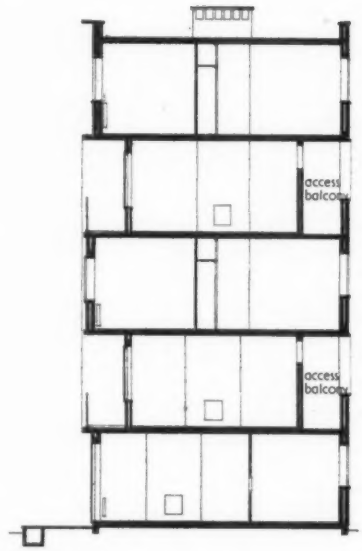
FLATS

in BROMLEY ROAD, LEWISHAM

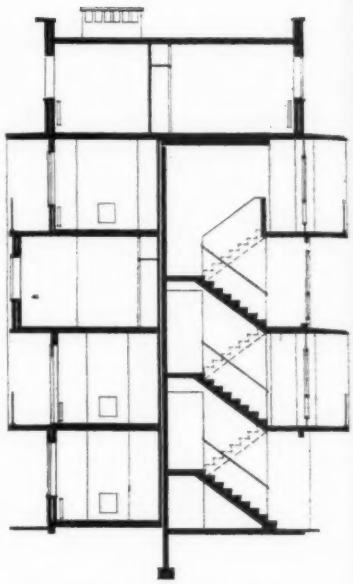
designed by FRY, DREW and PARTNERS



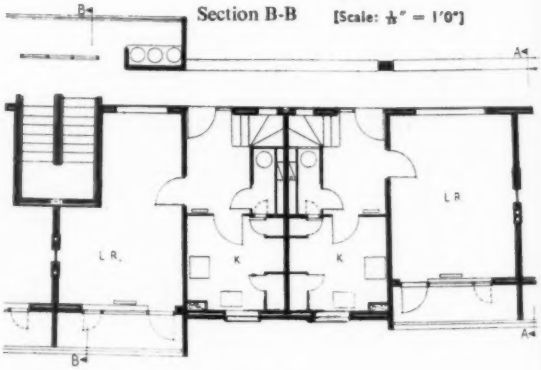




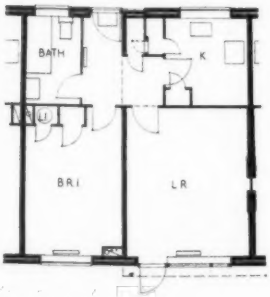
Section A-A



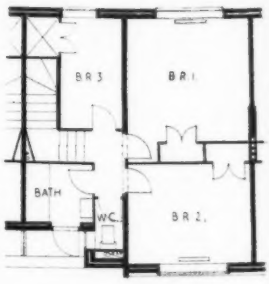
Section B-B [Scale: $\frac{1}{8}$" = 1'0"]



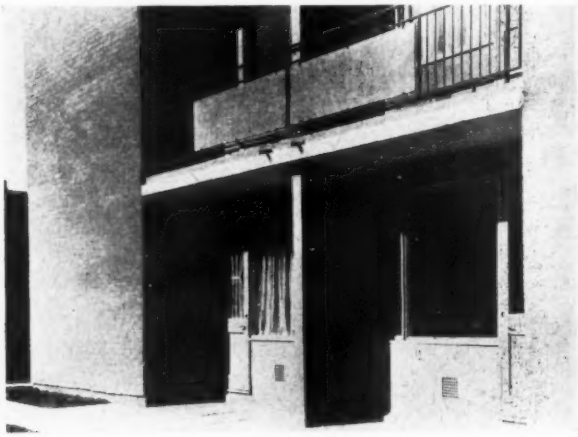
Block D, first floor maisonette plan



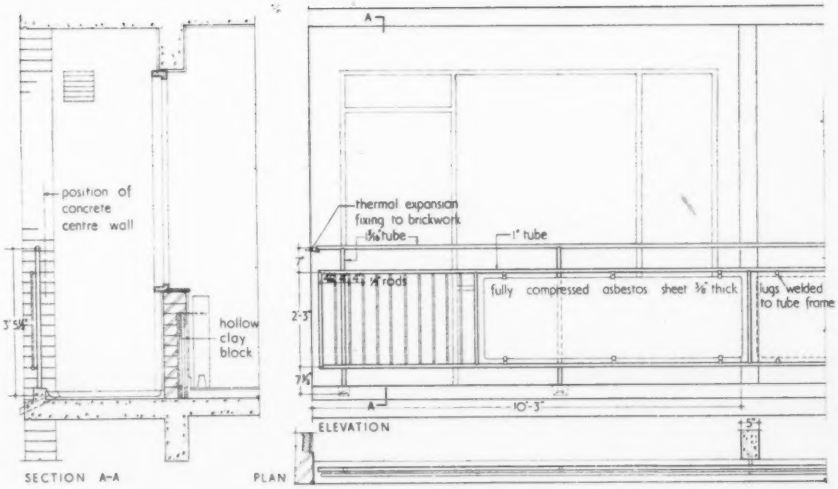
Ground floor flat plan



Second floor maisonette plan



Above right, west facade of block D looking north. Opposite page, above left, staircase window at the link of blocks E and D. Extreme left, entrance at north-west corner of block D. Left, ground and first floor balcony on south facade of block E.



Private living room balcony, block D. [Scale: ½" = 1'0"]

These flats provide a good example of collaboration between architect and engineer. In the following discussion, they both answer questions put to them by AJ *editors (who can be identified by referring to the first page of the* JOURNAL*).*

FLATS AT LEWISHAM

Discussion between the Architects, the Engineers and the Editors

EIGHTEEN : We should like to know what made you choose this form of construction. Did you have the " box frame " at the back of your minds when you designed the building ?

ARCHITECTS : Not exactly—the construction and the design are really one process and we worked in close collaboration with the engineers. Collaboration is, surely, essential if the design is to be kept under control.

EIGHTEEN : Is this an economical form of construction ?

ENGINEERS : It was most suitable for these particular flats. The planning produced the series of dividing walls between the flats, which should, of course, be solid, so it was logical to use them for carrying the floor loads.

TWENTY-THREE : Would columns plus an infilling not have been just as efficient ?

ENGINEERS : The vertical slabs of the box framing can be pierced wherever required for the access balconies, etc. ; a system involving the use of columns would be less flexible in this respect.

TWENTY-THREE : How about the floors—would not pre-cast units, for example, concrete ribs and hollow blocks, be cheaper ?

ENGINEERS : No, experience has shown us that an in-situ floor slab, 5 in. thick, is cheaper.

TWENTY : Did the box frame restrict your freedom of planning ?

ARCHITECTS : Only in some cases. For example, in the ground floor flats below the maisonettes, the intermediate cross wall of the box frame makes planning round the entrance halls and bathrooms rather tricky.

EIGHTEEN : Did the protruding type of balcony affect the choice of a constructional system ?

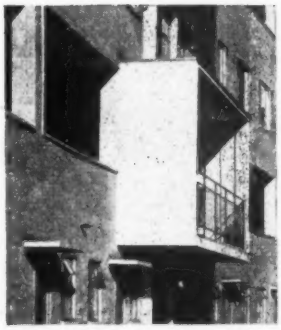
ARCHITECTS : On the contrary, we wanted a balcony for each flat and the construction suggested a balcony of this type.

TWENTY-THREE : Why ?

ENGINEERS : This type of balcony is very simple and economical to construct if you have a box frame. Normally, they would involve quite a complicated structural design, but, as it is, we have cantilevered them out simply at the cost of the side walls of the balconies.

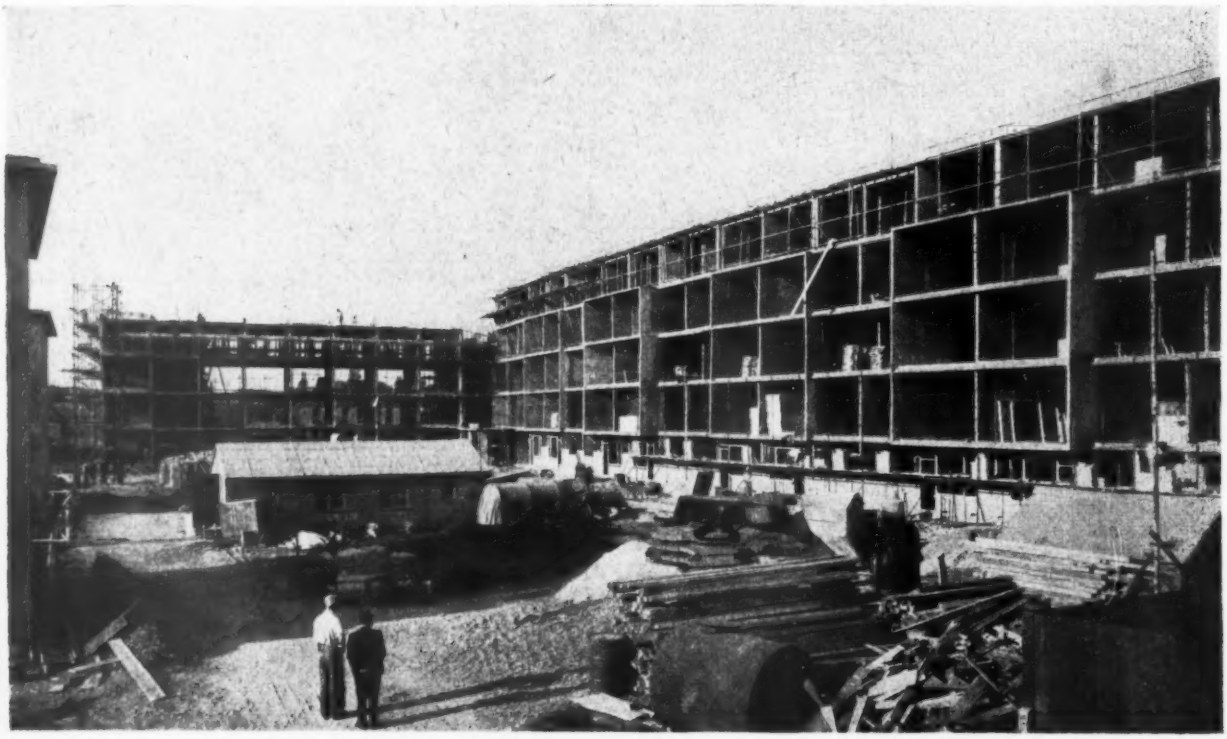
TWENTY-THREE : The span of your box framing is rather small. Could you not have spanned from party wall to party wall : is there an optimum span from the point of view of economy ?

ENGINEERS : A contractor would think one mad if one suggested spanning 22 ft. instead of 11 ft. Really, it depends on the relative cost and availability of the shuttering and the steel reinforcement. We have been studying the question of an optimum span and believe it to be between 17 ft. 6 in. and 18 ft., but when this job was designed, steel was still on licence and naturally smaller spans saved steel.



" the protruding type of balcony "

Below, general view of the five-storey block during progress.



TWENTY : Is LCC consent still required for box frame construction ?

ENGINEERS : Yes, but whereas it used to be necessary to send complete and detailed information with the application, all that is now required is a request to design according to BS 114, and consent is only a formality.

TWENTY : Did the LCC raise any objections in this case ?

ENGINEERS : Only regarding one or two minor points. For example, we had to put steel reinforcement in the walls. In our opinion, except for the end walls, this was quite unnecessary and, if anything, weakens the concrete. In addition, it raises the cost, since there is a lot of extra work in packing the concrete around the reinforcement.

TWENTY-THREE : I understand you used steel shuttering ; could the wood wool insulation for the party walls not have been used as permanent shuttering ?

ENGINEERS : Even when you use wood wool as shuttering it still requires a framework to support it. The system of shuttering used was decided on because the contractors had it in stock. We were hoping that these flats would be the prototype for a number of schemes and would have preferred to have designed a special system of shuttering, but contractors are not prepared to speculate on the possibility of there being more work of a similar nature and therefore use what they have. One of the main difficulties of post-war housing is that there is no large scale programme of building which could take full advantage of such a technique as this. If there were, it would mean a very considerable economy. The main cost of box framing is in the shuttering ; with a large scale programme it should be possible to reduce the price of this to a third of the present figure. In Denmark this system is used most economically. The system used at Rosebury Avenue was the same as is used in Denmark, and, after a year, they were getting down to approximately Danish labour costs. The key to any form of reinforced concrete construction is the design of the shuttering. The average contractor doesn't pay sufficient attention to it, but one cannot dictate too forcibly to the contractor ; having accepted his tender, one must leave him to decide how such things are done. If the architect and the engineer were also the contractor, the situation would be very different !

TWENTY-THREE : What type of cranes were used ?

ENGINEERS : The contractor used three cranes with standard jibs of 60 ft. and special swan-neck extensions to reach over the buildings.

TWENTY-THREE : Would the new mobile tower cranes have helped ?

ENGINEERS : If concrete is poured in-situ, it is not so advantageous to have a tower crane—but, once again, it was a question of the type of equipment which the contractor had in his possession. One cannot interfere too much with contractor's methods, providing the job is done satisfactorily.

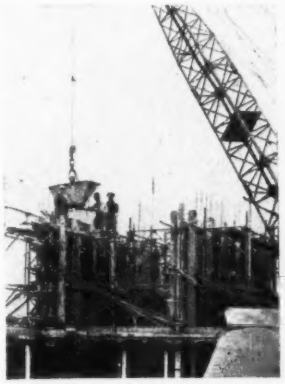
FOURTEEN : I believe you had to make certain "economy cuts"—did you have to cut insulation standards ?

ARCHITECTS : The heating insulation standards were not cut, but some cuts had to be made in the standards of sound insulation between flats.

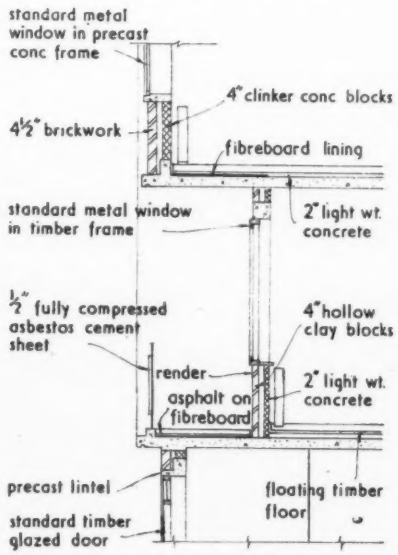
THIRTEEN : But you were able to use extra insulation above and below the recessed balconies.

ARCHITECTS : This avoids dangers of condensation on ceilings, unequal heating of floor surfaces, and excessive heat losses—there is only 5 in. of reinforced concrete between the rooms and the external air at these points—so the extra insulation is most important. It also helps from the point of view of sound transmission—the access balconies pass over some of the bedrooms.

"crane . . . with standard jib of 60 ft. and special swan-neck extension"

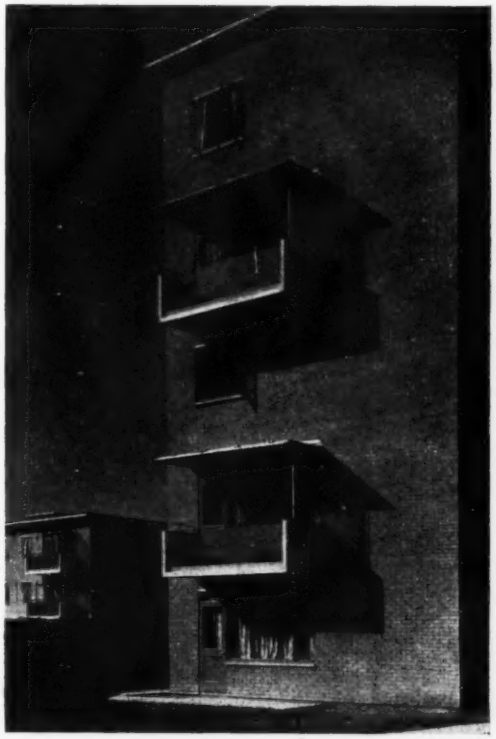


"if concrete is poured in-situ, it is not so advantageous to have a tower crane, but . . ."



"you were able to use extra insulation above and below the recessed balconies" (Above, section through typical recessed balcony) [Scale : ½"=1'0"]

Right, balconies on the south wall of the five-storey block.



" the protruding elements only extend from the first to the third floors."

FOURTEEN : Is the central heating plant adequate to cater for full loads in very cold weather ? If not, what provision is there for supplementary heating ?

ARCHITECTS : The plant was designed in accordance with the recommendations of the Egerton Report, and is a background system of heating. In very cold weather, heating has to be supplemented by the gas fires in the living rooms.

FOURTEEN : The background system of heating has evoked a good deal of criticism. The Abbots Langley experiments proved that, for houses at least, the " two stage " principle of heating is the least economical.

FIFTEEN : Are the lamp standards and outside wall lights, which we understand have been specially designed for this scheme, going to be mass produced and used elsewhere ? Have they proved to be as efficient as other designs of street lights using an equivalent amount of electric current ?

ARCHITECTS : The street lighting on this scheme does not have to comply with Ministry of Transport requirements, as the access roads are private roads. The fittings were designed only for this scheme, and there seems no point in mass producing them, as their use would be limited to the lighting of private roads.

ELEVEN : There seems to be some serious staining of the brickwork around the top of the chimney which rises above the laundry. Has any means been found to remedy this ?

ARCHITECTS : We think the staining at the top of the chimney is quite an attractive feature—the chimney capping was made flush with the face of the shaft so that the shaft would stain evenly at the top.

TWENTY : What composition of family does the two-room flat cater for ? What advantages does it have over the bed-sitting room type ?

ARCHITECTS : It is designed for one or two people, either young people without children, or old people. We have arranged the two-room flats to be near the lift or on the ground floor. The bed-sitting room type is only considered suitable for one person.

TWENTY : Could you not have avoided the long winding corridor in some of these two-room flats and the internal lobby in others ?

ARCHITECTS : From the point of view of the flat itself, the relatively large area of passageway is certainly a disadvantage, but providing this type of plan is adopted sparingly, it is justifiable when used for changing the direction of the main block shape and getting variety and flexibility in the layout.

TWENTY : Why do some flats have the kitchen off the living room, whilst others have them separate ; do tenants get a choice ?

ARCHITECTS : Only ten of the small flats have the kitchen opening off the living room—it gives variety to the planning, as I mentioned just before.

FIFTEEN : In some of the maisonettes both the windows of the living room are overshadowed by balconies—do you not consider this a disadvantage ?

