THE ARCHITECTS' JOURNAL

standard contents

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

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

IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 49, Cadogan Square.	Sloane 1601/3158
IIBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1.	Euston 2450
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Museum 1783
I of Arb	Institute of Arbitrators. 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197/5176
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
IWA	Inland Waterways Association. 14, Great James' Street, W.C.2.	Chancery 7718
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
MARS	Modern Architectural Research Group (English Branch of CIAM). Secretary: Trevor Dannatt, 6, Fitzroy Square, W.1.	Euston 7171
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. 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, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94-98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 31, Chester Terrace, Regent's Park, N.W.1.	Welbeck 0619
NCBMP	National Council of Building Material Producers. 10 Princes Street, S.W.1.	Abbey5111
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives. Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1.	Langham 4341
NPL	National Physical Laboratory. Head Office, Teddington.	Molesey 1380
NSA	National Sawmilling Association. 14, New Bridge Street, E.C.4.	City 1476
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1.	Abbey 1359
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	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. 22A, Queen Anne's Gate, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8.	Western 1571
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3.	Mansion House 3921
SIA	Structural Insulation Association. 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 5051
WDC	War Damage Commission. 6, Carlton House Terrace, S.W.1.	Whitehall 4341
ZDA	Zinc Development Association. Lincoln House, Turl Street, Oxford	Oxford 47988

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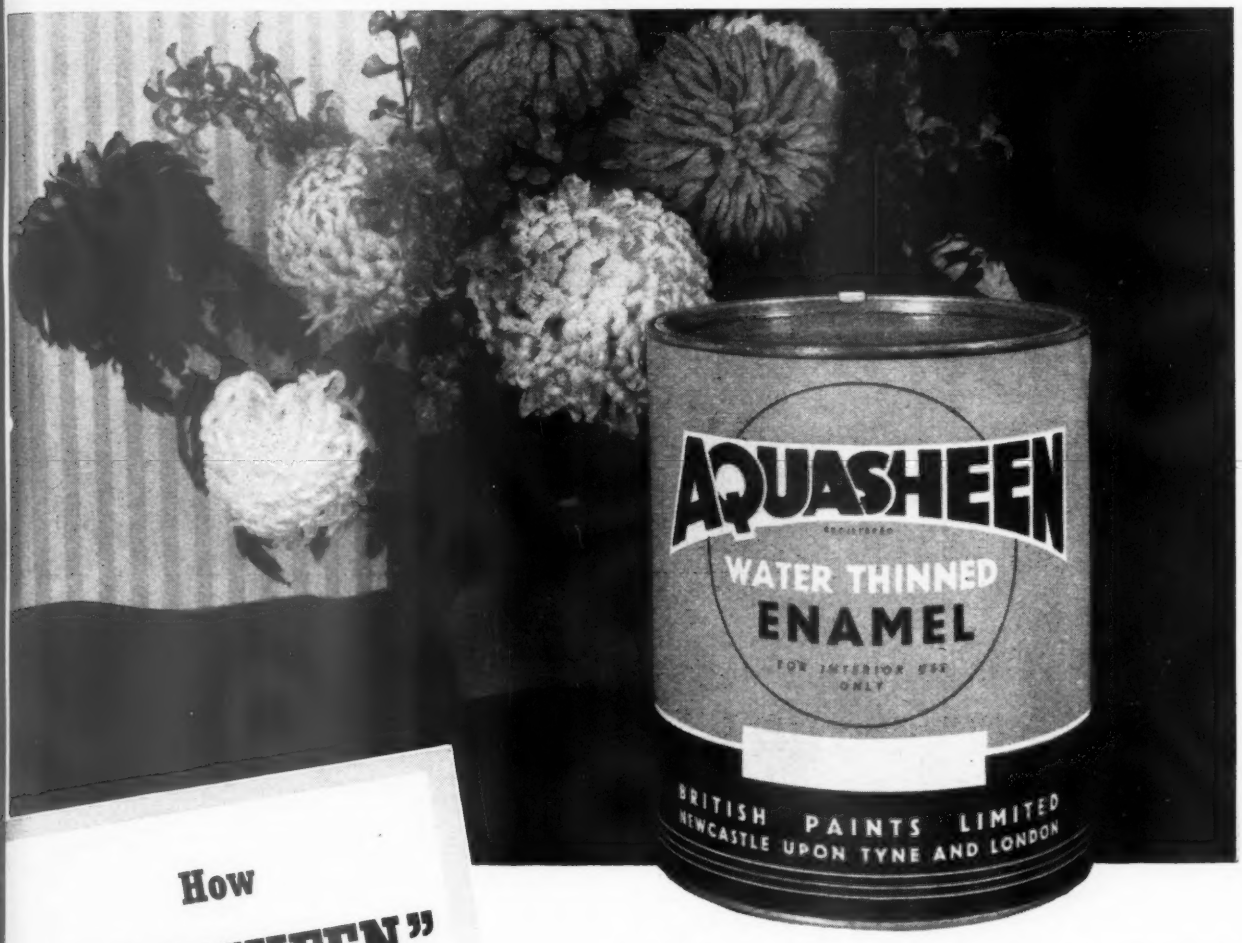

