THE ARCHITECTS' JOURNAL

standard contents

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

No. 3180] [VOL. 123

THE ARCHITECTURAL PRESS

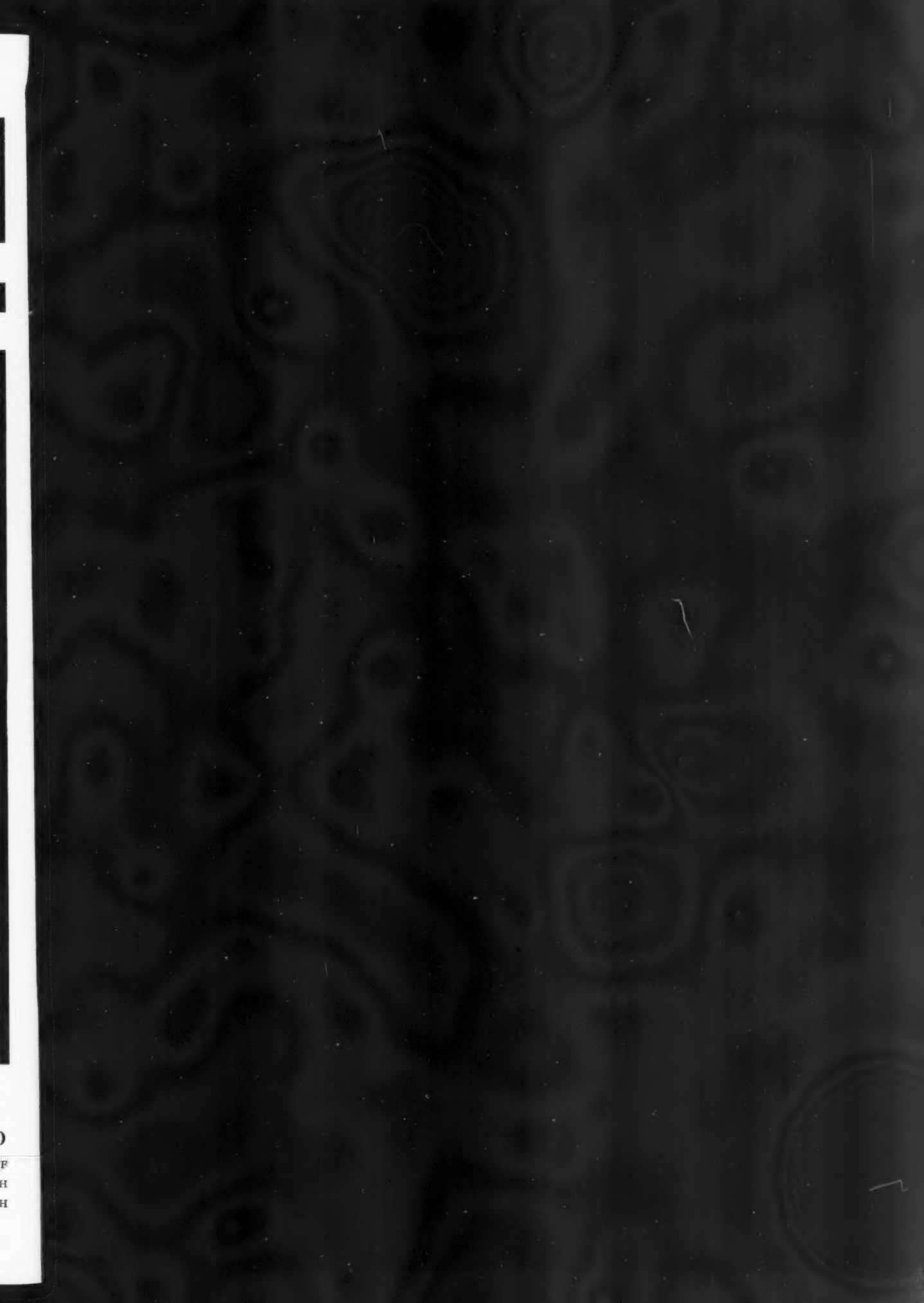
9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1. 'Phone: Whitehall 0611

Price 1s. 0d.

Registered as a Newspaper.

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

IHVE	Institution of Heating and Ventilating Engineers. 49, Cadogan Square.	Sloane 1601/3158
IIBDID	Incorporated Institute of British Decorators and Interior Designers. 100 Park Street, Grosvenor Square, W.1.	Mayfair 7086
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Museum 1783
I of Arb	Institute of Arbitrators. Hastings House, 10, Norfolk Street, Strand W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197
IQS	Institute of Quantity Surveyors, 98, Gloucester Place, W.1.	Welbeck 1859
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institute of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
LDA	Lead Development Association. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
LSPC	Lead Sheet and Pipe Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
MAFF	Ministry of Agriculture, Fisheries and Food. Whitehall Place, S.W.1.	Trafalgar 7711
MARS	Modern Architectural Research Group (English Branch of CIAM). Secretary : Trevor Dannatt, A.R.I.B.A., 71, Blandford Street, W.1.	Welbeck 4713
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. 23, Savile Row, W.1.	Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service. 8, St. James' Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, W.C.2	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine Owners and Manufacturers Council. 94/98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 31, Chester Terrace, Regent's Park, N.W.1.	Welbeck 0619
NCBMP	National Council of Building Material Producers. 10 Storey's Gate, S.W.1.	Abbey5111
NEFMAI	National Employers Federation of the Mastic Asphalt Industry. 21, John Adam Street, Adelphi, W.C.2.	Trafalgar 3927
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives. Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies 12, 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
NRDB	Natural Rubber Development Board. Market Buildings, Mark Lane, E.C.3.	Mansion House 9383
NSAS	National Smoke Abatement Society. Palace Chambers, Bridge Street, S.W.1.	Trafalgar 6838
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Abbey 4504
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Fountainbridge 7631
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. 5, Old Palace Yard, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSH	Royal Society of Health. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
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
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	Society of Industrial Artists. 7, Woburn Square, London, W.C.1.	Langham 1984/5
SIA	Structural Insulation Association. 32, Queen Anne Street, W.1.	Langham 7616
SNHTPC	Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen.	
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 21, College Hill, E.C.4.	City 4771
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation. 75, Cannon Street, E.C.4.	City 5040
WDC	War Damage Commission. 6, Carlton House Terrace, S.W.1.	Whitehall 4341
ZDA	Zinc Development Association. 34, Berkeley Square, W.1.	Grosvenor 6636



Levens Hall from a recent painting by Felix Kelly.

Levens Hall, on the River Kent in Westmorland, first consisted of a Pele Tower and Hall. It was re-built by Sir James Bellingham, who gave the house much of its present appearance, before he died in 1641. Levens Hall contains many interesting objects, including a Sèvres coffee service which Napoleon intended as a present for his mother ; it was in fact given by the Duke of Wellington to the great-great-great-grandmother of the present owner. Oil-fired space heating was installed in Levens Hall in 1954/55. The fuel is supplied by Shell Mex and B.P. Ltd.

AN ELIZABETHAN HOUSE WITH MODERN HEATING

Levens Hall is heated easily and cleanly by oil fuel

LEVENS HALL in its earliest form was built in the 13th century. Its transformation from a fortress into a home took place during the period 1489-1689 and was mainly the work of the Bellingham family. The next owner, Sir James Grahme, in 1689 employed the King's gardener, Monsieur Beaumont, to lay out the garden ; the beech hedges and limes that he planted (the first in England) are still to be seen today.

The present owner, Mr. O. R. Bagot, has installed an oil-fired heating system in Levens Hall. The large old panelled rooms are now kept comfortably warm even in the coldest Westmorland winter. The internal temperature can be changed quickly and easily to meet external conditions and the desired temperature can be kept constant indefinitely.

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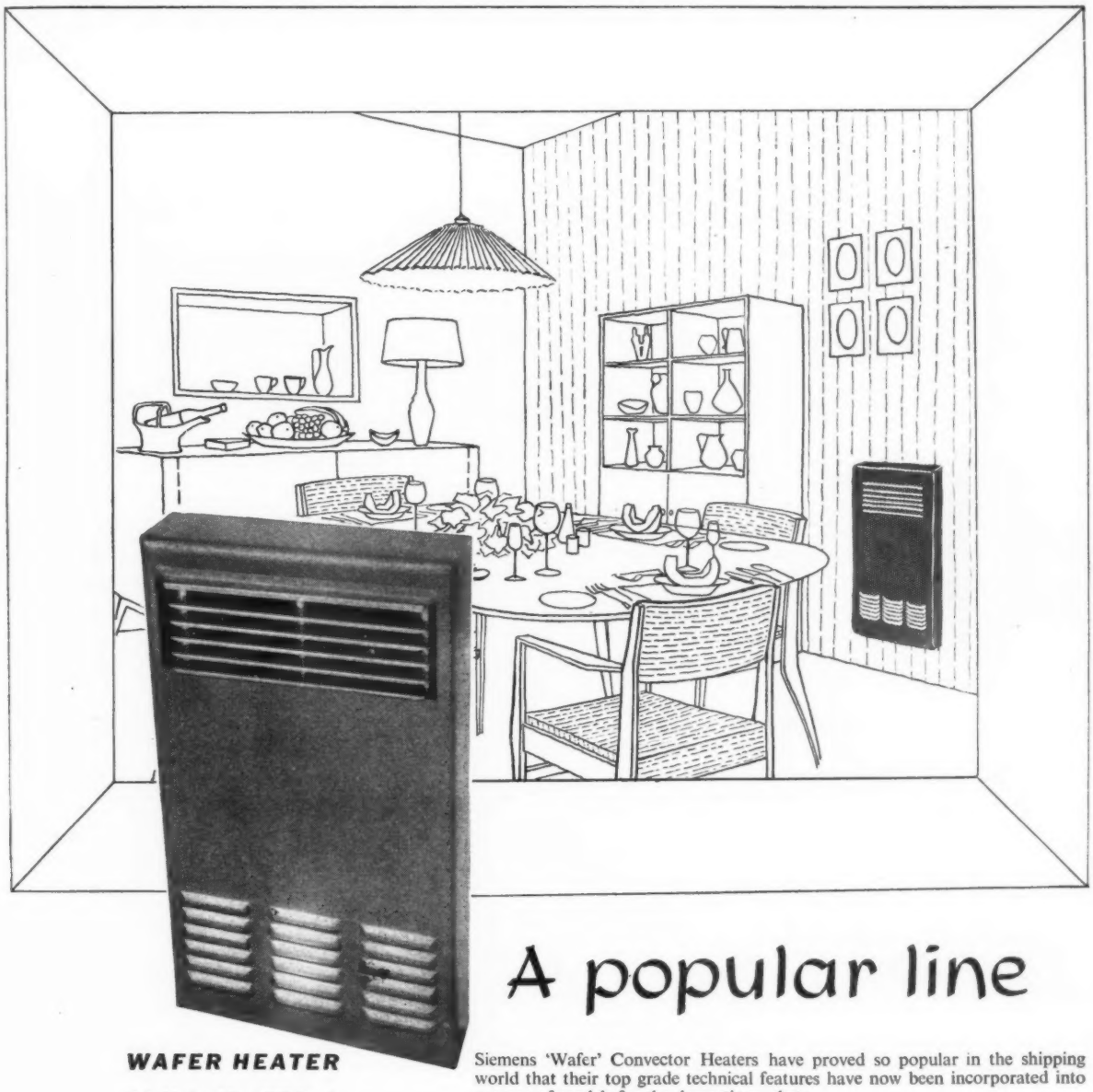

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	Pur. Tax	£3.4.8	£3.8.2	£3.8.2	£4.2.6	£4.5.9
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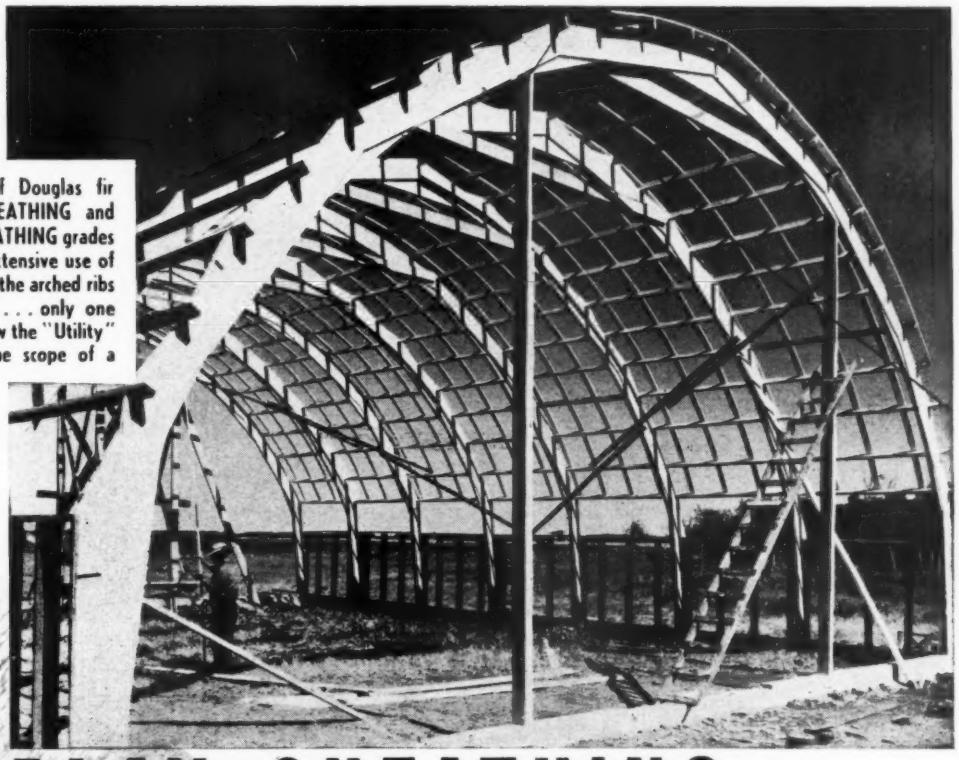

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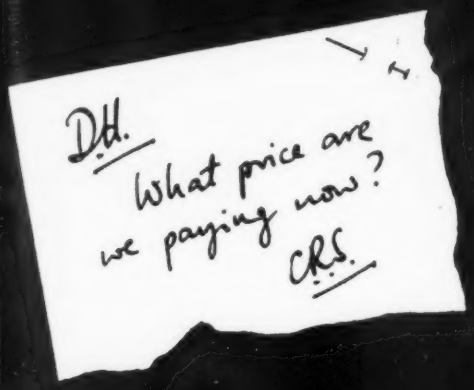

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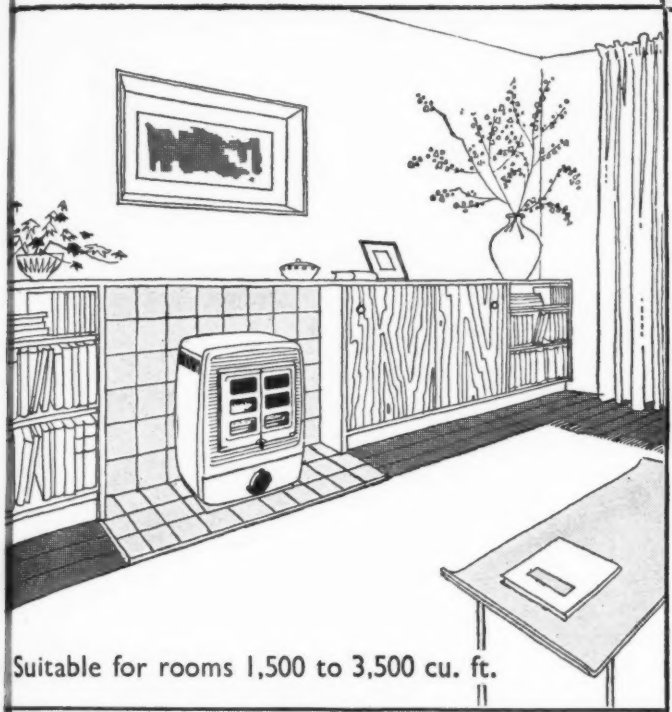
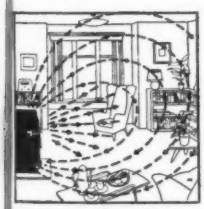
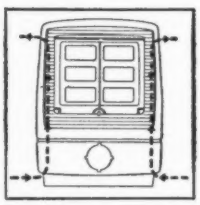


Suitable for rooms 1,500 to 3,500 cu. ft.

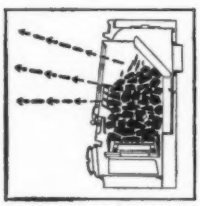
Supply and fit the RAYBURN Room Heater for radiant and convection heating



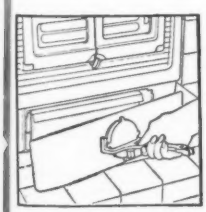
The well-known "warmth all round you" effect, plus a good view of the fire.



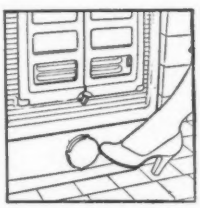
The Convection Flow: the inlet slots are concealed in the base, the outlet ones are at the sides.



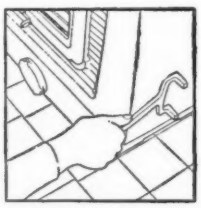
Note the firebrick lining, and the removable front bars.



Simple shovel-type ash-pan. Notice the tool.



Spin-wheel air control, easily operated with the foot.



External riddling, with the doors closed — no fly-ash. Notice the tool again.

NOTES:

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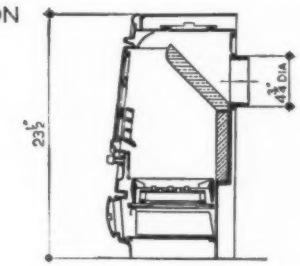
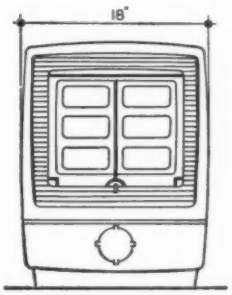
Excellent performance: can save up to 60% of fuel compared with the ordinary open fire.

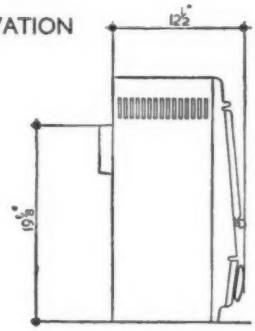
CROSS SECTION



FRONT ELEVATION



SIDE ELEVATION



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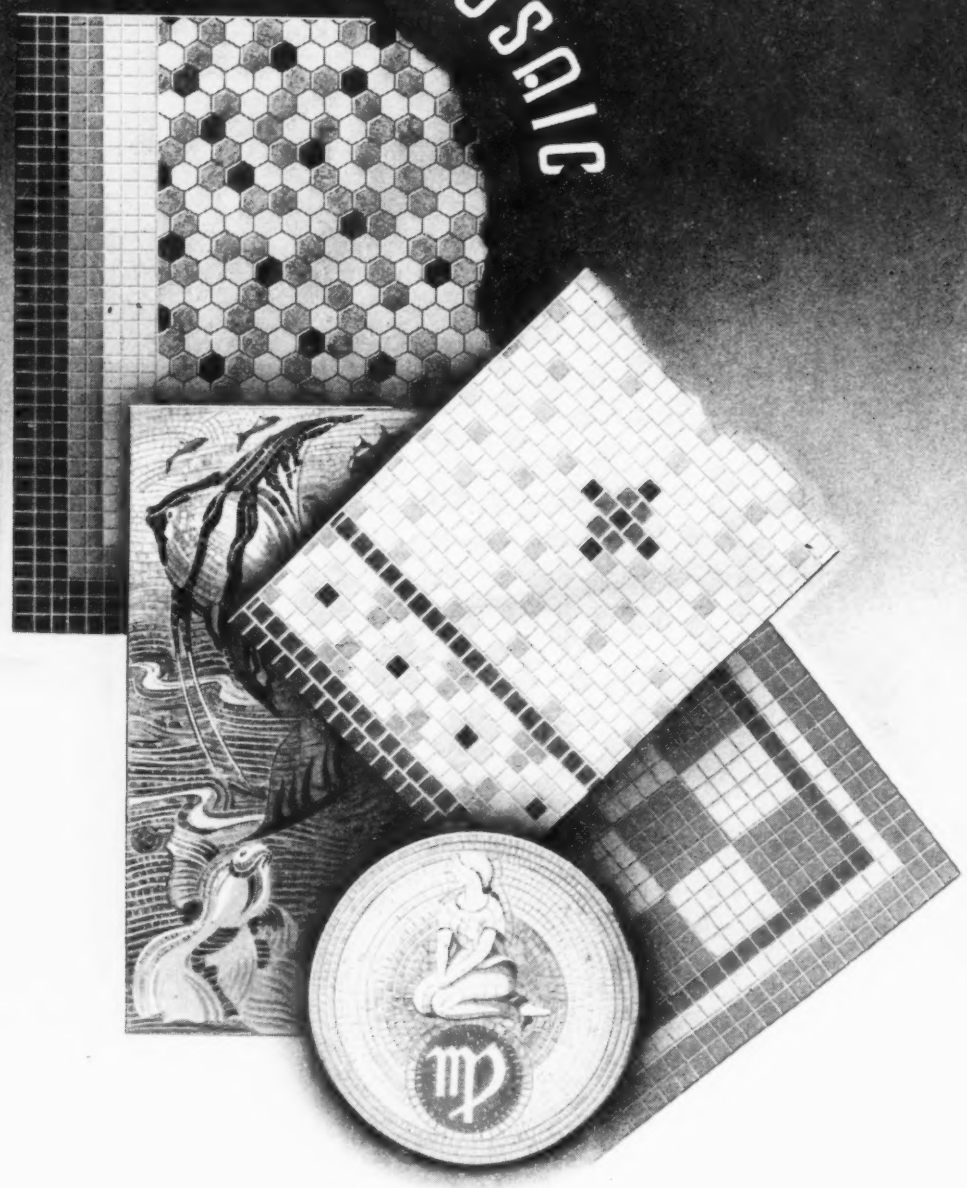

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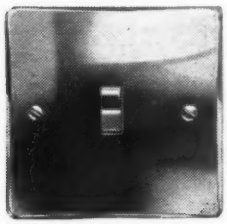

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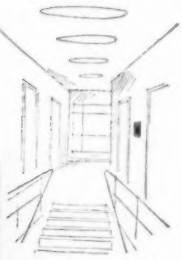

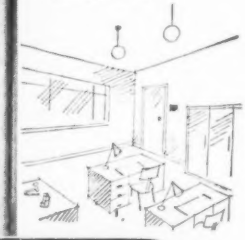

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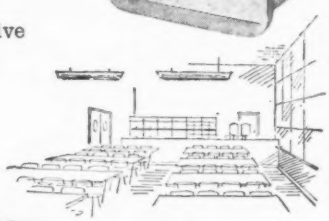
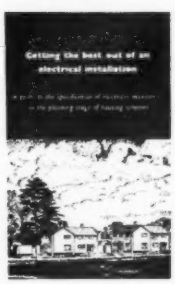


THE MK GRIDSWITCH

MK REGD



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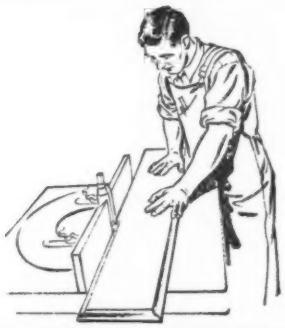

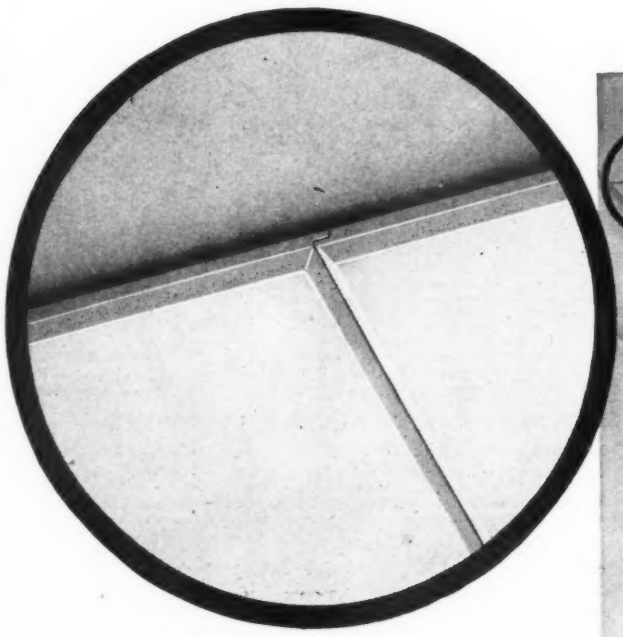

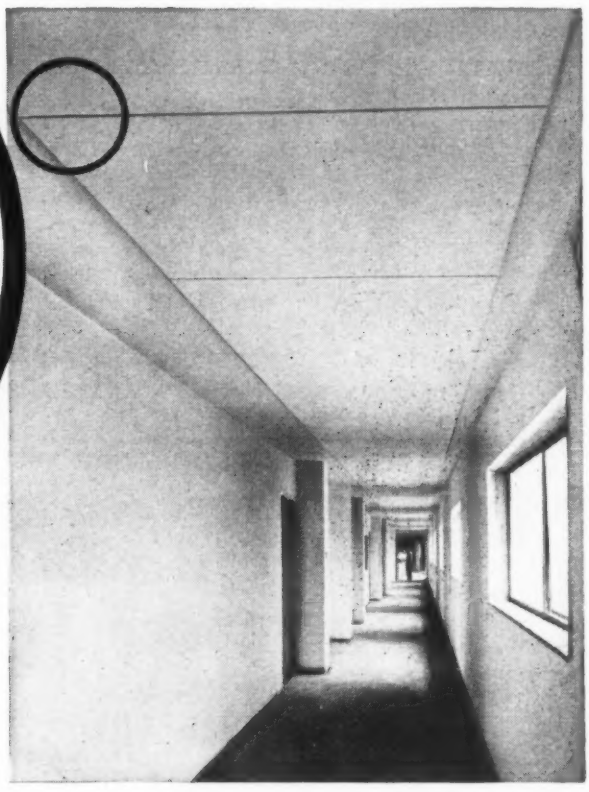

At Eltham Green Comprehensive School, now nearing completion, ¾" PLIMBERITE has been used for covering the Plenum Heating System ducts in the corridor ceilings.

Full-size PLIMBERITE boards were cut into panels 4′ 0″ x 3′ 4″ and 8′ 0″ x 1′ 8″, and the edges across the line of the corridors machined to form ship-lap joints; all edges were also chamfered.

A total of 1,880 foot run of Plenum ducting was covered in this manner; machining was carried out by the manufacturers, and erection on site by the Contractors.

The photograph shews a general view of a corridor, with the 4′ 0″ square panels screwed in position but not yet decorated; also a detail of the joint and chamfer.

Architect: J. L. Martin, Esq., M.A., Ph.D., F.R.I.B.A., Architect to the Council, London County Council, County Hall, S.E.1.

Contractor: Messrs. Gee, Walker & Slater, Limited, 100 Park Lane, W.1.

PLIMBERITE Building Board is made in the standard size 8′ 0″ x 4′ 0″, in two thicknesses, ¾″ and ½″.