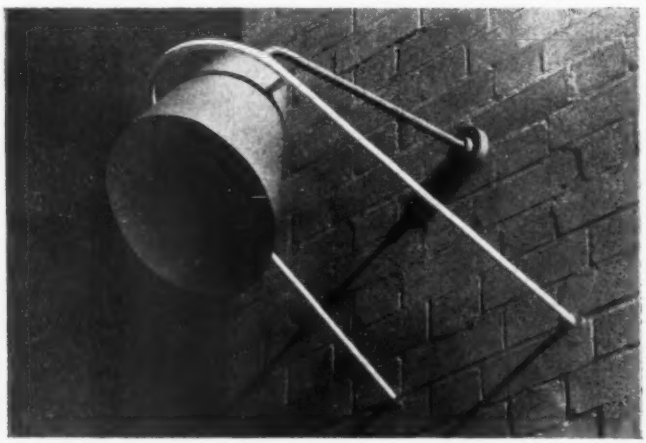
ARCHITECTS : It depends on the aspect. None of the living rooms are underlit, but they do get a certain reduction in the amount of direct sunlight in summer when the sun is high around midday. At other times of the year, with reduced altitude of the sun, direct sunlight enters the rooms. It is, of course, essential to have really large windows at the back of the balconies, and the projection of the balcony gives protection to this large window in exposed situations.

ELEVEN : The balcony drainpipes appear to drip down on to the path below—is this necessary ?

ARCHITECTS : Drain pipes from balconies into the interior of a building are fairly costly, and lead to all sorts of complications with a maisonette arrangement. The amount of water which comes from these pipes is small, and then only in very wet weather. It is not noticeable.

EIGHTEEN : On the south-west facade of the five-storey block, the protruding elements only extend from the first to the third floors. As there are two maisonettes above each ground floor flat would it not be a more logical expression of the planning, if this feature extended up to the eaves ?

ARCHITECTS : It might be more logical, but it would have been an unsatisfactory design.



" the lamp standards (left) and outside wall lights (above) . . . have been specially designed for this scheme "

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

TECHNICAL SECTION

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

THE INDUSTRY

By Brian Grant

LIBRARY PLANNING

Roneo Ltd., well known to all of us as the manufacturers of steel furniture and recording systems, have just produced a small, but informative, volume called *Planning the Library*. This starts with planning notes and continues, through all the usual types of shelving and other equipment, to book conveyors, trolleys, lifts and the many subsidiary items and specialized equipment for storing such things as newspapers and maps.

For shelving in libraries there is, of course, a good deal to be said in favour of steel, mainly because it is incombustible and is not attacked by vermin. With standardized parts it is also possible to build a bookstack up to almost any height, the uprights not only carrying the shelving but also serving to support the intermediate access floors. Pigeon hole fittings and card index drawers or catalogue page display panels are also produced in standard dimensions, so that almost any form of reference system can be built up.

This is a very useful publication, which should be kept for reference. From it one can learn quite a lot about library planning and lighting, and the optimum figures for temperature and humidity are given. There are also some handy notes on the construction of steel staircases and the construction of the intermediate concrete (precast or *in situ*) bookstack floors. (*Roneo Ltd., 17, Southampton Row, London, W.C.*1.)

INSULATING GLAZING

Messrs. Pilkington's Insulight double and multiple glazing was first announced some time ago and the firm has now issued a booklet which summarizes the essential data and contains some useful and easy to read condensation charts. Compared with an ordinary glass window, which has a transmission rate of 1·0 BThU per sq. ft. per hour per F°, two sheets of glass with a ¼-in. air space (which allows the manufacture of a thickness of unit convenient for normal glazing) have a conductivity of 0·57. Maximum insulation is given with an air space of ¾ in. when the transmission drops to 0·5 BThU, but this spacing produces an inconveniently thick unit for normal purposes.

So far as sizes are concerned the maximum available is 100 in. by 80 in., and the standard air spacings are ¼ in. and ½ in. The units are normally rectangular, but radiused corners and curved shapes can be produced, though each case must be considered on its merits. Three- four- and five-thickness panels are also produced for special purposes such as refrigerated showcases or for the glazing of special thermally controlled laboratories, but for purposes such as this it is best to consult the manufacturers.

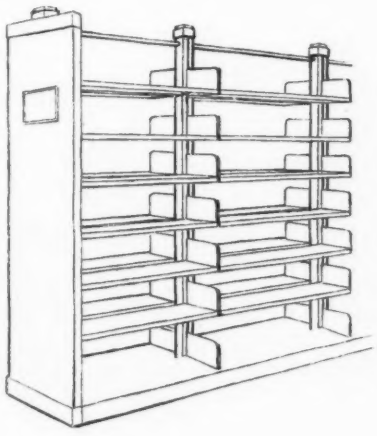
The condensation charts are useful in that for one, two, three and four thicknesses of glass, it is possible to determine at once the outside temperature at which condensation will form when the internal temperature and relative humidity are known. Similarly, of course, when any two of the factors are known, the third can be readily determined. (*Pilkington Bros., Ltd., St. Helens, Lancs.*)

NEON SIGNS

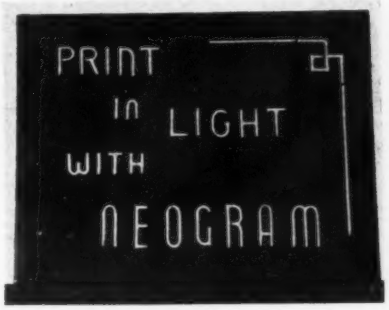
The ordinary neon sign has the disadvantage that groups of letters are formed from a single tube and that any sign, once made, cannot be altered. What seems to be a new method of attacking the problem has been evolved by Neogram Ltd., who make a series of individual letters and characters which are fixed to a back plate, so that the wording of the sign can be changed as often as required. The illustration shows the standard display unit, which measures 18 by 24 in. At the back, under the glass front is a metal plate, and to this plate are applied the individual letters, which stay where they are placed as each has two small magnets on its back. The display case costs £20, and the letters are 7s. 6d. and 8s. 6d. each in the 1½-in. and 2¾-in. heights which have so far been standardized. At the moment the only colour available is orange, but other colours are to follow later. An interesting point is that, although the standard model is suitable for normal A.C. supplies, other models are available for use with D.C. and on low voltages, so that these signs can be fitted to vehicles if required. Consumption is about 100 watts for a 50 letter sign. (*Neogram Ltd., Terminal House, Victoria, London, S.W.*1.)

WINDOWS FOR SCHOOLS

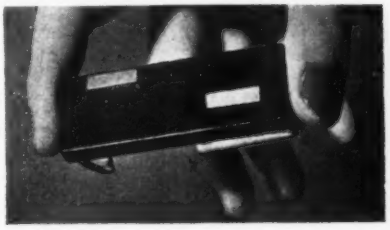
A new out-size booklet from Hope's gives details of a number of window designs



Bracket type of steel library shelving. Above, double faced shelving. Right, a constructional detail.



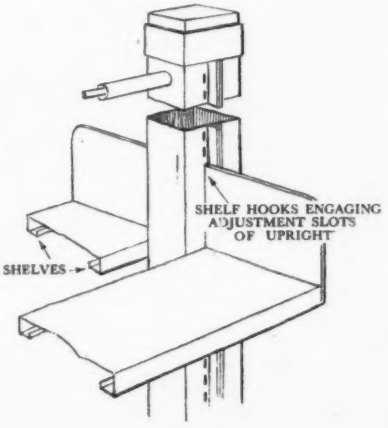
Above, Neogram portable neon sign. Below, back view of an individual letter, showing magnets.



which this firm has standardized for use in new schools. As is usual with this firm, each window is shown with admirably clear full size details. All the designs shown are based on a planning module of 8 ft. 3 in. but the cill heights can be varied, together with the spacing of any horizontal transoms or glazing bars, so as to provide a clear view through the glass for children of different age groups. In all the designs cleaning is considered, but all the windows are designed for single storey schools where the outside of the windows can be cleaned from the ground. The exception to this is the "Adelphi" type, where the two casements are vertically pivoted. All the windows shown are hot-dip galvanized, a process which, it may be noted, has not yet been forbidden. (*Henry Hope & Sons, Ltd., Smethwick, Birmingham* 40.)

PROHIBITED USES OF ZINC & COPPER

We have been asked, by the Lead Industries Development Council, to point out that in our list of suggested alternatives to certain uses of zinc and copper (AJ, Jan. 25, 1951, p. 133), we did not mention the used of lead. For several of the purposes described in this list (*e.g.*, flashings) lead is, of course, the ideal material, and zinc and copper have, in the past, always been considered as substitutes for lead. We are assured that, at present, lead is in good supply.

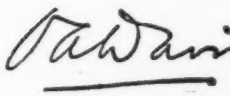


Prices are for work executed complete and are for an average job in the London area; all prices include overhead charges and profit for the general contractor.

CURRENT PRICES FOR MEASURED WORK

BY DAVIS, BELFIELD AND EVEREST, Chartered Quantity Surveyors

For Rates of Wages and Market Prices of Materials see THE ARCHITECTS' JOURNAL for January 25.



F.R.I.C.S., F.I.Arb.

PRELIMINARIES

To all valuations for measured work add for Preliminaries, Water and Insurances, according to the nature of the job (say)	11%

EXCAVATOR

Excavation

N.B.—The following prices are applicable to hand excavation in heavy soil.

Surface digging, 6" deep	per yard super	-/9
Ditto, 12" deep	per yard super	1/6
Excavating not exceeding 10' 0" deep to reduce levels	per yard cube	6/1½
Excavating not exceeding 5' 0" deep to form basement	per yard cube	6/11
Ditto, exceeding 5' 0" and not exceeding 10' 0" deep ditto	per yard cube	9/11
Excavating not exceeding 5' 0" deep to form surface trenches	per yard cube	8/5
Ditto exceeding 5' 0" deep and not exceeding 10' 0" deep ditto	per yard cube	11/6
Excavating not exceeding 5' 0" deep to form basement trench, commencing 10' 0" deep	per yard cube	14/6

Disposal

Returning, filling and ramming around foundations	per yard cube	2/8
Wheeling excavated soil not exceeding 100 yards and depositing	per yard cube	3/1
Ditto and spreading and levelling	per yard cube	4/-
Ditto, ditto, and consolidating to make up levels under floors and pavings	per yard cube	5/-
Filling into lorries and carting away	per yard cube	11/4

Planking and Strutting

Planking and strutting to sides of surface or basement excavation not exceeding 5' 0" deep	per ft. super	-/5
Ditto not exceeding 10' 0" deep	per ft. super	-/6
Planking and strutting to sides of surface trenches not exceeding 5' 0" deep (both sides measured)	per ft. super	-/1½
Ditto not exceeding 10' 0" deep (ditto)	per ft. super	-/3½

CONCRETOR

Concrete (Basic Prices)

Portland cement concrete 1 : 3 : 6 with 1½" coarse aggregate in foundations and masses exceeding 12" thick	per yard cube	52/6
Ditto 1 : 2 : 4 with ¾" coarse aggregate ditto	per yard cube	53/6

Add to Basic Prices for :—

Working around rod or mesh reinforcement	per yard cube	4/7
Being in beds less than 12" thick (6"-12")	per yard super	-/4½
Ditto less than 6" thick (3"-6")	per yard super	-/9

CONCRETOR—(*continued*)

Being in small quantities not exceeding 3' cube	per yard cube	12/3
Being in suspended floors and roofs	per yard cube	9/2
Being in walls not exceeding 6" thick	per yard cube	10/8
Ditto exceeding 6" but not exceeding 12" thick	per yard cube	6/1½
Ditto exceeding 12" thick	per yard cube	3/1
Being in lintels, beams, etc., not exceeding 72 sq. in. sectional area	per yard cube	13/9
Ditto exceeding 72 and not exceeding 144 sq. in. sectional area	per yard cube	9/2
Ditto exceeding 144 sq. in. sectional area	per yard cube	6/1½
Being in columns not exceeding 72 sq. in. sectional area	per yard cube	21/5
Ditto exceeding 72 and not exceeding 144 sq. in. sectional area	per yard cube	13/9
Ditto exceeding 144 sq. in. sectional area	per yard cube	9/2

Formwork

Close boarded formwork and supports to soffites of floors not exceeding 12' high	per yard super	17/10
Ditto to vertical faces of walls (both sides measured)	per yard super	14/4
Ditto to sides and soffites of lintols and beams	per ft. super	1/11
Add to any of the above for wrot formwork and rubbing down concrete	per yard super	1/11

Reinforcement

¼" to 1" diameter mild steel rod reinforcement, hooked, bent and tied at intersections as required and fixing in concrete	per cwt.	34/9
½" diameter ditto	per cwt.	37/6
¼" diameter ditto	per cwt.	46/9
Steel wire mesh fabric reinforcement to B.S. 1221, weighing 4·71 lb. per yard super, well lapped at joints and embedded in concrete	per yard super	2/7
Ditto weighing 9·32 lb. per yard super ditto	per yard super	4/11

BRICKLAYER

Common Brickwork

		Flettons	Rough stocks
Reduced brickwork one brick thick in cement-lime mortar (1 : 3 : 9)	per yard super	23/7	28/-
Add to the above :—			
If in cement mortar (1 : 3)	per yard super	-/3½	-/3½
If circular on plan to flat sweep	per yard super	3/8	3/11
Ditto to quick sweep	per yard super	7/4½	7/10
Half brick wall in cement lime mortar (1 : 3 : 9)	per yard super	12/11	15/2
Ditto built fair and pointed both sides with a neat flush joint	per yard super	14/6	16/9

clude

RK

Arb.