Its uses for partitioning and lining, roofing and flooring, and the construction of built-in and unit furniture, are dealt with fully in the PLIMBERITE Technical Brochure. For this publication and other technical literature, and for prices and the names of main distributors, please write to:

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BRITISH PLIMBER LIMITED

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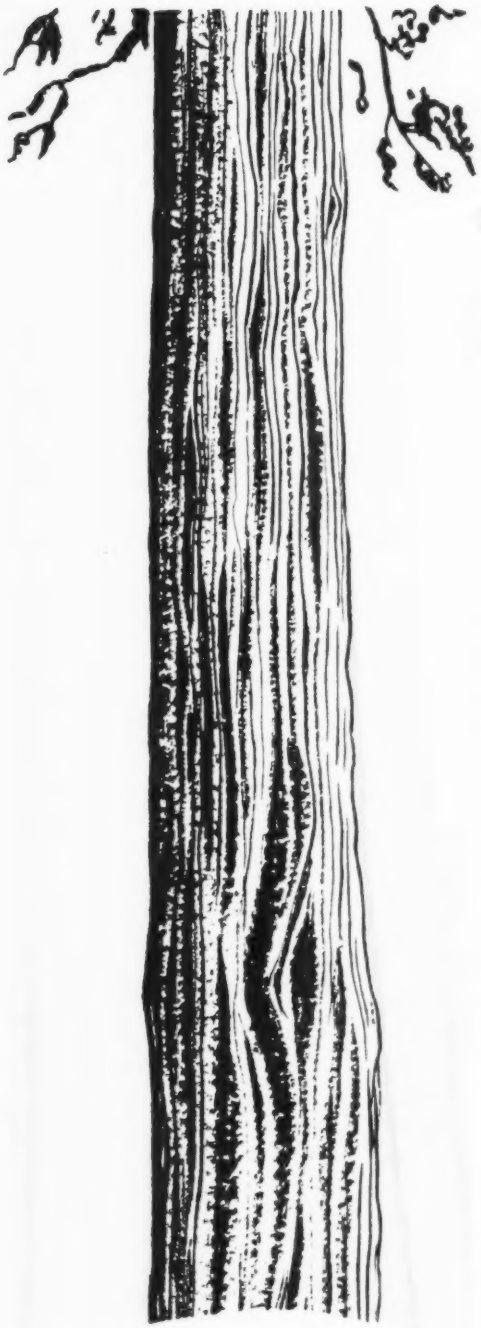
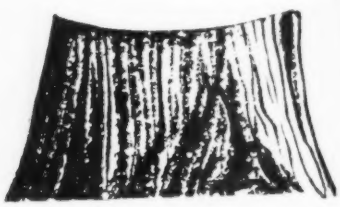


Western Red Cedar

WOOD
nature's best
building material

TYPICAL USES	SPECIAL ADVANTAGES
Boat construction, fish-net floats, conduits and shingles for roofing	Seasons readily with very little shrinkage — retains size and shape
Exterior finish, weather boarding or siding, window sashes, greenhouse construction	Very durable in contact with soil or in other positions favouring decay
Fence-posts, telegraph and telephone poles, piling	Straight grained — splits readily and uniformly
Cabinets, panelling, clothes closets and chests	Good glueing properties
Pattern making and pencil slats	Quite soft and light—takes smooth satiny finish—takes stains and paints well

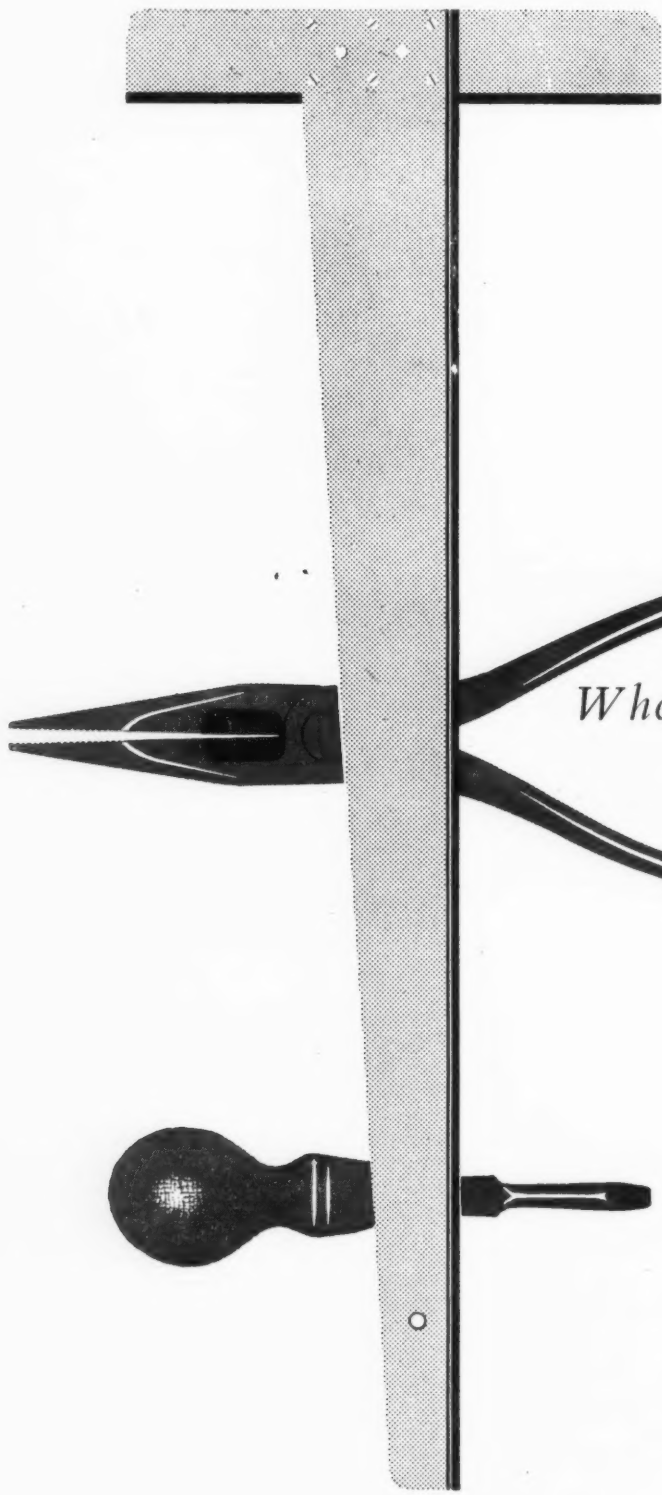
FOR FURTHER INFORMATION concerning Canadian woods contact The Commercial Counsellor (Timber), Canada House, Trafalgar Square, London S.W.1.



Reproduced here is figure of Western Red Cedar.

This advertisement is one of a series featuring Canadian Douglas Fir, Spruce, Red Pine, White Pine and Pacific Coast Hemlock.

TIM 4



Where does an Architect draw the line?

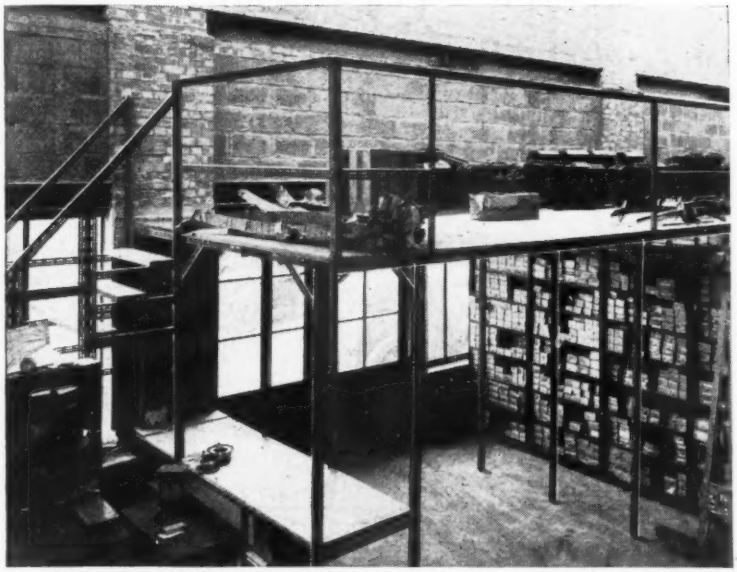
How much does
an architect
need to know about wiring
installations . . ?
He has to draw the line
somewhere,
and he will often leave the
practical details to the
Electrical Contractor.
But he will need to know
a reliable make of cable
to specify, with a type
to suit every purpose.
For his own safeguard,
it will pay him to remember
BICC.

BI Callender's

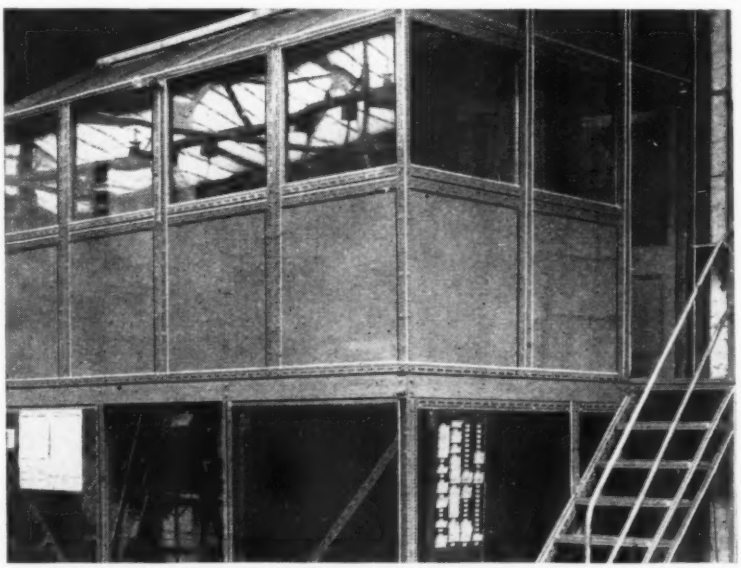
BRITISH INSULATED CALLENDER'S CABLES LIMITED
21 BLOOMSBURY STREET, LONDON, W.C.1

IT PAYS TO THINK OF DEXION

–at the planning stage



Service Depot builds storage platform. *Iron Bridge Service Depot Ltd. of Southall, Middlesex, built this overhead storage platform to carry 20 tons of motor-car parts. It effects a big saving in space, and the supports also serve as dividers for storage bins. Storage structures of Dexion can make full use of any existing space; and they have the great advantage of ensuring easy adaptability to changing needs.*



Machine Shop Engineer's office quickly built. *Thomas Allan & Sons Ltd. of Thornaby designed this office with tool store underneath to be built with conventional materials. They used Dexion instead when they found it was quicker and cost less. In jobs of this sort, Dexion invariably supersedes old-fashioned materials and methods.*

A FACTORY LAYOUT must be flexible, capable of being adapted at short notice to changing circumstances. This applies particularly to storage requirements and works equipment.

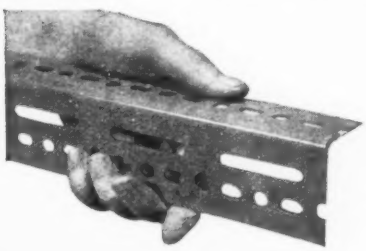
There is no more versatile material for building stores and equipment, exactly to your own designs, than Dexion Slotted Angle. Such Dexion equipment is quick and cheap to install. And any Dexion structure can be readily adapted and altered to meet changing needs. There is no waste, no scrap: Dexion is fully recoverable, and can be used again and again.

When you are planning the building and layout of a factory, Dexion deserves careful consideration at an early stage. This versatile material may bring about important economies, initially and for years to come.

A technical design and estimating service is available free; and for large installations, construction teams will carry out the work if required.

GET THE FACTS

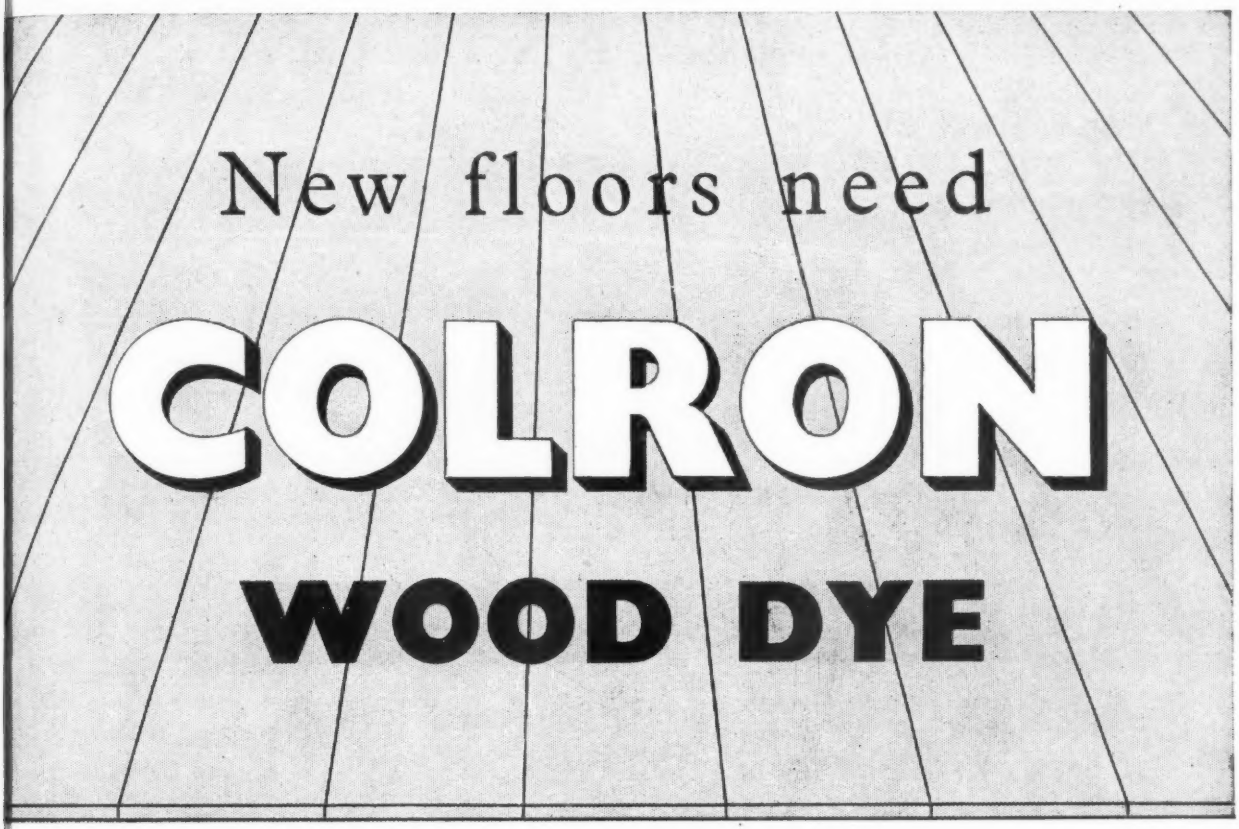
Dexion 225 is sold in packets of ten 10-ft. lengths, complete with bolts. Steel Dexion (price from 1/3½ to 1/5 per foot) is rust-protected, stove-enamelled. Where a light but strong, non-magnetic, non-corroding material is required, use Alloy Dexion (full technical details and prices on request). Send today for sample piece of Dexion and illustrated booklet AN. 143 showing many uses in industry. Dexion Ltd., 65 Maygrove Road, London N.W.6. (Telephone MAIda Vale 6031-9.)



DEXION

REGD.

SLOTTED ANGLE



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COLRON does not raise the grain.

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COLRON is permanent—will not wear or chip.

COLRON is very economical — a gallon covers upwards of 80 sq. yds. at a cost of only 3d. per sq. yd.

COLRON is made in 12 intermixable shades.

See our exhibit at the Building Centre, 26 Store Street, London, W.C.1, and at 425 & 427 Sauchiehall Street, Glasgow, C.2.

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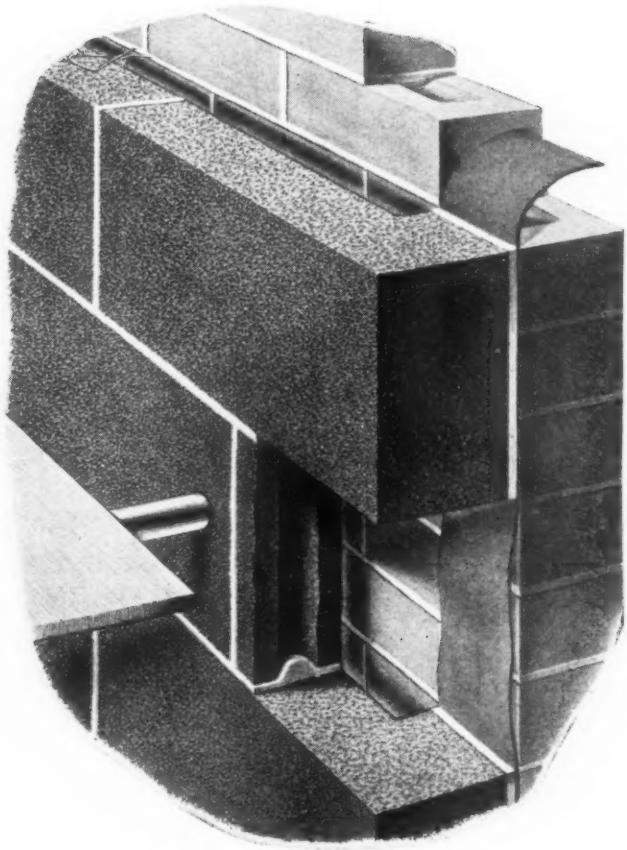
Broad-Acheson cavity construction



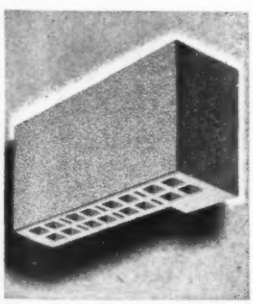
now made complete

with

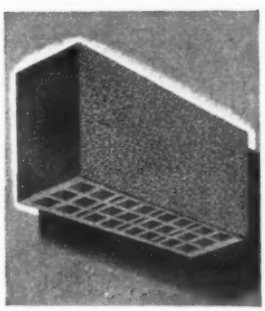
Broad-Acheson
cellular
reveal blocks

the latest addition to the series of

Broad-Acheson
cellular loadbearing blocks



Underside of Broad-Acheson loadbearing Reveal Block.

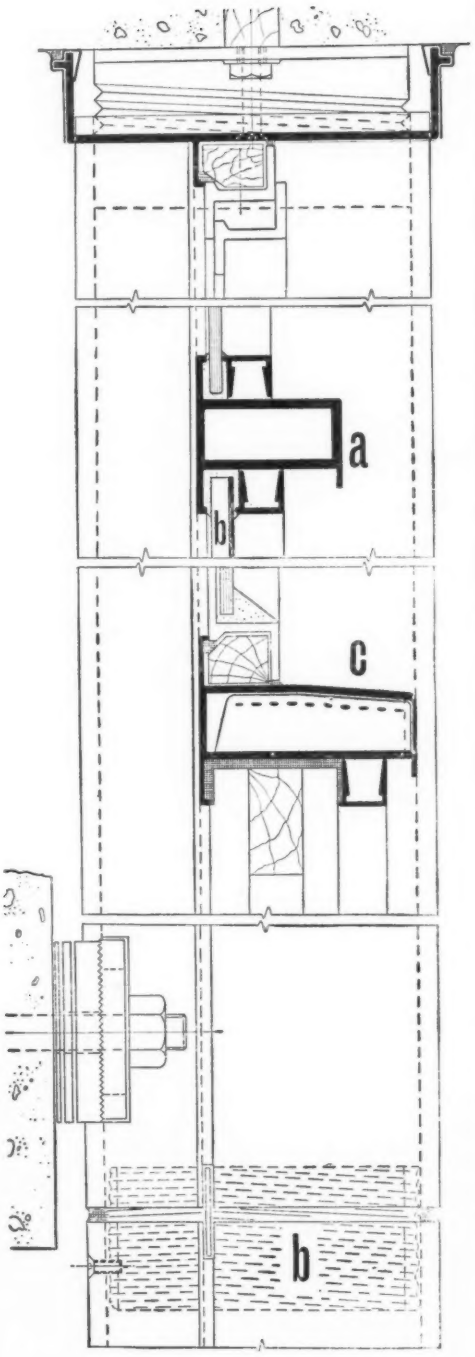


The other new addition to the Broad-Acheson range is the 6" Block. Full details sent upon request.

Full Technical Data including loadbearing tables, latest price reductions and cost comparisons sent on request

BROADs

BROAD & CO. LTD., 4 SOUTH WHARF, PADDINGTON, W.2 · Tel: PADdington 7061 (20 lines)



a Drip bars on all horizontal members divert rainwater from the wall surface.

b All spigots are channelled to afford a good key for non-setting mastic. Glazing wings are rebated and there is a nib on the glazing bead for the same purpose.

c Sloping-sill transoms are available as an added precaution.

Weathering in Curtain Walling

Experience of curtain walls both here and in North America emphasises the imperative need for adequate weathering. In a heavy wind-driven rainstorm the build-up of water on a wall area constructed of non-absorbent materials constitutes a severe test of the joints.

An exhaustive investigation of weathering problems was carried out during the development of Wallspan, and the three main conclusions arrived at have been embodied in the patented Wallspan design.

1

External joints should be kept to a minimum. *The main Wallspan members are manufactured as one-piece extrusions to accomplish this.*

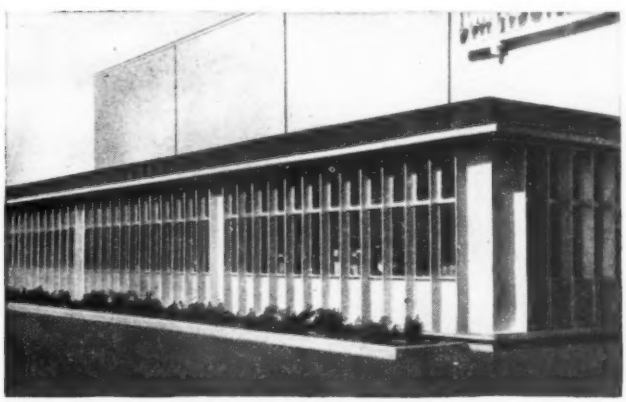
2

External joints should be weathered by the form of their construction—non-setting mastic forming a plastic cushion or bedding for the component members. *All Wallspan members have been designed with this basic requirement in mind, and are provided with suitable retaining grooves and flanges to retain the mastic in position.*

3

Horizontal components should be designed so that rainwater is thrown clear of the wall surface, preventing 'build-up' lower down the wall. *All Wallspan transoms and sill members are provided with drip bars for this purpose.*

As a result of its exclusive weathering features, Wallspan is satisfactory even in climates where heavy squalls and downpours are a seasonal characteristic.



Wallspan is going up all over the world!

In the new Simpson Sears Building in Peterborough, Ontario (Architects: John B. Parkin Associates) extensive use has been made of Wallspan for the ground floor elevations. The use of 9" mullions creates an interesting contrast of light and shade to offset the impressive upper facade.

Further details from **Williams & Williams Ltd.** *Reliance Works, Chester*

The Best Floor For Our 53 Laboratories

SAYS NOTTINGHAM UNIVERSITY

One of the 53 Laboratories in the Biology Building of Nottingham University with Nairn Vinyl Tile Flooring.

Contractor: THRAVES AND SONS, NOTTINGHAM.

Nottingham University decided to cover the floor of the Laboratories, Staff Rooms and Lecture Rooms in their Biology Building. Since the floors would be subject to continual traffic and, more especially, exposure to all manner of chemicals, the University Laboratories themselves tested various types of floor covering. Nairn Vinyl Tiles proved, on test, to be the most satisfactory and were used exclusively.

Nairn 'Clean-ability'. Grease, oil, mud . . . bleach, alkalis, ink . . . all the things that might ruin an ordinary floor don't affect a Nairn Vinyl Tile Floor. And all that's needed to keep it shining clean is an occasional polishing.

Nairn 'Versatility'. Nairn Vinyl Tile Floors can be laid on any kind of level surface, upstairs, downstairs, or in the basement. As a design component, the Nairn Vinyl Tile is extremely versatile, too . . . AND, LAST BUT NOT LEAST, THE COST IS SURPRISINGLY LOW.

For years, both here and in the U.S.A., laboratory research and stringent practical tests have *proved* the wear-resistance of Nairn Vinyl Tile Floors.

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THE ARCHITECTS' JOURNAL

9, 11 & 13 Queen Anne's Gate, Westminster, London, S.W.1 Whitehall 0611

No. 3180 February 9, 1956 VOL. 123

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A ROYAL GESTURE

ASTRAGAL, who is conscious of having to vent more spleen per column inch than any columnist anywhere, so frequently is he confronted by bad design, complacency, ignorance and official inertia, this week leaps to his feet, doffs his hat, and wholeheartedly congratulates the RIBA. And by the RIBA he means the Council, the secretariat and at least two committees. The reason for this enthusiasm is obvious to anyone who has opened their January *RIBA Journal*. The RIBA has published the reports (one an interim report) of the salaried and official Architects' Committee and of the *ad hoc* Committee appointed to "examine the representation of members in salaried employment and to review the structure of the profession." This shows a most welcome endeavour on the part of the RIBA to keep members informed on the work of the Institute.

*

The proposals of the *ad hoc* Committee (which is chaired by that gentle but inexorable go-getter Richard Sheppard) are extremely reasonable and sensible. If you haven't read them, please go now and do so, the matter is so important. They are commented on in this week's leading article, so it suffices for ASTRAGAL to make two points. First that, as regards the Council's approved recommendation to appoint a senior officer, and technical staff, to form a study-group to survey salaries and responsibilities and, consequently, remuneration in the profession, there is no point in getting in anyone but the best available—which means being prepared to pay for it. Such a job carries great responsibilities—such as a city architect carries. If the study is going to be of any value it will have to be so well done that no shrewd outsider can pick it to pieces, and it will have to be kept up-to-date and used as a basis for professional policy for many years to come. Obviously the task of organizing this should rest with the most competent and resourceful man the RIBA can procure.

*

The second point is this. A number of salaried architects have—like ASTRAGAL—been bombarding the RIBA with complaints on salary issues. ASTRAGAL hopes that they, like he, will make the publication of these reports an occasion for congratulating the RIBA by letter and by another means at their disposal, including attending the next AGM. Things are beginning to move, so let's be thankful.

STOWE-TOPIA

As one whose seat of learning was deleted from the *Public Schools Handbook* (for reasons which had nothing to do with me, of course) after a mere four hundred years of existence, ASTRAGAL has always been able to look down his nose at upstart schools founded since the war (any war, that is, back to the Civil War). Unfortunately, many of them act in a way that justifies this inbred contumely, and none more so than Stowe.

*

No school has gone further out of its way to cultivate tradition (whether native to the school or imported with its first Sixth Form), or made a greater fuss about the virtues of tradition, but the fact that it has inherited one of the Holy places of the English liberal tradition seems to have gone unnoticed by staff and Stoics alike. The magnificent park, which is Capability Brown following Kent, and its buildings, which are by most of the major Whig architects from Vanbrugh to Kent, are together a standing record of Whig sensibility and a memorial to the Whig Virtues—the temples honouring everything from Concord to Pastoral Poetry, by way of Venus and Bacchus.

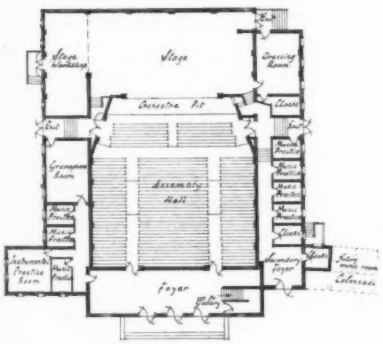
*

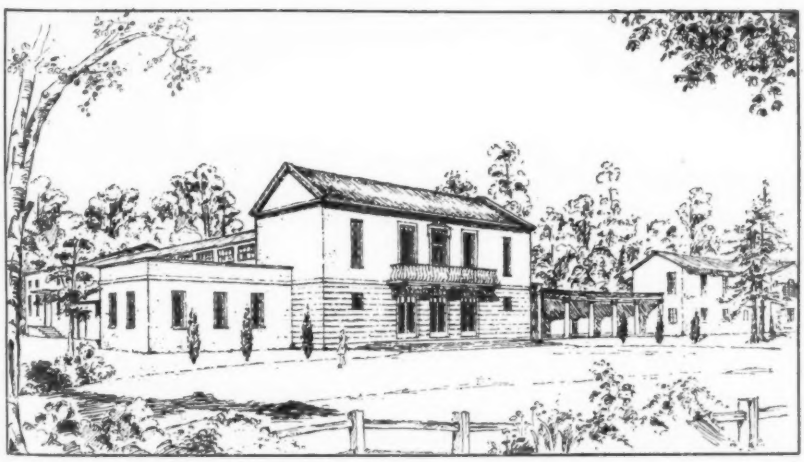
Most of these Temples were allowed to get in a shocking condition, many of the carefully landscaped views have been spoiled by insensitively-placed and badly-designed additional buildings. Now the MoW has stepped in with a grant for rebuilding and making good the more important garden buildings, and the last of the new buildings, the workshops, has the advantage of being by a progressive design office

(ACP) even if it, like so many other recent buildings, is not very satisfactorily sited.