2/3
9/2
0/8

6/1½
3/1

3/9

9/2
6/1½

1/5

3/9
9/2

17/10

14/4
1/11

1/11

34/9
37/6
46/9

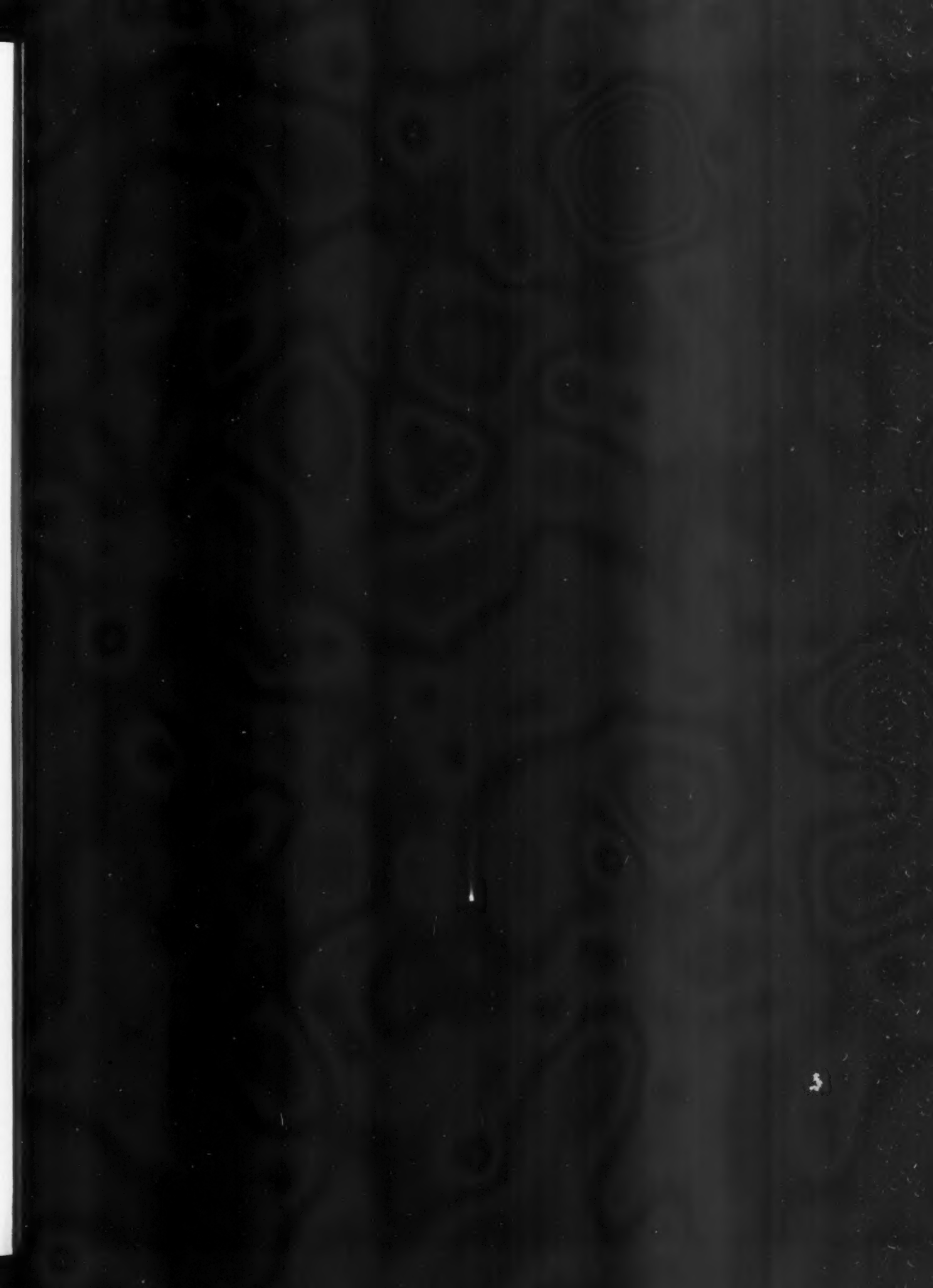
2/7
4/11

Rough stocks 28/–

–/3½
3/11
7/10

15/2

16/9



WORKING DETAIL

WINDOW WALL IN CAFETERIA: LABORATORY BUILDING IN ILLINOIS

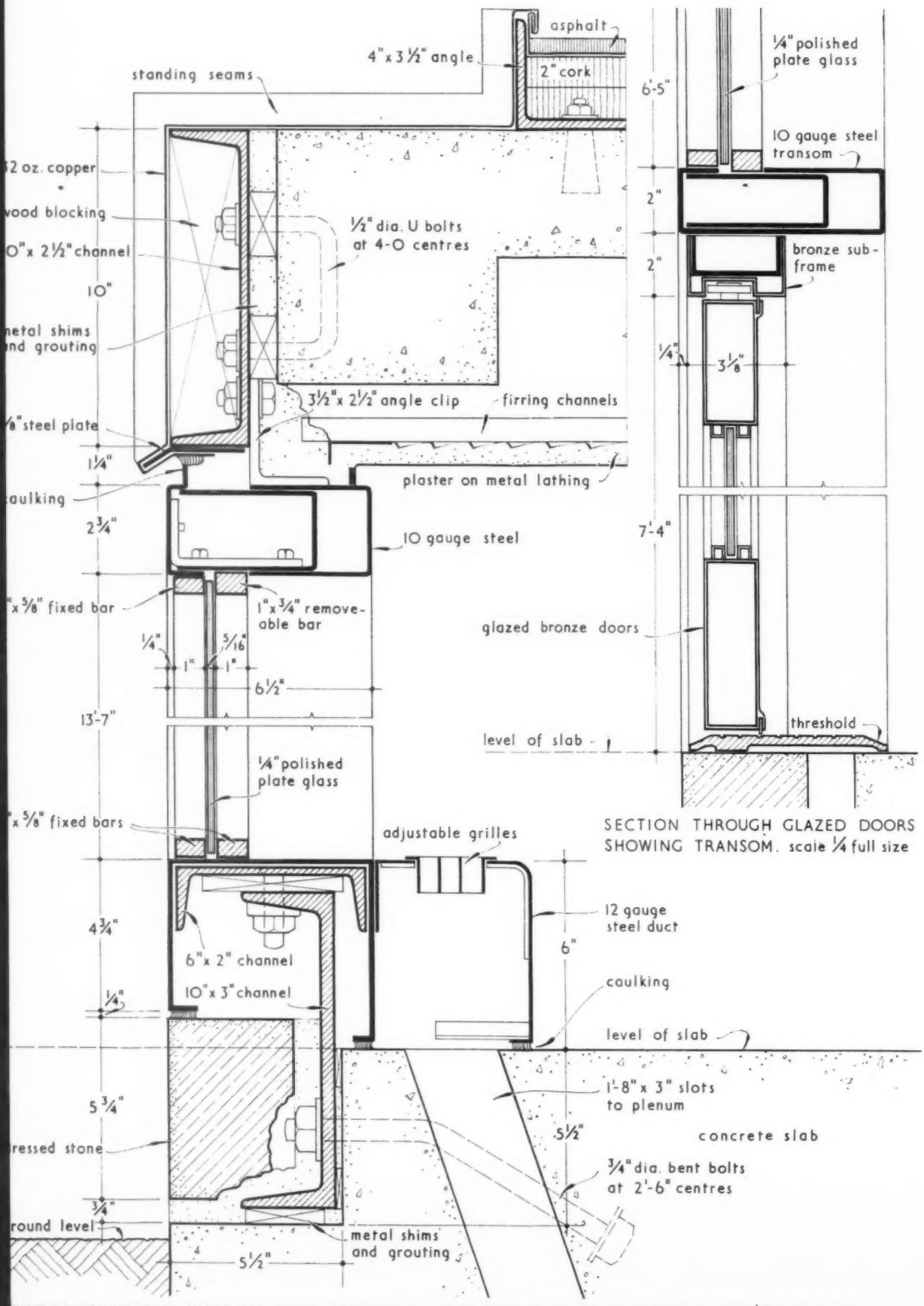
Holabird and Root and Burgee and Associates, architects

The wall consists of ¼ in. plate glass panels 13 ft. 7 in. high in steel mullions at 10 ft. centres.

WORKING DETAIL **WINDOWS: 1**

VINDOW WALL IN CAFETERIA: LABORATORY BUILDING IN ILLINOIS

Holabird and Root and Burgee and Associates, architects



SECTION THROUGH GLAZED DOORS SHOWING TRANSOM. scale ¼ full size

ECTION THROUGH EXTERNAL WALL SHOWING HEAD AND SILL OF WINDOW. scale ¼ full size

WORKING DETAIL

FIREPLACE: HOUSE AT CHICHESTER

Powell and Moya, architects

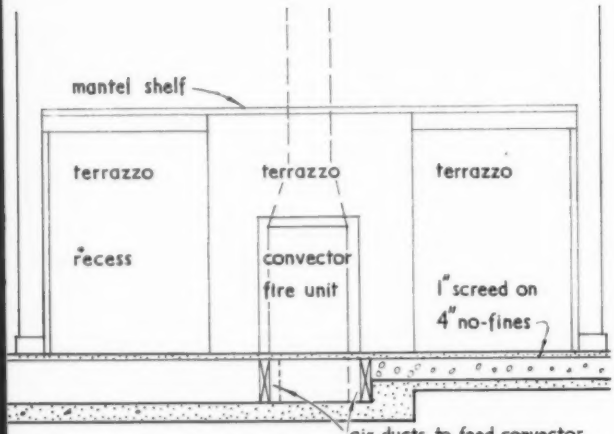
The solid fuel fire in the living room has hot air ducts serving the dining recess and kitchen.

Architects' Journal 8.2.51

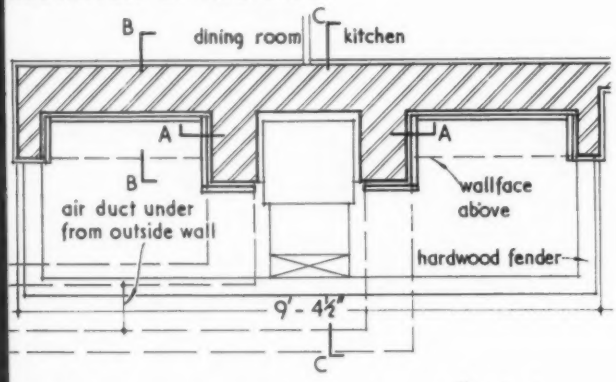
WORKING DETAIL

FIREPLACE: HOUSE AT CHICHESTER

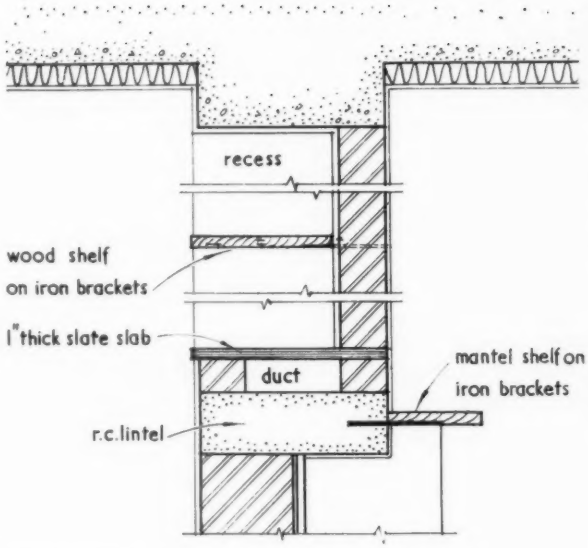
Powell and Moya, architects



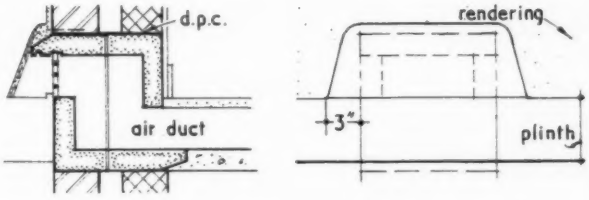
ELEVATION OF FIREPLACE.



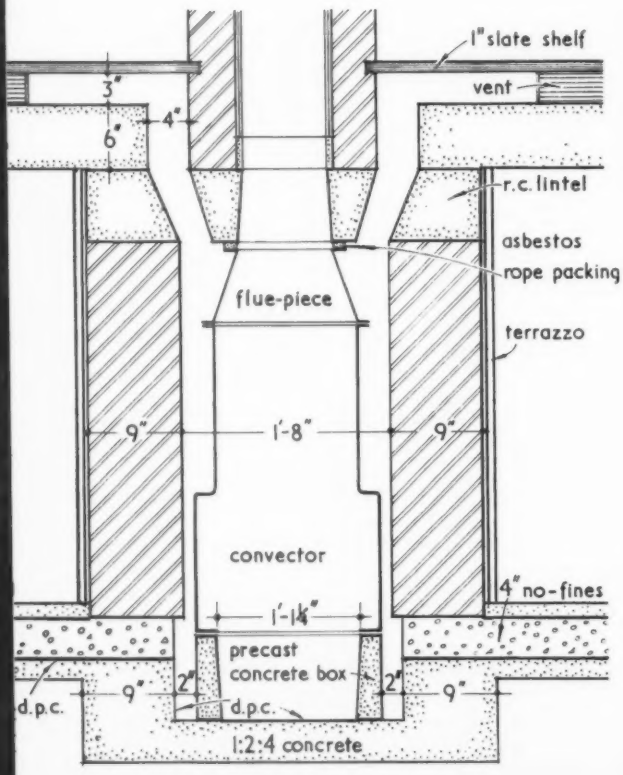
PLAN (showing air ducts below floor). scale $\frac{3}{8}$" = 1'-0"



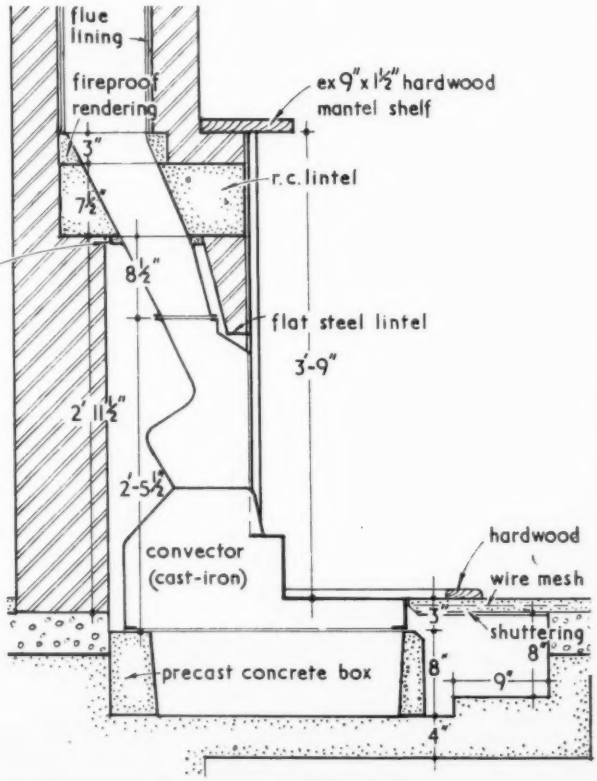
SECTION B-B (showing recess above fireplace).
scale $\frac{3}{4}$" = 1'-0"



AIR VENT (section and elevation).
scale $\frac{3}{4}$" = 1'-0"



SECTION A-A scale $\frac{3}{4}$" = 1'-0"



SECTION C-C scale $\frac{3}{4}$" = 1'-0"

BRICKLAYER—(*continued*)

		Flettons	Rough stocks
One brick wall built fair and pointed both sides with a neat flush joint	per yard super	23/9	28/2
11″ hollow wall with 2″ cavity and galvanized iron twisted ties	per yard super	26/3	30/9

Engineering Brickwork

		Lingfield Engineering Wirecuts	Blue Pressed bricks
Reduced brickwork one brick thick in cement mortar (1 : 3)	per yard super	33/9	56/11
Half brick wall in cement mortar (1 : 3)	per yard super	18/2	30/1
Ditto built fair and pointed both sides with a neat flush joint	per yard super	20/–	32/2
One brick wall built fair and ditto	per yard super	37/3	61/–

Sundries

Extra for internal fair face and flush pointing	per yard super	–/11
Horizontal damp-proof course of two courses of slates and bedding and pointing	per foot super	3/2½
Ditto of hessian base bitumen well lapped at joints	per foot super	–/9
Fixing only metal window, size 1′ 8″ × 4′ 0″, including cutting and pinning lugs to brickwork, bedding frames and pointing in mastic one side	each	6/6
Ditto, 3′ 3″ × 4′ 0″ ditto	each	10/–
Ditto, 6′ 6″ × 4′ 0″ ditto	each	17/8

Partitions

		2″	2½″	3″	4½″
Breeze concrete solid partition blocks to B.S. 492 and setting in cement mortar	per yard super	6/9	7/10	9/1	11/5
Hollow clay partition blocks to B.S. 1190, keyed on both sides and ditto	per yard super	7/1	7/10	9/3	11/3
					4″
Moler hollow partition blocks, keyed on both sides and ditto	per yard super	11/2	13/8	15/4	17/6

Facings

		Ordinary facings, p.c. 202/6 M.	Ordinary facings, p.c. 219/8 M.	White glazed facings p.c. 1,060/– M for stretchers 1,046/9-M for headers and pointing with white cement
Extra over common brickwork built with bricks p.c. 90/-M for facings as described, and pointing with a neat weathered joint :—				
To solid wall in Flemish bond	per yard super	11/9	13/–	74/3
To cavity wall in stretcher bond	per yard super	9/8	10/8	58/1
To ditto in Flemish bond with snapped headers	per yard super	11/2	12/4	—
Half brick wall in facings in stretcher bond built fair and pointed one side with a neat weathered joint	per yard super	21/8	22/7	—
Ditto pointed both sides	per yard super	24/3	25/2	—
One brick wall in facings built fair and pointed one side	per yard super	38/8	40/7	—
Ditto pointed both sides	per yard super	41/3	43/2	—
Brick on end flat arch in facings 4½″ on soffite and 9″ high and pointing	per foot run	2/5	2/6	—
Brick on edge coping to 9″ wall with two courses plain tiles under, laid breaking joint, two cement angle fillets and pointing	per foot run	3/10	3/11	—

ASPHALTER

Tanking

		To B.S. 1097	To B.S. 1418
Horizontal asphalt tanking in three thicknesses on brick or concrete	per yard super	15/–	25/2
Vertical ditto	per yard super	18/11	28/10½

Roofing

		To B.S. 988	To B.S. 1162
½″ asphalt flat in two thicknesses on and including felt underlay	per yard super	11/3	18/4½

ASPHALTER—(*continued*)

		To B.S. 988	To B.S. 1162
½″ asphalt skirting 6″ high with angle fillet at bottom and rounded top, turned into groove	per foot run	1/11	2/4½
½″ asphalt fascia 6″ high with solid water check roll at top and undercut drip at bottom	per foot run	2/7½	3/2

DRAINLAYER

Trenches and Beds

N.B.—The following prices are applicable to hand excavation in heavy soil, only requiring planking and strutting for depths of 3′ or more.

Excavate trenches for 4″-9″ pipes, including planking and strutting, filling in and ramming, and wheeling and spreading surplus :—		
For each 12″ in depth, for trenches not exceeding 3′ 0″ deep	per yard run	2/5
Ditto for trenches exceeding 3′ 0″ and not exceeding 5′ 0″ deep	per yard run	3/7½
Ditto for trenches exceeding 5′ 0″ and not exceeding 10′ 0″ deep	per yard run	6/3

		4″	6″
6″ concrete (1 : 3 : 6) bed and benching for pipes	per yard run	5/9	6/10
6″ ditto, and surround	per yard run	13/2	15/10

Drains

		3″	4″	6″
Clayware butt-jointed land drains and laying in trench	per foot run	–/3½	–/4	–/7½
		4″	6″	9″
"Seconds" quality glazed stoneware socketed drains and laying and jointing in trench	per foot run	1/7½	2/4	3/8½
"British Standard" quality ditto	per foot run	1/10½	2/9	4/5
Extra on "Seconds" quality for bends	each	1/11	2/10	4/1
Ditto "British Standard" quality ditto	each	2/3½	3/4½	5/11½
Extra on "Seconds" quality for single junction	each	3/1	4/5½	6/4½
Ditto "British Standard" quality ditto	each	3/8	5/3½	9/–
Cast iron socketed drains to B.S. 437 and laying and jointing in trench	per foot run	9/1	14/2	27/10½
Extra for short radius bend (Fig. No. 4)	each	18/7	36/8	103/6
Extra for single junction (Fig. No. 18)	each	33/8	65/6	195/–

Fittings, etc.

		4″	6″
Glazed stoneware trapped gulley with galvanized grating and outlet and setting in concrete	each	17/11	29/2
Ditto with vertical inlet ditto	each	21/3	32/6
Cast iron trapped gulley with high invert, grating, and 4″ outlet and setting in concrete	each	40/9	—
Ditto with vertical inlet ditto	each	50/2	—
Glazed stoneware intercepting trap with inspection arm, stopper and chain and fixing in manhole and jointing to drain	each	47/9	55/2
Brown glazed stoneware half round straight channels and bedding and jointing in cement mortar	per foot run	1/6	2/3
Ditto ordinary channel bend and ditto	each	4/5	6/3
Cast iron coated single seal manhole cover and frame to B.S. 497 Grade C and setting frame in cement and cover in grease	each	24″ × 18″ 35/10	24″ × 24″ 50/3
Galvanized ditto	each	59/9	87/2

PAVIOR

		¾″	1″	1¼″
Cement and sand (1 : 3) floated screed to receive pavings	per yard super	3/3	4/–	4/6
Ditto trowelled smooth to receive linoleum	per yard super	3/6½	4/3½	4/9½
Cement and sand (1 : 3) paving trowelled hard and smooth	per yard super	3/7	4/4	4/10
		1″	1¼″	1½″
Granolithic paving (1 : 2½) laid on concrete	per yard super	5/5	6/2	6/11
½″ Red composition paving to B.S. 776 laid on prepared screed	per yard super			15/9
⅝″ Terrazzo paving (Portland cement and spar aggregate) laid on prepared screed	per yard super			34/1½
Extra for white or cream cement	per yard super			5/3
½″ Rubber flooring in all colours, laid on prepared screed	per yard super			47/9
⅛″ × 12″ × 12″ Rubber tile flooring ditto	per yard super			37/3

PAVIOR—(*continued*)

$\frac{1}{16}$″ × 12″ × 12″ Cork tile flooring (brown shades) laid in mastic on prepared screed, surfaced and polished	per yard super	37/3
1½″ Hard red paving bricks p.c. 309/6 per M. laid flat on prepared bed in cement mortar	per yard super	17/10½
1½″ Ditto laid herringbone	per yard super	19/9

		½″	¾″
6″ × 6″ Red quarry tile paving to B.S. 1286 laid on prepared screed with straight joints	per yard super	21/–	22/7
6″ × 6″ Buff quarry tiles as last	per yard super	22/1	24/8
2½″ (Finished) Gravel path laid on prepared bed, well watered and rolled to cambers and falls	per yard super	2/3½	

MASON

Portland stone and all labours in pilasters, quoins, jambs, lintols, etc.	per foot cube	34/6
Ditto in arches, columns, cornices, etc.	per foot cube	47/6
Ashlar av. 6½″ on bed with plain dressed face	per foot super	19/6

		Portland	Artificial
Portland stone or artificial stone to B.S. 1217 :—			
4½″ × 4″ Sill, sunk, weathered, throated and grooved for water bar, set and jointed in cement mortar	per foot run	6/6	3/6
9″ × 3″ ditto	per foot run	7/7	5/–
2″ × 12″ Coping, weathered and twice throated, set and jointed as last	per foot run	7/–	4/6
3″ × 12″ Ditto	per foot run	9/9	6/9
5″ × 12″ Saddle back coping twice throated, set and jointed as last	per foot run	16/3	10/8
6″ × 12″ Ditto	per foot run	17/10	12/2

SLATER, TILER AND ROOFER

Slates

		20″ × 10″	16″ × 8″
Best Bangor slates to B.S. 680 laid with 3″ lap, each slate nailed with two stout copper nails	per square	225/9	214/–
Ditto hung vertically to dormer cheeks and gables	per square	233/9	224/6

Tiles.