*

But the next new building looks like being a disaster in design as well as location. The sketch of the new Memorial Hall on this page shows as dreary a piece of neo-Georgian as one could ever wish not to see anywhere, let alone in a great eighteenth century landscape. To make matters worse, it is only a false front concealing a couple of old aircraft hangars which presented such appalling difficulties in conversion that a previous architect apparently threw his hand in rather than wish a botched job on the school. ASTRAGAL understands that there is a certain amount of opposition to this project among Stoics, and wonders if the dissidents wouldn't do well to take their complaint to higher (even government) authority. If the Garden temples are worth preserving, then so is the setting they were designed for. The school has subtopiated enough of the park already, and insensitive building in it should be regarded as an offence to a major national monument. What Stowe urgently needs is a master plan, and an architect appointed to keep to it.





Plan and sketch of proposed memorial hall, Stowe.

FORBIDDEN TREES

Ever since Merrie England (whenever that was) churchyard trees have been the proper accompaniment to ivy-mantled towers and the headstones of village Hampdens, and on bleak high wolds, or in the centre of large towns, churchyards have been a means of getting big timber into places where it would never normally be allowed to grow.

*

But it looks as if the Church of England takes neither the consequent responsibility, nor the proffered opportunities of doing something positive for the environment of the living, any too seriously. Pictures on this page of the execution recently wrought in Ledbury churchyard, Herefordshire, tell their own story—out of four trees "condemned after expert advice" only one proved to be really decayed. But the pictures cannot tell the whole story, for what is to replace these magnificent limes? Answer (and no prizes for guessing) a Garden of Rest—or so rumour runs—with all the usual godwottery of pot shrubs, rustic walling, and the rest. Anglicans too, it appears, are agents of Subtopia.

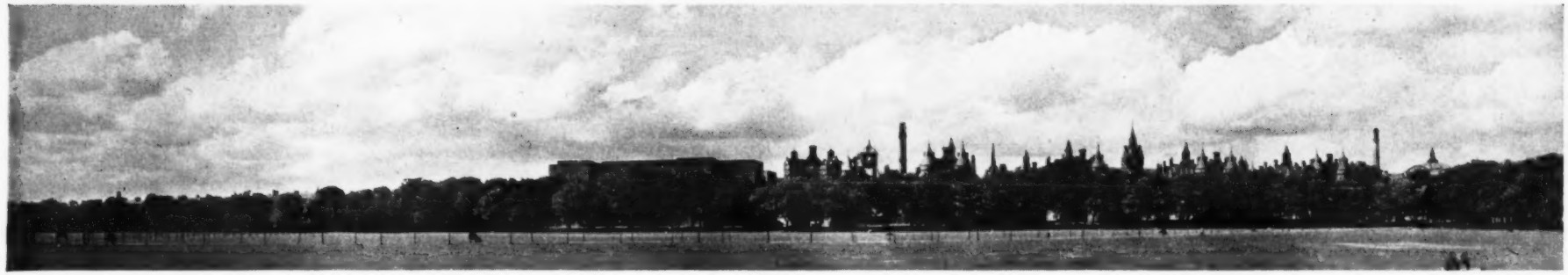
*

The enraged West-Midland correspondent who sent ASTRAGAL this dire news and incriminating photographs, also points out that one can't expect wonders at parish level when the quality of advice given out by the highest layers of Anglican command is so negative. In the Church Informa-

tion Board's pamphlet on *Care of Churchyards*, only the yew tree is encouraged, elms are discouraged and the danger of tall timber near buildings is underlined, and that is about the lot. But the C of E is the proprietor of a lot of trees in the public eye and has bigger responsibilities than merely the security of church property. A much more positive policy is required, in which replanting—since all timber should be cut eventually—plays a far bigger part. Churchman, spare that tree—or at least, replace it!

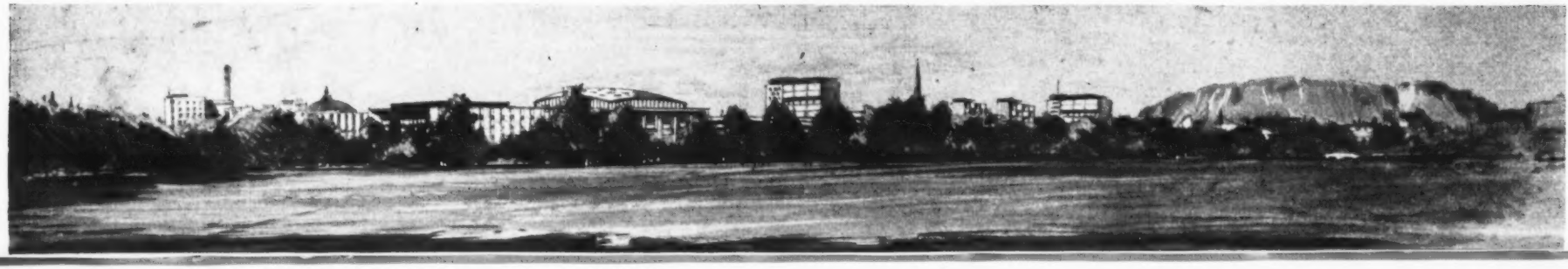
OH, CANADA!

What appears to be the first substantial Canadian magazine for architects to be published outside the ægis of the professional societies, appeared at the end of last year. It is called, simply and appropriately, *The Canadian Architect*. It will have to find its own distinctive style as a magazine, for it is a little reminiscent of other papers. But this first issue is full of good and interesting things, and its humane balance between the technical and the æsthetical is to be admired. Signs of the times



A New Silhouette for Edinburgh

Both the photographs above were taken from the Meadows, Edinburgh. The lower one shows the shambles that has grown up behind the George Square area, where the new University buildings will be grouped. Basil Spence, whose overall plan for these buildings has been accepted in principle by the Town Council, intends to make this skyline as interesting as the one in the top picture, at the Marchmont side of the Meadows. His drawing below gives an impression of what he hopes to do. "The character of silhouette," he says, "is an important one, for Edinburgh is a city of silhouettes. The opportunity exists to turn what is now a shambles into a modern backs." Basil Spence's long-term scheme will involve the demolition of old houses and their replacement by interlocking courtyards. Most of the new buildings will be three storeys high, but there will be points of emphasis as suggested in the perspective below.

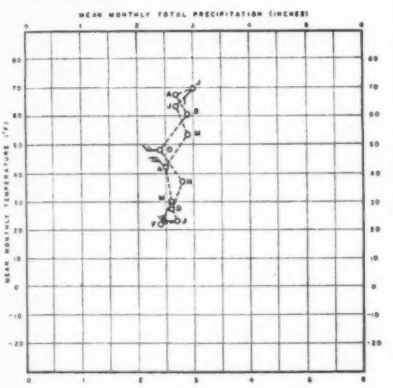


are a lakeside hotel for Toronto with Hilton-type planning (*i.e.*, a balcony—a *private and secluded balcony*—to every room) and a bungalow of which the most noteworthy aspect is that it is *not* a split-level plan, but all on one floor.

*

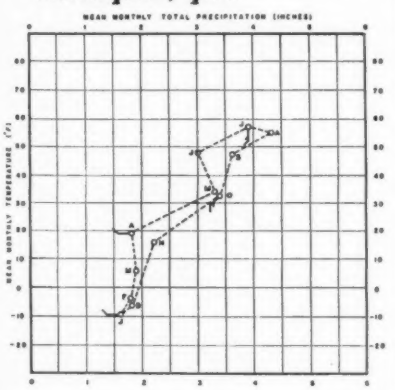
What intrigued me most were two pages of hythergraphs. What is a hythergraph? Thank you, sir, a very good question. No doubt the bright boys at BRS have heard of hythergraphs, but very few people else in

toronto



England know what they are, in spite of their obvious usefulness. They are, in fact, graphical plots of the mean monthly temperatures and rainfalls of selected places, producing thereby a kind of weather signature for that location which is almost as characteristic as a celebrity's autograph. The very shape of a hythergraph gives an impression of the climate—equable places

nitchequon, que.



give a neat, compact graph; places with real crazy weather like Nitchequon, Quebec Province, have a long straggling signature that is a warning in itself.

ASTRAGAL

THE PRINTING TRADE DISPUTE. The Editors very much regret that owing to the dispute in the printing trade, which has led to the practices of working to rule and limiting overtime among members of the London Typographical Society, there are fewer editorial pages than usual in this issue of the JOURNAL. *They also regret that it may be necessary to restrict the size of issues while the dispute continues, and that the new-style* JOURNAL*—which many subscribers will have heard about—cannot be produced until the dispute is settled.*

The Editors

MAKING A START

THE printing in the *RIBA JOURNAL* of the reports on salaried employment made by Richard Sheppard's *ad hoc* committee and by Leonard C. Howitt's Salaried and Official Architects' Committee must be a cause of much satisfaction and interest to the majority of the profession. Many will, we are sure, wish to congratulate the RIBA on the earnest endeavours of its committees and on its own wisdom in publishing the reports and thereby keeping the rank and file aware and interested in the problems which exercise the elected leaders.

The different terms of reference of the two committees are revealing. The first report, of which Leonard Howitt was chairman, was prepared in 1953 and was concerned with " the measures that would be necessary for the Royal Institute to take in order to provide effective representation of salaried architects . . . in all negotiations affecting their conditions of service and salaries. . . ." The second report contains, amongst other items in the committee's terms of reference, the following: ". . . the Committee be instructed . . . to consider the question of an extended investigation into the structure of the profession, the total income of the profession in relation to the scale of salaries that might be afforded, and the *grading* of architectural appointments in relation to age *experience and responsibilities*. . . ." (our italics).

The difference in the terms of reference is striking. The first mentioned leads inevitably into a study of the trade union either as existing or proposed, and the complexities of recognition, inter-union rivalries, legal liability and, eventually, disputes. The second term of reference, while equally, or even more involved and lengthy, is concerned with acquiring knowledge and with putting that knowledge to the best use to ensure that the highest awards go to those who carried the most responsibility.

If architects consider that they are underpaid there are two ways of going about remedying it. The immediate, short-term answer is to join one of the existing trade unions and become a fervent, loyal trade unionist. Then, in time, and more or less in step with the other hundreds of thousands of trade unionists, the pay increases, in five, ten or twenty pound annual rises, will inevitably come. In this approach one has to forgo any preferential treatment on account of

extra skill or responsibility in order to secure the mass, the numerical, support to ensure that the employer—whether an individual or the Treasury—takes notice of one's demands.

The alternative way of securing better pay does not necessarily need the (concealed) strike-weapon used by the trade unionist. The first requisite is knowledge. Knowledge, that is, of what the profession earns, and what its responsibilities are. Knowledge of what the profession is worth, in fact, if properly utilized, in terms of efficient planning and design, to the nation as a whole. With this sort of information architects could discuss issues at the highest, even at Ministerial, level and the income increases, commensurate with responsibilities, would be in hundreds rather than tens of pounds. But, even on a lower plane, fuller information about the profession would be of inestimable value, and could lead, for instance, to a more equable distribution of work, shared knowledge on methods of improving the establishment in local and central government offices and improved office efficiency.

The fortunate thing is that the recommendations of the *ad hoc* committee: liaison with existing trade unions and the formation of a top-level study-group within the RIBA—allow both the approaches referred to above to be made at the same time. An article in last week's *Economist* shows that the increase in salary between the 1939 rate and the present rate, for architects in local government, shown as a percentage increase, is lower than the increase during the same period for teachers, solicitors, bank clerks and medical officers. Clearly, the RIBA's proposed action in this matter is not only worthy but well timed.

LETTERS

Geoffrey Dunn and Barbara Jones
Charles V. Storm
J. A. Partridge, A.R.I.B.A.
Braithwaite and Co.

Sandow's Gymnasium

SIR,—Following your illustrations of the most interesting Crystal Palace development, we are wondering if there is any consideration being given to the preservation of what we believe to be called "Sandow's Gymnasium." This still stands in the grounds and is made of cast iron sections, duplicates of parts of the original Palace no doubt.

GEOFFREY DUNN.
BARBARA JONES.

Bromley

Dismayed by "Best Buildings"

SIR,—I was rather dismayed on reading your survey of the "best buildings of 1955" to find that a good 90 per cent. of them seemed hardly worthy of illustration.

If this miserable collection of buildings are in fact the best of 1955 (and it is difficult to find very many better), one is prompted to ask what is happening to modern English architecture. We have only to compare these outworn hangovers of the Festival of Britain with the designs of the great pioneers of modern architecture *thirty years ago* to discover how backward these best buildings of 1955 are—and when the best of today compares unfavourably with that of thirty years ago there seems little left to do but buy a black tie and start taking measurements for a coffin for English Architecture.

CHARLES V. STORM.

Leeds.

Not By Himself

SIR,—The architect for a house illustrated on page 112 (2 centre) of the ARCHITECTS' JOURNAL dated January 19, was incorrectly stated by you to be Bill Howell. The architects were the following group of which he is a member—S. F. Amis, J. A. W. Killick, W. G. Howell and J. A. Partridge.

J. A. PARTRIDGE.

Kent.

Not Gas, But Water

SIR,—With reference to the illustration shown under paragraph 10 of the article printed on page 116 of the JOURNAL, for January 19, we are very pleased to note that a building in which a Braithwaite Pressed Steel Tank is installed has been chosen to illustrate the particular need of this paragraph.

We feel, however, that we must point out that the general purpose of this structure is to act as a water tower for one of our tanks containing over 43,000 gal. at 60 ft. above ground level. It is not a gas storage house as stated in your article.

BRAITHWAITE & CO. STRUCTURAL LTD.

Surrey.

NEWS

CONVERSIONS

Scheme "A Failure"

Operation Rescue, by which it was hoped that several million dilapidated houses could be prevented from deteriorating into slums, was adjudged a failure by senior local government officials who spoke at a housing conference arranged by the Royal Society of Health in London recently.

J. E. Austin, chief housing officer, East Ham, felt that some measure of compulsion upon owners and occupiers might be necessary if efforts to rescue houses from deterioration and obsolescence were to succeed. In their efforts to acquire dilapidated houses and put them into repair his council found that the Exchequer grant amounted to only 19 per cent. in some cases, whereas they expected it to be 75 per cent. It was at this point that local authorities were liable to stick their heels in and say that Operation Rescue was not what they thought it was going to be.

N. Bastable, chief sanitary inspector, Barking, said: "We have had enough experience of the 1954 Act to be able to say now that repair and rescue on a voluntary basis has failed. The house-owning-for-letting industry is a run-down concern. The owners have no more capital to put into it, and if they were a company which was on the market the Stock Exchange would be ready for a takeover.

Not only had private owners failed to accept the challenge of Operation Rescue; local authorities were also not willing to accept it.

AA

Symposium On Traffic

A full report of the recent stimulating and informative symposium held at the AA, 34-36, Bedford Square, on "The Problem of Vehicles in Housing Areas" can now be obtained from the Association, price 3s. to members and 6s. to non-members.

COMPETITION

A Symbol For Pembrokeshire National Park

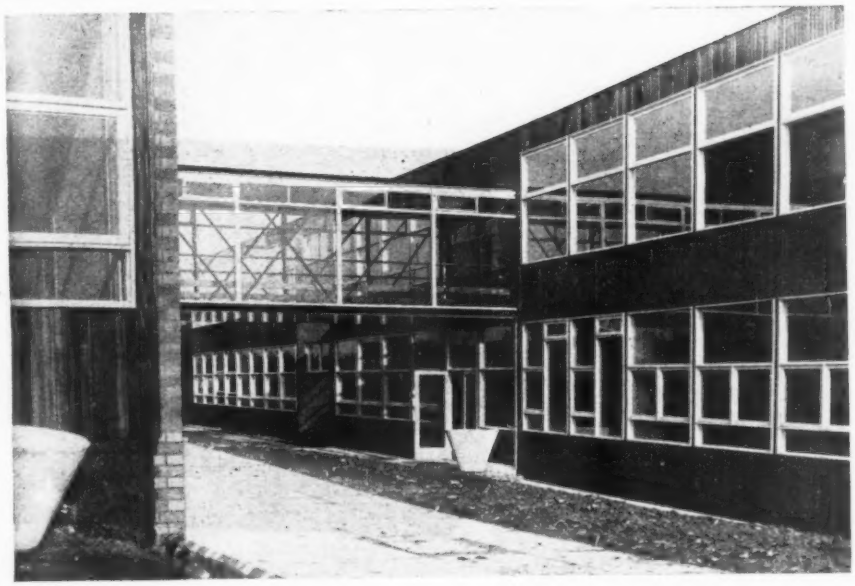
A first prize of £35 and a second prize of £15 is offered by the Pembrokeshire Coast National Park Committee for the design of a symbol for the park which is to be used on its own, on direction boards, as a badge, in black and white or in colour, and capable of reproduction at a reasonable cost. Entries must be submitted by March 1, under a *nom-de-plume*, to the Clerk of the Pembrokeshire CC, County Offices, Haverfordwest.

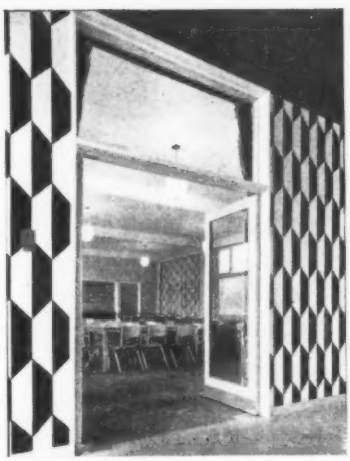
RIBA

Cricket Dinner

The annual dinner of the RIBA Cricket Club was held recently at the Architectural Association, 34-36, Bedford Square. At the Annual General Meeting which preceded the dinner the following officers were elected for the 1956 season. Club captain, C. A. R. Norton; vice-captain and hon. secretary, D. L. Robinson; treasurer, J. G. Batty; assistant secretary, G. Fyson; ordinary members of the committee, R. R. Fairbairn and R. Case.

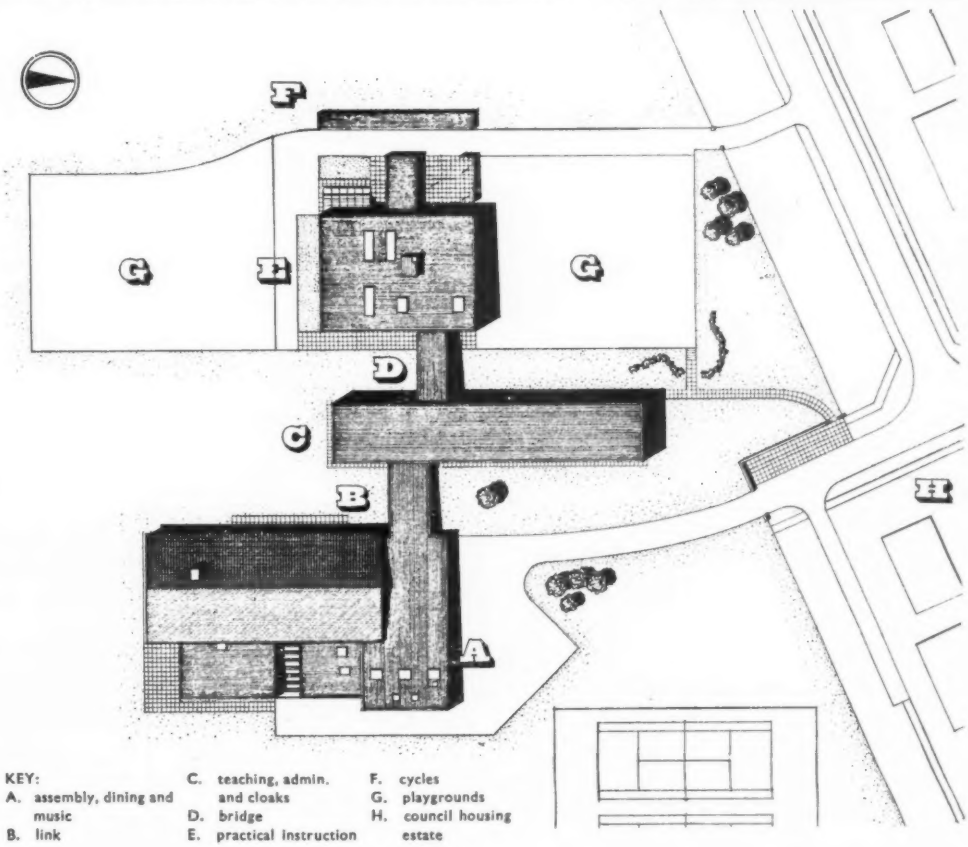
BUILDINGS IN THE NEWS



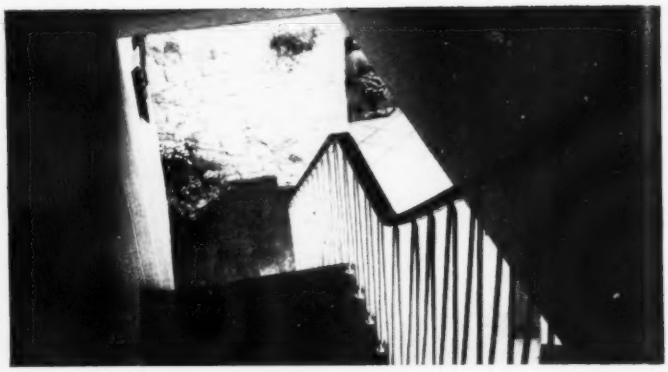


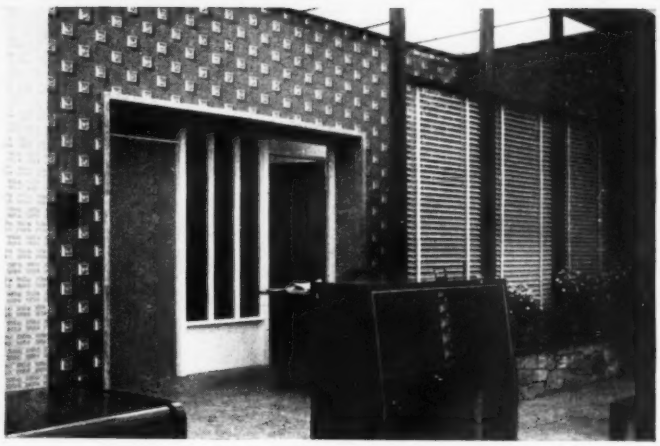
School at Great Missenden, Bucks

The Misbourne County Secondary School was designed by the Buckinghamshire County Architect, F. B. Pooley; Deputy County Architect, D. C. H. Jenkin; Assistant County Architect, A. R. Walker, and Architect-in-charge, Brian J. McMillan. In his speech at the school's opening the Minister of Education, Sir David Eccles, pointed out that it is the first to be completed in accordance with the Rural Education policy announced on December 3, 1954, and was built in only six months. In order to achieve this it was necessary to reduce p.c. sums to a minimum. The tender figure was £88,679, of which p.c. sums totalled £6,589. Drawings and specifications of heating and electrical installations were sent to the tenderers some weeks before the despatch of bills of quantities, so that they might obtain their own quotations. The exterior photograph, above, shows the bridge connecting the practical block on the left with the teaching block on the right. Top right, teaching block hall seen from link; above right, dining room seen from the main entrance hall. The quantity surveyor was I. M. Larkin, and the contractors were Holloway Brothers.



KEY:
A. assembly, dining and music
B. link
C. teaching, admin. and cloaks
D. bridge
E. practical instruction
F. cycles
G. playgrounds
H. council housing estate





Showrooms in Yorkshire

The new radio and television showrooms in George Street, Hull, East Yorkshire, for Comet Radiovision Services Ltd., were designed by W. Gregory Wilson. The photographs show, above, the building seen from the street, top right, looking down the staircase into the ground floor showroom. The wall in the background is of Yorkshire stone. Above right, part of the ground floor radio showroom, with doors to the demonstration rooms in the background. On the first floor is the television showroom, which has walls painted jasmine yellow and a cerulean blue ceiling. Colours used in the second floor offices include terracotta, eau de nil and mushroom and off-white in the corridors.

BUILDINGS IN THE NEWS

Factory in South Wales

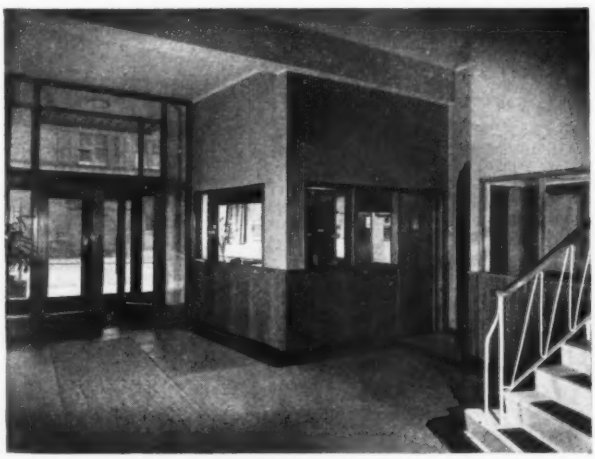
Left, the north end of the loading bay at the factory for Hoover (Washing Machines) Ltd. in Plymouth Street, Merthyr Tydfil, designed by Wallis, Gilbert and Partners. Additions to this factory, making it three times its original size, now give it a floor area of 241,890 sq. ft. and there are over 1,300 employees. The loading bay, which is 60 ft. wide and has a floor area of about 20,000 sq. ft., is used for the receipt of all raw materials from the adjacent railway sidings and the despatch of the finished products at the north end. The bay has a shell concrete roof with top lighting and there are high-level offices, with an unobstructed view of the whole floor area, at either end.

Shop at Ramsgate

The rebuilding of Messrs. Alfred Olby's premises at 23-29 King Street, Ramsgate, was necessitated by the almost complete destruction by fire in 1952 of the original four-storey Victorian houses which had been converted into a shop. The architects, W. R. H. Gardner and Dale, were asked to plan a new building containing a selling and display area for paint, paper and ironmongery at ground level, two upper floors of offices and a basement for storage, all integrated with the rear premises, which were not destroyed by fire. The construction is of r.c., with hollow pot floors and open web steel roof joists. The front facade, seen right, is faced with grey farmhouse bricks and mahogany-faced plywood. Fascia lettering is of stove-enamelled yellow letters on sand blasted ribbed glass, coloured blue.

Old People's Club, North Kensington

The Cecil Residential Club for 72 old age women pensioners at 1-5 Wedlake Street, Kensal Road, London, W.10, was designed by Hastie, Winch and Kelly for Cecil Houses (Inc.). The old people are accommodated in dormitories or bedrooms, each containing four beds, as seen below. The photograph below left, shows the entrance hall and enquiry office. The contract price was £85,900.



On December 7, 1955, Hope Bagenal, F.R.I.B.A., delivered the 1955 Alfred Bossom Lecture to the Royal Society of Arts on the subject of "Planning Against Noise." In the course of an exceedingly interesting paper of which we print here a shortened version, he discussed an American experiment in sound zoning and the impact of airborne sound on modern building structures.

PLANNING AGAINST NOISE

By H. Bagenal

Our subject cannot be understood if considered as a purely technical subject. It is not a quantity but a relationship. It is largely social; its causes are partly economic; it involves modern building practice, modern traffic development, modern machine design; it tests theories in physics; it is implicated in modern styles of architecture; its remedies must depend chiefly on planning and on intelligent siting and zoning. There is also, lying beneath it, the difficult legal problem of how to define noise nuisance and beneath that the more difficult ethical problem of whether "peace and quiet" is to be defended against speed, or to be sacrificed.

Therefore to give you a true account I must touch now on one factor, now on another. I am not attempting a scientific paper but to interpret a difficult situation characteristic of our times. Certain distinctions can be made.

Day and Night Noise

In the case of day and night noise there is a fundamental difference, noise becoming more obvious at night against the quieter background. This factor enters Law cases, and in the interests of public health it is to be hoped that disturbance of sleep by noise will continue to be taken as evidence of nuisance at law.

Night Sources

From this certain things follow. There are recognized night sources of noise, such as industrial night working, garages, milk centres, shunting yards, etc. Planning becomes increasingly aware of these factors and the new towns have been at pains to isolate residential areas from such noise sources as arterial roads. In existing towns, where new trading estates abut existing houses, the situation is much more difficult.

Legal Aspect

Noise is not one of the statutory nuisances covered by Public Health Act 1936 and urban complaints of noise have lead local authorities to seek additional Parliamentary powers. Parliament will now grant powers to make noise a statutory nuisance, the local authority having power to act on the complaint of at least three occupiers. However, Parliament usually attaches a proviso that "if the noise is occasioned in the course of any trade, business or occupation it is 'a good defence' that the best practicable means of preventing or mitigating it, having regard to cost, have been adopted." Such a defence has been upheld. The model clause of 1953 proposed "It shall be a defence that the best practicable means have been taken." This would seem better, since inadequate thin "sound-proof" sheet might be held as protection when really a solid brick screen was required.

If a case brought under statutory powers were dismissed an action in Equity can be sought, restraining a man from causing a private nuisance. This usually takes the form of a High Court or County Court injunction. Here it is not necessary to show that noise is injurious, nor is it a defence that all possible care has been taken to prevent it. A great variety of cases are on record in which the Court has given relief for nuisance by noise, and a clear statement on actionable nuisance by noise was given by Justice Luxmore in Vandepant v. Mayfair Hotel Co. Ltd. (1930 1 Ch. 138 at 165). Further, the new Legal Aid Act can now help occupiers of housing estates to go to law.

Background Noise

The Court does not seek to apply a rigid standard of comfort, but a variable standard differing in different circumstances. The plaintiff has no right to a greater immunity from discomfort than that prevalent among his neighbours. (Justice Warrington in Rushmer *v.* Polsue & Alfieri Ltd. 1906.)

This is important because it means that the notion of "background noise" and of intrusive noise relative to that background has been envisaged by the Courts. Background is well known in acoustic studies; it is the noise of our environment, which is persistent, and to which we have grown accustomed. It may be quite loud and yet not noticed. It may be an open-air level in a garden of 35 decibels due to rural sounds or in a room a sustained fan noise of 50 decibels. Any intrusive noise must generally come to within 15 decibels of the background noise if it is to be noticeable. So that it is not a single noise we are evaluating: noise nuisance is a noise related to another noise. That is why there is such a significant difference between day and night conditions.

Factories

What can a firm do if it genuinely desires to be a good neighbour and reduce its noise. One such is known to me—a firm building a number of new factories in different parts of the country in which noisy processes are unavoidable. The firm also has a campaign once or twice a year in which they work all night. The method is briefly as follows: they and their architect take the six-inch scale map on which their new site, and the adjoining property is marked, and note houses which come within at least 100 yards of their boundary. They also have a survey made in close proximity to the houses of the existing noise background in order to form a judgment of what noise background the occupiers are accustomed to, *both by night and by day*. It is important to assess the right conditions. The proximity of existing noise sources is also noted. It may happen that a loud night source such as a shunting yard or arterial road is there already which would mask their own noise and reduce its risk of nuisance for the more remote houses—but leaving perhaps some six or eight houses close enough to their site to require special consideration on one side, and perhaps a very close pair of houses on the other side. Then the factory, *and its production track*, is laid out as far as possible so as to place the loud factory noises away from the houses. Also, wherever a canteen building, or managerial block can be interposed as a screen, this is done.

Next it is important to pay attention to entrances, openings, air-intakes, and locate them so that they are directed away from the housing. In the case I have in mind it happens that the loading bay is quiet: but very often the loading bay with wide openings into the heart of the factory is a serious noise source, and should be specially considered. All this hinges on the production track, that is on the basic organizing of the whole factory process. Then comes the question of how far it is necessary to contain the noise by solid structure. Factories for economy are usually built of frame structure and then cladding, which easily transmits loud noise, and it may be necessary along one flank, or at one or two gable-ends, and angles, to go to the expense of 9-in. brick work. Here the roof is equally important and should be designed so that the bays slope away from the vulnerable aspect or that it is screened by a high parapet.

Shrillness and Irregularity

A survey of the noise background by means of an objective noise meter is comparatively easy, but this only gives the average loudness over a wide frequency. It is therefore necessary to measure the relative loudness at the different pitches—high, middle and low. For this another standard instrument, namely, an octave band fitter set, is used, giving the relative loudness over a number of octaves.

In the matter of planning and building this factor of shrillness is less intractable because high-pitched noise can be more easily contained by structure than middle, and low-pitch. But again there must be no openings. (It is well known that noise complaints are more numerous in summer when the tendency is to open doors and windows.) Also since high-pitched noise does not bend round corners, and gives a sharper sound-shadow, it can sometimes be directed skywards from high level openings. This principle is made use of in designing aeroplane testing beds.

Irregularity is very difficult to assess yet is a vital factor. In making a survey it is essential to observe it carefully and make notes. Certain kinds of irregularity we can anticipate, resolve, and grow accustomed to. Here the classic example is when tenants next a railway line, after six months, become accustomed to trains *so long as they keep to their time-table*, and can sleep through them. This ability to resolve by anticipation seems to be a defensive faculty of the mind. Street traffic also we can grow accustomed to if it is fairly uniform: but if the time interval between vehicles becomes long, and if the occasional motor bike or sports car is high in pitch, or much louder, then potential nuisance goes up. The irregularity that is quite intolerable is the marked rhythm occasionally broken, as in some types of air compressors and in the exhausts of internal combustion engines. Therefore, in the matter of planning, these exhausts must be specially screened, or planned away from houses.

In assessing potential noise nuisance therefore those three factors must be taken into account, and it is well to remember that any new type of noise in a locality draws attention to itself.

Community Reaction to Noise

In America the reaction to noise of people living in a number of different neighbourhoods has been studied by the acoustic engineers Bolt, Stevens, and Rosenblith*. Case histories of different neighbourhoods were prepared, to show the reaction of the neighbourhood group to "acoustic events." As a result a "response scale" has been devised, showing a range of responses forming a series of steps—namely "no observed reaction"; "sporadic complaints"; "widespread complaints"; "threats of community action" and finally "vigorous community action." At the same time an attempt is made to combine the various physical aspects contributing to noise nuisance, namely—loudness, and spectrum or frequency analysis, together with influencing factors such as background noise, temporal or seasonal factors, irregularity or smooth occurrance—to combine all these into a single computation called the "Composite Noise Rating."

Zoning Ordinance

This is an interesting attempt to give a schematic account of noise nuisance and has been used as a basis for a proposed zoning ordinance for Chicago and for the city of Stony Point in New York State. A brief account of the Stony Point Ordinance is as follows: the town is divided into eight zones: one agricultural plus residential district; two residential; one residential plus office buildings; two commercial; light manufacturing; general manufacturing. A general clause forbids all dangerous, injurious, noxious, uses or occupations and noise and vibration is named. But any use may be undertaken or performed provided it conforms to certain performance standards. These performance standards are to be determined by measurements in order to limit any dangerous or objectionable elements, and the measurements are to ten made at certain points—they may be either at the establishment itself or at the lot line or on the boundary of the nearest residential district. And certain uses will always be subject to certain performance standards. For noise it is laid down that:

At the specified points of measurement the sound pressure level of noise radiated continuously from a facility at night time shall not exceed the values given in Table I in any octave band of frequency. The sound pressure level shall be measured with a sound level meter and an Octave Band Analyser which conform to specifications published by the American Standards Association.

Table I then gives maximum permissible sound pressure levels, in decibels, for continuous noise from an establishment, *radiated at night*, as measured at the specified points, and over a frequency band of eight octaves. Night time, and continuous noise conditions, are thus taken as the significant basis. The figures are as follows:

Frequency band, cycles per second	Sound pressure level decibels re 0·0002 dyne/cm.²
20—75	69
75—150	54
150—300	47
300—600	41
600—1200	38
1200—2400	38
2400—4800	38
4800—10,000	38

Then using these figures as a basis, certain corrections are made to allow for the various "influencing factors" which are recognized as contributing to or altering, the "composite noise rating" or general noise nuisance. The Table II says:
If the noise is not smooth and continuous and is not radiated at night-time, one or more of the following corrections shall be added to or substracted from each of the decibel levels given above in Table I.
The figures are as follows:

Type of operation or character of noise	Correction in decibels
Daytime operation only	+ 5
Noise source operates less than 20% of the time	+ 5[a]
Noise source operates less than 5% of the time	+ 10[a]
Noise source operates less than 1% of the time	+ 15[a]
Noise of impulsive character (hammering, etc.)	− 5
Noise of periodic character (hum, screech, etc.)	− 5

Apply one of these corrections only.

Thus we see that the influencing factors are day-time rather than night work; duration of the noise; and character of the noise. My criticisms here are these: if part-time noise is permitted at a five decibel higher level—then the starting and stopping hours must be regular; irregular starting and stopping, specially at night, can be more of an annoyance, not less: also "hum" and "screech" are not the same type of stimulus: a hum is generally at low or middle pitch and is less of a nuisance: "a screech" is always high in pitch and is a serious nuisance: a circular saw is a screech.

But these are details. It is by noise surveys of community reaction, on the principles here shown, that we must master the elusive *mesh* of the noise nuisance. May I briefly summarize. In surveying three things are required: (1) the average loudness on a standard noise meter; (2) the frequency components on a standard octave band analyser; and, equally important, (3) notes as to the regularity or irregularity of the existing night noises; all forming what we call "background," and what the law takes note of as "local circumstances." (Note there are several London acoustic firms who will undertake measurements: additional personal notes taken at night by the architect or surveyor are most useful.)

English Noise Climates

We can distinguish three distinct day-time noise climates in this country. (1) Urban with sustained street traffic: where clerical workers of all grades are exposed to loud noise during working hours but return home to relative peace at night. (2) Industrial areas in the Midlands and North where local industries have grown up among homes and where there is traffic noise plus peaks due to individual factory noises: here workers want to live near their work (they are inured to industrial noises and can often read them like a book). (3) Rural areas exposed to aircraft noise and to the new type of agricultural machinery, often very loud. Here maximum nuisance is experienced because of the quiet day background: schools and institutions specially suffer.

Street Traffic Noise

I once stood in Hyde Park for the two minutes' silence and had the impressive experience of hearing the roar of London die down and pause and mount again. In 1937 my old friend C. W. Glover measured some forty decibels difference, *viz.*, 32 to 72 decibels in the Strand between the silence and the resumed traffic. The noise has now increased: yet we have grown so accustomed to it that we often complain of a committee room or church or magistrates' court, without recognizing that a speaker to be intelligible in it must drown out a noise equivalent to an interrupter. Thus we become conditioned but demand loudspeakers everywhere. Traffic on a hill (Winchester, Norwich, St. Albans) is specially noisy; also at traffic light. Therefore the relatively quiet

* See the first number published of the American Journal *Noise Control*, January, 1955: article entitled "A Community's Reaction to Noise: Can it be Forecast." Published by Acoust. Soc. of America, 57 East 55th Street, New York 22.

site, and also the quiet side of the site, have now an enhanced value which should be recognized by all professional men concerned with property.

Cloistral Planning

It follows that newly-planned office buildings in cities should reverse the old social tradition (that important suites of rooms should come on the street front) and deliberately place the corridors, lavatories, stores, canteens, staircases, kitchens on the street front. Then general offices, managers, engineers, directors, medical officers, board-rooms and committee rooms will be planned on the court. This will immediately pose a daylighting problem and a further noise problem. For light the ingenious plan will step back on the cloistral side, but height must clearly be limited. The noise problem will be due to the fact that "container courts" can prove very noisy, if basement noise from mechanical equipment, bins, coke dumps and so forth, is not controlled. Also the very fact that traffic noise is screened, will *uncover* the interior noises which are now caused by footsteps on cheap, hard floor finishes, by telephone conversations heard through thin sectional partitions, by door bangs prolonged by reverberation, and by tabulating and punching machines of all kinds. Yet in spite of the difficulties—how well worth while it would be. I happen to know the resentment which some of our new transparent-to-noise office buildings inspires. Every "acoustic event" (as our American friends say) is registered on the senses. Telephoning, dictating, interviewing, causes strain. Note the real value of quiet floor finishes and of sound-absorbing ceilings.

In all cases it is the quiet site with low background that requires extra care in specification in respect of interior noise, whether in flats, offices, institutions. And so the two risks—that of exterior noise and interior noise—are reciprocal.

On outer circular roads a great deal of residential building develops without proper consideration of traffic noise. Houses should be set back from kerb as far as possible—say, 100 ft. and main bedrooms planned at the back. In the Chapman Survey, *nearness* is taken as within 100 yds. and within that distance complaints go up. The LCC planners say that in cases of planning near arterial roads (and railways) the housing density is important. With less density it is easier to plan for quiet, whether on the principle of putting building blocks parallel to the road, giving shaded courts behind, or at right angles exposing gable ends rather than fronts. Both methods have their own advantages and disadvantages.

The principle of pedestrian ways in the new town planning, and the interposing of green spaces, will considerably reduce noise problems. In modern town planning it is important to ensure that heavy traffic will not find short cuts from arterial roads through residential areas to trading estates and to railway stations.

High Buildings

I am informed on good authority that buildings of sixteen to twenty storeys can be supported on the London clay. High buildings are already going up, and we should consider their future effect on the noise problem. Much depends on their set-back from the building line. I am informed that New York sky-scrapers have acoustic levels corresponding to storey heights. The first eight or ten storeys are so noisy that closed windows and air conditioning is a necessity: then comes a moderate noisy belt: and above forty or fifty storeys there is a relatively quiet zone where the only complaints are those due to wind-noise. (The Empire State Building, is, I believe, 102 storeys.) But the New York buildings are often directly over the street, forming canyons, which inter-reflect from noise sources at street paving. If in London we should set back the "towers" in the centre portion of the island blocks and put shops, and parking places of one or two storeys on the building fronts, we should then have quieter conditions up above, we should be defending against street traffic noise. But we should not be defending against helicopters.

Noise Defence and Ventilation

Heavy glazing kept shut will defend against street traffic. On noisy sites it is well worth while having this protection. The frames should be sufficiently far apart to be able to line the "reveals" with perforated absorbent tiles. But this involves a special ventilation system, or else air conditioning for the whole building. Hence in nine cases out of ten a traffic insulation problem involves also a ventilation scheme.

Motor Vehicle Noises

We have so far omitted an important thing, namely motor horns. In this country the problem is not so acute as on the Continent. It is reported that as a result of the recent police edict in Paris banning the use of horns there has been an impressive reduction of street accidents. This may be due to more careful driving, but is also relative to the point that when a pedestrian crosses the street he is unconsciously establishing relative positions of cars and their distance, a sudden louder noise interferes with this perception of distance and is a danger. This then becomes an added reason for controlling the noise of sports cars, motor cycles and scooters, and in Switzerland vehicles are controlled to the following maximum permissible sound levels.

It was found by the Swiss Authorities that it was not possible to make measurements of motor cycles successfully by police officers on the roads: they had to be placed on a stand in position free from wall reflections.

We now come to the biggest problem when we consider aircraft noise. *The Times* published two articles on this subject on October 24 and 25, showing the distance at which various machine noises render a telephone unintelligible, assuming the telephone inside a room with open window. Further, *The Times* pointed to the American researches proving the major noise source to originate from the propeller. However, a lead to reduction of noise nuisance comes from the Elizabethan, whose high wing design places the exhaust on top of the wings, directing noise upwards and correspondingly shading noise downwards.

Vehicle category	Maximum permissible level
Passenger car	80 decibels
Bicycle with motor	80 ,,
Two-stroke motor cycle	85 ,,
Four-stroke motor cycle	90 ,,
Trucks and buses	90 ,,

The above figures give a picture of the potential loudness of aircraft. They are measurements of sound energy level only. Noise nuisance would often extend very much further. The same high authority makes the following statement:

The noise from piston-engined aircraft comes from two sources: the exhausts and the propellers. According to American information the propeller noise predominates, but there is now reason to doubt this. If it is not true, then some reduction might be obtained by fitting silencers to the exhausts but this means more weight, probably some loss of power and a reduced pay-load. No air-line will penalize itself in this way unless its competitors will also do so. Propeller noise can only be reduced by, so far as is known, less power per propeller blade (*i.e.*, more blades per engine) or a reduced blade speed. When run at full power, as at take-off, the noise output from an air-liner is closely related to its size, with one exception. At other times, *e.g.*, when cruising or coming in to land, the noise varies much more, for unknown reasons. These may be pointers for future research. Whatever the predominant factors are found to be they will have to be considered when an aircraft is first designed. It will, then, need a major effort to reduce noise from future air-liners.

Vulnerable Buildings

From the zoning aspect the obvious defence is to keep the noise at a distance and this means siting with knowledge of future aircraft development. The clear objective is to keep vulnerable buildings from being put out of action and also prevent the hardship now inflicted. All buildings are not equally vulnerable: they come in an order of sensitivity somewhat as follows—recording studios, certain types of laboratory, auction rooms; hospitals and clinics; then law-courts and schools; and finally the large auditorium class, including the common committee room.

In hot countries where open windows are the rule it should be noted that the auditorium

class is more vulnerable and, unless zoning measures are taken in time, the unrelated planning of new air-fields and new parliament houses and universities in the British Commonwealth may lead, in the future, to insoluble noise problems.

Zoning

The flying ground and wider control zone problems have in the past, as at Manchester Airport, been dependent on the main runway, usually south-west to north-east, but, with the greater stability of aircraft and their ability to use secondary runways, the nuisance may not be so concentrated when considering regional planning. Manufacturers' testing beds and the shading of running machines by buildings is largely restricting actual ground noise problems.

Military aircraft are, of course, outside our control, but if low flying could be restricted to a regular time-table the nuisance value might be greatly reduced by the anticipation of noise referred to earlier.

Helicopters

The transport argument in favour of helicopters is that when a flight in an air-liner from one airport to another is a matter of minutes, it is inconvenient and uneconomic to spend an hour or so getting from the landing ground to the centre of the city. Hence the advantage of helicopter routes from airports to business centres. This applies not only to English cities but also to Johannesburg, and other large cities in the Commonwealth. Claims are also made that intercity traffic by helicopter can be developed, and frequent services provided straight from city stations. But the critics say that helicopters cannot carry the economic loads necessary, and that they are too noisy for frequent flights over built-up areas. The authority quoted above says:

The machines at present running into London are very small and have been "silenced." The larger piston-engined helicopters will be inherently noisier and silencing more difficult; it is not impossible that the "interference-with-telephone" distance will increase from the 400 ft. of the present machines to 1,500 ft. if the 30 to 40 seaters of the future are silenced as effectively, in proportion, as the present machines, or to a mile if not silenced. Jet-driven helicopters may be worse still.

With machines arriving or departing every minute the noise will be practically continuous. It behoves town-planners to consider the siting of air-stops most carefully. And not only air-stops. The future helicopters must influence town-planners in their decisions as to high buildings in cities. "Air-to-ground noise" is more direct and dangerous in its assault than "ground-to-ground" noise. The noise comes down on to roofs and into courts, and enfilades streets. This means that we can no longer protect from major noise by putting top lighting on, for instance, law-courts and council chambers. It is roofs which will be generally attacked; and to resist, our roofs will have to take on the mass equivalent of walls.

After reading a two-volume report on the education and registration of architects in America, Ian Bowen found that "while the circumstances of the profession in Britain and the United States vary very considerably, and in some important particulars, the issues *before the profession are strikingly similar." In this article Mr. Bowen comments on the profession in America in the light of the report, which was prepared for the American Institute of Architects.*

THE PROFESSION IN AMERICA

By Ian Bowen

Architects in the United States are in the process of taking stock of themselves, both in individual and group discussions at chapter level, and by means of full-scale national surveys. Most important of the latter is the report published in 1954 of a Commission to survey Education and Registration of Architects, set up by the American Institute of Architects (the AIA). The first volume of the report was called "Evolution and Achievement," and the second, based on discussions in various centuries, is "Conversations Across the Nation." No one who has studied these two monumental surveys can help observing that, while the circumstances of the profession in Britain and the United States vary very considerably, and in some important particulars, the *issues* before the profession are strikingly similar. The architects' dilemma is, perhaps, bound to have similar features the world over, if only because it is but a special instance of the dilemma of modern industrial man. In any attempt, such as will be made in this and some succeeding articles, to summarize the difficulties of the architect's position today, emphasis tends to be placed on the unsolved rather than upon the solved problems, and may give the wrong impression that to train to become an architect, and to follow that honourable calling, presents difficulties that all other professions have much more successfully avoided. In some respects, some other professions have undoubtedly a slight lead in organization, medicine and law being the two most often cited. But it is wrong to suppose that, in a rapidly changing society even these professions have attained perfect balance, nor certainly have professions in general a marked lead over architecture. It is hard, for example, to become a trained physicist or a trained economist, or, let us admit, an all-round trained physician, given the present state of human knowledge, which far out-ranges the capacity of individual learning, and the present state of human development, in which the management of other human beings plays so important a part; hard, not just in terms of toil, but in the choice of precisely the right discipline to adopt.

Educational Requirements

Architects, like every other group, are caught by the conflicting claims of specialisms, on the one hand, and of certain so-called "general" educational requirements, needed by anyone who wishes to succeed in our complex, partly managerial, society. The general requirements which will serve a particular architect (or lawyer or doctor) best will vary from one set of circumstances to another; it may be executive experience, or a knowledge of classical English literature, or ability to make a good speech at a dinner—all these kinds of "skill," little related to what one is accustomed to thinking of as technical skill, are required of professional men, in differing degrees, from time to time. So the "general" requirements may be bundles of specialisms, or they may indeed be simply the result of an earlier unspecialized general education, in the arts or the sciences.

In subjecting the architect to further discussion and analysis all that the American Commission set out to do was to examine the relationship of the organization particularly the registration system, and of the education provided in the different universities, and the training provided in the various offices, to what was demanded of architects in their careers. Furthermore, the extent and scope of the architect's activities in society were brought under review, as an inevitable consequence of the survey.

Differences in American and British Organization

In America, as in Britain, the right to describe oneself professionally as an architect is limited by law to certain categories of people. But there are two important differences: first, this kind of law in the United States is enacted under the "police power," that is the power to regulate for the general welfare, health and safety of the community, and this power rests under the constitution with the individual States. Secondly, while, in consequence there are some fifty-four sets of regulations to consider (for forty-eight States, and four territories), many of them differ from the British system in that they regulate not merely the use of the name of architect, but the actual practice of architecture. To be exact, twenty-seven States restrict the practice of architecture to certain qualified persons, and practice is, in these States, usually defined as either the performance of, or the offering to perform, such professional services as are laid down. They may be quite widely described, to include development, design, enlargement or alteration of buildings, or they may be listed in detail.

The principle of registration of architects embodied in all this state legislation did not get adopted universally at all quickly, and there are still substantial differences between the requirements of the different States. The last two States to adopt registration of architects were Wyoming and Vermont (where laws were passed in 1951), and before that Kansas, Nevada and New Hampshire—

States not otherwise with much in common. California was an early state to compel registration of architects, and passed a law to this effect as long ago as 1901, although it was preceded by Illinois in 1897; Arkansas adopted registration in 1901 too, and New Jersey in 1902. The historical reason for the early development of registration in Illinois, and then in certain Eastern and Western States seems to have been the rate of expansion of these states in the last two decades of the nineteenth century. Between 1880 and 1890 the number of architects in the country multiplied by nearly 2½ times, and it doubled again between 1890 and 1910. The number of architects in relation to the total urban population also was increasing (according to the Census figures taken at ten-year intervals); the ratio of architects per 100,000 urban population in the United States was 23·9 in 1880, and had risen to 39·7 in 1910.

This, incidentally, was the highest ratio attained; since then there has been a persistent relative decline, and the ratio in 1950 was only 26·5.

Those parts of the country where there was the greatest rate of both municipal and domestic building had to tackle earliest the problem of the increasing number of "architects," some with very poor qualifications. Under existing legislation, in nineteen states the title of architect is reserved to those persons who are licensed to practice. in five states the practice of architecture by unlicensed persons is permitted provided that they do not use the title of "architect," the usual substitute title in such cases seeming to be "designer."

Variations in Legislation

The great variations in the legislation finally adopted by the different states partly reflects the varying political strength of the interests which have opposed registration; for example, agricultural interests have everywhere been pretty strong politically, with the result that in thirteen states all farm buildings are exempt from the provisions of the registration act. Similarly, merchant builders, building materials dealers, and real estate operators have obtained exemption from the acts. The biggest exemption of all usually applies to buildings incidental to industry, transport and power, where the structures are designed by engineers.

The registration acts are acknowledged to be imperfect even by their best friends, but are regarded as perhaps the nearest to the ideal that can yet be achieved against the vigorous opposition of the affected interests. One of the most embarrassing features of this, as of other American laws (for instance, the marriage and divorce laws) is the heterogeneity of the provisions made. The only way to obtain a uniform, all-American registration law would be by way of Constitutional Amendment, which even the average British reader will readily understand to be a major undertaking, practically impossible in fact, since any such amendment would have to provide for the professions in general, not merely for architects, and this would array together many kinds of political opposition.

To mitigate the consequences of the diverse practices, in 1920 a National Council of Architectural Registration Boards was set up (known as NCARB) to act as a clearing house for discussion on registration matters between the boards of the different states, and to minimize thereby, so far as is consistent with legislation, the differences in policy for registration followed in actual practice in the different States. There has to be, of course, a registration board in each state, but one of the penalties of this subdivision is that the amount of business that each board undertakes does not, in many cases, warrant even the retention of a full-time secretary. NCARB concerns itself particularly with qualifications for registration. A permanent professional organization of architects, the AIA, was begun in New York in 1857, by a small group of architects, some of whom were conducting education by "ateliers" in their own offices. The institute expanded across the country in the period after the Civil War. Professional education has always occupied a big place in its deliberations.

Architectural Schools

In early years, there was an agitation for the establishment of a national professional school for architecture, but with the rise of the American collegiate (university) system, this project was abandoned. First the MIT, then the University of Illinois, and then Cornell offered curricula in architecture, and by 1898 there were nine such schools of architecture; by 1930 the number of these university schools was 53.

The AIA, in collaboration with the NCARB, and with another body called the ACSA (set up in 1912 to co-ordinate the work of the architectural schools), have since 1939 supported a national Architectural Accrediting Board, which in practice has operated only since 1945. This board collects data on the schools, inspects them and publishes an official annual list, but has no power to standardize the schools; on the contrary, it has been instructed to encourage each school to develop its own special lines. There was a survey made of the schools in 1950, on which the survey at present under review was able to comment. The NAAB found in its 1950 survey considerable diversity of entrance requirements in the 63 schools then being run in the different universities. Statistics of student wastage and withdrawal were not very adequate, but this figure too seemed to vary very much so far as could be ascertained, sometimes being very high. Part of these difficulties in 1950, and others, were due to the abnormally heavy post-war enrolment.

Size of the Profession

The 1950 Survey included an analysis of all the different states' registration lists, to remove duplication (an architect wishing to practice in another state than that where he normally practises will have to be registered again; an out-of-state architect who carries out work, though unregistered, is liable to heavy penalties). As a result, it appeared that there were 19,137 registered architects at that date, exclusive of duplication. As many as 97 per cent. of them described themselves as "professionally active" (including teachers); practitioners in private practice were 70 per cent. of the total, those on a wage or salary basis 24 per cent., those in public bureaus 5 per cent. The 24 per cent. on a wage or salary basis were divided 14 per cent. in private firms, and 5 per cent. employed in public bureaus. Two points emerge from these figures at once; first, how low is the proportion of architects to population in the US as compared with the UK, and secondly, how high is the proportion of them who are engaged as principals or employers in private practice.

Not all the 19,137 listed registered architects were members of the AIA; less than 50 per cent. of them in fact belonged to that organization. Among AIA architects 81 per cent. were "practitioners," *i.e.*, principals in private practice, and 11 per cent. were private employees, while among non-AIA architects only 56 per cent. were principals, and 29 per cent. were employees (in the private sector).

The average age of all the registered architects was 45·5; in 1950 no less than 15 per cent. of the profession were of age 60 or more, while back in 1870 (according to the Census of Population) the percentage was 2·4 per cent. The proportion over 45 was 50 per cent. in 1950, and had been only 24 per cent. as late as 1890. These changes are due largely to the improved expectancy of active life.