		Hand made	Machine made
Best sand faced plain (nibbed) tiles to B.S. 402, 10½″ × 6″ laid to a 4″ gauge with each tile in every fourth course nailed with galvanized nails	per square	141/9	133/10½
Ditto hung vertically to dormer cheeks and gables to 4½″ gauge with each tile nailed with galvanized nails	per square	136/6	131/3
Berkshire hand made sand faced red pantiles 14½″ × 10″ laid to 2½″ head and 1½″ side laps, each tile in every third course nailed with galvanized nails	per square		141/9
Ditto to mansard slopes	per square		149/7½
Concrete plain (nibbed) tiles to B.S. 473, 10½″ × 6″ laid as before described for plain tiles	per square		86/8
Ditto hung vertically to dormer cheeks, and gables, ditto	per square		89/3
Concrete interlocking tiles 15″ × 9″ laid to 3″ lap, each tile in every third course nailed with galvanized nails	per square		76/1½
Ditto to mansard slopes ditto	per square		84/–

Asbestos Cement

6″ Corrugated asbestos cement sheeting fixed to wood roofs with galvanized drive screws and washers with a side lap of 1½ corrugations and an end lap of 6″	per square	77/9
6″ Ditto but fixed vertically	per square	81/11
Add to both last if fixed to steel purlins or sheeting rails with galvanized hook bolts	per square	2/9

Felt

Reinforced bituminous roofing felt laid with 3″ laps and nailed to rafters at 18″ centres with galvanized clout nails	per square		18/11
		Two layer	Three layer
One-ply bitumen felt to B.S. 989 laid on concrete. Each layer bedded in hot bitumen	per yard super	6/4	8/5

CARPENTER

Carcassing

Softwood, sawn and fixed, in plates, sleeper joists and lintols	per foot cube	12/1
Ditto in floor and ceiling joists	per foot cube	13/7
Ditto in stud partitions	per foot cube	14/11
Ditto in rafters	per foot cube	14/9
Ditto in purlins and struts	per foot cube	14/11
Ditto and framing in ridge	per foot cube	14/9
Ditto in hip and valley rafters including cutting rafters to sizes	per foot cube	16/6

Battening and Boarding

		Roof slopes	Vertical hanging
¾″ × 1½″ Battens nailed to softwood for 20″ × 10″ slates to 8½″ gauge	per square	24/2	25/2
Ditto 16″ × 10″ slates to 6½″ gauge	per square	28/10½	30/2
Ditto 10½″ × 6″ tiles to 4″ gauge (4½″ for vertical hanging)	per square	39/4½	39/4½

		Roof Slopes	Mansards
Ditto 14½″ × 10″ pantiles to 12″ gauge	per square	16/10	17/4
Ditto 15″ × 9″ concrete interlocking tiles to 12″ gauge	per square	16/10	17/4
Roof boarding in batten widths close jointed and fixed to flat or sloping roofs	per square	¾″ 89/6	1″ 111/4
Ditto tongued and grooved and prepared for felt roofing including firring to falls	per square	148/6	173/3
Sawn gang boarding fixed to joists in roof	per foot super	1/–	1/2½
Wrot and crosstongued eaves soffite	per foot super	1/7	1/10
6″ Wrot and grooved eaves fascia planted on	per foot run	–/7	–/9

Wall and Ceiling Boards

		Vertically	Soffites
½″ Fibre board to B.S. 1142 fixed with galvanized flat headed nails to softwood	per yard super	4/5	4/7
$\frac{3}{16}$″ Asbestos cement flat sheeting to B.S. 690 fixed as last	per yard super	4/10	5/2
¼″ Ditto	per yard super	5/10	6/2

JOINER

Floors and Skirtings

(All thicknesses stated are nominal)

		¾″	1″	1½″
Plain edge softwood flooring in batten widths nailed to floor joists	per square	106/9	118/6	142/3
Tongued and grooved ditto	per square	114/–	126/3	151/–

1″ Double grooved and tongued and grooved wood block floor laid herringbone with two-block border, set in hot mastic composition on prepared screed and wax polished :—

Swedish softwood	per yard super 24/3
English Beech	per yard super 34/9
European Beech	per yard super 34/3
English Oak	per yard super 45/3
European Oak	per yard super 39/9
Burma Teak	per yard super 46/3

		Sectional area 3″ to 6″	Over 6″
Softwood skirtings with splayed or molded top edge, planted on (per inch sectional area)	per foot run	–/2½	–/2½
Extra for grounds plugged to brickwork	per foot run	–/5	

Windows in Softwood

		1½″	2″
Rebated and molded softwood fanlights and casement sashes divided into squares for glass	per foot super	2/5½	2/9
Extra for hanging	each	4/11	4/11
Cased frames with 6″ × 3″ Oak sill and 2″ molded double hung sashes including pulleys, line and weights	per foot super	—	8/6

N.B.—The above prices are for purpose made joinery. Standard pattern casement windows and double hung sashes and frames to B.S. 644 are cheaper.

Doors in Softwood

		1½″	1¾″	2″
Framed ledged and braced doors filled in with 1″ T. & G. and V-jointed boarding and hanging	per foot super	4/4	4/10½	5/–
Four-panel door, square both sides and hanging	per foot super	3/3	3/6	3/7
Ditto molded one side	per foot super	3/6	3/9½	3/10½
Ditto molded both sides	per foot super	3/9½	4/0½	4/2

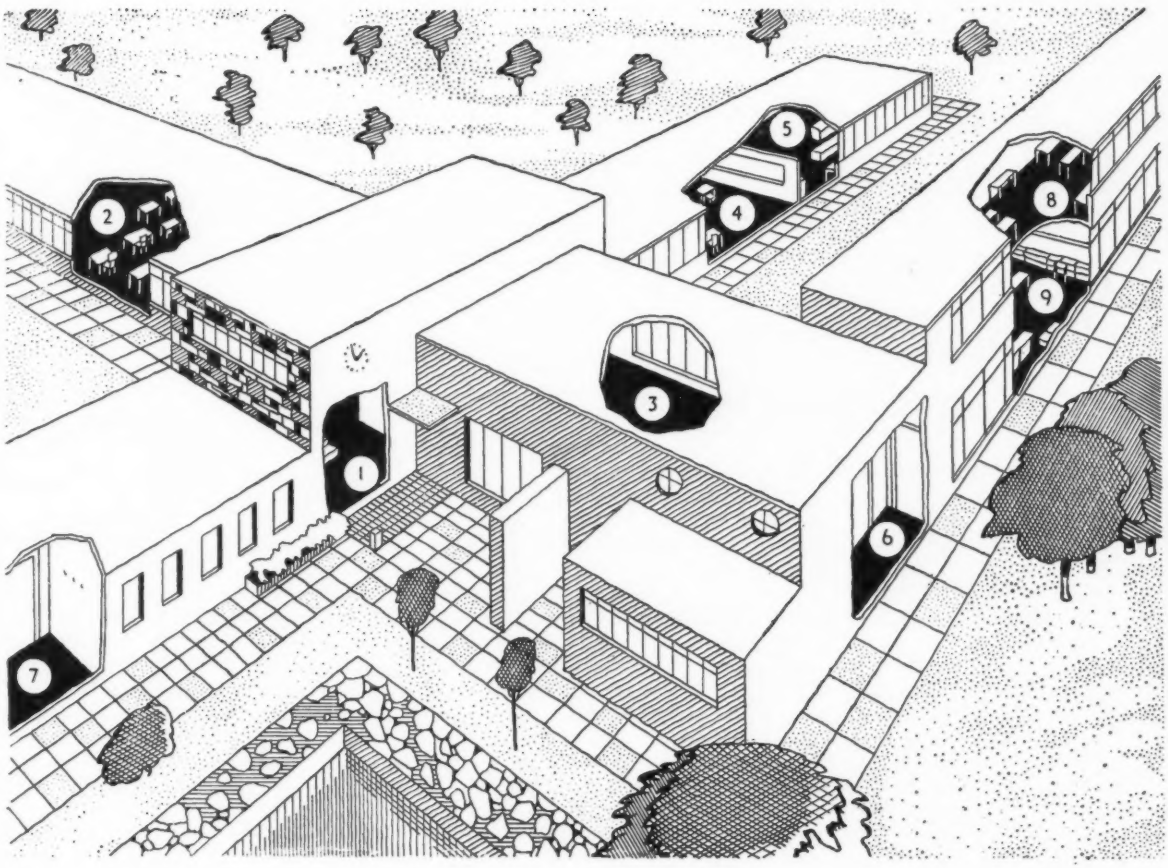
N.B.—The above prices are for purpose made doors. Standard panelled doors to B.S. 459 are cheaper.

1½″ Standard flush doors 2′ 6″ × 6′ 6″, internal pattern	each 84/3
2″ Ditto external pattern	each 89/9

Linings, Frames, etc., in Softwood

		Sectional area Up to 6″	6″ to 12″
Window and door linings etc. (per inch in sectional area)	per foot run	–/3	–/2½
Frames wrot all round and framed (ditto)	per foot run	–/2½	–/2
Mullions, transomes and cills (ditto)	per foot run	–/2¾	–/2½

		2″ to 4″	4″ to 6″
Moldings, architraves, etc. (ditto)	per foot run	–/2	–/1½



FLOOR FINISHES AVAILABLE FOR SCHOOLS

The table below indicates the principal floor finishes considered appropriate for use in various parts of a school. In any particular instance, special factors might weigh in favour of one or other of the alternatives shown. Semtex Ltd. is equipped to advise on all floor finishing problems, and specialises in the installation of those surfacings marked **S** in the chart.

(The information panel has been prepared without prejudice to any special claim made by manufacturers of the materials listed.)

	S SEMASTIC TILES	S FLEXIMERS	ASPHALT	S RUBBER	S LINOLEUM	S CORK	WOOD BLOCK	TERRAZZO	GRANOLITHIC	S QUARRY TILES
1. ENTRANCE HALLS	•	•	•	•	•	—	•	•	—	•
2. CLASSROOMS	•	•	•	•	•	—	•	—	—	—
3. ASSEMBLY HALLS	•	•	•	•	•	•	•	—	—	—
4. DINING HALLS	•†	•	•	—	•	—	•	—	—	—
5. KITCHENS	—	•	—	—	—	—	—	•	—	•
6. CORRIDORS	•	•	•	•	•	—	•	—	•	—
7. CLOAKROOMS AND LAVATORIES	—	•	•	—	—	—	—	•	•	•
8. HANDICRAFT ROOMS	•	•	•	—	—	—	•	•	•	•
9. LABORATORIES Physical / Chemical	• / —	• / •	•† / •†	• / •	• / —	• / —	• / —	• / —	— / —	• / •

† SPECIAL GRADE AVAILABLE FOR INSTALLATION IN THESE SPACES.

SEMTEX LTD
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5OSE/CI7

Hills Lantern Lights at new factory for Messrs. W. Canning & Co. Ltd. Architects: Harry Bloomer & Son.

STANDARD LANTERN LIGHTS

The above illustration shows Standard and Purpose Made Lantern Lights recently installed on the water-cooled roof of a new factory for Messrs. W. Canning & Co., Birmingham. Hills Lantern Lights incorporate special lead clothed Ridge and Hip Bars which eliminate the heavy cost of separate lead flashings. Interlocking cast iron corner posts and malleable iron finial connections impart rigid strength to each unit. These are available in a wide range of Standard Sizes, and can also be made to specific dimensions. Hills also specialise in Lead and Aluminium Roof Glazing; any degree of ventilation can be incorporated, from cord-operated single pane opening lights, to continuous stretches, electrically operated by tension rod gearing. List No. 209, giving full details of the complete range of Standard Lantern Lights, will be sent free on request.

HILLS

(WEST BROMWICH) LIMITED.

ALBION ROAD, WEST BROMWICH & 125 HIGH HOLBORN, LONDON, W.C.1

Branches at Birmingham, Swansea, Bristol, Manchester, Newcastle-on-Tyne Glasgow and Belfast.

JOINER—(*continued*)

		Thickness 1″	Thickness 1¼″
6″ Window boards with rounded nosings, tongued at back and including bearers	per foot run	2/3	2/5
9″ Ditto	per foot run	2/5	2/8
Shelving and Fittings in Softwood			
Shelving of 2″ slats spaced 1″ apart on bearers (measured separately)	per foot super	¾″ 1/8½	1″ 2/1
Shelving on ditto	per foot super	2/–	2/7
Crosstongued shelving on ditto	per foot super	2/4½	3/–
Shelving 9″ wide on ditto	per foot run	1/6	1/11
2″ Shelf bearers plugged to walls	per foot run	–/9	–/9
The following in framed up cupboard fittings :—			
T. & G. & V-jointed back	per foot super	1/10	2/–
Crosstongued top, bottom shelf or division	per foot super	2/3½	2/7
1½″ Flush cupboard doors	per foot super	4/10	
Labour rebate or groove	per foot run	–/2¼	
Ditto cross-grain	per foot run	–/3½	
1″ × 2″ Bearers screwed on	per foot run	–/4½	

N.B.—The above prices are for purpose-made cupboard fittings. Standard pattern kitchen fittings to B.S. 1195 are cheaper.

IRONMONGERY

		Soft-wood	Hard-wood
3″ Steel butts (medium quality)	per pair	1/10	1/10
4″ Ditto (ditto)	per pair	2/4	2/4
Double action floor springs and top centres including filling boxes with oil P.C. 118/6	each	144/9	149/9
Overhead check action door springs. P.C. 60/6	each	75/6	78/6
6″ Barrel bolts. P.C. 6/–	each	7/11	8/3
Cupboard locks. P.C. 6/4	each	9/8	10/7
Norfolk latches. P.C. 5/–	each	9/2	10/4
Cylinder night latch. P.C. 13/3	each	19/2	20/7
Mortice latch. P.C. 7/9	each	12/1½	13/4
Rim lock. P.C. 8/4	each	11/11	12/9
Mortice lock. P.C. 12/8	each	18/6	20/–
Door furniture. P.C. 17/8	per set	20/4	20/4
Sash fasteners. P.C. 6/11	each	9/1	9/6
Casement fasteners. P.C. 6/1	each	7/9	8/1½
Casement stays. P.C. 8/10	each	10/9	11/2

STEEL AND IRONWORKER

Structural Steelwork

The following prices are for Basic sections (5″ × 4½″ to 16″ × 6″) only. Prices for other sections vary roughly in proportion to the price of the steel ex mills—see "Current Market Prices of Materials."

		£	s.	d.
R.S.J.—in steel framed structures hoisted and fixed complete	per ton	48	16	0
Riveted compound girders including plates and rivets	per ton	52	15	3
R.S. Stanchions including caps, bases, cleats, etc	per ton	54	6	9
Riveted compound stanchions ditto	per ton	56	3	6
Riveted roof trusses with flat and angle members, plates, cleats, etc., 30′ span	per ton	75	12	0
Ditto 40′ span	per ton	73	10	0

Sundries

Simple wrot iron balustrades fixed complete (excluding mortices etc.)	per cwt.	7	15	0
Bolts with heads, nuts and washers and fixing	per cwt.	8	15	0

PLASTERER AND TILE FIXER

24 gauge expanded metal lathing and fixing to softwood soffites	per yard super	4/11

Lime and Gypsum Plaster

		Lime	Sirapite
Three coat lime and two coat Sirapite or similar Gypsum plaster :—			
On brick walls and partitions	per yard super	4/6	3/7
On concrete soffites including hacking	per yard super	5/6	4/7½
On soffite of E.M.L. (measured separately)	per yard super	4/6	4/9
On and including wood laths, to soffites	per yard super	7/10	—
⅜″ Gypsum plasterboard fixed to softwood soffites, in accordance with manufacturer's instructions, scrimmed and finished with setting coat of suitable plaster	per yard super		5/11
Plaster moulded cornice or cove (per inch in girth)	per foot run		–/4

Cement Rendering

Rendering in Portland cement and sand (1 : 4) and setting in Keenes cement on brick walls and partitions	per yard super	4/7
Portland cement and sand (1 : 3) plain face trowelled smooth on ditto	per yard super	4/2
Portland cement and sand (1 : 3) screed for tiling on ditto	per yard super	2/3½

PLASTERER AND TILE FIXER—(*continued*)

Wall Tiler

6″ × 6″ × ⅜″ Standard quality white glazed wall tiles set and jointed on prepared screed	per yard super	35/9
Ditto eggshell matt or glossy glazed enamelled	per yard super	45/3

EXTERNAL PLUMBER AND COPPERSMITH AND ZINCWORKER

		Flats	Gutters, flashings, etc.	Stepped flashings
Milled sheet lead and labour	per cwt.	224/6	224/6	232/–
24 S.W.G. sheet copper and labour	per foot super	4/9	5/–	5/3
23 S.W.G. sheet copper and labour	per foot super	5/–	5/3	5/6
14 gauge zinc and labour	per foot super	3/3	3/5	3/8

Rainwater Pipes and Gutters

		3″ With holderbats	3″ With nails	4″ With holderbats	4″ With nails
Cast iron medium section (⅜″ metal) R.W. pipes and jointing and fixing to walls with pipe nails and distance pieces or holderbats (cutting and pinning holderbats measured separately)	per foot run	4/7	3/8	5/6	4/6
		24 G.		20 G.	
Pressed steel R.W. pipes and ditto	per foot run	3/2	2/7	4/3	3/8
Asbestos cement R.W. pipes and ditto	per foot run	2/2	—	2/10	—
		4″		6″	
Cast iron half round eaves gutter and jointed and fixed with brackets to fascia	per foot run	⅛″ 1/11½	3/16″ 2/8½	⅛″ 3/4½	3/16″ 4/1
Ditto O.G. ditto	per foot run	2/5	3/4	3/7	5/1
18 Gauge pressed steel half round ditto	per foot run	2/2		3/-	
Ditto O.G. ditto	per foot run	2/7		3/5	
Asbestos cement half round ditto	per foot run	1/11		3/–	
Ditto O.G. ditto	per foot run	2/2		3/2	

Soil and Ventilating Pipes

		3″	4″
Lead soil, waste and ventilating pipes (17 lb. per yard for 3″ and 22·8 lb. per yard for 4″ diameter) fixed to walls with lead tacks and brass screws	per foot run	12/4	17/–

		Heavy 11/16″	Medium 3/16″	Heavy 11/16″	Medium 3/16″
Medium or heavy section cast iron soil, waste and ventilating pipes with caulked joints, fixed to walls, with pipe nails and distance pieces	per foot run	4/8	4/3½	5/10½	5/10

INTERNAL PLUMBER

Lead Pipes

Prices are based upon the following weights per yard.