Size of Incomes

In this, as in other professions, the increasing length of active life raises serious problems, especially in a country where the chances of making a name early are not particularly good. The median income of architects in the AIA was about $5,000 in the age-group 25-29, and rose with each age-group to the highest point for the age-group 60-64, when it was $14,000. The non-AIA architects appear to have had a lower income on average in all age-groups, and their incomes cease earlier to rise with age, so that an AIA average income may be about 40 per cent. above the non-AIA income for the middle-aged persons, but rises to 100 per cent. above it for those aged 75 or more.

Summing up the figures another way, it may be stated that 52 per cent. of all AIA practitioners are enjoying incomes of $10,000 or more, as against 31 per cent. of all non-AIA architects. Employee architects' salaries tend to cluster round the $8,000 to $10,000 bracket, many of them, however, also being found in the $6,000 to $8,000 class. These are certainly much better salaries than can be found in Great Britain, in real terms, that is, allowing for differences in the cost of living. The professional man in the US has a "higher," or at least greater, material standard of living than his opposite number in Britain. But relative to other professional salaries in the United States, these earnings are not especially high; there are no exact figures for comparison available, but a general enquiry to architects, doctors, university teachers and other groups would, I am sure, show that the relative position of architects was low.

The architectural firms of the United States, and other employing agencies (whether private or public), employed in all an estimated 128,900 employees, of whom about 61,000 were draughtsmen, designers, or "specification writers," and the rest engineers, accountants, secretarial staff, or administrators. The sources of recruitment of this large, and necessarily trained, staff are a cause of anxiety to the profession; they look mainly to the vocational courses of public or private "schools," collegiate schools, of business and the like. The individual employer will look for recruitment to five sources, the employees of other firms, the unemployed, the untrained youths, non-graduates who have flunked their architectural examinations (or lack the funds to complete the course), and finally architectural graduates. Because of the popularity of this last source of recruitment (all the first four sources having considerable disadvantages to the employer), there is considerable controversy in the profession as to what should be included in the architectural degree courses at the universities, the employers naturally being inclined to support the inclusion therein of courses on draughtsmanship and other skills likely to be of immediate use by an employee in an architectural office. Educators take the view that their prime responsibility is to train men to become versed in the fundamentals of architecture; and it was partly this difference of view that led to the enquiry which is here being discussed.

It has already been noted that though the number of architects in the United States has grown; it has not done so in proportion to growth in the population but, then, population in recent decades has increased very fast. Between 1940 and 1950 the number of architects increased by nearly 13 per cent. (about 2,700 in all), while the total population of the country went up by nearly 20 per cent. If this were merely the experience of an isolated decade it would perhaps not be very surprising or disquieting, but it actually continues a trend that has been observable since about 1910. Neither in relation to urban population (which has risen even more steeply than total population), nor to gross national product has the number of architects proportionately increased. It becomes, therefore, very difficult to know what proportion of architects to population, or to national product, should be allowed for in the future. If the present ratio of architects to urban population were to be maintained, it would seem that by 1960 some 23,670 registered architects would be needed (registered architects are assumed to bear in constant relation to "census" architects, *i.e.*, those recorded in census returns). This would mean an increase of 4,500 registered architects in a decade.

The application of these ratios is, however, very hazardous, and the authors of the survey do not lay great weight on the estimate that has just been quoted. That they are by no means over-estimating the *need* for architects is perhaps made clearer if the size of the profession in relation to the volume of building activity is considered. In the 1950's the total value of expenditure on buildings in the United States is averaging well over $20 billion a year (over $25 billions at the moment). Over three million building employees are working on sites (all construction) perhaps two-thirds on buildings proper. Perhaps in the next half century, and almost certainly for the next 15 years, the volume of building activity is likely to remain very high. The complexity of the building process is not getting less, even though the problems are changing. The needs for skilled design, and skilled supervision, are as great as ever. Following this way of looking at the numbers in the profession, it would appear easy to arrive at the conclusion that even more than in Britain, there is a shortage of skilled architects available to meet the needs of a society that is growing in wealth and numbers simultaneously far faster than Britain, and where building needs expand yearly. Moreover, in the present decade, not only need but effective demand for buildings has grown, and there is at present no sign of an early slowing down.

Distribution of Work

Over the whole period from 1925 to 1951 it is estimated that some 52 per cent. of the building work done was residential, 25 per cent. industrial and commercial, 15-16 per cent. educational, medical (hospitals), social or public, and the remainder miscellaneous public or private building. A number of architects replied to a survey of the class of work that they were undertaking in 1950, and it seems that commercial building came first, followed by residential, educational, religious and industrial building in that order. There is a variation in the relative importance of the different classes of work in different parts of the country, residential practice being more important for architects in the eastern states, but low in the Central and Gulf regions, where, however, hospitals were relatively more important than they were in the east. All over the country, commercial, residential and educational projects comprised together a fairly steady 58 per cent. or so of the total recorded practice of architects.

All these classes of work will continue to be done on an increasing scale, as new satellite residential areas grow up and further expand in or near the 160 metropolitan areas of the country. For example, the U.S. Office of Education estimates that there was a need for a minimum of 600,000 new classrooms for the state schools by 1958. The ratio of hospital beds to population is not as good now as it was in the early 1940s. The huge residential programmes imply a large growth in commercial centres, which to be competitive have to be attractively designed, and well laid out. Indeed, it may be observed that the commercial centres of new residential areas are often far more attractively sited and designed than the residential areas themselves, the store owners being more progressive, or better able to afford an outlay on architecture, than the individuals who hopefully purchase a "modern" builder-designed residence.

There are already over 40,000,000 dwelling units in this country (over three times the British figure), 1,700,000 retail stores, and 186,000 schools, not to mention the universities and numerous technical schools and training colleges. Their extension, replacement, and modernisation call for a tremendous effort.

An Experimental Spirit

The contribution of the American architectural profession to all these requirements has been immeasurable, and they can in this country rightly boast that their best housing, shops and schools are as good as, if not better than, those anywhere in the world. Moreover, there is an experimental spirit and a production drive which permits remarkable results to see the light of day faster in the United States than in any other country, this in itself being a powerful educative factor on the public's opinion of modern architectural techniques. Despite all these achievements, it is not clear that the profession is yet organised either as it would like to be, or as it should be, nor that it is playing the part in society that in principle it ought to play. Because of these doubts, the profession, like others, is constantly examining its own presuppositions and practices, and the needs if any for reform of its educational methods.

While many architects have been highly successful in serving individual clients of the upper income groups, it has to be noted that this, in the case of housing, has touched only a tiny fraction of the vast demand of recent years. The architect is coming into the housing picture a little more through the increasing tendency of development builders of housing to employ architects. This development is encouraged by the publicity for good design, and it undoubtedly gives the architect "new opportunities for service" to a wider middle-class segment of the population. But it raises a serious issue as to where the architect's loyalty really lies.

The first main point made in the survey of the "Evolution and Achievement" volume of the AIA is that the fixed sum building contract has profoundly affected the relation between the architect and the client or, as he is often described, the building owner. The fixed sum contract, according to the Survey, is itself to be regarded as the result of the emergence of a "strong middle-class society," which is contrasted with the more aristocratic society of earlier ages, when patrons of architecture were to be found among "kings, nobles, priests and magnates." The middle-class patrons are alleged to be collectively richer but limited in individual resources (richer than their predecessors is presumably meant). In this situation they need a fixed sum contract.

The description is perhaps historically vague, and even inexact, but it will serve; undoubtedly, despite the individual rich persons, whose resources must in the last hundred years frequently have been enough to put many an ancient magnate to shame, the more "typical" middle-class demand is more in the character of small-scale patronage, and is, perhaps, exercised often in a more commercial spirit than some of the patronage of earlier centuries. Whatever the reason, there is, in an industrial and commercial society, more care exercised over costs, and a greater desire to budget ahead, and the fixed sum contract has become the

characteristic method in the United States, especially of organizing a building project. But this type of contract itself gives rise to difficulties; it puts the builder under a strong economic motive for giving less quality of work than the owner was led to expect that he would receive. Hence, this type of contract leads to a need for more detailed methods of estimating and laying down specifications, and of closer methods of control.

So, the survey seems to suggest, the architect, for the first time in history, became directly involved in the role of watchdog over the builders' activities, guardian of costs, policeman even against possible malpractices, a controller of building.

Secondly, in the United States in recent years there has been a notable increase in the demands for buildings of corporations and institutions, a type of demand that is often very different in scope and character from private demand. Boards, bureaux and authorities, whether private or public, are different customers to work for than individual clients; this affects not only procedures and communications, but also the scale of finance, the pressure to complete on time, and other matters directly concerned with the running of the contract. The reaction of the architectural profession has been that many offices undertaking these classes of work have had to be enlarged and the type of services offered extended. New kinds of work indeed have had to be undertaken. In particular, architects have been obliged to give financial counsel and advice to their corporative clients, and to accept codes and regulations laid down by the corporations or agencies. While the scale of this kind of demand has given American architects new scope, it is for obvious reasons not an unmixed blessing to the profession. The best corporations and agencies, it is said, have given their architects support in fresh approaches to design.

Thirdly, in recent years there have been very substantial changes in the methods of building used, especially in regard to the equipment of buildings. Within the widening of the range of technical possibilities has had to come a new examination of the functions that the buildings are to serve.

Fourthly, clients have learned the lesson fairly well in recent years that a simple shell for a building will rarely give optimum results for a given expenditure; and if they have failed to learn this lesson themselves, a lending agency, often concerned for its own equity, may insist that the borrower makes full use of architectural services. In this very practical way, society is showing greater respect for the expertize of the architect.

Press Publicity

The general press, finally, carries every week long supplements featuring architectural developments in any neighbourhood. The public is being made aware, as never before, by the publicity given through open competitions, and through other channels, of the importance of the architect's contribution.

Although there are still important and regrettable gaps in the relation between buildings put up and architectural design—some buildings are not designed professionally, or are designed professionally but incompetently, or inappropriately—the fact that architectural practice is booming in the United States is the primary fact to grasp, and also that the public is being deluged with publicity on this matter, a point, however, that needs qualifying with the remark that the public is fairly deluge-proof.

Methods of Practice

Architectural practice is commonly divided into five types of function.

First, comes the programme stage, during which the problem to be solved is formulated.

Second, is the basic design stage, in which a basic solution to the problem is worked out by the architect.

Third, comes the preparation of the working documents; the architect is supposed in this stage to record the means by which the basic design can be realized in detail, and this involves the preparation of working drawings, specifications, and general conditions. These together form the working documents. The fact that they have, in America, to be complete and accurate at this third stage is what British observers have describe as pre-planning.

Fourth, is the construction contract stage during which the architect's duty is to advise and assist the owner to secure an equitable contract with a builder for the construction of the project.

Fifth comes the construction stage. During construction, the architect has to perform for the owner at least eight distinct types of service, including approval of sub-contractors, preparation of details, approval of materials, checking of shop drawings, general supervision and certification of requisitions for payments, negotiation of changes in the contract and final inspection. These methods have only to be set out in full for the great importance to be seen of an insistence by the profession that, for its members, there should be a clear-cut line of responsibility. It is clear that to perform the functions outlined above in a manner above any possible reproach would not be possible for an architect engaged himself in building activities; hence, a reputable architect must not engage in the business of construction contracting, nor hold any personal interest that might discredit his freedom to act under all these headings impartially and independently. The fee for service, paid by the client, and no other source, must be the architect's reward for his services.

It remains to be discussed further, however, how far this etiquette of the profession can in fact be enforced, and what forces are at work to whittle away the safeguards that are evidently so necessary to the system.

But before criticizing departures from the "normal" practice, it may be as well to underline that that practice's essential merit lies in its insistence on a clear differentiation of functions. The architect is supposed to discharge such matters as the certification of payments and final inspection with regard for equity, as well as acting for his client, and to approach the discharge of these duties in a personally impartial frame of mind. "Absolute" impartiality is claimed as the ideal, as in the case of judges.

The architect's fee may be on a percentage of building costs, or a fee-plus-office-costs, or a principal's—salaries-plus-costs-basis; all methods are used.

Architects are also sometimes consulted on other matters, such as the design of furniture, or to prepare plans for a project still in the prospective stage.

Specialization

With this great variety of functions there is naturally some tendency for architects to specialize in one field or another, and the consequences of this tendency deserve examination. The old aesthetic specialization has largely disappeared in America (the division into "Gothic" and "Classical" specialists, for example), but there does seem to be a considerable tendency of over 40 per cent. of firms to specialize in particular types of building. To be precise, 43 per cent. of firms reporting to the survey considered themselves to be specialists in one or more specific types, educational and residential being the most frequent combination, followed by commercial, religious, industrial, hospitals and public building. But the degree of specialization is not known for architects in general, nor even in detail for the reporting group. It is known, of course, that architects with extensive experience in special types of building are brought in quite frequently as consultants or associates by the primary architect on a project.

Organization of Offices

There were 3,253 firms in private practice reporting to the survey, 2,302 being AIA and 951 non-AIA. The average number of employees of the AIA firms was just over ten, and the grouping of the reporting firms by size was as follows:—

Employing	Percentage of reporting AIA architectural firms in private practice	
1—4	47·5	
5—9	27·9	
10—19	14·6	
20—39	6·7	[private]
40—99	2·3	[private]
100 and over	1·0	[private]
	100·0	

Three general types of office can be distinguished, the small type with one or two principals, working alone or with very few assistants, the medium office, serving a region, and the large which will have numerous principals, a corps of highly specialized technicians, and will work over broad regions, and sometimes on a nation-wide scale. The organization of these three types of office differs a great deal, but they have in common the fact that the unit of operation is an individual project. Large-scale offices, therefore, have adopted various techniques of organization, such as the estab-

SHEET MATERIALS | METAL | APPLICATIONS

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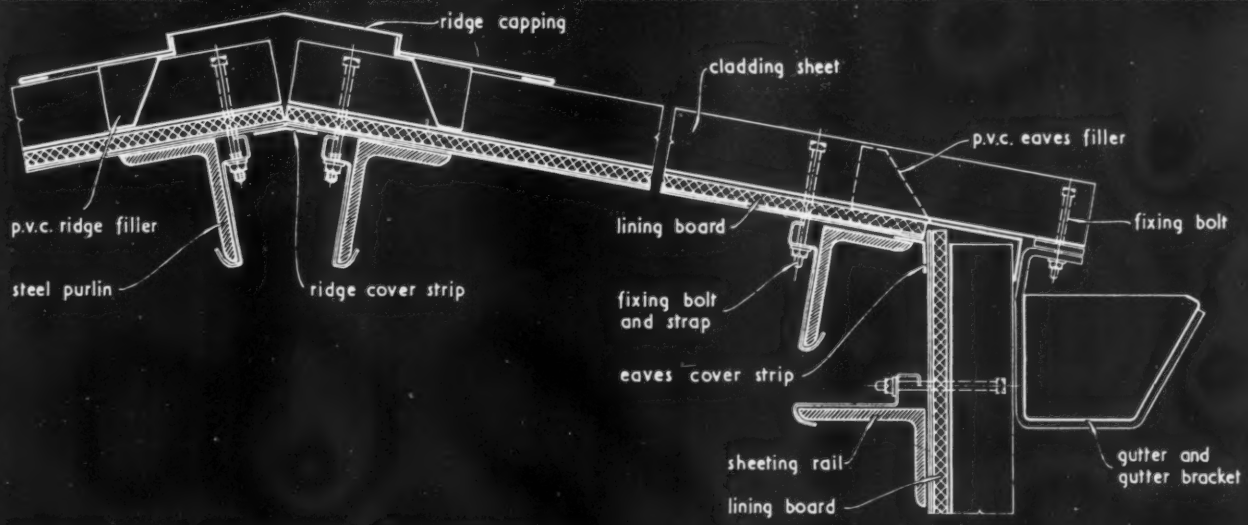
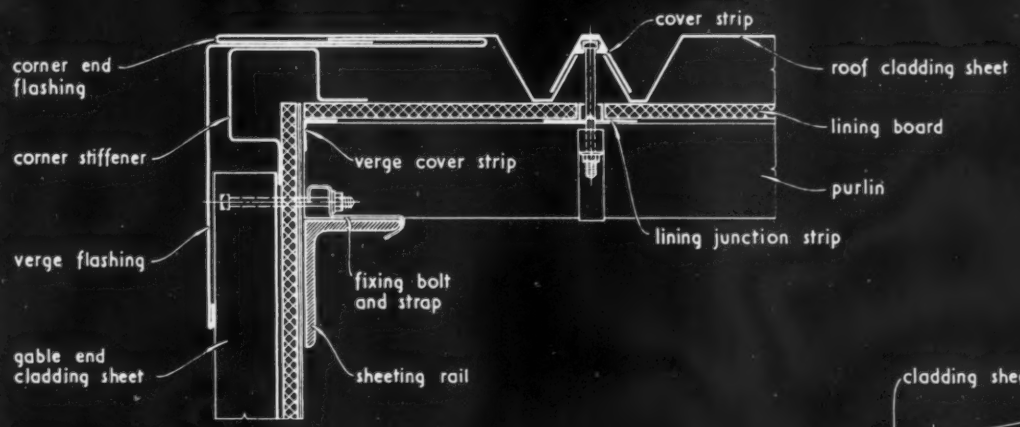
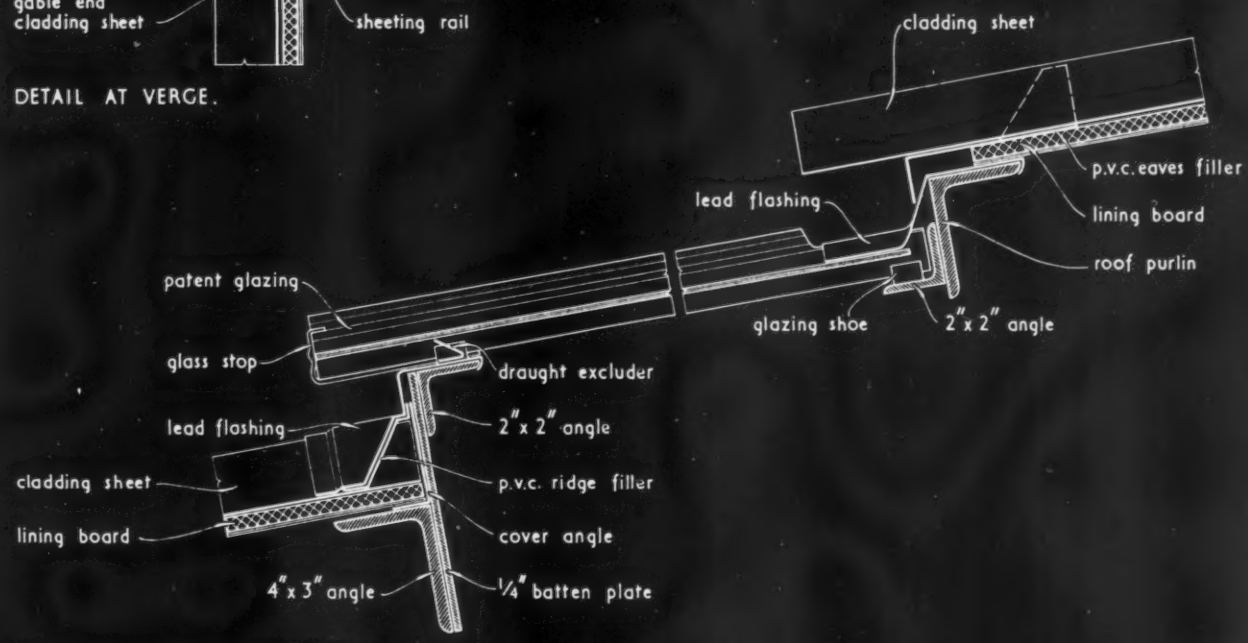


TREATMENT OF CLADDING AT RIDGE AND EAVES.



DETAIL AT VERGE.



TREATMENT OF PATENT GLAZING.

·KYNALOK SECRET-FIX· ALUMINIUM-ALLOY CLADDING : ROOFS.

Manufacturer : Imperial Chemical Industries Limited Metals Division

15.Q2 ·KYNALOK SECRET-FIX· ALUMINIUM-ALLOY CLADDING: ROOFS

This Sheet deals with Kynalok Secret-fix aluminium-alloy cladding for roofs. Cladding for walls is dealt with on Sheet 15.Q1, to which reference should also be made for notes on thermal insulation.

The system employs a method of concealed fixing whereby the cladding sheets are not pierced and, in consequence, all movement due to thermal variations is accommodated without affecting the weather seal. Provision is made for insulation or other lining board to be erected at the same time as the cladding and retained by fixings common to both.

Material

The cladding sheets, flashings and extruded sections are made from selected Kynal aluminium alloys which are light and strong, and offer excellent resistance to corrosion.

Sizes

The system is based on a 1 ft. 8 in. module, and sheets are available in full module and ½-module widths in 20 s.w.g., and in lengths up to 16 ft. 0 in. Extruded cover-strip and lining junction-strip sections are available in lengths up to 21 ft. 0 in.

Construction

The assembly of cladding sheets and cover strips is as given on Sheet 15.Q1 for wall cladding, except that roof sheeting should be supported at 7 ft. 6 in. maximum centres. Ends of sheets should be lapped 6 in. on a pitch of 30° and 9 in. on the minimum pitch of 10°. Cover strips should be lapped 1 in. where jointing is necessary. Both slopes of a double-pitched roof should be covered simultaneously so that the ridge units can be fixed as the work proceeds. The drawings on the upper face of the Sheet show the treatment of a roof at ridge, eaves and verge.

Lining: Roofs are lined in the same way as walls, as described on Sheet 15.Q1.

Glazing

The drawings on the lower face of the Sheet show how patent glazing can be incorporated in the cladding. ·Perspex· sheets, made to the Kynalok profile and supplied up to a maximum length of 7 ft. 6 in., are also available for roof lighting. To accommodate the difference in thickness between the ·Perspex· and the aluminium cladding, it is recommended that the intervening end laps should be caulked with mastic to ensure a complete weather seal; this is particularly important with pitches of 10°.

Ventilation

Many types of proprietary ventilator can be fitted in Kynalok roof cladding. The fixing flanges are bolted or clipped to the supporting members and the sheeting fixed over them. A ridge filler is fixed to the ends of sheets above the ventilator and lead flashings below and at the sides.

Fittings

The following components are available in aluminium alloy for use with the cladding sheets—flashings for verges and openings; corner stiffeners; ridge cappings and stop ends; cavity sealing strips (used when ·Perspex· roof lighting is employed). Ridge and eaves fillers are available in p.v.c.

Further Information

The manufacturer maintains a technical advisory department available to answer questions dealing with this subject. The Kynalok system is erected under licence by approved contractors whose names are obtainable from I.C.I. Sales Offices at:

Belfast:	Imperial House, Donegal Square East. Telephone: Belfast 27741.
Birmingham 2:	11, Bennetts Hill. Telephone: Midland 7101.
Bradford 1:	Britannia House, Hall Ings (P.O. Box 100). Telephone: Bradford 29530.
Bristol 8:	Trafalgar, The Promenade, Clifton Down. Telephone: Bristol 38981.
Cardiff:	National Provincial Bank Buildings, Bute Street, Docks. Telephone: Cardiff 22731.
Glasgow, C.2:	4, Blythswood Square. Telephone: Douglas 7020.
London, W.1:	Gloucester House, 149, Park Lane. Telephone: Grosvenor 4010.
Manchester 2:	Temple Chambers, 33, Brazennose Street. Telephone: Deansgate 2466.
Newcastle-upon-Tyne 2:	21, Claremont Place. Telephone: Newcastle 22681.

Compiled from information supplied by:

Imperial Chemical Industries Limited, Metals Division.
Address: P.O. Box 216, Kynoch Works, Witton, Birmingham 6.
Telephone: Birchfields 4848.
Telegrams: Icimetal, Telex, Birmingham.

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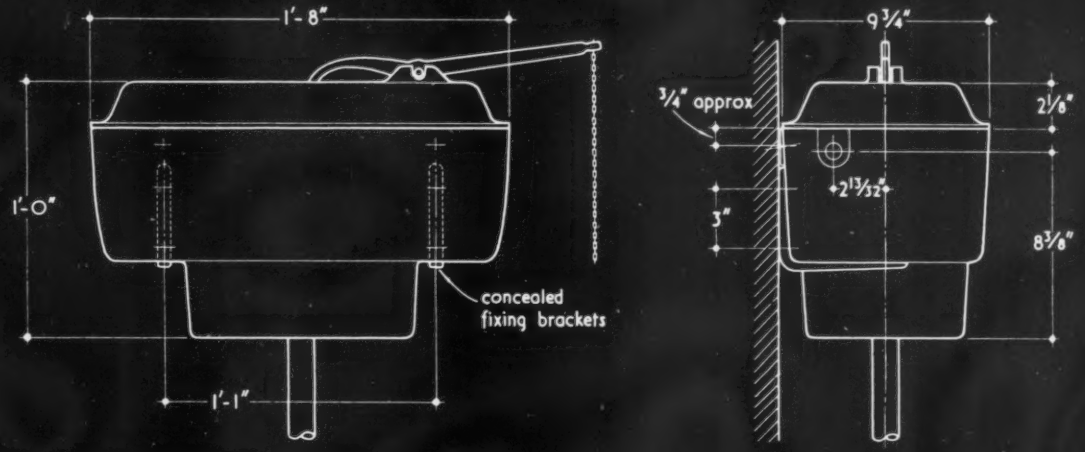
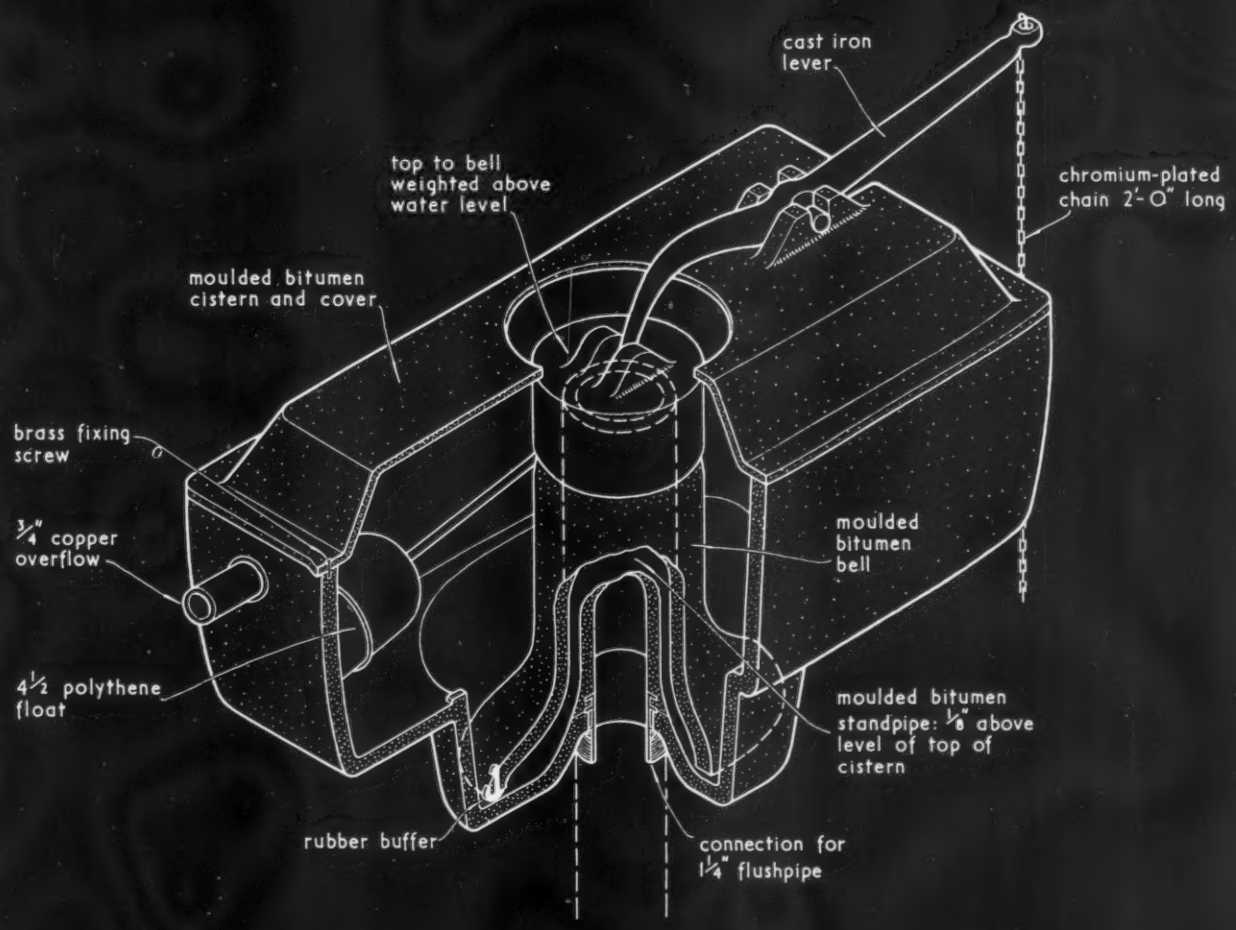


FRONT AND SIDE ELEVATION OF CISTERN.



ISOMETRIC VIEW SHOWING COMPONENTS.

·A.B.M· HIGH LEVEL MOULDED BITUMEN FLUSHING CISTERN.

Manufacturers: Associated Builders Merchants Ltd

33.Q6 ·A.B.M.· HIGH LEVEL MOULDED BITUMEN FLUSHING CISTERN

This Sheet describes a high level flushing cistern made from moulded bituminous composition. The use of this material renders the cistern non-resonant, unaffected by acids in water and free from electrolytic action.

Material and Construction

The cistern shell, standpipe and bell are moulded of bituminous composition which conforms to the requirements of BS.1125 *W.C. Flushing Cisterns*. The lid is moulded of a similar material of specially hard composition to ensure a durable bearing for the lever arm, and is fixed to the body of the cistern by two brass screws. The standpipe is secured by an external brass backnut. The bell has a cast-iron weighted top above the water level. The composition of the standpipe and bell are in accordance with the statutory M.O.H. Model Byelaws required under the Water Act of 1945. The flushing action depends on the simple raising and lowering of the bell. Specially-designed rubber buffers on the base of the bell and cistern well prevent noise and damage in operation. The lever is of cast iron with a twisted type chain and pliable polythene pull both to withstand a strain of 84 lb.

Ballvalve: To conform to BS.1125 a ½-in. ballvalve to BS.1212 must be fitted (M.O.H. ballvalve is also available when appropriate Byelaws permit its use). The diameter of the ballvalve and overflow and corresponding holes are identical so that the cistern is reversible. A plastic silent filling tube is fitted. The float is acid-resisting polythene sealed by a heat process without the use of adhesives. It will not dent or shatter and owing to its shape—it is not spherical—a straight ballvalve arm is possible with ample clearance from the side of the cistern and bell. The lifting power of the float conforms to BS.2456 *Floats for Ballvalves (Plastics) for Cold Water*. It will be noted from the above that as the bell, standpipe, silent filling tube and float are of corrosion-resisting material, no metal parts are immersed in the water.

Overflow: A ¾-in. copper overflow is fitted, suitable for connection to lead, copper or plastic pipe.

Flushpipe connection: A connecting cap nut for 1¼-in. flushpipe is provided.

Fixing brackets: These are mild steel angle brackets 6 in. by 5 in. by 1⅛ in. wide.

Sizes

The cistern has a capacity of 2 gallons in accordance with the requirements of the Model Byelaws and its overall dimensions are as shown on the face of the Sheet. The chain is 2 ft. 0 in. long.

Fixing

The cistern is supported on the fixing brackets, which are partially concealed as shown in the drawing at the top of the Sheet. Two holes are provided in the back of the cistern, ¾ in. from the top and at 1 ft. 1 in. centres, through which it may be screwed to keep it in position.

Optional Fittings

Flushpipe: This may be a standard 1¼ in. diameter galvanised steel telescopic pipe 5 ft. 6 in. long, or an A.B.M. black p.v.c. pipe to match the cistern, 1¼ in. diameter, 5 ft. 6 in. long, airtight and adjustable.

Extension piece: Where it is desired to link up the cistern with an existing flushpipe, a polythene extension piece is available at no extra cost for extending the standpipe to the required distance beyond the recessed cistern connection.

Finish

The cistern has a hard black mirror finish. The lever arm and bell cap are finished with bituminous solution and the chain chromium-plated.

Maintenance

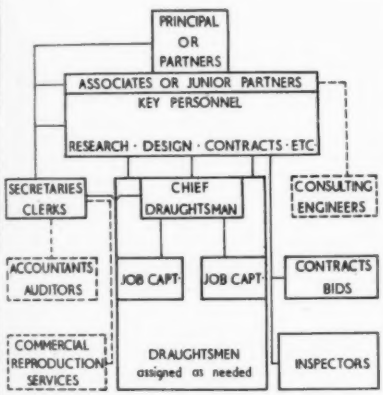
The finish of the cistern may be maintained by the use of any normal household polish.

Compiled from information supplied by:
Associated Builders Merchants Limited
Address: Peters Hill, Upper Thames Street, London, E.C.4.

lishment of branch offices, or the breaking down of the central office staff into fairly self-contained units, to meet the requirements of the individual projects, but retaining of course the special advantage of the large office, which is that specialist advice can be provided within the organization as required.

The small office will leave to the principal or partners such matters as client contacts, design, supervision of draughtsmen, specifications, bids, contracts and field supervision; it may employ part-time accountants, a full-time secretarial office (or secretary and bookkeeper) and occasionally consult with engineers; its permanent employees, if any, will be draughtsmen, responsible for some design, and the drawings; commercial, transcribing and reproduction of drawings may be done within or outside the office.

The medium sized office typically has a more formal organization chart, approximately as below:—



The point of this organization is that a small number of key personnel is available to relieve the principals of the burden of several of their functions, undertaking perhaps working drawings, or research and basic design, or one of the other functions, always under supervision. There are many variations in the pattern, some medium firms employing full-time engineers or other specialists. With the large firms the variations are even greater. In their case the organization is sometimes on a fairly consistent horizontal pattern, with departments each with a well-defined function; each has its assigned duties to perform, and the job of the project manager is to guide the project smoothly through, consulting the respective departments at the appropriate time. The advantage of this type of organization is the standardization of each part of the work that can be secured, with consequent economies, and speed of operation. But the disadvantage is that there is less personal concentration on any particular project. So some large firms, while providing many services centrally, put a project architect in charge individually of each job, and allow him to build up a project team.

Even this brief description makes it clear how important, and increasing, a part is played in the success of a firm by organizational planning. From an office point of view, even the executive services of the architect involve such separate functions as client relations, project research, architectural design, site development, engineering design, working drawings, production of specifications, preparation of estimates, counsel on letting of contracts, and field supervision; and in addition there may be auxiliary services, such as community planning, landscape design and consultation with clients on many other auxiliary matters; finally comes the office organization. Obviously in the small firms it is usually the draughtsmen who are called on to act in diverse capacities.

For AIA offices making reports it worked out that, in private practice the time of the responding architects was distributed as follows:—

	Per cent.
Architectural design	15·5
Overall activities of general practice ..	15·1
Drafting and development of drawings ..	12·8
Administration and office management ..	12·5
Client relations	11·6
Construction supervision	10·9
Specification writing..	6·9

The rest of the time was spent on consulting, engineering, estimating, planning and other matters.

Personnel Employed

With this variety of function, and type of office organization, the profession needs to employ many types of workers; but a much deeper difficulty than this arises—a question of prestige and status. The best designer is not necessarily the best office organizer, or cost analyst, or even clients' relation expert; indeed, the qualities of mind needed in one field rather than the other vary, and it would be rare indeed to find them combined. But when there is a joint enterprise, which is the essential part of the firm? Who employs whom? Does the design architect hire some administrarios for his office, or do some business-minded architects hire designers? The setting for conflict of groups within the profession arises from the functions that it has to perform.

From the 1950 survey it appears that in the United States there were 128,900 architectural employees then, 76,800 of whom were in private architectural firms. Of the 76,800, 33,800 were draughtsmen, 6,150 designers.

The complexity and scale of modern architectural practice demands a variety of types of training for the employed personnel; furthermore it places much heavier demands upon the requirements for the architects themselves. The qualifications of an architect as set out in the survey are formidable; he is expected ideally to be competent in analysis, design, communication and executive activities, and to this end he must not merely be fully educated in the sense of acquiring knowledge, but also seek for "mature judgment and dynamic wisdom," evolving a suitable philosophy, faith and convictions to give direction to creative action; he must have the capacity and habit of systematic, sustained, objective and precise thought, and in his character he needs perseverance and courage and all the other fundamental human virtues, besides the ability to stimulate co-operation.

It is impossible to deny that the presence in any one man, architect or otherwise, of all these qualities would be desirable, at least for the society which such a man chose to serve; nor are the authors of the survey to be censured for setting their sights high, and laying down the sought-for qualities, however difficult these may be to inculcate. But there is perhaps a slight danger, in asking for a race of super admirable Creightons, to overlook the more humdrum practical problems of actual educational policy. In practice, the problem is rarely how to produce a race of superlative all-round geniuses—the rare man of all parts may gain much from his education, but that is another story—the practical problem is how to use human material in all its variety and limitations so as to produce an end-product not too grossly ill-fitted for the immense demands to be made upon it in adult life.

Of course, there is another way of interpreting the description which the Survey gives of the qualities required of a professional man, namely as being a definition rarely lived up to, but to which the professional should approximate in some degree before launching on a professional career. Many of the university teachers of architecture in "Conversations Across the Nation" seemed to think that many of the students embarking on an architectural course lacked "what it takes" to become architects, although they might well become competent draughtsmen or technicians. They would, in the university teachers' view, be better advised to attend a vocational training, and they wished to persuade these people that there was "no stigma" in recognizing that they lacked the professional qualities. Personally, I would not like to undertake this task of persuasion; on the one hand the ideal architect is held up as one requiring an abnormally large share of all the human virtues, on the other it is argued that some people are so deficient in qualities required for architecture that, even though some of them are capable of passing their examinations, they should desist from an architectural career. How can there really be no stigma? Also, what in a free society, can be the test, except that of the market—not that this is a final or absolute test either, but it is surely one that a man is entitled to appeal to if he so elects?

Since architectural training in America takes place at the universities, and since many of the universities are State supported, it is not easy to control entry to architectural courses. Faculties may impose minimum educational entrance requirements, or agitate for the dismissal of students not keeping up with their courses. But in general rather more—even substantially more—students are likely to obtain and hold a place in the universities than the stricter members of faculty think are intellectually capable of profiting from higher education. So, in a different way, the problem of an over-supply of the wrong kind of material for the profession is present in the U.S. as in Britain.

HOUSE

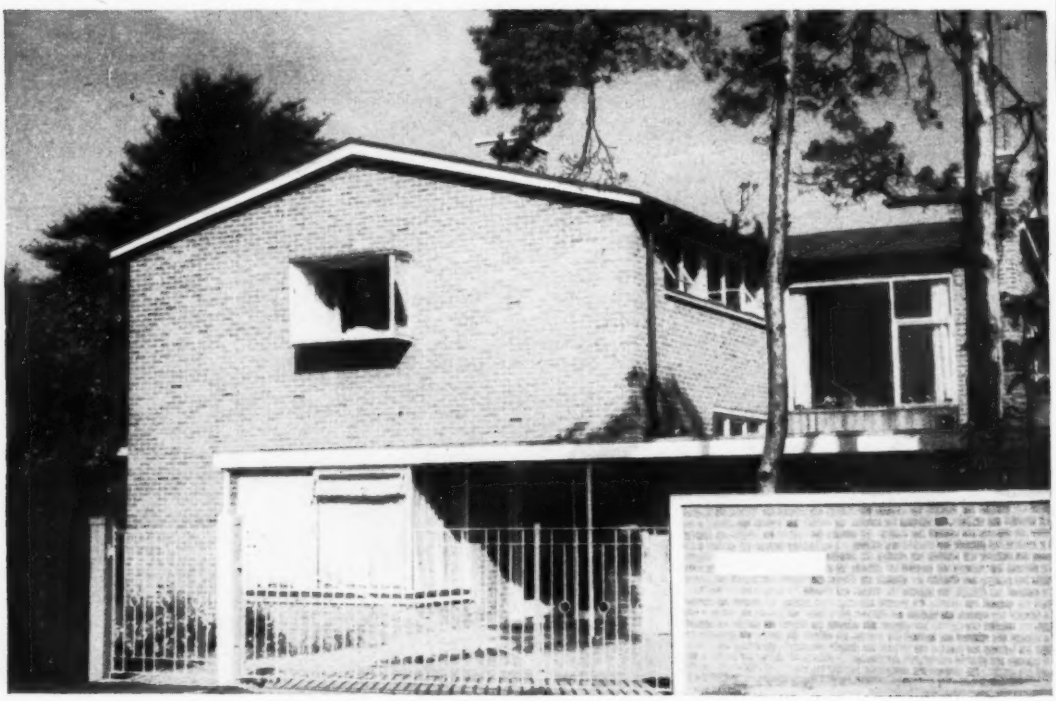
in THE DRIVE, KETTERING, NORTHANTS

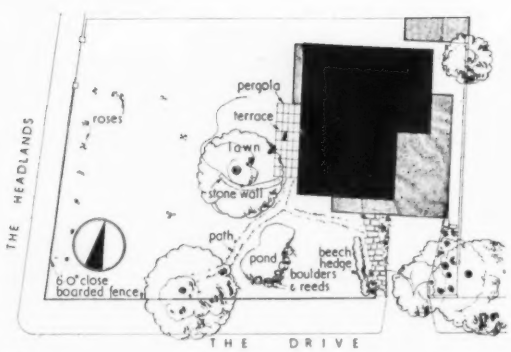
designed by GOTCH, SAUNDERS and SURRIDGE

Windows on the south facade.

The site of this house in Kettering consists of a small enclosed garden, near the centre of the town, on which the client required a three-bedroom house with two bathrooms and a double garage. There are two gas-fired boilers serving the floor heating panels throughout the ground floor, including part of the garage and the bathrooms and also the convector heating units installed on the remainder of the first floor. The whole system is thermostatically controlled.

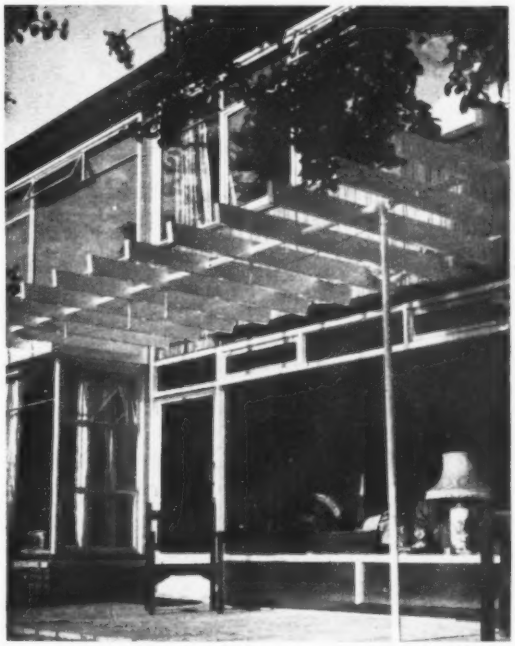
The south and east facades.





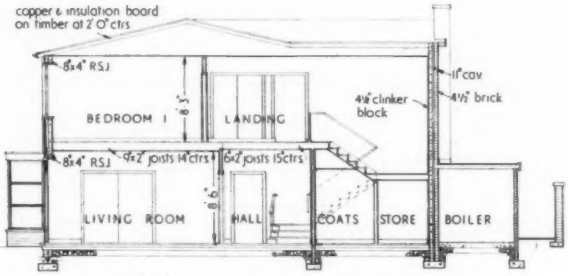
Site plan

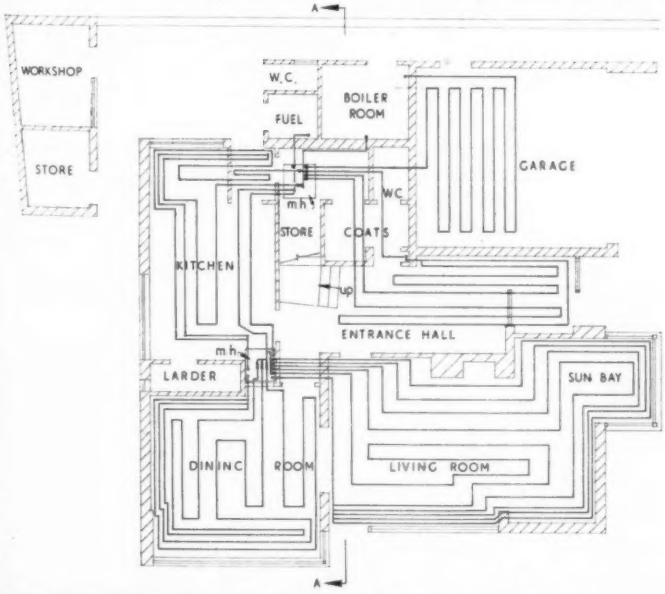
The construction is of 11-in. cavity external walls, with outer skin of local orange-red bricks and inner skin of 4½-in. load-bearing clinker blocks. The west elevation is steel framed and is partly faced with teak weatherboarding. The pitched roof is at 15°, copper-covered on insulation board and timber trusses at 6-ft. centres. The flat roof is finished with 3-layer felt on compressed straw slabs on timber joists at 2-ft. centres. Window frames are of natural finish aluminium with sills of sapele, except on the west facade, where teak sills are used. Bathroom floors are r.c. slabs containing heating pipes and finished with mosaic tiles. Internally walls are finished with emulsion paint on plaster except for panels of fair-faced Rounds bricks in the dining room and entrance lobby, which has a ceiling of acoustic hardboard panels, removable for access to plumbing. Floor finishes include a margin of 1-in. sapele blocks with cork expansion strips in living room and dining room, red quarry tiles in the kitchen and hexagonal mosaic tiles in cloakroom and bathrooms. Bedroom floors have oak parquet margins and elsewhere all floors are close carpeted. The photographs on this

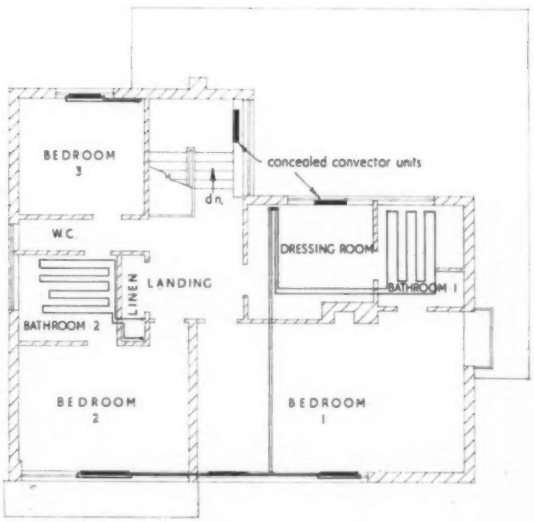


page show, above, the south-facing staircase window from the garage roof, right, the west facade, which contains large living room and bedroom windows and below right, the front door beside which is a full-height glazed panel containing a letter box with transparent plastic letter-catcher. The heating consists of ½-in. bore copper pipes in two circuits, one for floor panels and the other for concealed convection units under first floor window sills. A thermostatically controlled mixing valve ensures the correct temperature relationship between the two circuits. The series of panels in the two principal rooms are individually controlled by thermostats with motorised valves situated in a manhole under the serving hatch. Blow-out and venting valves are also supplied to all panels. Other services include outlet points for radio, television, VHF and five telephone extensions. The boiler chimney is reinforced with ½-in. bars between flue liners and brick-work and has built-in clamps to take radio and television aerials. The floor area of the house, garage and stores is 3,180 sq. ft. and the cost was approximately £12,000, including £900 for the heating and hot water systems, which includes boilers, calorifier, pumps, etc., but excludes electric wiring to valves and thermostats. The genera contractors were A. Tailby & Sons Ltd.

Section A-A







Ground and first floor plans, showing heating layout [Scale: 1/16" = 1' 0"]

TECHNICAL SECTION

One of the more spirited contributions to the Annual General Meeting of the NFBTE on January 5 was from a Stockport builder who spoke on the proposed revision of the RIBA contracts. His protest—at the locking up of builders' capital in the retention fund, often with a " due performance bond " imposed on top—was warmly applauded. Other industries, he said, enjoyed " cash on delivery." But builders, he said, had to borrow money at 5½ per cent., while clients held their own money without interest. Readers may recall that the Working Party Report on this problem, published at the end of 1954, was not in favour of performance bonds and took the view that the withholding of working capital was as much due to delays in settlement as to the actual proportion of money properly retained. They called for a reduction in retentions, but suggested that the real answer was to reform our ways and put an end to slipshod handling of contracts, incomplete drawings and extensive re-measurement. It is clear that the retention forms an architect's weapon that proves necessary for some builders, and the ludicrous assumption made by local authorities that all builders are of this kind is probably a natural consequence of their foolish insistence on open tendering. But for selected tenderers there is no justification for a large retention percentage or for protracted negotiations to trace the last penny. Builders have a just grievance against the freezing of their working capital ; but greater efficiency and speed in valuation and payment especially by local authorities, is more important than reduction of the percentage.

8 ESTIMATING
materials' prices

Current prices for measured work will appear on February 23. Prices of materials and measured work last appeared in the JOURNAL on November 24

Current rates of wages and market prices of materials prepared by Davis, Belfield and Everest, Chartered Quantity Surveyors. Rates for measured work will be published in the JOURNAL *for* February 23.

Rates of Wages rose on February 6, 1956 and are now as follows:—

LONDON DISTRICT	*Craftsmen.*	*Labourers.*
Within 12 miles radius	4s. 2½d.	3s. 8d.
From 12-15 „ „	4s. 2d.	3s. 7½d.
LIVERPOOL and DISTRICT	4s. 2½d.	3s. 8d.

GRADE CLASSIFICATIONS	A	A^1	A^2	A^3
Craftsmen ..	4s. 1d.	4s. 0½d.	4s. 0d.	3s. 11½d.
Labourers ..	3s. 6½d.	3s. 6d.	3s. 5½d.	3s. 5d.

Prices vary according to quality and the quantity ordered.

Those given below are average market prices and include delivery in the London area, except where otherwise stated, but do not include overhead charges and profit for the General Contractor.

CONCRETOR

Cements

Portland to B.S. 12, 6 tons and over	per ton	101/6
Rapid hardening to B.S. 12, 6 tons and over	,,	112/–
Aquacrete water repellant, 6 tons and over....	,,	134/–
Aluminous to B.S. 915, 1 ton lots	,,	307/–
Sulphate resisting cement, 6 tons and over	,,	134/–
Snowcrete, 1 ton lots	,,	262/–

Above prices include for delivery to Charing Cross in non-returnable paper bags or cotton sacks.

Aggregate and Sands, etc. (Full Loads)

¾″ (down) Washed, crushed and graded shingle to B.S. 882, Table 2	per yard cube	21/1
1½″ Ditto	,,	20/2
3/16″ Sharp washed sand to B.S. 882, Table 3	,,	24/2
Vermiculite, ⅜″ down	per ton	720/–
Brick hardcore	per yard cube	9/6
Ashes	,,	10/6

(For Sands for Bricklaying and Plastering, see respective trades)

Floor Blocks

		4″	6″	7″
Floor blocks, 12″ × 12″	per 1,000	714/–	957/–	1,168/–

Reinforcement

Home trade maximum basis price for mild steel rods to B.S. 785, ⅝″ diameter and upwards, ex mills delivered to station or siding	per ton	£34 13 0
Extras for sizes:—		
Under ⅝″ down to and including 9/16″ diameter	,,	£2 19 6
,, 9/16″ ,, ,, ,, ,, ½″ ,, ,,	,,	£3 2 9
,, ½″ ,, ,, ,, ,, 7/16″ ,, ,,	,,	£3 12 0
,, 7/16″ ,, ,, ,, ,, ⅜″ ,, ,,	,,	£4 12 0
,, ⅜″ ,, ,, ,, ,, 5/16″ ,, ,,	,,	£6 12 0
,, 5/16″ ,, ,, ,, ,, ¼″ ,, ,,	,,	£8 12 0
,, ¼″ ,, ,, ,, ,, 3/16″ ,, ,,	,,	£9 12 0

Fabric Reinforcement

	16.35 lb.	9.32 lb.	4.71 lb.	1.83 lb.
Steel wire mesh fabric to B.S. 1221, Part A. per yd. super	9/–	5/2¾	2/7¼	1/5⅞

BRICKLAYER

Common Bricks

Common stocks	per 1,000	132/10
Rough stocks	,,	174/4
Mild stocks	,,	215/10
Sand limes	,,	112/–
Phorpres pressed flettons	,,	113/–

Facing Bricks

Hand-selected sand limes	per 1,000	148/–
Phorpres rustic flettons	,,	138/–
Stocks, first hard	,,	271/4
Stocks, second hard	,,	250/4
Southwater pressed sandfaced reds	,,	319/–
Dorking pressed sandfaced multicoloured facings....	,,	256/6

Engineering Bricks

Lingfield engineering wirecuts. Grade 'B'	per 1,000	239/–
Southwater engineering No. 2 (second quality red pressed)	,,	306/6
Blue pressed bricks to B.S. 1301	,,	561/–

Glazed Bricks

		Best quality. £	*s.*	*d.*
White, ivory or brown, 9″ × 2⅞″ × 4½″ delivered London stations.				
Headers	per 1,000	74	0	6
Stretchers	,,	75	4	0

Seconds quality above prices less 10%.

BRICKLAYER (*continued*)

Limes and Sands

		1 ton lots
†Lime, greystone, to B.S. 890	per ton	119/6
†Lime, chalk, ditto	,,	119/6
*Lime, hydrated, ditto	,,	132/–
Washed pit sand to B.S. 1200	per yard cube	24/2

* Including paper bags.

† Hire of jute sacks charged at 1/6 and credited at 1/6. If left, charged at 1/9.

Sundries

10 s.w. gauge galvanized butterfly type wall ties to B.S. 1243	per 1,000		106/–
Wall ties, galvanized, 8″ × ¾″ × ⅛″, to B.S. 1243...	per cwt.		85/9
Damp proof course slates:		Imported	Welsh
Size 14″ × 9″	per 100	43/6	82/6
,, 14″ × 4½″	,,	21/–	36/6
Hessian base bitumen damp course to B.S. 743	per yard super		5/4

		9″ × 3″	9″ × 6″	9″ × 9″
Terra-cotta airbricks	each	1/3	2/7	5/6
Galvanized cast-iron airbricks	,,	3/4	6/7	8/6
Galvanized cast-iron hit-and-miss ventilators	,,	3/5	5/8	8/6

Wall reinforcement supplied in standard rolls containing 25 yards lineal

‡ 2″ wide black japanned	per roll	3/7
‡2½″ wide black japanned	,,	4/6

‡ Greater widths pro rata 2½″ price, carriage paid on orders of £7. Discount for quantities.

Partitions, etc.

		2″	2½″	3″	4″	
Clinker concrete solid	per yard super	3/9	4/4	5/3	6/5	
Thermalite-Ytong	,,	—	6/11	8/3½	10/9	
Hollow clay to B.S. 1190 (keyed)	,,	4/4	4/7	5/4	—	
						4½″
Moler (keyed)	,,	14/3	15/–	16/–	19/3	21/–
Leca blocks						
Solid	,,	6/–	6/8	8/–	10/–	
Hollow	,,	7/6	8/6	9/6	—	
Building blocks (keyed):—						
6 cavity			per yard super			6/9
Normal quality woodwool slabs		1″	1½″	2″	2½″	3″
Minimum delivery, square yards, per yd. super		500 5/–	400 6/6	325 8/–	275 9/2	250 10/3

PAVIOR

2″ coarse gravel for paths	per yard cube	23/3
¾″ fine ditto	,,	24/9
Clean granite chippings to B.S. 1201, Table 4 (in 5-ton loads)	per ton	44/9
Red quarry tiles 6″ × 6″ × ⅞″, to B.S. 1286	per yard super	17/3
Ditto 6″ × 6″ × ⅝″, to B.S. 1286	,,	14/6
Buff quarry tiles, 6″ × 6″ × ⅞″, to B.S. 1286	,,	20/9
Ditto 6″ × 6″ × ⅝″, to B.S. 1286	,,	17/6
2″ Noelite paving in mixed colours and random sizes	,,	13/–

DRAINLAYER

Clay Land Drain Pipes to B.S. 1196

		3″	4″
Pipes in 12″ lengths	per 1,000	220/6	289/6

Salt Glazed Stoneware Pipes and Fittings

The following percentages to be added to the Standard List prices.