		½″ lb.	¾″ lb.	1″ lb.	1¼″ lb.
Supply		7	11	16	21
Distributing		6	9	12·5	16
Flushing and overflow		3	5	7	9
Waste and ventilating		—	—	—	7

		½″	¾″	1″	1¼″
Supply pipe in trench (measured separately)	per foot run	4/5	6/9	9/9	12/8
Ditto fixed to walls and ceilings	per foot run	4/9	7/3	10/4	13/11
Distributing pipe fixed to walls and ceilings	per foot run	4/2	6/2	8/5	11/–
Flushing and overflow pipe ditto	per foot run	2/11	3/10	5/3	7/1
Waste and ventilating pipe ditto	per foot run	—	—	—	5/8
Joints to fittings	each	5/3	6/6	7/1	8/–
Bends	each	–/9½	–/9½	1/0½	1/6
Branch joints	each	6/–	7/6	8/–	9/5

Steel Tubes and Fittings

		½″	¾″	1″	1¼″
Galvanised steel tubes to B.S. 1387 Class C with screwed joints in red lead as supply pipe laid in trench (measured separately)	per foot run	1/7½	1/11	2/-	2/10
Ditto Class B ditto fixed to walls and ceilings as supply, distributing, waste pipe, etc.	per foot run	1/8½	1/11	2/1	2/8½
Joints to fittings	each	3/5	4/3	5/–	6/–
Bends	each	2/–	2/4	3/1	4/8
Tee, equal or reducing	each	1/10	2/3	2/11	3/8

INTERNAL PLUMBER—(*continued*)

Copper Tubes and Fittings

Prices are based upon the following gauges :—

		½"	¾"	1"	1¼"
Supply		18	17	16	16
Distributing, waste, etc.		19	19	18	18
Copper tubes to B.S. 1386, as supply pipe laid in trench (couplings and trench measured separately)	per foot run	1/6½	2/3½	3/2	3/9
Ditto to B.S. 659 as distributing, waste pipes, etc. fixed to walls and ceilings. Couplings measured separately	per foot run	1/8	2/2	3/–	3/7½
Brass compression type couplings—copper to copper	each	4/–	4/11	6/9	8/9
Ditto bends	each	5/5	6/4	9/4	12/–
Ditto tees	each	7/2	8/3	12/8	18/6

Sanitary Fittings

		£ s. d
Fireclay sinks 24" × 18" × 10" including cutting and pinning brackets to tiled wall. P.C. 60/–	each	3 16 9
Combined metal sink and drainer 42" × 18" × 8½" to bearers (measured separately). P.C. 322/–	each	18 1 0
Fireclay lavatory basin 25" × 18" with taps and towel rail bracket including screwing brackets to tiled wall. P.C. 121/3	each	7 3 3
Rectangular cast iron porcelain enamelled bath 5' 6" long, with taps, and panels to side and one end fixed to framing (measured separately) P.C. 362/3	each	21 7 9
Fireclay w.c. pan with trap, plastic seat, high level cistern and flush pipe, including screwing pan to floor and cistern brackets to backboard. P.C. 194/6	each	12 1 0
Ditto with low level cistern. P.C. 205/6	each	12 14 3

GLAZIER

		To wood	To metal
18 oz. Ordinary quality sheet glass and glazing with putty in squares not exceeding 4 ft. sup.	per foot super	1/0	1/2
24 oz. Ditto and ditto	per foot super	1/1½	1/3½
32 oz. Ditto and ditto	per foot super	1/5½	1/7½
⅛" Figured, rolled, and cathedral—untinted and ditto	per foot super	1/3	1/5
¼" Rough cast and ditto	per foot super	1/4	1/6
¼" Wired cast and ditto	per foot super	1/5	1/7½
¼" Georgian wired cast and ditto	per foot super	1/6	1/8

GLAZIER—(*continued*)

		To wood	To metal
¼" Georgian wired polished plate and ditto	per foot super	5/1	5/3
¼" Polished plate (glazing quality) and ditto	per foot super	4/4½	4/6½

PAINTER

Whitening, Distemper and Paint on Walls

Prepare and twice whiten plastered walls and ceilings	per yard super	–/11½
Prepare and twice distemper with washable distemper on plastered walls and ceilings	per yard super	1/4½
Ditto on brick or concrete	per yard super	1/8
Prepare, prime, and paint two coats oil colour on plastered walls and ceilings	per yard super	3/10

Paint on Metal

		Basic price	Add for each additional coat
Prepare, prime, and paint one coat oil colour on general surfaces	per yard super	2/7	1/2
Ditto metal casements	per yard super	3/11	1/8
Ditto members of roof trusses	per yard super	3/3	1/5
Ditto balustrades one side	per yard super	3/11	1/8
Ditto bars, etc., not exceeding 6" girth	per yard run	–/8	–/3½
Ditto small pipe	per yard run	–/8	–/3½
Ditto large pipe	per yard run	1/3½	–/7

Paint on Wood

		Basic price	Add for each additional coat
Knot, prime, stop and paint one coat oil colour on general surfaces of woodwork	per yard super	2/10½	1/2
Ditto on skirtings, rails, frames, etc., not exceeding 3" girth	per yard run	–/4½	–/1¾
Ditto ditto for each additional 3" in girth	per yard run	–/4	–/1½
Ditto on sash squares one side	per dozen	3/8½	1/5
Ditto on large sash squares one side	per dozen	6/8	2/6

Stain and Varnish on Wood

Prepare, size, stain and twice varnish on general surfaces of woodwork	per yard super	2/10½
Ditto on skirtings, rails, frames, etc. not exceeding 3" girth	per yard run	–/1½
Ditto ditto for each additional 3" in girth	per yard run	–/4

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

INFORMATION CENTRE

10.81 design : building types

HOUSE BUILDING

House Building. (Engineering, Nov. 17, 1950. p. 380.)

Two-column report and commentary on a paper to the British Association. Food for thought for all those who are anxious to build more houses in less time.

A paper entitled "Output Problems in House Building" was recently read before Section G of the British Association, at its meeting at Birmingham, by Dr. J. Bronowski. His statements are based on four years' experience as a member of the Chief Scientific Adviser's Division of the MOW. He draws a comparison between the results obtained since 1900 in the building industry and in motor car production. Then the cost was about the same for a house and a car, about £300. Thirty years later the cost of a house had gone up by 50 per cent.; that of a car, however, had gone down by the same percentage. Today, at least the same disparity may be assumed, and motor car production is not subsidised while house building is. The success in the motor car industry is based on large production units and specialized manufacture of components, while in building, in 1935, there were still 64,000 firms with not more than 10 men each. At the present rate of about 200,000 houses a year, it would take, according to Dr. Bronowski, about 50 years to keep up with our growing population, quite apart from a burden of, at least, £20 a house per annum by way of subsidy.

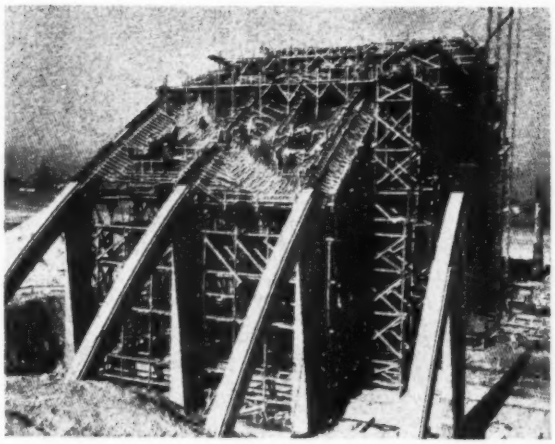
More than one third of the work on building sites is done by unskilled labour, and this explains the low output. The concrete mixer is almost the only machine to be found on domestic building sites. About 130 tons of building materials make a house, but more than 630 tons of weight have to be handled, nearly half of it by the human digger, the concreter and the general labourer, most of the other half by the bricklayer. About 2·5 horse-power units per head is the average for employees in all manufacturing firms, but for the building industries it is only 0·5.

Dr. Bronowski suggests two main lines of attack for increasing output and reducing costs. Structural possibilities of new materials and methods should be utilized to the full by so-called non-traditional building, and site operations are to be broken down and taken over by small firms specializing in particular work on a great number of sites, all the year round.

At least four non-brick types of houses are known which would reduce labour cost on site to such an extent (in one case by 40 per cent.) that output could be raised "to that longed-for and long-vanished target of one house per man-year." But none of these non-traditional types has yet been organized for continuous large scale production. Great savings in total labour content, not only in site labour, will be secured by using large pre-fabricated panels, both inside and out. Only large firms with sufficient capital and good mechanical equipment would be able to compete in this form of production, and this solution is not possible for the vast number of small building firms. To meet their needs new materials will have to be supplied in such forms as they can handle. The use of ready-made items should be extended from windows and doors, fireplaces and cupboard fronts to finished interior panels, all made in standard units. Standard slabs should be used for the floors, and ready-made brick corners for the walls to speed up bricklaying. "Some observers may feel that it could also be speeded up by using more speed!"

As to the second method of attacking the problem of house building, the agricultural industry offers examples of certain operations, undertaken by specialist firms. Unskilled labour on a building site could to a large extent be replaced by mechanised operations, even on a small site, if the equipment could be fully employed all the year round. A typical example is the digging of foundations. A small builder cannot afford to buy an excavating machine for say £1,000, but specialist firms of subcontractors could do it, if they kept their machines busy by serving a fairly large area. In the USA the digging for the sub-basement, containing the boiler, is often done by such well-equipped specialist firms.

While Dr. Bronowski's suggestions are by no means new they are extremely well presented and strikingly supported by statistics covering space and time. They should pro-



Live-stock "coliseum" in Montgomery, Alabama, USA. Photo shows concrete frames which support the arch ribs, and formwork for the ribs the barrel vaults and the edge beam. See 20. 194.

vide the architect, the structural designer, the builder, and especially the industrialist and the authorities with basic facts and figures for a new approach to the immense problem of building more houses.

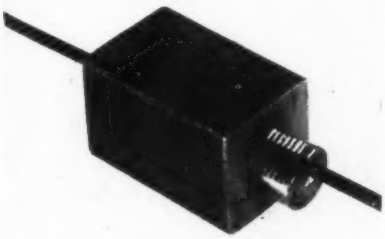
18.69 construction: theory

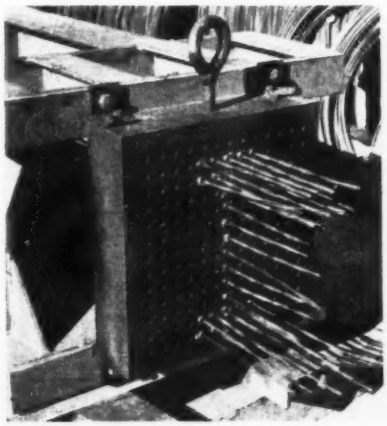
CONCRETE PRESTRESSING PLANT

Plant for Prestressing Concrete. National Building Studies, Bulletin No. 12 MOW (HMSO, 1950. 1s. 3d.)

Some new appliances developed by the Field Test Unit of the Ministry of Works. Most useful as a guide to new manufacturers, but also to students and architects as a first introduction. 7pp. 25 ill.

The next few years will in all probability see a vast development in the field of prestressed concrete. This will essentially concern the engineer, but the architect will wish to acquaint himself now with the fundamentals of this new technique and to know about its possibilities and limitations. He will find further studies much easier once the definitions of the two main methods of prestressing have been absorbed, *i.e.* (1) *pretensioning* where the high tensile steel wire is stressed *before* the concrete is cast and is afterwards restrained by bond; (2) *posttensioning*, with the wire is stressed *after* the concrete has hardened, and kept taut by permanent anchorages. Some elementary facts are extremely well presented in this little pamphlet. The "know-how" of a new industry, condensed into 7 pages of text and 25 photographs, will strongly appeal to architects and engineers as a first basic survey.





Plant for prestressing concrete. Above, wire-gripping device; below, multi-hole cross-head. See 18.69. (Crown Copyright Reserved, reproduced by permission of the Controller of HMSO)

19.107 construction: details

STEELWORK DESIGN

Examples of Structural Steel Design (Part 2) to Conform with the Requirements of BS 449:1948. V. H. Lawton. (British Constructional Steelwork Association, London, 1950.)

This pamphlet is the second in the series. The first, reviewed in these columns on August 10, 1950, gave the computation of external loads and the detailed design of the roof trusses for single-bay and triple-bay single-storey factory buildings, the bays being 50-ft. wide each. This second publication, again very well printed, deals with the valley beams and the stanchions. Numerical calculations are given and even details like batten plates and riveted connections are fully covered. Several trial sections are compared before deciding on the most economical type of structural member. The value of this second (as well as of the first) pamphlet lies in its ample references to the new BS showing not only how to apply the new rules but also the effect of alternative assumptions for loading and boundary conditions. Looking through these pages the architect may well enjoy a feeling of relief that he need not worry about such calculations. 31 pp., 24 diagrams.

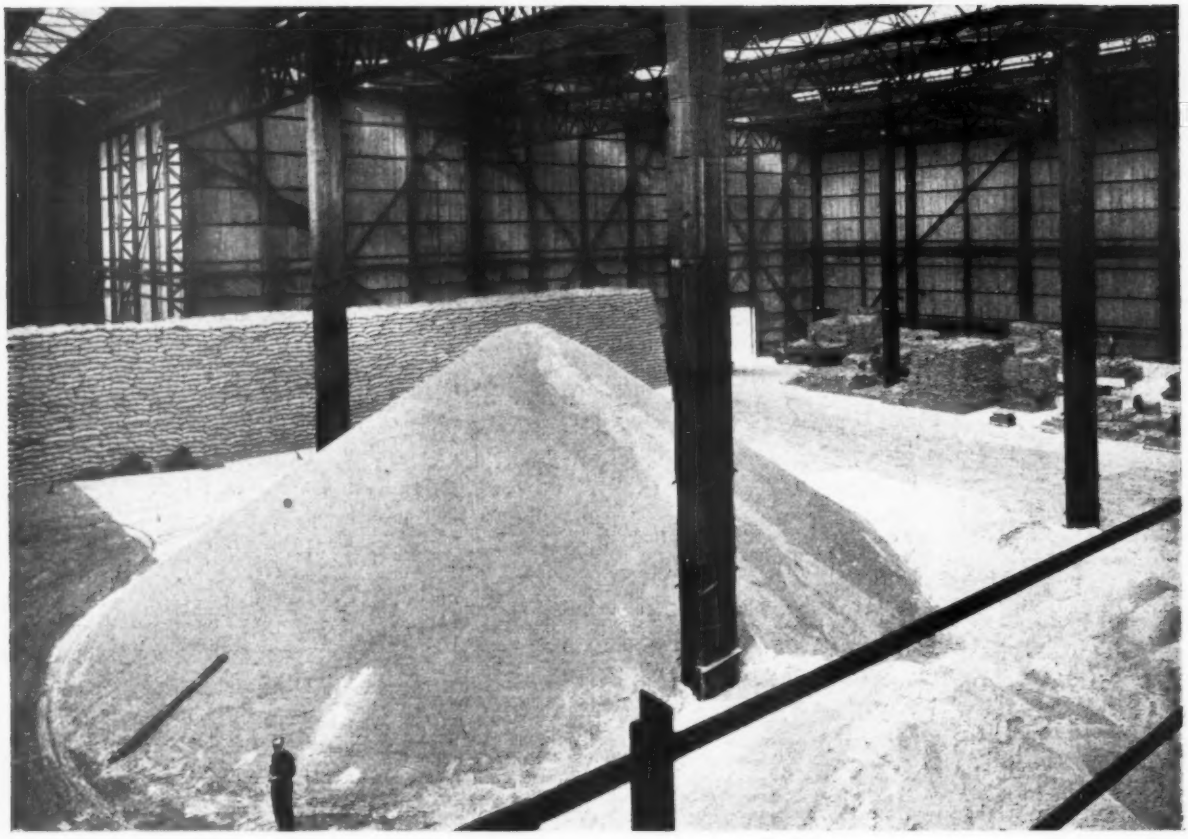
20.194 construction: complete structures

CIRCULAR STADIUM

Cylindrical Roof for Circular Coliseum. Boyd G. Anderson. (Engineering News Record [USA], Nov. 2, 1950.)

Shape and leading dimensions somewhat similar to Dome of Discovery, Festival of Britain. Novel solution in reinforced concrete, on quite different lines. Of interest to both architects and engineers. 4 pp., 5 illustrations.

This building was designed for the state of Alabama and is nearing completion. Its unobstructed floor area equals about two football playing fields put together. Eleven reinforced concrete arch ribs, 375 ft. between abutments and 96 ft. high, at 28 ft. 4 in. centres, support the cylindrical roof barrels of only 3½ in. concrete, thickened to 5½ in. at the supporting ribs. The unusual feature, however, is the circular wall of 340 ft. diameter (comparable to the 365 ft. diameter of the Dome of Discovery). This vertical wall cylinder intersects the horizontal cylinder formed by the roof shell, and the result is an edge beam curved in two directions. There are no columns to obstruct the spectators' vision and no corner spaces occur as in rectangular buildings. The edge beam stiffens the edges of the roof slab and serves as a rainwater gutter. Architecturally it provides a cap band for the circular wall. Comparative designs had been prepared in structural steel, but on somewhat different assumptions, and the tenders for concrete were lower and gave shorter time for construction. It is difficult to see why a circular area had to be covered by a structure which is rectangular in plan, and so much larger than the useful space. The concrete arch abutments stand clear of the circular wall and provide interesting architectural effects, and that may well have decided the issue.



A mountain of raw sugar lying on Messrs. Tate & Lyle's new warehouse floor at Thames Refinery kept dry by—

COLEMANOID

LIQUID WATERPROOFER & HARDENER

The floor of this Warehouse, which is within a few feet of the Thames, was constructed with Colemanoid in the mass concrete mix, so that in spite of its proximity to the river it is bone dry. Incidentally Colemanoid has been used for many years throughout Messrs. Tate and Lyle's factories in other Warehouses to ensure dry floors. For further details as to how Colemanoid can help you with your flooring, waterproofing, acid, oil and alkali problems, write to me.

Cecil Kahn

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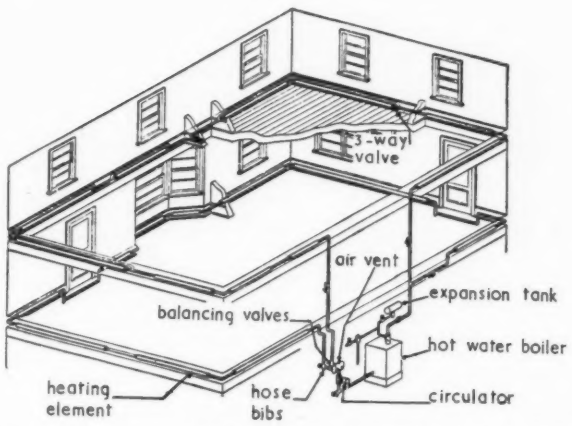


Baseboard (skirting) heating. Mainless perimeter (series loop) heating system in conventional 2-storey house. See 23.139.

23.139 **heating and ventilation**

DESIGN OF SKIRTING HEATING INSTALLATIONS

Practical Baseboard Heating. Charles H. Burkhardt. (Plumbing and Heating Journal [USA], Oct., 1950.)

Second article of a series on the practical aspects of the design and installation of a skirting heating system.

This is a valuable article for those who have to design and install skirting heating systems. It is a continuation of a previous article. (See 23.138:25.1.51.)

Information is given as to the layout and sizing of pipework, emission from various types of heater, and kindred subjects. Thus, its appeal is rather to the heating engineer than to the architect.

Nevertheless, the architect who wishes to know more of the system will find the article useful and the diagrams clear. In particular, attention is drawn to the exceptionally simple layout of a small "mainless perimeter" system, as shown in the diagram above; it may well commend itself to those who wish for an unobtrusive and efficient heating system at moderate cost.

26.82 **services and equipment : miscellaneous**

LCC REQUIREMENTS IN RESPECT OF SANITATION

The Law and Practice of LCC Sanitary Systems. Arthur Mason. (The Municipal Journal, July 21, 1950, 1s.)

Article on legal requirements for sanitary installations in the LCC area.

The author, who is on the Architect's staff of the LCC, makes, in particular, the following points :—

The LCC permits the use of the "one pipe" system of drainage : (in reality, a two-pipe system, for an anti-siphon pipe is required in addition).

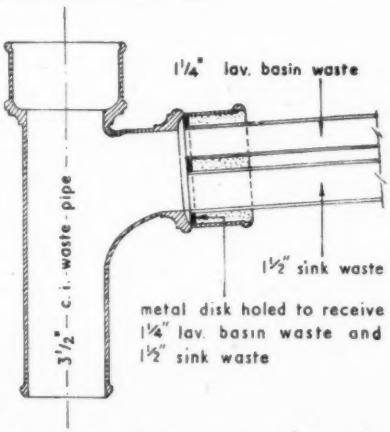
Since 1930, the LCC has permitted the installation of soil, vent and waste pipes, of materials other than lead, within the building. This has facilitated economy and neatness of pipework, placed in ducts instead of festooned about the outside of the building. Careful planning to ensure that bathrooms and kitchens are adjacent in blocks of flats, both horizontally and vertically, is necessary to achieve this economy : this usually involves the placing of a given size of flat vertically one over the other. Economy can also be achieved by placing the wc in the bathroom, in small flats: medical opinion now generally commends this. Regulations permit the installation of internal wc's with ventilating trunks, but such installations are rare. The trunks may become receptacles for rubbish. A vertical pipe duct 27 in. × 15 in. continuous for the full height of the building, has been found suitable for 3½-in. soil pipe, anti-siphon pipe, wastes and cold down-service. Construction is usually in timber framework, with hardboard or similar covering secured by screws for access. Metal framing has been found less economical. The duct should be sealed in fine concrete at each floor level as a precaution against fire and vermin. Internal pipework has the advantage of immunity from frost damage.

Each fitting should have its own branch waste. With 3-in. seal traps no unsealing has been experienced with as many as 24 fittings connected to one 4-in. downpipe. The regulations demand an anti-siphon pipe wherever there is more than one fitment connected to one waste pipe, but experience shows that provided a 3-in. seal trap is used, if the branch is short and the outlet to the waste but little below the trap, no unsealing takes place.

With regard to soilpipes—a 2-in. main vertical anti-siphon pipe is used, connected back to the main soil pipe not more than 24 in., nor less than 9 in. below the lowest fitting, or above the highest fitting. The lower connection is unnecessary where the outlet of the pan of the lowest wc is more than 10 ft. above the invert of the horizontal drain. The "one-pipe" system, whilst having considerable advantages from the self-cleansing angle, may not be more economical than the two-pipe, due to the necessity of providing anti-siphon pipes to all traps.

A recent experiment is to use the "one-pipe" system without anti-siphonage. A main stack of not less than 4 in. is provided: traps and branch wastes not less than 2 in. diameter : branches not more than 4 ft. long, and very shallow in pitch: 3-in. seal to baths, basins, etc., and 2-in. only to wc's; water spirals down the larger pipe, leaving the centre as a vent.

The article is well illustrated with diagrams of different installations.



Detail of combined sink and lav. basin waste connection. See 26.82.

This feature answers any question connected with building confidentially and free of charge. Questions to the Technical Editor, The Architects' Journal, 9, 11, and 13 Queen Anne's Gate, S.W.1.

QUESTIONS AND ANSWERS

3037 HORIZONTAL FLUES

Q *With reference to the house in Hauxton Road, Trumpington, Cambridgeshire, designed by D. C. Denton Smith and illustrated in the AJ Nov. 9, 1950 (Pages 370 to 372) I observe that the architect has employed a central fire situated between the lounge and the dining area with a horizontal flue running to the external wall. I realise that there might be a certain sluggishness in the withdrawal of smoke and the necessity of a soot door with such a flue, but as I have had no actual experience of such a flue, yet realising its possibilities, I would be very pleased, if you could let me have any available facts about its performance.*

A Horizontal flues can be made to work satisfactorily provided that :—

1. The ratio of horizontal length to height is not excessive.

2. Either smokeless fuel is used or the flue is frequently swept.

With regard to the first, I have found a ratio of 5 to 1 generally successful. In favourable conditions, a lower ratio might prove satisfactory : in the example published, it would appear that the ratio is more of the order of 3 to 1.

INFORMATION CENTRE INDEX, 1950

An alphabetical index covering items published during the twelve months ended December 31, 1950, *is being prepared. Readers who wish to have a copy—it is free of charge—should complete the form below and post it to the Technical Editor,* THE ARCHITECTS' JOURNAL, *not later than March* 9, 1951.

Please send me the Information Centre Index for 1950 :—

Name .....

Address .....

..... A. J. 8.2.51

Buildings Illustrated

"Passfields," Flats in Bromley Road, Lewisham, London, S.E.6, for Lewisham Borough Council. (Pages 183-190.) Architects: Fry, Drew and Partners. Assistant Architect: J. B. Shaw. Consulting Engineers: Ove Arup and Partners. Quantity Surveyors: Oswald E. Parratt, F.S.I. General Contractor: Wates Ltd. Sub-contractors: Central heating, hot water and plumbing, G. N. Haden & Sons Ltd.; electric drying tumblers in laundry, Isaac Braithwaite & Son, Engineers Ltd.; Bendix washing machines in laundry, Bendix Home Appliances Ltd.; water treatment plant, Candy Filter Co. Ltd.; sanitary equipment and gas fires, J. Young & Co. and J. S. & F. Folkard Ltd.; electrical installation, Brakefields Ltd.; tubular metal work to balconies and staircases and steel fixing, R. Smith (Horley) Ltd.; exterior light fittings, Falk Stadelmann & Co. Ltd. and Best & Lloyd Ltd.; louvred air ventilators, Greenwood's & Airvac Ventilating Co. Ltd.; floor finishes and insulating screeds, S. Towers & Son Ltd.; garden work and tree planting, J. Burley & Sons Ltd.; electric passenger lift, Hammond & Champness Ltd.; metal windows, Crittall Manufacturing Co. Ltd.; door furniture, Rennis Ltd.; paint, R. Gay & Co.; kitchen fittings, Kandya Ltd.; facing bricks, Uxbridge Flint Brick Co. Ltd.; precast concrete, Wates Ltd.; refrigerators, Electrolux Ltd.; doors and joinery, Ram & Austin Ltd.; gas fire flues in 5-storey block, True Flue Ltd.; gas fire flues in 3-storey block, Nautilus Fire Co.; steel shuttering to floors, Scaffolding (Great Britain) Ltd.; painting, J. W. Thompson; asphalte roofs and floors, Kent Asphalte Co.; brickwork to 3-storey blocks, G. & E. Hills; chain link fencing, W. A. Skinner & Co.; glazing, Wottons (Croydon) Ltd.; plastering, Southern Counties Plastering Contractors, tiling, Allan & Cairns Ltd.; concrete partition blocks, Lokay Sales; gas distribution and installation, S. Eastern Gas Board; electrical distribution, London Electricity Board.

The following was omitted last week:—

Flats at 19-20, *Bolingbroke Grove, London, S.W.*11. (Page 150.) Designed by: H. Atkinson, A.M.I.C.E., Borough Engineer and Surveyor. General Contractor: Battersea Borough Council direct labour force. Sub-contractors: Demolition, London Demolition Co. Ltd.; excavation, foundations, dampcourses, artificial stone, electric wiring, electric light fixtures, plumbing, plaster, metalwork, joinery, Battersea Borough Council Works Dept.; asphalt, Highways Construction Co. Ltd.; breeze blocks, internal brickwork, Hall & Co. Ltd.; reinforced concrete, Helical Bar & Engineering Co. Ltd.; facing bricks, J. H. Sankey & Co. Ltd.; special roofings, Wm. Briggs & Sons; patent flooring, S. Towers, "Fleximer"; grates, W. N. Froy & Sons Ltd; gas fixtures, South Metropolitan Gas Co. (now S.E. Gas Board); door furniture, L. Richmond Ltd.; metal casements, window furniture, Williams & Williams Ltd.; telephone cables, G.P.O.; Emalux wall glazing, John Ellis & Sons Ltd.; shrubs and trees, Battersea Borough Council Cemeteries Dept.; lifts, Hammond & Champness Ltd.; water supply, Metropolitan Water Board.

The following were not credited in our article on pages 154-158 on February 1 (Royal Festival Hall) owing to lack of space. Sub-contractors: Metal windows, The Crittall Manufacturing Co. Ltd., (windows in staircase towers only) James Gibbons Ltd.; glazing, Faulkner Greene & Co. Ltd.; patent glass lights, Lenscrete Ltd.; glass for armour plate doors, Pilkington Bros. Ltd.

Announcements

We regret to announce that Mr. Robert Taylor, managing director of R. Taylor & Co. (Ironfounders) Ltd., Muirhall, Larbert, has died at the age of 63.

A new rubber factory is being opened in Ceylon by the Latex Corporation of Ceylon Ltd., a subsidiary of the Dunlop Rubber Company, recently registered with an authorised capital of 4,000,000 rupees, equivalent to £300,000. The factory is at Kalutara, a rich rubber-planting district about 27 miles from Colombo.

Mr. F. J. Press, F.I.A.S., M.INST.R.A., of Franklin Newman & Press, architects and surveyors, has taken into partnership his chief assistant, Mr. Frank Wright, A.R.I.C.S. The name of the firm will be altered to Press & Wright, and the practice carried on from 20, Regent Place, Rugby.

Corrections

On page 170 of our issue of February 1, we omitted to mention, in our list of subcontractors for the Paton and Baldwin factory at Darlington, Co. Durham, the name of E. J. Elgood Ltd. (Industrial Flooring Specialists) who supplied and laid the Elco Cork Tile Flooring.

Messrs. Braithwaite & Co., Engineers, Ltd., have moved to Dorland House, Regent Street, S.W.1. In our issue for January 18 we wrongly stated that their advertising agents, Messrs. G. Street & Co., had moved to this address.

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SOLIGNUM WOOD PRESERVING STAIN— the standard preservative used throughout the world to give protection against dry rot, decay and the ravages of insects. It preserves and stains and is available in a variety of colours.

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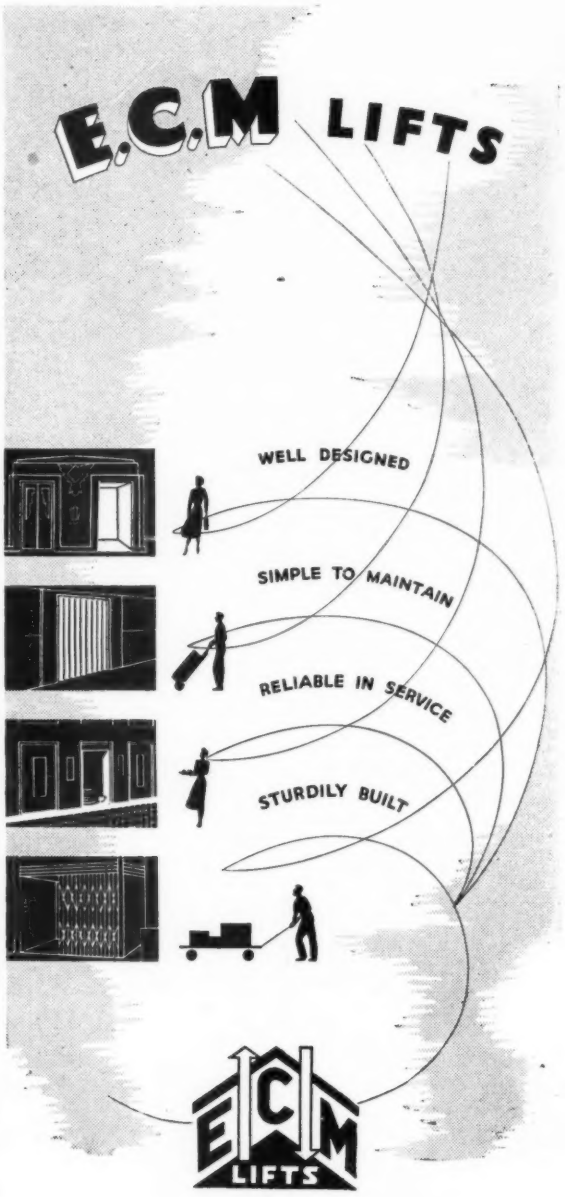
E.C.M LIFTS



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ECM 8

CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcement

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

NORTH THAMES GAS BOARD.

Applications are invited for the following appointment in the Architects' Section of the Chief Engineer's Department of Westminster: SENIOR ARCHITECTURAL ASSISTANT, minimum starting salary £650 per annum.

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

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

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

LONDON COUNTY COUNCIL.

Applications are invited for positions of ARCHITECTURAL ASSISTANT (salaries up to £580 a year) in the Housing and Valuation Department. Commencing salaries will be determined according to qualifications and experience. Engagement will be subject to the Local Government Superannuation Acts, and successful candidates will be eligible for consideration for appointment to the permanent staff on the occurrence of vacancies.

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

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

BOROUGH OF SCARBOROUGH.
APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the position of Architectural Assistant, Grade A.P.T., V (£520-£570), for work on new housing and other public buildings.

The position is superannuable.

The provision of housing accommodation will be considered if necessary.

Applications, stating age, experience, qualifications, past and present appointments, and the names of two persons to whom reference may be made, to reach the undersigned by Wednesday, 14th February, 1951.

H. V. OVERFIELD, M.I.C.E.,
Borough and Water Engineer.

Town Hall, Scarborough.
January, 1951. 1725

GLENROTHES DEVELOPMENT CORPORATION.

Applications are invited for the post of CHIEF QUANTITY SURVEYOR, the salary grade for which is £850 by annual increments of £50 to £1,000 per annum. Applicants should be under 45 years of age, Corporate Members of the R.I.C.S. with suitable experience, preferably in Scotland in estimating, preparing Bills of Quantities, and settling final accounts of large contracts.

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

Particulars of the assistance which the Corporation will give in securing housing accommodation will be given at the time of interview.

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

Applications, giving full particulars of the candidate's age, qualifications and experience, together with copies of not more than three recent testimonials, must reach the Secretary, Glenrothes Development Corporation, Woodside, Glenrothes by Markinch, not later than 20th February, 1951. 1815

LANCASHIRE COUNTY COUNCIL.

Qualified SURVEYOR required in the Estate Development Section of the County Planning Department. Salary £595-£660. The Section is attached to Headquarters' Office and carries out (in co-operation with County District Councils) schemes for accommodating overspill population from urban areas by developing existing townships.

Preference given to applicants with experience of estate management and levelling and surveying of large housing sites.

Applications, giving names, addresses and qualifications of two referees (where possible one should be the present employer), to reach the County Planning Officer, County Offices, Preston, by 17th February. 1779

MINISTRY OF WORKS.

SENIOR ARCHITECTURAL ASSISTANTS are required in the Chief Architect's Division, who have had first-class experience and who are capable of supervising drawing office staffs. Vacancies exist in London, Edinburgh, Newcastle, Leeds, Birmingham, Manchester and Capenhurst (Cheshire). Assistants will be employed on a wide variety of Public Buildings, including Atomic Energy and other Research Establishments, Telephone Exchanges, Office Buildings, etc. London salary, £625-£750 per annum. Salary elsewhere is slightly lower.

Although these are not established posts, many have long term possibilities.

Apply in writing, giving full details of age, qualifications and experience, to Mr. W. A. Rutter, C.B.E., F.R.I.B.A., Chief Architect, Ministry of Works, Abell House, John Islip Street, Westminster, S.W.1, quoting reference W.G.10/BE. Locality preferred should be stated. 1719

CORPORATION OF THE CITY OF ABERDEEN.
TOWN PLANNING DEPARTMENT.