	Orders for 2 tons and over	Orders under 2 tons 100 pieces upwards	Orders under 2 tons less than 100 pieces
Seconds Quality	85% less 15%	117½% less 15%	130% less 15%
Best Quality	85%	117½%	130%
British Standard Quality	85% + 10%	117½% + 10%	130% + 10%
Tested Quality....	85% + 37½%	117½% + 37½%	130% + 37½%
British Standard Tested	85% + 47½%	117½% + 47½%	130% + 47½%

Cast Iron Drain Pipes and Fittings

Socket and spigot pipes to B.S. 437:—

Weight per 9 ft			Size	9 fts. each	6 fts. each	4 fts. each	3 fts. each	2 fts. each
1	1	17	4″	71/3	51/2	39/8	30/7	24/3
2	0	1	6″	105/–	79/10	62/–	49/4	36/10
3	3	21	9″	194/9	158/8	131/–	101/1	86/10

DRAINLAYER—(*continued*)

Tonnage Allowances :—

Orders up to 2 tons nett.

		4″	6″	9″
*Bends (short radius)	each	15/6	41/3	115/6
*Single junctions	„	27/6	66/–	171/–
*Intercepting traps	„	101/6	155/6	335/–
*Gullies ordinary trapped " P "	„	39/9		
*Extra for 4″ vertical back inlet	„	8/3		
*Grease gully trap	„	325/3		

* These prices are subject to 7½% plusage.

Channels in Brown Glazed Ware

Standard list + same percentages as " Best " quality salt-glazed Stoneware pipes.

White Glazed Channels

Orders under £30, makers' list value. Standard list + 10%.

Manhole covers and frames

		Size of load	Unit price
C.I. coated double triangular manhole cover and frame, 22″ dia. clear opening to B.S. 497, Grade A	each	35 tons	200/1
C.I. coated circular manhole cover and frame, 22″ dia. clear opening to B.S. 497, Grade B	each	5 tons	106/8

		Size of load	Single seal Flat type	Double seal Flat type
Coated manhole cover and frame to B.S. 497, Grade C, 24″ × 18″	each	1 ton	36/7	52/2
Galvanized ditto, 24″ × 18″	each	1 ton	65/8	91/9
Coated manhole cover and frame, to B.S. 497, Grade C, 24″ × 24″	each	1 ton	55/9	83/4
Galvanized ditto, 24″ × 24″	each	1 ton	101/8	144/4

MASON

Yorkstone

Building quality Robin Hood and Woodkirk Blue Stone.

Blocks scrappled, random sizes	per foot cube	12/9
Add for blocks to dimension sizes	„	1/6 (each dimension)
Templates with sawn beds, edges rough (up to 4 ft. super and not over 2′ 6″ long)	„	14/3
Templates with sawn beds, sawn one edge	„	16/6
Price f.o.r. Yorkshire, railway rate to London Station per ton. (Minimum 4-ton loads)		67/8

Bath stone in random blocks

Monk's Park	per foot cube	8/–
St. Aldhelm Box Ground	„	9/–

Delivered on rail at South Lambeth Station.

Portland stone in random blocks, average 20 feet cube

Whitbed	per foot cube	8/3½

Delivered on rail at Nine Elms Station.

Somerset stone in random blocks

Doulting	per foot cube	8/9

Artificial Stone to B.S. 1217

4½″ × 4″ Sill, sunk, weathered, throated and grooved	per foot run	3/3
9″ × 3″ Ditto	„	4/11
2″ × 12″ Coping, weathered and twice throated	„	4/3
3″ × 12″ Ditto	„	6/6
5″ × 12″ Saddleback coping, twice throated	„	9/8
6″ × 12″ Ditto	„	10/9

SLATER, TILER AND ROOFER

Slates

		£	s.	d
16″ × 10″ Best Bangor Slates to B.S. 680	per 1,000 actual	50	15	0
20″ × 10″ Ditto	„	89	0	0

SLATER, TILER AND ROOFER (*continued*)

Tiles

Best hand-made sandfaced 10½″ × 6½″ red roofing tiles ex works	per 1,000	236/6
Machine-made sandfaced best red tiles with continuous nibs, 10½″ × 6½″ ditto	„	190/–
Delivery to London sites 37/– to 45/– per 1000		
Bridgwater hand made red sandfaced pantiles, in 6-ton loads	„	878/–
Bridgwater hand made red sandfaced Double Roman tiles, in 6-ton loads	„	1,156/6
Concrete plain tiles, 10½″ × 6½″	„	156/–
Ditto interlocking tiles, 15″ × 9″	„	440/–
Ditto Double Roman Tiles	„	740/–

Asbestos-cement

*6″ corrugated sheets, grey	per yard super	6/1

* Prices are for minimum two-ton loads, and are subject to 5% trade discount.

Felt

Reinforced roofing felt to B.S. 747	per yard sup.	1/6
Roofing felt (1-ply bitumen) to B.S. 747, Part I	„	1/6
Bituminous hair felt to B.S. 747, Part II	„	2/9

CARPENTER AND JOINER

Wall boards

¼″ Imported Fibre board .... (per 100 sq. ft.)	5,000 to 15,000 sq. ft.	41/6
¼″ Imported Hardboard (per 100 sq. ft.)		39/6
3/16″ Imported Hardboard (per 100 sq. ft.)		57/6
* 3/16″ Semi compressed asbestos cement flat building sheets, grey, size 8′ × 4′	per yard super	3/7
* ¼″ Ditto	„	4/10

* Prices are for orders of 2 tons and over. Subject to 5% trade discount.

Sundries

" Sisalkraft " standard grade	per yard sup.	–/10½
" Sisalkraft " subsoil grade	„	–/6½
" Sisalation " single sided	„	1/10½
" Sisalation " double sided	„	2/10
Fibre glass Bitumen bonded	„	1/9½

Timber

Softwood for Carpentry (average price)	per std.	£102
Softwood for Joinery (ditto)	„	£112
Tongued and Grooved Softwood Flooring (ditto)	„	£112
*First Quality European Oak	per ft. cube	25/– to 40/–
*Teak	„	40/– to 80/–

* Prices vary considerably depending on specification.

Standard Panelled and Glazed Wood Doors to B.S. 459, Pt. I

Type 4	size 2′ 6″ × 6′ 6″ × 1½″	each	35/3
Type 2 × G	size 2′ 6″ × 6′ 6″ × 2″	„	42/9
Type 4 × G	size 2′ 6″ × 6′ 6″ × 2″	„	49/–

In lots of from 1 to 11 inclusive.

Wood Windows

N 26 V	size 1′ 5¼″ × 2′ 6¼″	each	21/10
2 26 V	size 4′ 0¼″ × 2′ 6¼″	„	43/8
N 40 V	size 1′ 5¼″ × 4′ 0¼″	„	24/8
3 40 V	size 5′ 11¼″ × 4′ 0¼″	„	76/7
4 40 V	size 7′ 10¼″ × 4′ 0¼″	„	96/3

In lots of from 1 to 20 inclusive.

Kitchen Units

No. 1	size 3′ 6″ × 2′ 8″ × 1′ 7″	each	166/3
No. 2	size 3′ 6″ × 2′ 8″ × 1′ 7″	„	115/3
No. 4	size 2′ 8″ × 1′ 9″ × 1′ 7″	„	102/–
No. 5	size 3′ 10″ × 1′ 9″ × 1′ 7″	„	88/7
No. 7	size 6′ 6″ × 1′ 9″ × 1′ 7″	„	133/5

Prices include for tops and plinths.
In lots of from 1 to 15 inclusive.

STEEL AND IRONWORKER

		£ s. d.
Basis price for rolled steel joist sections, in 10 ft. to 50 ft. lengths	ex mills per ton	32 0 6
Extra for sizes:—		
9″ × 7″, 10″ × 8″, 12″ × 8″, 14″ × 5½″ 14″ × 6″, 14″ × 8″, 15″ × 5″, 15″ × 6″, 16″ × 6″, 16″ × 8″, 18″ × 6″, 18″ × 7″, 18″ × 8″, 20″ × 6½″, 20″ × 7½″	Add per ton	10 0
5″ × 4½″, 7″ × 3½″, 13″ × 5″	„ „	15 0
5″ × 5″, 12″ × 5″, 22″ × 7″	„ „	1 0 0
3½″ × 3½″, 6″ × 4½″, 7″ × 4″, 8″ × 4″, 9″ × 4″, 10″ × 5″	„ „	1 5 0
4″ × 3″, 10″ × 4½″	„ „	1 10 0
4½″ × 4½″, 5″ × 2½″, 5″ × 3″	„ „	1 15 0
6″ × 3″, 24″ × 7½″	„ „	2 0 0
4″ × 4″	„ „	2 5 0
3″ × 3″	„ „	2 10 0
4½″ × 1¾″	„ „	3 5 0
3″ × 1½″, 4″ × 1¼″	„ „	3 10 0
Basis price for angles	ex mills per ton	31 19 6
„ „ „ tees	„ „	31 19 6
„ „ „ solid steel columns	„ „	34 9 6

All delivered Station or Siding.

Standard Metal Windows

Rustproof type

Type ND2F, 4′ 0″ × 3′ 3½″	each	47/– to 62/6
„ ZND2F, 4′ 0″ × 4′ 0″	„	53/– to 70/9

Prices vary with size of order, those given are maximum and minimum.

PLASTERER

Plaster and Cement

		1-ton loads	4-ton to 5 ton 19 cwt loads
Thistle (browning) to B.S.1191, Class B	per ton	157/6	144/9
Gypstone to B.S.1191, Class B	„	160/–	142/6
Faristone (haired) to B.S.1191, Class B	„	162/6	145/–
Ditto (unhaired)	„	160/–	142/6
Cretestone bonding plaster	„	170/–	152/6
Sirapite (coarse) to B.S.1191, Class C	„	154/–	142/9
Ditto (fine) to B.S. 1191, Class C	„	162/-	150/9
Keene's Pink to B.S.1191, Class D	„	211/9	
Keene's White to B.S.1191, Class D	„	217/–	
Cullamix (Tyrolean Finish), except chrome green	„	225/–	

Sundries

Sharp washed sand to B.S.1198	per yard cube				24/2
Cow Hair	per cwt.				97/6
Expanded metal lathing, 9′ 0″ × 2′ 0″ × ⅜″ mesh × 24 gauge	per yd. sup.				3/–
	75 to 149 yards	150-299 yards	300-599 yards	Over 600 yards	
⅜″ Plasterboard (base board or lath) per yard super	2/10	2/8	2/6	2/3½	
½″ Insulating ditto, per yard super	3/4½	3/2½	3/1½	2/11½	
Plasterboard nails 12 G	per cwt.				121/–
Hessian Scrim cloth in 100-yard rolls, 3½″ wide	per roll				7/9

Wall Tiles

The following prices are subject to 30 per cent. addition:—		
Standard quality white glazed 6″ × 6″ × ⅜″	per yard super	18/6
Cream glazed 6″ × 6″ × ⅜″	„	20/6
Eggshell or glossy glazed 6″ × 6″ × ⅜″	„	26/3

PLUMBER

Lead and Copper

		£ s. d.
3½ lb. and upwards milled sheet lead in quantities of 5 cwts. to under 1 ton in sheets to B.S.1178	per cwt.	156/6
Hot rolled copper sheeting in 1-ton lots (4′ × 2′ sheets), to B.S.899	23 wire gauge, per ton	469 0 0
Ditto	24 wire gauge, „	472 0 0
Zinc sheeting in 1-ton lots	14 gauge „	135 5 0

Cast Iron Goods

Percentage Adjustment on List No. 3300 A.B. 1/2/55.

Rainwater Goods (painted or unpainted)	Plus 7½%
Soil goods (coated or uncoated)	Plus 7½%

Mild Steel Rainwater Goods

		Standard List
Gutters .... (under 100 lengths)	Plus 3%	Less 22½%
Pipes and Fittings („ „)	Plus 3%	Less 22½%

Asbestos-Cement Rainwater Goods

The following prices are subject to 12½% trade discount.
Orders over £30 are subject to 17½% trade discount

PLUMBER (*continued*)

Rainwater Pipes

	Diameter 2″	2½″	3″	4″	6″	
6′ 0″ lengths	7/11	8/6	10/3	13/7	27/4	each
10′ 0″ „	12/6	13/7	15/11	22/10	45/6	„

Gutters

		3″	4″	4½″	5″	6″	8″
Half round gutters 6ft. lengths	each	5/3	6/3	6/5	7/7	10/7	13/1

INTERNAL PLUMBER

Lead pipe (basis, weights) in coils 5 cwts. to under 1 ton, up to 4″ bore to B.S.602	per cwt.	157/9
Light lead pipe ditto	per cwt.	159/3
Lead pipe to B.S. 1085	per cwt.	164/9

Polythene tubing, normal gauge in quantities of 500 ft. to 999 ft.	½″	¾″	1″	1¼″
per 100 ft.	55/6	109/6	141/6	227/–
Ditto, heavy gauge ditto per 100 ft.	118/–	163/6	208/–	—

Drawn lead traps with brass screw eye, to B.S.504	1½″-6lb.	1½″-6lb.	2″-7lb.
S. trap 1½″ seal ....each	8/1	9/7¾	16/5
„ 3″ deep seal .... „	9/7¾	11/5¾	18/9¼
Drawn copper traps to B.S. 1184	1½″	1½″	2″
S. trap 1½″ seal ....each	24/6	27/4	—
„ 3″ deep seal .... „	26/6	29/4	47/–

Screwed and Socketed Steel Tubes and Fittings for Gas, Water and Steam, etc.

Fittings and tubes ordered in long random lengths are subject to the following trade discounts:—

Tubes: ⅛″ to 4″		Fittings:	
Class B	9¼%	Lightweight	plus 14¼%
„ C .... plus	4¼%	Heavyweight	plus 22%
Galvanized Class B plus	12 %	Galvanized:	
„ „ C plus	29½%	Lightweight	plus 27½%
Galvanized malleable fittings		Heavyweight	plus 35%

Less 35% less 6¼% plus 40%.

Copper tubing to B.S. 659 and 1386. Basic price per lb. 3/9¼

GLAZIER

Sheet Glass, cut to size (ordinary glazing quality), to B.S.952, Section A

18 oz.	per foot super	–/6¾
24 oz.	„	–/8¾
32 oz.	„	1/2⅜

Polished Plate Glass, ordinary substance, approximately ¼″, to B.S.952, Section A.

In plates not exceeding:		Glazing quality	Selected glazing	Silvering quality
2 ft. super	per foot super	3/7	4/3	5/1
5 ft. super	„	4/5	5/2	6/2
*45 ft. super	„	5/1	5/9	6/11
*100 ft. super	„	5/6	6/9	8/10

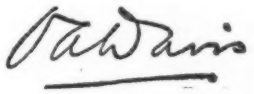
* Extra sizes, *i.e.*, plates exceeding 100 ft. super or 160 in. one way, or 96 in., both ways at higher prices.

⅛″ figured rolled and cathedral, to B.S.952, Section B—standard patterns, white	per foot super	–/10
3/16″ or ¼″ rolled plate, patterns, white	„	1/1
3/16″ or ¼″ rough cast, patterns, white	„	1/1
¼″ Georgian wired cast, patterns, white, Section D	„	1/3½
¼″ Georgian wired polished plate, Section D	„	5/1
¼″ wired cast	„	1/3¼

Attention is drawn to reductions in certain glass prices offered by manufacturers for acceptance of specified minimum quantities of the size and substance delivered to one address at one time.

PAINTER

White ceiling distemper	per cwt.	29/–
Washable distemper	per cwt. from	112/–
Primer, general purpose	per gallon	33/6
Ready mixed, white lead paint	„	66/–
Flat oil paint	„	39/–
Emulsion paint	„	44/–
Hard gloss paint:		
Undercoat	„	42/–
Finishing	„	44/–
White Portland cement paint	per cwt.	71/–



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

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

ENQUIRY FORM

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

.....

.....

.....

Please ask manufacturers to send further particulars to:—

NAME .....

PROFESSION or TRADE .....

.....

ADDRESS.....

.....

9.2.56

Buildings Illustrated

House in The Drive, Kettering, Northants. (Pages 187-188.) Architects and Quantity Surveyors: Gotch, Saunders & Surridge, A./A.R.I.B.A. General Contractors: A. Tailby & Sons Ltd. General Foreman: G. Haycock. Sub-contractors and Suppliers: bricks, Smith & Sons; blocks, Broad & Co. Ltd.; copper roof, Broderick Insulated Structures Ltd.; flat roofs, William Briggs & Sons Ltd.; plastering, Jones & Harrold; rooflights, Henry Hope & Sons Ltd.; wood block and parquet floors, Hollis Bros.; internal doors, Linden Doors Ltd.; garage "up and over" door, Westland Engineers; sanitary and kitchen fittings and wall tiling, B. Finch & Co. Ltd. and Ideal Boilers & Radiators Ltd.; balustrading, Edward Cheney & Sons; ironmongery, Dryad Metal Works Ltd.; Derbydene marble, Nine Elms Stonemasonry Ltd.; marble, worked and fixed, H. T. Higgins; terrazzo hearth slab, Constone Ltd.; York stoneware panel, W. T. Cox; floor heating and hot-water installation, S. Booth Horrocks & Sons Ltd.; gas boilers, Ideal Boilers & Radiators Ltd.; "Vectair" heaters, F. H. Biddle; wrought-iron gates, F. W. Covington; venetian blinds, Sunway; paint, I.C.I. Ltd. (Paints Division); painting, A. G. Miller; water softener, Permutit Ltd.

Announcements

TRADE

British Plimber Ltd. have appointed C. K. McConnan as Sales Manager to the Company. He has had experience of all branches of the Company's activities, including three years as technical representative in the Midlands area.

The new address of the Gypsum Building Products Association is GPO Box No. 321, London, W.1. This address will also be that of the "Gypsum Journal."

L. H. Butler, former assistant Manager of Walsall Conduits Ltd., West Bromwich, has been appointed Managing Director to succeed A. E. Millard, who has resigned due to ill-health.

Air Control Installations Ltd., Ruislip, Middlesex, have opened a new branch office at 17, Manchester Street, W.1. (Tel.: WELbeck 1306). This office will deal with enquiries and sales in the London and South-east England area. Products include fans, and equipment for air conditioning, air filtration, dust collection and control, fume and vapour extraction, drying, humidifying, pneumatic conveying and vacuum cleaning.

Northern Aluminium Co. Ltd. have opened a new Regional Sales Office at 16, Cumberland Place, Southampton, Hants (Tel.: Southampton 25425), and are opening another at 57, Bute Street, Luton, Beds (Tel.: Luton 7364-5) on January 16, 1956. They also announce that their Manchester Area Sales Office has moved to larger premises at 23, Princess Street, Manchester, 2. (Tel.: Central 9335.)

CORRECTION

On page 835 of the JOURNAL for December 22, 1955, it was stated that stage 1 of the proposed offices for the Clyde Crane & Engineering Co. at Glasgow were already under construction. We now learn from the architect, G. L. Thompson, that this scheme was abandoned at tender stage on account of cost.

CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

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

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

BOROUGH OF SOLIHULL
ASSISTANT ARCHITECTS, A.P.T. Grade IV
(£710—£885)

Applications are invited for the above-mentioned posts in the Borough Engineer & Surveyor's Department.

Solihull has a population of 75,000, which is to increase to 110,000 over the next few years, and the appointments are primarily in connection with the large programme of schools and capital work schemes including libraries, crematorium, corporation depot, etc., which are in hand as a result of the rapid expansion of the Borough.

No application forms are being issued, but the Borough Engineer will be pleased to answer specific questions regarding the positions.

Commencing salary may be fixed at an appropriate stage within the grade, according to qualifications and experience.

The appointments are subject to the Local Government Superannuation Acts, the National Scheme of Conditions of Service and one month's notice on either side.

Where applicable housing accommodation may be made available as soon as possible.

Applications, giving the names of two referees, must be sent to Mr. C. R. Hutchinson, B.Sc., A.M.I.C.E., Borough Engineer & Surveyor, 90 Station Road, Solihull, not later than 17th February, 1956.

W. MAURICE MELL,
Town Clerk.

11th January, 1956. 9174

CITY OF ROCHESTER
ARCHITECTURAL STAFF

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

(*a*) CHIEF ARCHITECTURAL ASSISTANT, A.P.T. V (£795—£970).

(*b*) SENIOR ARCHITECTURAL ASSISTANT, A.P.T. IV (£710—£885).

(*c*) ARCHITECTURAL ASSISTANT, A.P.T. III (£640—£765).

(*a*) is the Senior position in the Architectural Section. Candidates should be Associates of the Royal Institute of British Architects, and administrative ability is essential in addition to a good general experience, particularly in the preparation of drawings and specifications for municipal housing, including shops and flats.

Candidates for positions (*b*) and (*c*) should have general experience, including the preparation of drawings and specifications for municipal housing schemes. Preference will be given to candidates who are Registered Architects.

For all positions the commencing salary will be according to qualifications and experience.

There is a varied programme of work, including the redevelopment of clearance areas, and the development of a large area added to the City.

In appropriate cases the City Council will provide the successful candidates with suitable housing accommodation, and will be prepared to refund removal expenses after twelve months' service.

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

Applications, stating age, qualifications and experience, together with the names and addresses of three persons to whom reference may be made, should be delivered to the City Surveyor, 66 Maidstone Road, Rochester, not later than Thursday, 16th February, 1956.

PHILIP H. BARTLETT,
Town Clerk.

Guildhall,
Rochester.
19th January, 1956. 9132

THE LONDON HOSPITAL, Whitechapel, E.1, requires JUNIOR ARCHITECTURAL ASSISTANT, salary £440 to £650 p.a. according to experience, plus London weighting. Post superannuable. Applications, stating age, present salary and brief particulars of experience, to be sent to the House Governor. Accommodation is available in Kensington if successful candidate is a woman. 9156

MINISTRY OF WORKS require ARCHITECTURAL ASSISTANTS, with 3 years' training, experience in Architect's office, and of Inter. R.I.B.A. standard. Prospects of promotion and permanency. State salary required, age, details of training and experience, to Ministry of Works, W.G.10 (G), Abell House, John Islip Street, S.W.1. 9167

CAMBRIDGESHIRE COUNTY COUNCIL
COUNTY ARCHITECT.

Applications are invited for the appointment of County Architect for the Administrative County of Cambridge. Candidates should be Chartered Architects and have had wide experience with a local authority. Salary £2,265, rising by two increments of £100 and one of £55 to £2,620.

Application forms and terms and conditions of appointment may be obtained from the undersigned, to whom applications should be forwarded not later than the 18th February, 1956.

CHARLES PHYTHIAN,
Clerk of the County Council.

Shire Hall, Cambridge. 9080

LONDON ELECTRICITY BOARD
CHIEF ENGINEER'S DEPARTMENT
ARCHITECTURAL DRAUGHTSMEN required in Architect's Section in Central London. Applicants should be neat Draughtsmen and preferably have had several years' experience in an Architect's office.

STRUCTURAL DRAUGHTSMAN required in Construction Branch in Central London. Applicants should have a knowledge of building construction requirements and some experience in detailing reinforced concrete or steel structures.

These posts are graded under Schedule "D" of the National Joint Board agreement as Grade 6 —£535 10s. 0d. to £661 10s. 0d. per annum, inclusive of London allowance.

Application forms obtainable from Personnel Officer, 46/7 New Broad Street, London, E.C.2. Please quote reference PER/V/2002/3/A. 8079

BOROUGH OF WILLESDEN.
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the following permanent appointments on the 1956 Revised A.P.T. Scales:—

(*a*) ASSISTANT ARCHITECT, Grade A.P.T. VI (£880×£40—£1,080).

Applicants must be A.R.I.B.A., and will be required to take charge of work regarding a Comprehensive Redevelopment Area in the Borough. Planning experience is desirable.

(*b*) ASSISTANT ARCHITECTS (three posts), Grade A.P.T. V (£795×£35—£970).

Applicants must be A.R.I.B.A., and will be required to work with Group Leader on schemes consisting mainly of housing projects.

(*c*) ARCHITECTURAL ASSISTANT, Grade A.P.T. III/IV (£640×£25×£35—£885).

Applicants must be Student R.I.B.A., and will be required to work on an existing Redevelopment Scheme.

(*d*) ARCHITECTURAL ASSISTANTS (two posts), Grade A.P.T. III (£640×£25—£765).

Applicants must be Students of the R.I.B.A., and will be engaged on various schemes to be carried out by the Department.

London weighting is payable in addition to the above.

The Council is unable to assist with housing accommodation.

Forms of application and conditions of appointment may be obtained from the Borough Engineer and Surveyor, Town Hall, Dyne Road, Kilburn, N.W.6. Applications are to be returned to the undersigned not later than 9 a.m. on Monday, 20th February, 1956.

When writing for application forms candidates must state for which appointment they wish to apply.

R. S. FORSTER,
Town Clerk.

Town Hall, N.W.6.
January, 1956. 9112

BOROUGH OF BARNES.

Applications are invited for two temporary ARCHITECTURAL ASSISTANTS: (i) Special Grade (£710×£30—£860), (ii) Grade II (£615×£20—£695).

Candidates should be good draughtsmen and have had experience in the preparation of plans and details.

Applications, giving the names of two persons to whom reference can be made, should be sent to the undersigned not later than Saturday, 18th February, 1956.

W. H. SHEPHERD, A.M.I.C.E., F.R.I.C.S., M.I.Mun.E., A.M.T.P.I.,
Borough Engineer and Surveyor.

Municipal Offices, Sheen Lane, S.W.14.
13th January, 1956. 9090

HAYES AND HARLINGTON URBAN DISTRICT COUNCIL.

Applications are invited for:—

(*a*) ARCHITECTURAL ASSISTANT (PERMANENT), Grade A.P.T. II, *i.e.*, £560—£640 p.a.;

(*b*) SENIOR ARCHITECTURAL ASSISTANT (TEMPORARY), Grade A.P.T. IV, *i.e.*, £675—£825 p.a., plus London weighting in both cases, 21-25 years £20 p.a., 26 years and over £30 p.a. Candidates for (*a*) must have passed the R.I.B.A. Inter. Exam., good experience of housing work with a local authority; (*b*) must be a Registered Architect, have good general experience in design and construction in relation to municipal housing and other works, and capable of supervising large building contracts. The Council is unable to provide housing accommodation for either of these appointments. Further particulars and form of application available from the undersigned, which when completed must be returned as soon as possible.

GEORGE HOOPER,
Clerk and Solicitor.

Town Hall, Hayes, Middx. 3712

COUNTY BOROUGH OF SOUTHAMPTON
BOROUGH ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:—

(*a*) SENIOR ASSISTANT ARCHITECTS, Grade IV (£710—£885).
Applicants should state their housing needs.

(*b*) ARCHITECTURAL ASSISTANTS, Grade I (£530—£610).

(*c*) JUNIOR ARCHITECTURAL ASSISTANTS H.G.D. (£180—£500).

(*d*) TECHNICAL ASSISTANT (plan filing, etc.) H.G.D. (£180—£500).

Application forms from the Borough Architect, Civic Centre, Southampton, closing date 13th February, 1956. 9168

CITY OF OXFORD
CITY ARCHITECT AND
PLANNING OFFICER'S DEPARTMENT

Applications are invited for the following posts on the permanent staff:—

(*a*) PRINCIPAL ARCHITECTURAL ASSISTANT, Grade VII A.P.T. Division (£975—£1,200 per annum). To deal with all types of new building work undertaken by the three sections of the Architectural Group in the Department.
Candidates must be members of the Royal Institute of British Architects, and a Town Planning Qualification is desirable.