Applications are invited for the following posts:—

(*a*) TECHNICAL ASSISTANT. Salary scale £595, rising to £660 per annum.

(*b*) TECHNICAL ASSISTANTS. Salary scale £390, rising to £570 per annum, with initial placing in accordance with qualifications and experience.

Application forms and further particulars of the appointments are obtainable from the Director of Town Planning, 5, Bon-Accord Crescent, Aberdeen.

Completed application forms (which should be submitted in duplicate) should be returned on or before 21st February, 1951.

J. C. RENNIE,
Town Clerk.

Town House, Aberdeen.
22nd January, 1951. 1740

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.

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

DORSET COUNTY COUNCIL.

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

(*a*) TWO ASSISTANT ARCHITECTS, with experience in Architectural work undertaken by a Local Authority (A.P.T., Grade V—salary £520-£570).

(*b*) An ASSISTANT ARCHITECT, with experience in alterations and additions to existing properties (A.P.T., Grade III—salary £450×£15—£495).

The minimum qualification required for posts (*a*) is Associates and for (*b*) Intermediate Examination of the Royal Institute of British Architects.

Full particulars and Forms of Application may be obtained from the Clerk of the County Council, County Hall, Dorchester, to whom applications must be returned by the 17th February, 1951. 1805

NATIONAL COAL BOARD—SOUTH-WESTERN DIVISION.

Applications are invited for the following posts in the Divisional Architects Branch, National Coal Board, South-Western Division, Cambrian Buildings, Mount Stuart Square, Cardiff.

The posts will be temporary, and, subject to satisfactory service, of not less than 12 months' duration.

(*a*) ARCHITECTURAL ASSISTANTS, Grade I. Salary: £410×£20—£550 (male); £340×£15—£445 (female).

Applicants should have passed the Intermediate Examination of the Royal Institute of British Architects and have had at least 5 years' office experience and be able to prepare sketch plans and working drawings.

(*b*) ARCHITECTURAL ASSISTANTS, Grade II. Salary: £300×£20—£440 (male); £247×£15—£352 (female).

Applicants should have passed the Intermediate Examination of the Royal Institute of British Architects or have had their testimonies of study for that examination accepted, and should preferably have had 4 years' experience and be capable of assisting in the preparation of working drawings and details.

(*c*) JUNIOR ARCHITECTURAL ASSISTANTS. The salary will be rate for age, ranging from 67s. per week at age 18 to 130s. per week at age 27 and over (males), and 67s. per week at age 18 to 108s. per week at age 27 and over (females).

Applicants must have attained a good standard of education and have had some experience in an Architect's office, and should be studying for the Intermediate Examination of the Royal Institute of British Architects.

The point of entry into the relevant salary scales for grades (*a*) and (*b*) will depend upon the qualifications and experience of the applicants.

Applications in writing, stating age, education, qualifications and experience, present appointment and salary, should be submitted within 14 days of the date of publication of this advertisement to the Divisional Establishment Officer, National Coal Board, South-Western Division, Cambrian Buildings, Mount Stuart Square, Cardiff.

Applicants should state clearly the appointment for which application is made. 1801

COUNTY BOROUGH OF GATESHEAD.
CHIEF ARCHITECT'S DEPARTMENT.

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

ASSISTANT ARCHITECTS. Grade V (£520-£570).

ARCHITECTURAL ASSISTANTS. Grade II to IV (£420-£465), (£450-£495), (£480-£525), according to experience.

ASSISTANT HEATING AND VENTILATING ENGINEER. Grade I to IV (£390-£525), according to qualifications and experience.

ESTIMATING AND COST CLERK. Grade IV (£480-£525).

Full particulars of the conditions attaching to each appointment can be obtained from the Chief Architect, and applications on forms provided should be returned to H. J. Cook, A.R.I.B.A., M.I.Struct.E., Chief Architect, Municipal Buildings, Swinburne Street, Gateshead, not later than Monday, 19th February, 1951.

J. W. PORTER,
Town Clerk.

Town Hall, Gateshead.
31st January, 1951. 1802

SUDAN GOVERNMENT.

The Public Works Department requires SENIOR LECTURER, aged 30 to 40 (approximately), in the Building School (Lecturer in Building Construction and allied subjects), for service in the Sudan. The duties consist of assisting in the setting up of a School of Building, which may later be incorporated in the Khartoum Technical Institute and to lecture in Building Construction, Technical Drawing, Quantity Surveying and allied subjects. Candidates should hold professional qualifications in Architecture or Civil Engineering, or equivalent qualifications appropriate to the post, and have had adequate teaching experience up to the Higher National Diploma standard at a recognised Technical College.

Appointment will be either on Long Term Contract for seven years on a salary scale of £E759 to £E1,316, with special post-service gratuity of £E1,500, or on Provident Fund Contract or Short Term Contract, at higher rates of pay and different post-service benefits.

Cost-of-living allowance varying between £E142 and £E352 per annum, according to the number of dependents, is at present payable, and, subject to certain limitations, an outfit allowance of £E60 on appointment. There is at present *no income tax* in the Sudan. Free passage on appointment. Full particulars and application form may be obtained on application to: Sudan Agent in London, Wellington House, Buckingham Gate, London, S.W.1. Please mark envelopes "Lecturer (Building) P.W.D." 1804

COUNTY BOROUGH OF MIDDLESBROUGH EDUCATION COMMITTEE.
ASSISTANT ARCHITECTS.

Applications are invited for three posts of Assistant Architect, Grades A.P.T., VII, and A.P.T., V (two posts), respectively, in the Education Offices (Education Architect: P. R. Middleton, Dipl.Arch., A.R.I.B.A.). The Committee have a large Building Programme in hand, and the posts offer excellent opportunities in the design and construction of modern school buildings.

Forms of application and conditions of service may be obtained from the Director of Education, Education Offices, Woodlands Road, Middlesbrough, to whom completed forms should be returned, not later than Monday, 19th February, 1951.

E. C. PARR,
Town Clerk.
1782

NATIONAL COAL BOARD.
NORTH-EASTERN DIVISION.
ARCHITECTURAL STAFF.

Applications are invited for the following appointments in the Architects' Department of this Division at Denaby, near Doncaster:—

ARCHITECTURAL ASSISTANT, Grade I. Salary scale £410×£20 to £550 per annum (men) and £340×£15 to £445 per annum (women).

Applicants should be student R.I.B.A. and training for the Intermediate Examination. Applicants should have some experience in the preparation of Sketch Plans, Working Drawings and Specifications, and have a good knowledge of building construction.

Commencing salary according to knowledge and experience.

ARCHITECTURAL ASSISTANT, Grade II. Salary scale £300×£20 to £440 per annum (men) and £247×£15 to £352 per annum (women).

Applicants should be probationers of the R.I.B.A.

Commencing salary according to knowledge and experience.

CLERKS OF WORKS, Grade II. Salary scale, £400×£25 to £550 per annum.

Applicants should be Clerks of Works, preferably with experience of Industrial and Welfare Buildings. They should be experienced in the supervision of steel and reinforced concrete structures and have a knowledge of sewage disposal plants and the heating, ventilating and electrical plants and services connected with Industrial and Welfare Buildings.

Commencing salary according to knowledge and experience.

Applicants for all the above appointments should be made on Form S.8.A., obtainable from the Establishments Officer, National Coal Board, North-Eastern Division, Ranmoor Hall, Belgrave Road, Sheffield, 10. 1816

METROPOLITAN BOROUGH OF SHOREDITCH.
SENIOR ASSISTANT ARCHITECT.

Applications are invited for the appointment of Senior Assistant Architect, on the permanent staff of the Council, at a salary in accordance with Grade VII of the National Scale of Salaries, £665-£740 per annum, consolidated.

Applicants should have had a recognised architectural training and be competent to undertake the design and construction of Municipal buildings, including multi-storey flats.

Preference will be given to candidates with a recognised architectural qualification.

The appointment will be subject to medical examination, the Council's Superannuation Scheme, and General Conditions of Service.

The Council will make available to the successful applicant a three bedroom house now in course of erection.

Applications, stating age, training and experience, together with the names of two persons to whom reference may be made, should be submitted to the undersigned not later than Thursday, 15th February, 1951, and endorsed "Senior Assistant Architect."

C. A. JAMES,
Town Clerk.

Town Hall, Old Street, E.C.1.
31st January, 1951. 1800

LONDON ELECTRICITY BOARD.
DRAUGHTSMEN.

Applications are invited for vacancies as Draughtsmen.

Ref. No. EST/V/1151/A—Southern Sub-Area. Experience in records in connection with the laying of underground cables preferable.

Ref. No. EST/V/1252/A—South-Western Sub-Area (Battersea, Balham and Wimbledon). Applicants should have experience in the following in relation to distribution systems up to 11kV:—plant and cable layout work; diagrams; cable surveys and wayleaves.

Ref. No. EST/V/1155/A—Northern Sub-Area (Aldersgate Street, E.C.1), Design and Planning Branch. Applicants should be capable of making drawings of plant, cable layouts, line diagrams of steel or concrete structures from rough sketches supplied, or from draughtsman's own measurements. Previous experience in the Electricity Supply Industry an advantage, but not essential.

Candidates for all the foregoing vacancies should have had a good general and technical education, also drawing office experience. The commencing salaries, which are provisional, pending agreement with the appropriate negotiating organisations, will be in accordance with qualifications and experience and will be between £300 and £450 per annum.

Application forms obtainable from Establishments Officer, 46, New Broad Street, E.C.2, to be returned duly completed within 7 days. Please enclose addressed foolscap envelope and quote appropriate Ref. No. shown above, on envelope and all correspondence. 1796

LONDON ELECTRICITY BOARD.
JUNIOR QUANTITY SURVEYOR.

Applications are invited for the above position in the Architect's Section of the Chief Engineer's Department at Lesco House, Stamford Street, S.E.1.

Applicants must have had experience in working up in all trades, and the successful candidate will be on the staff of a Chartered Quantity Surveyor.

The post has been graded under the National Joint Board agreement of 17th February, 1950, as Grade 9 (Schedule C). Salary range: £400 to £579 per annum inclusive. This grading is subject to the approval of the District Joint Board and confirmation by the National Joint Board.

Application forms obtainable from Establishments Officer, 46, New Broad Street, E.C.2, on receipt of addressed envelope, to be returned duly completed within 7 days. Please quote Ref. EST/V/1150/A on envelope and all correspondence. 1777

THURROCK URBAN DISTRICT COUNCIL.
ARCHITECTURAL ASSISTANT, GRADE VI.

Applications are invited for the appointment of an ARCHITECTURAL ASSISTANT, at a salary in accordance with Grade VI of the A.P.T. Division of the National Scale of Salaries, *i.e.*, £595 per annum, rising by three annual increments to £660 per annum.

Candidates should be Associates of the Royal Institute of British Architects, and should be experienced in the preparation of drawings, specifications, and estimates for building and architectural work, undertaken by a Local Authority, particularly in connection with housing schemes on a large scale.

Housing accommodation, if necessary, will be provided for the successful candidate if he lives more than 20 miles from the district.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination.

Applications, endorsed "Architectural Assistant, VI," stating age, qualifications and experience, and quoting three references, should reach the undersigned not later than the first post on Wednesday, the 21st February, 1951.

Canvassing will disqualify, and applicants must disclose in writing any relationship to any member or senior officer of the Council.

A. E. POOLE,
Clerk of the Council.

Council Offices, Whitehall Lane, Grays, Essex. 1786

BOROUGH OF WEYMOUTH AND MELCOMBE REGIS.
APPOINTMENT OF SENIOR QUANTITY SURVEYING ASSISTANT.

Applications are invited for the above appointment in the Borough Engineer and Surveyor's department at a salary in accordance with A.P.T., Grade V (£520×£15×£20—£570 per annum).

Candidates must be Members of the Royal Institute of Chartered Surveyors (Quantities), and must be competent and experienced in all branches of quantity surveying. The point of entry in the scale will be determined in accordance with qualifications and experience.

The appointment will be terminable by one month's notice on either side, and will be subject to the provisions of the Local Government Superannuation Act, 1937.

Applications, stating age, qualifications, training and experience, together with the names of three gentlemen to whom reference may be made, to be forwarded endorsed "Senior Quantity Surveying Assistant," to the undersigned not later than Wednesday, 21st February, 1951.

PERCY SMALLMAN,
Town Clerk.

Municipal Offices, Weymouth.
January, 1951. 1823

BOROUGH OF WEYMOUTH AND MELCOMBE REGIS.
APPOINTMENT OF SENIOR ARCHITECTURAL ASSISTANT.

Applications are invited from Registered Architects for appointment as Senior Architectural Assistant to the Borough Engineer and Surveyor's department, at a salary in accordance with A.P.T., Grade VI (£595×£20×£25—£660 per annum).

The appointment is in connection with the large scale re-development of an area of extensive bomb damage, and the candidate should have had suitable architectural training and considerable experience in the design of shops and large blocks of flats. The point of entry in the scale will be determined in accordance with qualifications and experience. Candidates must hold the examination of the Royal Institute of British Architects or a similar qualification by examination.

The appointment will be terminable by one month's notice on either side, and will be subject to the provisions of the Local Government Superannuation Act, 1937.

Applications, stating age, qualifications, training and experience, together with the names of three gentlemen to whom reference may be made, to be forwarded, endorsed "Senior Architectural Assistant," to the undersigned not later than Wednesday, 21st February, 1951.

PERCY SMALLMAN,
Town Clerk.

Municipal Offices, Weymouth.
January, 1951. 1822

CITY OF MANCHESTER.
CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following permanent appointments:—

(1) ARCHITECTURAL ASSISTANT.

(2) HEATING, VENTILATING AND MECHANICAL ENGINEERING ASSISTANT.

Candidates must be experienced in the design and detailing of all types of heating and hot water supply installations.

(3) ELECTRICAL ENGINEERING ASSISTANT.

Candidates must be capable of preparing schemes for electric lighting and power installations in all types of Municipal buildings.

Candidates for the above positions must have passed the Intermediate or equivalent examination of the appropriate professional body.

The salary for each of the above appointments will be A.P.T., III, £450 to £495 per annum.

(4) JUNIOR ELECTRICAL ENGINEERING ASSISTANT.

Salary, General Division Grade, £135 to £385 per annum, according to age.

Candidates must be training in the application of electricity to all forms of public buildings, and should have obtained the Ordinary National Certificate in Electrical Engineering.

The salary and conditions of service for all of the appointments will be in accordance with the National Scheme of Service Conditions.

Forms of application may be obtained from and should be returned, together with not more than three recent testimonials, to Leonard C. Howitt, B.Arch., F.R.I.B.A., City Architect, Town Hall, Manchester, 2, by 24th February, 1951, endorsed for the appropriate appointment. Canvassing is prohibited.

PHILIP B. DINGLE,
Town Clerk.

Town Hall, Manchester, 2.
February, 1951. 1820

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.
BUILDING SURVEYORS.

Applications are invited for positions of TECHNICAL ASSISTANT (salaries up to £580) on the surveying staff of the Architect's Department, to deal with the temporary administration of the London Building Acts and other statistics (including means of escape, safety precautions in buildings licensed for public entertainment and general building regulations). Candidates should have a knowledge of building construction, and preference will be given to those taking R.I.C.S. qualificat ions. The positions will be superannuable. Application forms from the Architect (AR/EK/BR), County Hall, S.E.1, enclosing stamped addressed envelope, to be returned by 28th February, 1951. (98) 1791

WANTED.
TEMPORARY STRUCTURAL ENGINEER FOR THE GOVERNMENT OF CEYLON.

Applications are invited for a post of Temporary Structural Engineer, Public Works Department, Ceylon.

Qualifications and Experience Required.—Candidates should possess the B.Sc.(Eng.) degree or is an examined member of a professional institution of the standing of the Institution of Civil Engineers or the Royal Institute of British Architects, and shall have at least 15 years' experience in Structural Designs, during which time he must have been, for some years, in sole charge or in a high responsible position. They should also be capable of undertaking full charge and responsibility for such work, entirely under their own initiative and without the possibilities for reference which are quite normal in a country such as England.

Age.—Candidates should be not more than 40 years on 12th January, 1951.

Emoluments.—Europeans and Australians, £1,000×5 of £40—£1,200 per annum. Ceylonese, Indians and Pakistanis, Rs.13,200×3 of Rs.600—Rs.15,000 per annum.

Terms of Appointment.—Appointment will be on agreement for a period of 4 years, with a possible extension of 4 years, but terminable by the Government at any time on giving 3 months' notice or 3 months' salary, and terminable by the officer appointed under conditions more fully set out in the form of agreement and schedule attached thereto, which can be inspected at the Office of the High Commissioner for Ceylon in the United Kingdom in London, from whom further particulars and forms of application may be obtained.

Applications for the above post should reach the High Commissioner for Ceylon in the United Kingdom, 13, Hyde Park Gardens, London, W.2, on or before 21 days from the date of this publication. 1786

BOROUGH OF WORTHING.
APPOINTMENT OF SENIOR ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of a Senior Architectural Assistant on the permanent establishment of the Borough Engineer and Surveyor's Department, at a salary in accordance with A.P.T., VI (£595-£660).

Candidates should preferably be Associates of the Royal Institute of British Architects, and should have had a sound experience in the preparation of Drawings and Specifications for Local Authority building contracts.

The appointment will be subject to the National Scheme of Conditions of Service of Local Government Officers, to the Local Government Superannuation Act, 1937, and to the successful candidate passing satisfactorily a medical examination.

The Council will assist the successful applicant to obtain housing accommodation, if necessary.

Applications, endorsed "Senior Architectural Assistant, Grade VI," stating age, status, qualifications, present and previous appointments and experience with dates, and accompanied by copies of three recent testimonials, should be addressed to the Borough Engineer and Surveyor, Town Hall, Worthing, and should be received by him not later than 12 noon on Friday, the 16th February, 1951.

ERNEST G. TOWNSEND,
Town Clerk.

Town Hall, Worthing.
26th January, 1951. 1794

UNIVERSITY OF NOTTINGHAM.
ARCHITECTURAL ASSISTANT.

Applications are invited for appointment as Architectural Assistant in the Surveyor's Department. Candidates must have practical experience in the preparation and development of detailed working drawings from sketch plans.

Conditions of appointment and form of application may be obtained from the undersigned.

H. PICKBOURNE,
Registrar.

1792

CLACTON URBAN DISTRICT COUNCIL.
ENGINEER AND SURVEYOR'S DEPARTMENT.
SENIOR ENGINEERING ASSISTANT, A.P.T., GRADE V.
ARCHITECTURAL ASSISTANT, A.P.T., GRADE V.