(*b*) CHIEF ARCHITECTURAL ASSISTANT, Grade VI A.P.T. Division (£880—£1,080 per annum). To take charge of the section dealing with public buildings and site planning.
Candidates must be members of the Royal Institute of British Architects, and a Town Planning Qualification is desirable.

(*c*) SURVEYING ASSISTANT. Grade: Special Classes of Officers (£690—£840 per annum). To deal with maintenance work and small alterations to all types of buildings.
Candidates should preferably be qualified members of the Royal Institution of Chartered Surveyors, although consideration would be given to applicants not yet fully qualified, in which case salary would be at the appropriate lower level.

(*d*) SURVEYING ASSISTANT, Grade IV A.P.T. Division (£710—£885 per annum). To deal with maintenance work and small alterations to all types of buildings.
Candidates should be qualified members of the Royal Institution of Chartered Surveyors.

(*e*) PLANNING ASSISTANT. Grade: Special Classes of Officers (£690—£840 per annum). For general planning duties.
Candidates should have passed the Final Examination of the Town Planning Institute.

Housing accommodation provided for ALL posts.

Car allowances for posts (*a*), (*b*), (*c*) and (*d*).

Further details of the duties of these posts, together with application forms, which must be returned by the 18th February, 1956, from the City Architect and Planning Officer, Town Hall, Oxford.

Please indicate clearly for which post application is being made.

HARRY PLOWMAN,
Town Clerk.

Town Hall,
Oxford. 9169

COVENTRY CORPORATION requires GROUP PLANNING OFFICER, A.P.T. VII (£900—£1,100), revised scales pending, for Residential Redevelopment, Rehabilitation and Suburban Development. Planning and architectural qualification essential. Housing accommodation may be available. Application forms, etc., from Arthur Ling, Bull Yard, Coventry, returnable within 15 days of publication. 9190

WEST SUSSEX COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:—

(1) SENIOR ASSISTANT ARCHITECTS, Grade V A.P.T. Division (£795—£970). Commencing salary according to experience.

(2) ASSISTANT ARCHITECT, Grade IV A.P.T. Division (£710—£885). Commencing salary according to experience.

(3) ASSISTANT ARCHITECT, Grade III A.P.T. Division (£90—£815 if Associates R.I.B.A. and £640—£765 if not Associates). Commencing salary according to experience.

Further particulars should be obtained from the County Architect, County Hall, Chichester, to whom all detailed applications must be submitted not later than 20th February, 1956.

T. C. HAYWARD,
Clerk of the County Council.

County Hall,
Chichester.
25th January, 1956. 9192

POSTS OF TEMPORARY ARCHITECT, GRADE I, IN THE DEPARTMENT OF PUBLIC WORKS, CEYLON

Applications are invited for posts of TEMPORARY ARCHITECTS in the Department of Public Works, Ceylon, on the scale of Rs.8,400—10 of Rs.480 and 4 of Rs.600—Rs.15,600 per annum for Indians and Pakistanis and £600—12 of £30 and 6 of £40—£1,200 per annum for non-Ceylonese other than Indians and Pakistanis.

2. Further particulars may be obtained from the Office of the High Commissioner for Ceylon in the United Kingdom, 13, Hyde Park Gardens, London, W.2.

3. Applications for the above posts should reach the High Commissioner for Ceylon in the United Kingdom before 10th March, 1956. 9195

CENTRAL ELECTRICITY AUTHORITY,
SOUTH EASTERN DIVISION,
MECHANICAL AND CIVIL DRAUGHTSMEN required in a modern drawing office at KINGSTON-ON-THAMES. Educational facilities at hand and every opportunity provided for advancement by merit. All posts superannuable. Good holidays and liberal sick pay scheme. Salary according to ability within range of £672—£777 p.a. Applicants should preferably have knowledge and drawing office experience in the preparation of diagrams and drawings applicable to power station and/or sub-station development. Applications to be sent to Establishments Officer, Central Electricity House, Lower Ham Road, Kingston, to arrive by 16th February. 9194

WORCESTERSHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
Appointment of :
(1) SENIOR ASSISTANT ARCHITECT, Grade A.P.T. V.
(2) ASSISTANT ARCHITECT, Grade A.P.T. IV.
(1) This position is for a group leader in charge of a section of the drawing office mainly engaged in carrying out major capital projects on new schools.
Applications are invited from qualified Architects with good experience in the design and construction of contemporary schools.
(2) This post is in the section dealing with capital works for all Committees other than Education.
Housing accommodation may be available.
Application forms may be obtained from L. C. Lomas, F.R.I.B.A., County Architect, 14, Castle Street, Worcester. 9199

SHEFFIELD REGIONAL HOSPITAL BOARD
Applications are invited for the whole-time post of SENIOR ASSISTANT ARCHITECT. Salary scale, £920 × £30 (5) × £25 (1)—£1,095. Candidates must be Registered Architects and should be capable of taking charge of a block of work in the Architectural department and of undertaking personally the more difficult and responsible individual projects. The appointment is subject to the Whitley Council terms and conditions of service, to the National Health Service (Superannuation) Regulations, and to one month's notice on either side. Applications, together with the names of three referees, should be sent by February 18th to the Secretary to the Board, Fulwood House, Old Fulwood Road, Sheffield, 10. 9201

CITY OF OXFORD
CITY ARCHITECT AND PLANNING OFFICER'S DEPARTMENT
Applications are invited for the following posts on the permanent staff :—
(*a*) PRINCIPAL ARCHITECTURAL ASSISTANT, Grade VII A.P.T. Division (£975—£1,200 per annum). To deal with all types of new building work undertaken by the three sections of the architectural group in the Department. Candidates must be members of the Royal Institute of British Architects and a Town Planning qualification is desirable.
(*b*) CHIEF ARCHITECTURAL ASSISTANT, Grade VI A.P.T. Division (£880—£1,080 per annum). To take charge of the section dealing with public buildings and site planning. Candidates must be members of the Royal Institute of British Architects and a Town Planning qualification is desirable.
(*c*) SURVEYING ASSISTANT. Grade, Special Classes of Officers (£690—£840 per annum). To deal with maintenance work and small alterations to all types of buildings. Candidates should preferably be qualified members of the Royal Institution of Chartered Surveyors, although consideration would be given to applicants not yet fully qualified, in which case salary would be at the appropriate lower level.
(*d*) SURVEYING ASSISTANT, Grade IV A.P.T. Division (£710—£885 per annum). To deal with maintenance work and small alterations to all types of buildings. Candidates should be qualified members of the Royal Institution of Chartered Surveyors.
(*e*) PLANNING ASSISTANT. Grade, Special Classes of Officers (£690—£840 per annum). For general planning duties. Candidates should have passed the Final Examination of the Town Planning Institute.
Housing accommodation provided for all posts. Car allowances for posts (*a*), (*b*), (*c*) and (*d*).
Further details of the duties of these posts, together with application forms, which must be returned by the 18th February, 1956, from the City Architect and Planning Officer, Town Hall, Oxford.
Please indicate clearly for which post application is being made.

HARRY PLOWMAN,
Town Clerk.

Town Hall,
Oxford. 9169

METROPOLITAN POLICE.
ARCHITECTURAL ASSISTANTS required for unestablished appointments in New Works Branch of Chief Architect and Surveyor's Department, New Scotland Yard, S.W.1.
Rates of Pay
Men: £463 10. 0. (aged 21) × £20 — £523 10 0. × £25 — £725. Women: £463 10. 0. (age 21) × £15 — £493 10. 0. × £20 — £533 10. 0. × £25 — £645 0. 0.
Annual leave 24 days. Conditioned hours 45½ a week, overtime paid for 1½ hours a week.
Apply to Chief Clerk, Chief Architect & Surveyor's Department, New Scotland Yard, S.W.1. 29th December, 1955. 8039

HEMEL HEMPSTEAD DEVELOPMENT CORPORATION
SENIOR ASSISTANT ARCHITECT. Salary scale £715—£835 p.a. Must be A.R.I.B.A. and experienced in commercial and/or domestic architecture.
Applications from persons with experience but not yet qualified for the Senior Assistant grade will be considered for appointment to another grade with slightly lower salary scale.
Conditions of service similar to those in Local Government.
Housing accommodation may be available.
Applications, endorsed "Vacancy No. 72," giving age, education, qualifications, and experience, and names of two referees, should reach the General Manager, Westbrook Hay, Hemel Hempstead, by 23rd February. 9202

COUNTY BOROUGH OF GREAT YARMOUTH
Applications are invited for the following appointment:—SENIOR ASSISTANT ARCHITECT at a salary in A.P.T. Grade V (£795 × £35—£970).
Applicants should be Associate Members of the R.I.B.A. and experienced in the design, construction and supervision of public buildings, housing and flats.
Housing accommodation will be made available to a married man, if required.
The appointment is subject to one month's notice on either side, to the Local Government Superannuation Acts, and to the passing of a medical examination.
Forms of application may be obtained from the Borough Engineer, Town Hall. Applications, endorsed "Senior Assistant Architect," must reach me not later than first post on the 17th February, 1956.

FARRA CONWAY,
Town Clerk.

Town Hall,
Great Yarmouth.
25th January, 1956. 9225

POSTS OF QUANTITY SURVEYOR (TEMPORARY)
PUBLIC WORKS DEPARTMENT, CEYLON
Applications are invited for posts of TEMPORARY QUANTITY SURVEYOR in the Department of Public Works, Ceylon, on the scale of Rs.8,400—10 of Rs.480 and 4 of Rs.600—Rs.15,600 per annum for Indians and Pakistanis, and £600—12 of £30 and 6 of £40—£1,200 per annum for non-Ceylonese other than Indians and Pakistanis.
2. Further particulars may be obtained from the office of the High Commissioner for Ceylon in the United Kingdom, 13, Hyde Park Gardens, W.2.
3. Applications for the above posts should reach the High Commissioner for Ceylon in the United Kingdom before 1st March, 1956. 9208

BOROUGH OF ERITH
THIRD ARCHITECTURAL ASSISTANT
Applications are invited from young, contemporary-minded Assistants for the above vacancy in the Borough Architect's Department at a salary in accordance with Grade A.P.T. II (£595 × £20—£675 per annum, plus London weighting).
Applications, stating age, education and training, previous appointments and experience, together with names and addresses of two referees, should reach the Borough Engineer and Surveyor not later than the 20th February, 1956. Canvassing disqualifies.

J. A. CROMPTON,
Town Clerk.

Town Hall,
Erith,
Kent. 9209

WORTLEY RURAL DISTRICT COUNCIL
(Population 45,000)
APPOINTMENT OF ASSISTANT ARCHITECT
Applications are invited for this appointment at a salary of £690, rising to £840 per annum. Housing accommodation available. Forms of application may be obtained from the undersigned, to whom applications must be delivered not later than 24th February, 1956.

ADRIAN M. KELLY,
Clerk.

Council Offices,
Grenoside,
Near Sheffield. 9203

COUNTY BOROUGH OF DERBY
BOROUGH ARCHITECT'S DEPARTMENT
ARCHITECTURAL STAFF

(*a*)	A.P.T. Grade IV.	(£710—£885 per annum)
(*b*)	A.P.T. Grade III.	(£640—£765 per annum)
(*c*)	A.P.T. Grade II.	(£595—£675 per annum)
(*d*)	A.P.T. Grade I.	(£530—£610 per annum)
(*e*)	Higher General Division.	(£180—£500 per annum)

QUANTITY SURVEYING STAFF

(*f*)	A.P.T. Grade V.	(£795—£970 per annum)
(*g*)	A.P.T. Grade III.	(£640—£765 per annum)
(*h*)	A.P.T. Grade II.	(£595—£675 per annum)

Commencing salary will be according to qualifications and experience.
Permanent superannuable appointments, subject to one month's notice and to medical examination.
National Conditions of Service.
Applicants must state for which post they are applying.
Further particulars and application forms obtainable from and to be returned to The Borough Architect, The Council House, Corporation Street, Derby, not later than Monday, 20th February, 1956.

G. H. EMLYN JONES,
Town Clerk.

26th January, 1956. 9226

SURREY COUNTY COUNCIL
Applications invited for following appointments:
1. ASSISTANT QUANTITY SURVEYOR, GRADE V, £795 × £35—£970 p.a., plus London weighting. Must be A.R.I.C.S. having experience in taking lead of team on large new buildings.
2. ASSISTANT QUANTITY SURVEYOR, GRADE IV, £710 × £35—£885 p.a., plus London weighting. Must be A.R.I.C.S. with experience in taking off.
3. ASSISTANT QUANTITY SURVEYOR, GRADE III, £640 × £25—£765 p.a., plus London weighting. Preference given applicants who have passed Inter. R.I.C.S.

Full details and present salary, with three copy testimonials, to County Architect, County Hall, Kingston, as soon as possible. 9159

LANCASHIRE COUNTY COUNCIL
Applications are invited for the following appointment on the permanent staff of the County Architect's Department in A.P.T. Grade III of the Salary Scales (£640—£765) :—
MEASURING SURVEYORS. Successful candidates will be engaged in the measuring of variations and site work for major projects, and the settlement of contractors' accounts. Applicants should have had experiences of similar work in surveyors' or building contractors' offices.
Application forms from the County Architect, P.O. Box 26, County Hall, Preston, to be returned by Monday, 20th February, 1956, quoting Ref. A/AJ. 9213

BOROUGH OF BLYTH
SENIOR ARCHITECTURAL ASSISTANT
Applications are invited for the post of Senior Architectural Assistant in the Borough Engineer's Department at a salary in accordance with the Special grade for qualified Architectural Assistants of the National Scheme of Conditions of Service, namely £690 per annum rising by annual increments of £30 to £840 per annum.
Applicants should be Registered Architects or hold the Final examination of the R.I.B.A. with experience in Municipal housing.
The appointment is subject to the National Scheme of Conditions of Service, the Local Government Superannuation Acts, the passing of a medical examination and one month's notice on either side.
Applications, suitably endorsed and accompanied by the names of two referees must reach the undersigned on or before March 6th, 1956.
Canvassing will disqualify and applicants must state whether they are related to any member or senior official of the Council.
Housing accommodation will be provided if necessary.

E. W. CARTER,
Town Clerk.

"Dinsdale,"
Marine Terrace,
Blyth,
Northumberland. 9228

BOROUGH OF WALTHAMSTOW
COMMITTEE FOR EDUCATION
APPOINTMENT OF CLERK OF WORKS
Applications are invited for the appointment of CLERK OF WORKS at a salary in accordance with A.P.T. II of the National Scales, commencing at £560 per annum and rising by annual increments of £20 to £640 per annum, plus London weighting of £30 per annum for a person 26 years of age or older. The salary scale is under review and will probably be increased by £35 at all points. The post is a permanent pensionable one and the successful candidate will be required to pass a medical examination.
The person appointed will act under the direction of the Education Architect and will be required to undertake the supervision of contracts for minor projects and extensions and alterations to educational buildings. Candidates should have a good knowledge of the building trade and be suitably experienced in the supervision of contracts and preparation of reports.
Forms of application to be obtained from and returned to the undersigned within two weeks of the appearance of this notice.

E. T. POTTER,
Borough Education Officer.

Education Department,
Town Hall,
Forest Road,
Walthamstow, E.17. 9206

BERKS COUNTY COUNCIL
PLANNING DEPARTMENT
Applications are invited for the following posts for duties principally in connection with the County Development Plan :—
(*a*) ASSISTANT PLANNING OFFICER on A.P.T. Grade VI (£880—£1,080 p.a.). Applicants must be Associate Members of the Town Planning Institute and be experienced in the preparation of a County Development Plan. Experience also in Development Control will be considered an advantage.
(*b*) PLANNING ASSISTANT on A.P.T. Grade II (£595—£675 p.a.). Applicants must either be Graduates, or must have passed the Intermediate examination of the Town Planning Institute and have had some experience in the work of a planning department. Training in statistics and ability in draughtsmanship will be considered an advantage.

Form of application from County Planning Officer, 7 Abbot's Walk, Reading, to be returned by 18th February, 1956.

E. R. DAVIES,
Clerk of the Council. 9204

LAGOS EXECUTIVE DEVELOPMENT BOARD—NIGERIA

ASSISTANT ARCHITECT: £1,500 per annum. 1. Applications are invited for the above appointment. 2. The Board is responsible for large-scale planning control, outline and detail planning and construction for both new development and redevelopment for industrial, residential and commercial purposes in Lagos. These responsibilities follow very similar lines to those of a Development Corporation operating under the New Towns Act, 1946. 3. Candidates must preferably have experience in large-scale housing development and be Associate Members of the Royal Institute of British Architects. 4. Conditions of appointment are as follows. Appointment is for one tour of eighteen to twenty-four months in the first instance, renewable by mutual agreement. The Board operates a Provident Fund to which the officer contributes 10% of his salary. Leave is granted at the rate of seven days on full pay for each month resident in Lagos. Free first-class air passages are provided for the officer and his wife and assisted passages (maximum £75 per child) for up to two children, or separation allowance of £75 per annum per child in lieu thereof. Partly furnished quarters are provided for which a rent of 10% (maximum £150 per annum) of the officer's basic salary is charged. 5. Application forms and conditions of appointment obtainable from the Commissioner for Nigeria in the United Kingdom, 41, Buckingham Palace Road, London, S.W.1. All correspondence should be marked L.E.D.B. 9235

SOUTH CAMBRIDGESHIRE RURAL DISTRICT COUNCIL DEPUTY ARCHITECT

Applications are invited for this appointment at a salary within the range of A.P.T. IV (£710—£35—£805).

Candidates must be corporate members of the Royal Institute of British Architects.

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

Forms of application can be obtained from the undersigned, to whom they must be returned not later than first post on Saturday, the 18th February, 1956.

Housing accommodation in the Rural District may be provided for the successful candidate, if required.

Canvassing, directly or indirectly, will disqualify.

B. G. CRAFT,
Clerk to the Council.

County Hall,
Hobson Street,
Cambridge.
27th January, 1956. 9214

Architectural Appointments Vacant

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

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

ARCHITECTS' CO-PARTNERSHIP require qualified ASSISTANT with experience. Write 44, Charlotte Street, London, W.1, or Telephone Langham 5791. 3275

SCHERRER & HICKS, of 19 Cavendish Square, W.1 (tel. Museum 1105), require immediately a number of ARCHITECTURAL ASSISTANTS with imagination and initiative. The work is varied and covers Research Laboratories, Offices, Housing and Schools. Five-day week. Salary by arrangement. 9124

ARCHITECTURAL ASSISTANT required, qualified, with experience of running contracts. Write full particulars to T. Mitchell & Partners, 20, Bedford Square, W.C.1. 4992

ARCHITECTURAL ASSISTANT required. Must have attained R.I.B.A. Intermediate Standard or equivalent. Reply giving full particulars to Bernard H. Dale & Partners, 19, Carlton Crescent, Southampton. 9198

ARCHITECTURAL ASSISTANT required, Final standard, in busy office in South West. Salary £640—£765. Pension scheme. Considerable responsibility and opportunity to work with only nominal supervision. The practice consists of a considerable mixture of interesting jobs of all types, but specialises in industrial and housing schemes. Apply, Gordon Payne and Preece, 67, London Road, Gloucester. 9206

ARCHITECTURAL ASSISTANT required in N.C.B.'s Production Department in London. Salary (superannuable) according to qualifications and experience within inclusive scales (Grade 1) £667—£804 male, £558—£662 female. At least three years' experience in an architectural office and Inter. Exam. of R.I.B.A. essential; ability to prepare sketch plans and working drawings from preliminary sketches desirable; some experience of industrial buildings an advantage. Write giving particulars of age, education, qualifications and experience, to National Coal Board, Staff Dept. (Personnel), Hobart House, Grosvenor Place, London, S.W.1, marking envelope SS/192. before 24th February, 1956. 9210

THE UNIT CONSTRUCTION CO. require an ARCHITECTURAL ASSISTANT/DRAUGHTSMAN for their projects department, which is responsible for the preparation of both traditional and non-traditional designs and schemes for two-storey and multi-storey buildings. This appointment provides great scope for the younger man of ideas and imagination. Good salary and pension, and excellent prospects for the right man. Write in confidence, giving age and full details of experience and qualifications, to the Personnel Manager, Section A.92, The Unit Construction Co., Ltd., 34, St. James's Street, London, S.W.1. 9153

SENIOR ASSISTANTS, with adequate experience and contemporary outlook, urgently required in mixed practice in Cheltenham. JUNIOR required at Intermediate level. Write, stating experience and salary required, to I. M. Williams, A.R.I.B.A., 98, Bath Road, Cheltenham. 9140

COURTAULDS, LTD., has vacancies in Coventry for young qualified ARCHITECTS, capable of taking charge of small jobs or working as members of a team on larger projects. Candidates should write for a detailed form of application to the Director of Personnel, Courtaulds, Ltd., 16, St. Martin's-le-Grand, London, E.C.1, quoting reference number B.33. 9154

ASSISTANTS required, Intermediate to Final standard. Must have had at least 3 years' office experience, and be conversant with traditional styles. Apply at once in writing to Walters & Kerr Bate, 14, Gray's Inn Square, London, W.C.1. 9138

ARCHITECTURAL ASSISTANT required in Chesterfield Office. Intermediate standard or above. Interesting variety of work. Some office experience essential. Full particulars, with references, including salary, required. Box 9134.

ARCHITECTURAL ASSISTANTS, with approx. 5 years' office experience, required for West End Architect's office engaged on large office building and cinema contracts. Commencing salary £625. 'Phone Whitehall 1624 for appointment. 3561

ARCHITECTURAL ASSISTANTS, Senior and Junior required, preferably with London practice experience, office and factory buildings. Write, giving particulars of experience, etc., to Messrs. Bates & Sinning, 89, Chancery Lane, W.C.2. 2508

ARCHITECTS' CO-PARTNERSHIP require unmarried, qualified, experienced ASSISTANT in their Lagos office. Maximum tour 14 months. Flat provided. Write 44, Charlotte Street, London, W.1, or telephone Langham 5791. 3274

ASSISTANT ARCHITECT and ARCHITECTURAL ASSISTANTS required in City office for work on important modern buildings. Sound knowledge of construction essential. Very good salaries paid to successful applicants. Write or telephone, Campbell Jones & Sons, 9, Dowgate Hill, E.C.4 (Central 7748). 8054

NORMAN & DAWBARN require ARCHITECTURAL DRAUGHTSMEN to prepare working drawings on major projects in London. Professional qualifications are not required but applicants should have had not less than five years' experience in an architectural drawing office. Accurate draughtsmanship and sound knowledge of building construction and detailing are essential. Applications in writing only to 5, Gower Street, London, W.C.1. 6058

TAYLOR & YOUNG, Manchester, require two ARCHITECTURAL ASSISTANTS interested in good class work; salary by arrangement, according to experience. Apply in writing to 195, Oxford Road, Manchester, 13. 8099

ARCHITECTURAL ASSISTANT required by firm in Home Counties. General practice. Apply, stating experience and salary, to Manning & Steel, F.R.I.B.A., 3, George Street West, Luton, Beds. 8026

SENIOR and JUNIOR ASSISTANTS required for large schemes of contemporary nature. Excellent opportunities to suitable applicants. Five-day week. Please write, giving full particulars of experience and salary required, to Johns, Slater & Haward, F./A.R.I.B.A., 32, Foundation Street, Ipswich. 8069

ARCHITECTURAL ASSISTANT required in Architect's Department of London Brewery Company. Must be good draughtsman. Write, stating age, experience, salary required. Box 8071.

ARCHITECTURAL ASSISTANTS required, with about 4 to 5 years' office experience. Write or telephone, giving full particulars, including age and salary, to Hasker & Hall, Architects, 13, Welbeck Street, W.1 (WELbeck 0061). 9009

ARCHITECTURAL ASSISTANTS, Intermediate or up to Final standard, required as soon as possible at Welwyn Garden City. Varied work and congenial office conditions. Apply in writing, giving full details of age and experience, to Chas. W. Fox, F.R.I.B.A., 22, Parkway. 8081

ARCHITECT requires, CHIEF, SENIOR and JUNIOR ASSISTANTS. Interesting work on flats, shops, schools, etc. Apply Roff Marsh, F.R.I.B.A., M.T.P.I., 125, London Road, Chelmsford. 9021

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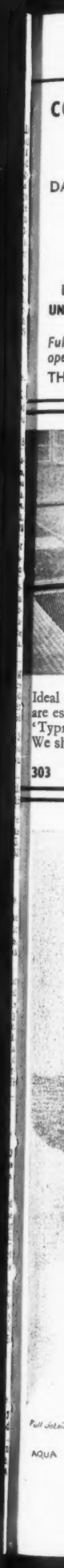

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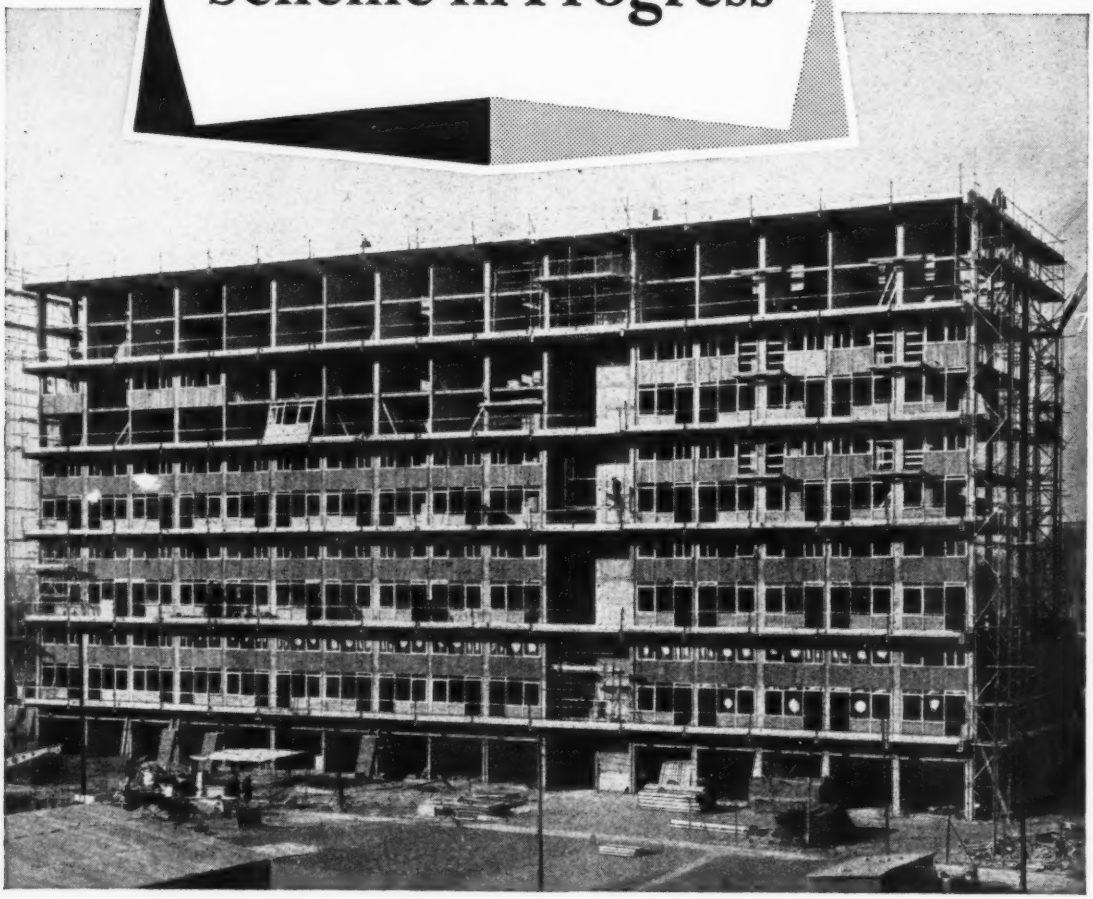

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Printed in Great Britain for the Proprietors of "THE ARCHITECTS' JOURNAL" (The Architectural Press Ltd.), 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, by HARRISON & SONS LTD., by Appointment to Her Majesty The Queen, Printers, London, Hayes (Middx.), and High Wycombe.
Editorial illustrations engraved by THE ENGRAVERS' GUILD LTD., Windsor House, 23/26, Cursitor Street, London, E.C.4.