Applications are invited for the above appointments, each at a salary in accordance with A.P.T. Division, Grade V, of the National Joint Council Scale (£520-£570 per annum). In the case of the Senior Engineering Assistant, preference will be given to holders of the Final Examination of the Institution of Civil Engineers or the Institution of Municipal Engineers. Applicants for the position of Architectural Assistant should be Registered Architects.

A flat is available for one of the successful applicants.

Forms of Application may be obtained from Mr. W. Aiston, A.M.I.C.E., Reg. Arch., Engineer and Surveyor, Town Hall, Clacton-on-Sea, and must be delivered, duly completed, in plain sealed envelopes endorsed "Senior Engineering Assistant" or "Architectural Assistant," as the case may be, to the undersigned by not later than first post on Tuesday, 20th February, 1951.

Canvassing, either directly or indirectly, will disqualify.

CHARLES B. HEARN,
Clerk of the Council.

Town Hall, Clacton-on-Sea. 1819

SUNBURY-ON-THAMES URBAN DISTRICT COUNCIL.

A vacancy exists for a JUNIOR PLANNING ASSISTANT in the Engineer's Department of the Council, at a salary in accordance with Grade II of the A.P. and T. Division of National Scales of Salaries (£420 to £465 per annum), plus London "weighting" allowance.

Technical qualifications, although desirable, are not insisted upon, but applicants will be required to demonstrate possession of some knowledge of Town and Country Planning.

The position presents an opportunity to gain experience in all aspects of Planning, including presentation of suggestions for development and redevelopment.

Applications, giving the names of two persons to whom reference may be made, should be sent to the undersigned not later than 20th February, 1951.

A. J. BUTTRESS,
Engineer and Surveyor.

Council Offices, Sunbury-on-Thames.
1st February, 1951. 1821

BOROUGH OF NEWCASTLE-UNDER-LYME. CHIEF QUANTITY SURVEYOR.

Applications are invited for the above appointment in the A.P. and T. Division, Grade VII (£635-£710 per annum), of the National Scale of Salaries. Housing accommodation will be available for the successful candidate.

Applicants must be qualified Quantity Surveyors, fully experienced in the taking off and preparation of Bills of Quantities, Specifications and Estimates, preferably in connection with new school contracts, and should have a thorough knowledge of contract administration.

Application forms, further particulars and conditions of appointment may be obtained from the Borough Engineer and Surveyor, Lancaster Building, Newcastle-under-Lyme, Staffs., to whom applications must be delivered not later than 26th February, 1951.

C. J. MORTON,
Town Clerk.

Town Clerk's Office, Newcastle, Staffs. 1818

UNIVERSITY OF SYDNEY, AUSTRALIA.

Applications are invited for the position of SENIOR LECTURER in the Department of Town and Country Planning.

The commencing salary will be fixed according to qualifications and experience within the range £1,050 to £1,300 (Australian) per annum, plus cost-of-living adjustment (at present £49 males, £39 females), with annual increments of £50, and will be subject to deductions under the New South Wales Superannuation Act.

The appointment is for a period of five years, subject to extension under such conditions as may be approved by the University of Sydney, and the successful applicant will be required to take up duties as early as possible.

Further particulars and information as to the method of application may be obtained from the Secretary, Association of Universities of the British Commonwealth, 5, Gordon Square, London, W.C.1.

The closing date for the receipt of applications is 16th March, 1951. 1826

LONDON ELECTRICITY BOARD. DRAUGHTSMEN.

Applications are invited for positions as Draughtsmen in the Design and Planning Branch of the Western Sub-Area.

Applicants should have had a technical education to National Certificate standard, drawing office training, and considerable experience in the layout of H.V. and L.V. mains and general mains records.

Pending grading of the posts under the national agreement of the appropriate negotiating body, the commencing salaries will be within the range of £300/£500 per annum inclusive, according to qualifications and experience.

Application forms obtainable from Establishments Officer, 46, New Broad Street, E.C.2, to be returned duly completed within 7 days. Please enclose addressed foolscap envelope and quote Ref. EST/V/1158/A on envelope and all correspondence. 1825

CITY OF BATH. CITY PLANNING DEPARTMENT.

Applications are invited for the appointment of a CHIEF PLANNING ASSISTANT, Grade VII (£635-£710), or Grade VI (£595-£660), according to qualifications and experience. Preference will be given to candidates who possess a recognised Town Planning qualification. The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and to the successful candidate passing a medical examination. Applications, stating age, qualifications and experience, together with the names of three referees, should be forwarded to the City Planning Officer, 2, Princes Buildings, Bath, not later than 17th February, 1951. 1783

LONDON COUNTY COUNCIL. ARCHITECT'S DEPARTMENT.

CLERKS OF WORKS required for erection of schools, including a comprehensive high school. Salaries up to £550 a year for normal school work and up to £660 a year for comprehensive high school. Applicants should have had reinforced concrete and steelwork experience on major works. Application form from Architect to the Council (AR/EK/CW), County Hall, Westminster Bridge, S.E.1, enclosing stamped addressed foolscap envelope. (99) 1790

BOROUGH OF DEVIZES. TECHNICAL ASSISTANT.

Applications are invited for the temporary appointment of Technical Assistant in the office of the Borough Surveyor and Water Engineer, to assist in the preparation of schemes for the Council's permanent housing programme, at a salary in accordance with Grade IV (A.P.T.) of the National Scale of Salaries (£480 p.a., rising by annual increments of £15 to £525).

Applicants should have had good experience in the preparation of schemes of Municipal housing, including sewerage, highways and water supply. Preference will be given to applicants who have passed an examination of the Institution of Civil Engineers or the Institution of Municipal Engineers or the Royal Institute of British Architects.

Forms of application and any further particulars may be obtained from, and applications should be addressed to the Borough Surveyor and Water Engineer, The Chequers, Devizes, Wilts.

All applications should be received in an envelope endorsed "Technical Assistant," by not later than noon on Monday, 12th March, 1951.

The appointment will be subject to one month's notice on either side.

A. HODGE,
Town Clerk.

Midland Bank Chambers, Devizes, Wilts.
2nd February, 1951. 1824

Partnership

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

UNUSUAL OPPORTUNITY.—S/c. 3-room Flat, moderate rent, S.E. London, available to Architect willing invest suitable capital to form business arrangement, not necessarily full time nor architectural. Facilities studio office same premises. Suggestions to Box 1811.

Tenders for Contracts

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

COUNTY BOROUGH OF BIRKENHEAD. EDUCATION COMMITTEE. NEW TECHNICAL COLLEGE—SUPERSTRUCTURE.

Tenders are invited from Registered Building Contractors for the erection of the Superstructure of the New Technical College, Borough Road, Birkenhead.

The foundation work up to ground level, Pitched Roads, Sewers and other site works have been the subject of a separate Contract and are now nearing completion.

Specifications, Bills of Quantities, and Forms of Tender may be obtained on or after 12th February, 1951, from the Architects, Messrs. Willink & Dod, F./F.R.I.B.A., Cunard Building, Liverpool, 3, on payment of a deposit of three guineas, which will be returned on receipt of a *bona fide* tender.

Tenderers must be firms of standing and be prepared to give a Bond jointly with a Bank or approved Insurance or Guarantee Company, for the due performance of the Contract, in the event of their tender being accepted.

Drawings may be inspected at the Architects' Office on or after 12th February, 1951.

Tenders must be sent in the official envelope provided (which must not bear any name or mark indicating the sender), sealed and endorsed "Tender for Superstructure—New Technical College," and received at my office by *postal delivery* not later than 10 a.m. on Friday, 9th March, 1951.

The acceptance of any tender is subject to approval, and the Corporation do not bind themselves to accept the lowest or any tender. Tenders delivered by hand will not be accepted, and tenders which do not comply with these instructions will not be considered.

DONALD P. HEATH,
Town Clerk.

Town Hall, Birkenhead. 1793

Competition

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

ARCHITECTURAL COMPETITION.
A FESTIVAL HALL AT HESWALL FOR THE WIRRAL URBAN DISTRICT COUNCIL.

The Wirral Urban District Council invite Architects to submit designs in Competition for a Festival Hall to be erected at Heswall, Wirral, Cheshire.

Assessor: MR. P. GARLAND FAIRHURST, M.A., F.R.I.B.A.

Premiums: £500, £350, £250.

Last day for submitting designs: 28th April, 1951.

Last day for submitting questions: 6th February, 1951.

Conditions may be obtained on application to: WM. F. ROBERTS, Clerk of the Council, Council Offices, Heswall, Wirral, Cheshire.

Deposit £2 2s. 1564

ARCHITECTURAL COMPETITION for the HERZL MEMORIAL ON MOUNT HERZL, JERUSALEM, ISRAEL.

The Executive of the World Zionist Organisation, in conjunction with the Board of Trustees for Herzl's Tomb invite Jewish ARCHITECTS, SCULPTORS and PLANNERS throughout the world to submit designs in competition for the proposed Memorial to Herzl's Tomb, the park, and the traffic layout of the immediate vicinity.

Assessors:

1. B. Locker, Chairman, Jewish Agency, Jerusalem.
2. A. Berachyahu, Engineer, Jewish National Fund, Jerusalem.
3. Dr. L. Lauterbach, Secretary of the Zionist Executive, Jerusalem.
4. J. Mevrikin, Architect, Jewish Agency, Jerusalem.
5. J. Pinkerfeld, Architect, Tel-Aviv.
6. Professor Y. Rainer, Architect, Haifa.
7. H. Rau, Architect, Jerusalem.
8. J. Weitz, Jerusalem.
9. N. J. Aslan, A.R.I.B.A., A.M.T.P.I., London.

Premiums:

11 premiums totalling £5,000.

Last day for submitting designs, 21st June, 1951.

Schedule of conditions and particulars may be obtained on application to the Secretary, The London Committee, Herzl Memorial, 77, Great Russell Street, London, W.C.1, enclosing a deposit of £2 2s.

(In view of the religious character of the project this Competition has been restricted to members of the Jewish faith.) 1815

COMPETITION. DORSET COUNTY COUNCIL. A COLLEGE FOR FURTHER EDUCATION AT POOLE, DORSET.

The Dorset County Council invite Architects to submit designs in competition for a College of Further Education to be erected at Poole, Dorset.

Assessors:

J. Leathart, F.R.I.B.A., Royal Institute of British Architects.

S. A. W. J. Johnson-Marshall, B.Arch., A.R.I.B.A., Chief Architect, Ministry of Education.

H. E. Matthews, F.R.I.B.A., County Architect, Dorset, Dorset County Council.

J. Haynes, M.A., County Education Officer, Dorset, Dorset County Council.

H. J. Shelley, O.B.E., Chief Inspector, Ministry of Education.

Premiums:

£1,000 to author of design placed 1st by the Assessors.

£500 to author of design placed 2nd by the Assessors.

£300 to author of design placed 3rd by the Assessors.

Last day for the receipt of designs 30th September, 1951.

Last day for the receipt of questions 30th April, 1951.

Conditions may be obtained from the County Education Officer, County Hall, Dorchester, Dorset. A deposit of £1 1s. made payable to the County Treasurer should accompany the request for the Conditions, which will be returned on receipt of *bona fide* design.

Paragraph 11 of the Conditions and instructions to competitors must be strictly adhered to.

C. P. BRUTTON,
Clerk of the County Council.

County Hall, Dorchester. 1784

Architectural Appointments Vacant

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

FULLY qualified ARCHITECTURAL ASSISTANT required for West End office. Capable of handling contracts. State qualifications, experience, and salary required. Box 1586.

ARCHITECTURAL DRAUGHTSMAN required immediately. Interesting and varied work. 5-day week. Apply in writing, stating age and experience, to the Austin Motor Co., Ltd., Longbridge, Birmingham (Personnel Dept.). 1665

SOUTHAMPTON.—Busy firm of Architects require ASSISTANT ARCHITECT, with some office experience; alternatively medium grade ASSISTANT of at least Intermediate standard, with sound knowledge of design of commercial and industrial buildings. Applications, giving full particulars, including qualifications, experience, and salary required, to Box 1756.

SINGLE ASSISTANT, Intermediate standard, car driver, required for live country office. Experienced measured surveys. Full details with salary required to Box 1765.

QUANTITY SURVEYORS require ASSISTANT for Branch Office, Harrow, with experience in taking off, measuring, and working up. Reply in writing, stating age, experience, and salary required, George Lewis & Son, 49, Sheepcote Road, Harrow, Middlesex. 1774

QUALIFIED ARCHITECTURAL ASSISTANT required for large London office. Must be fully experienced and able to take complete charge of jobs. Good prospects for keen man. Apply Box 1773.

QUALIFIED ARCHITECT, some years' experience essential and knowledge of current school design desirable. Reply by letter stating experience and salary required to Howard V. Lobb & Partners, 20, Gower Street, W.C.1. 1812

ARCHITECT'S ASSISTANT and DRAUGHTSMAN to take charge of Works and Drawing Office (30 miles London). Experience essential of prefabricated composite building and particularly timber construction. Permanent and progressive post with scope for new design and development work. Apply with experience, references to Box 1833.

ASSISTANT required in small London office. Contemporary design ability and construction experience necessary. Progressive appointment for young man to eventually take over complete jobs. Salary £550 to £650 to commence. Write, stating age and experience. Box 1813.

E. MAY requires TWO ASSISTANTS for his Nairobi office. Several years' experience modern architecture essential. Passage money out refunded, free return fare. Salary according to qualifications and experience. Apply Overseas Architects Service, 5, Welldon Crescent, Harrow. 1814

ASSISTANTS wanted for hospitals, schools and planning work. F. W. B. Charles, B.Arch., A.R.I.B.A., 3, Great Stuart Street, Edinburgh, 3. 1807

ARCHITECTS' CO-OPERATIVE PARTNERSHIP require an ASSISTANT, with experience of administration. Salary according to experience. Apply in writing to 34, Gordon Square, London, W.C.1. 1780

ARCHITECTURAL ASSISTANT required, N.W. Kent area. Must be up to Intermediate standard. Write, stating age, experience, and salary required, to Box 1799.

DRAUGHTSMAN, with experience in the design of structural steelwork on industrial buildings, required. A knowledge of reinforced concrete and general building construction also desirable. Write, stating age, experience, and salary desired, to E.M.A., Cadbury Brothers, Ltd., Bournville. 1796

ARCHITECTURAL ASSISTANT. Intermediate R.I.B.A. standard, busy Herts office. Apply, giving fullest particulars and salary required, Box 1828.

GOOD steady job for well experienced SENIOR ARCHITECTURAL ASSISTANT, having neat draughtsmanship and really practical knowledge. Reply, with brief personal history and salary expected, Box 1831.

LEWELLYN SMITH & WATERS, F./F.R.I.B.A., 103, Old Brompton Road, S.W.7, and Willis, Llewellyn Smith & Waters, Albany House, Worcester, require competent ASSISTANTS. Applicants should have passed the Intermediate Examination and have had at least three years' office experience. Interesting programme of varied work in hand. Please apply in writing to London office. 1834

Architectural Appointments Wanted

ASSISTANT and Secretary (woman) requires position Architect's office. Good drawing office experience, shorthand typing, etc. Box 84.

SENIOR ASSISTANT (32), with wide experience, including local authority housing and industrial work, seeks responsible position in the [illegible] South. Box 83

OFFICE trained ASSOCIATE, with varied experience, including 6 years as Senior and Managing Assistant in private practice, and accustomed to responsibility for office administration and staff supervision, desires new appointment. Box 85.

A.R.I.C.S. (Building), M.R.San.I. (Sanitary Science), A.I.Arb., age 29; 11 years' experience in private and local government service. Studying for special Final R.I.B.A. November, 1951. Desires post giving architectural experience. Please state approximate salary. Box 82.

Services Offered

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

PERSPECTIVES in all mediums. Professional Artist, many years with London Architect producing only perspectives, can now accept free lance commissions. Quotations and drafts returned in few hours. F. RANDALL FORWARD, Diploma Fine Art, London University, etc., 9, Elliott Avenue, Southwold, Suffolk. 1708

R.I.B.A. Calculations of Simple Structural Members and Theory of Structures. Postal Tuition. Apply D. A. Fowler, Dip.Arch.(Abdn.), F.R.I.B.A., 22, Oakwell Mount, Leeds, 8. 1208

EXPERIENCED BUILDING ENGINEER offers spare-time assistance to Architects. Calculations, Details and Schedules prepared for all types of R.C. or Steel Structures. Box 1781.

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EXPERIENCED Architectural Work. Part-time. Available anywhere S.E. England, East Anglia, London and Manchester, as required. Box 1809.

A.R.I.B.A., A.M.T.P.I., requires part-time in own office in Central Scottish area. Wide experience. Will undertake sketch plans, perspectives, models and working drawings. Box 1806.

Other Appointments Vacant

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

SECRETARY required in Architects' office. 5-day week. Good salary offered. Write, stating age, experience and salary required, to R. P. Sharman, A.R.I.B.A., 55, Queen Anne Street, Cavendish Square, W.1. 1805

QUANTITY SURVEYOR required by the Design and Construction Department of a plastics manufacturing concern near Maidstone. Experience in taking off and measuring essential. Congenial working conditions. Write experience, age, and salary required. Box 1829.

CITY Surveyors require Qualified BUILDING SURVEYOR (35/50 years), experienced in current practice and building costs for works to offices, commercial and industrial properties in the London area. Permanent and responsible post, with variety and scope. Salary £800 to £1,000 p.a. Box 1788.

ARCON require DRAUGHTSMEN for preparing presentation drawings. Salaries according to ability and experience. Apply 81, Piccadilly, W.1. 1817

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

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ACCOMMODATION address available for professional use; 1 minute Victoria Station and in very well-known road. Letters forwarded and telephone messages taken; £26 for one year. Box 1787.

ARTISTS' West End Studio; small painting classes. Highest professional individual tuition for beginners in serious but informal atmosphere. Reasonable terms. Box 1832.

Educational Announcements

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

R.I.B.A. EXAMS.—Mr. L. Stuart Stanley, M.A., F.R.I.B.A., M.T.P.I., Distn. in T.P. (Tutor in the Sch. of Arch. Lon. Univ.), and Mr. G. A. Crockett, B.A., A.R.I.B.A., A.M.T.P.I., F.R.S.A., Donaldson Medallist, prepare Students by correspondence tuition. Stuart Stanley & Crockett, 10, Adelaide Street, Strand, W.C.2. TEM. 1603/4.

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