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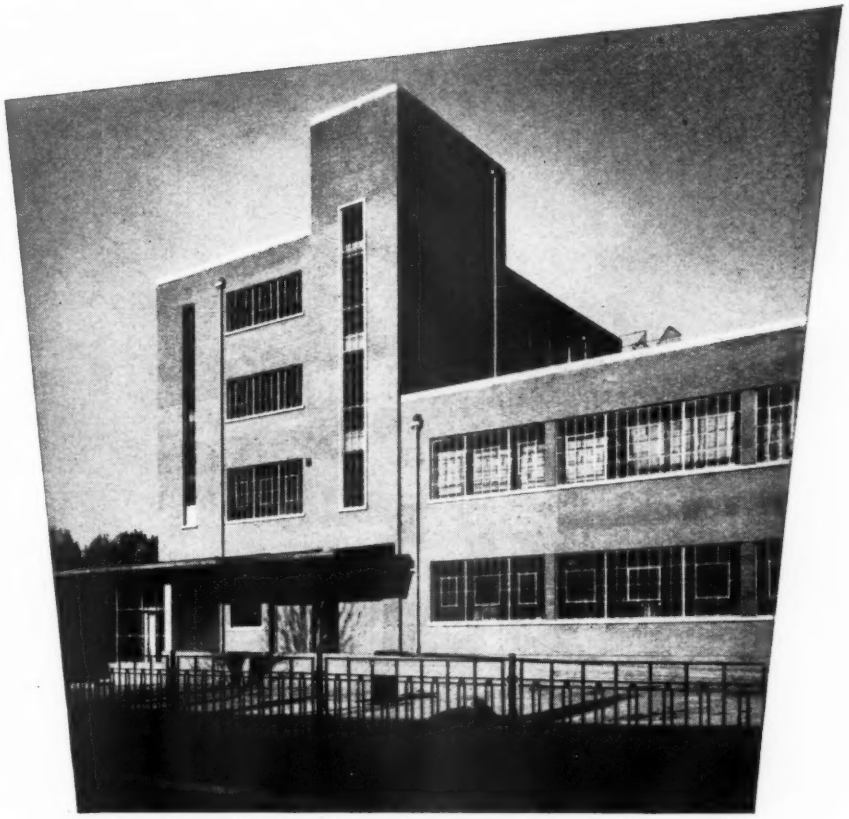

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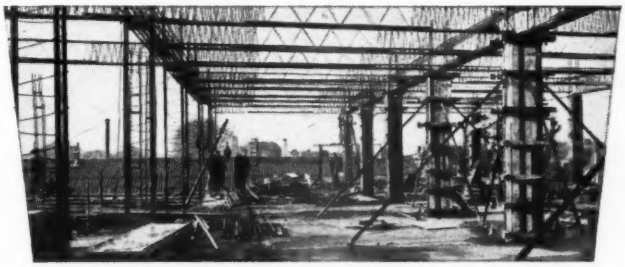

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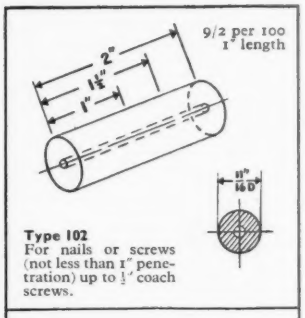

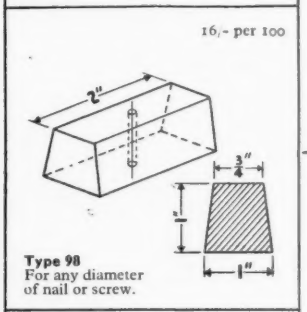

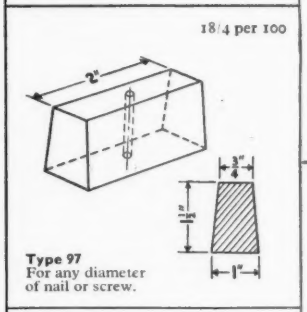

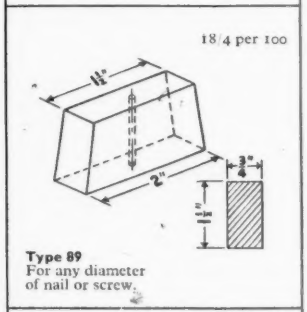

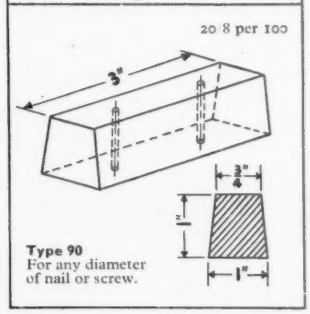

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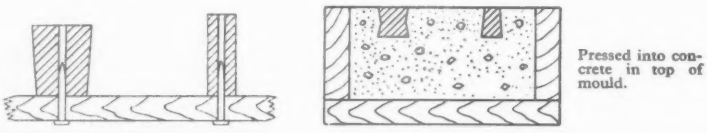

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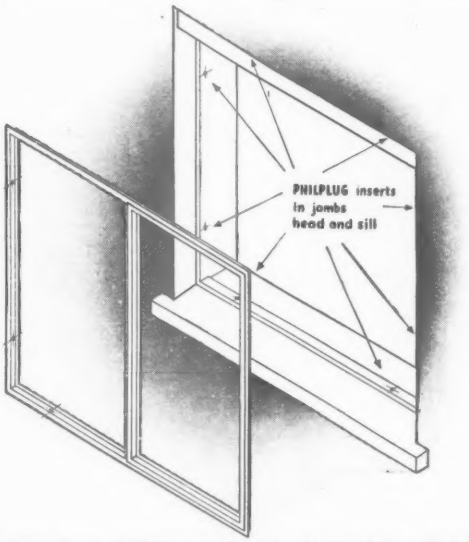

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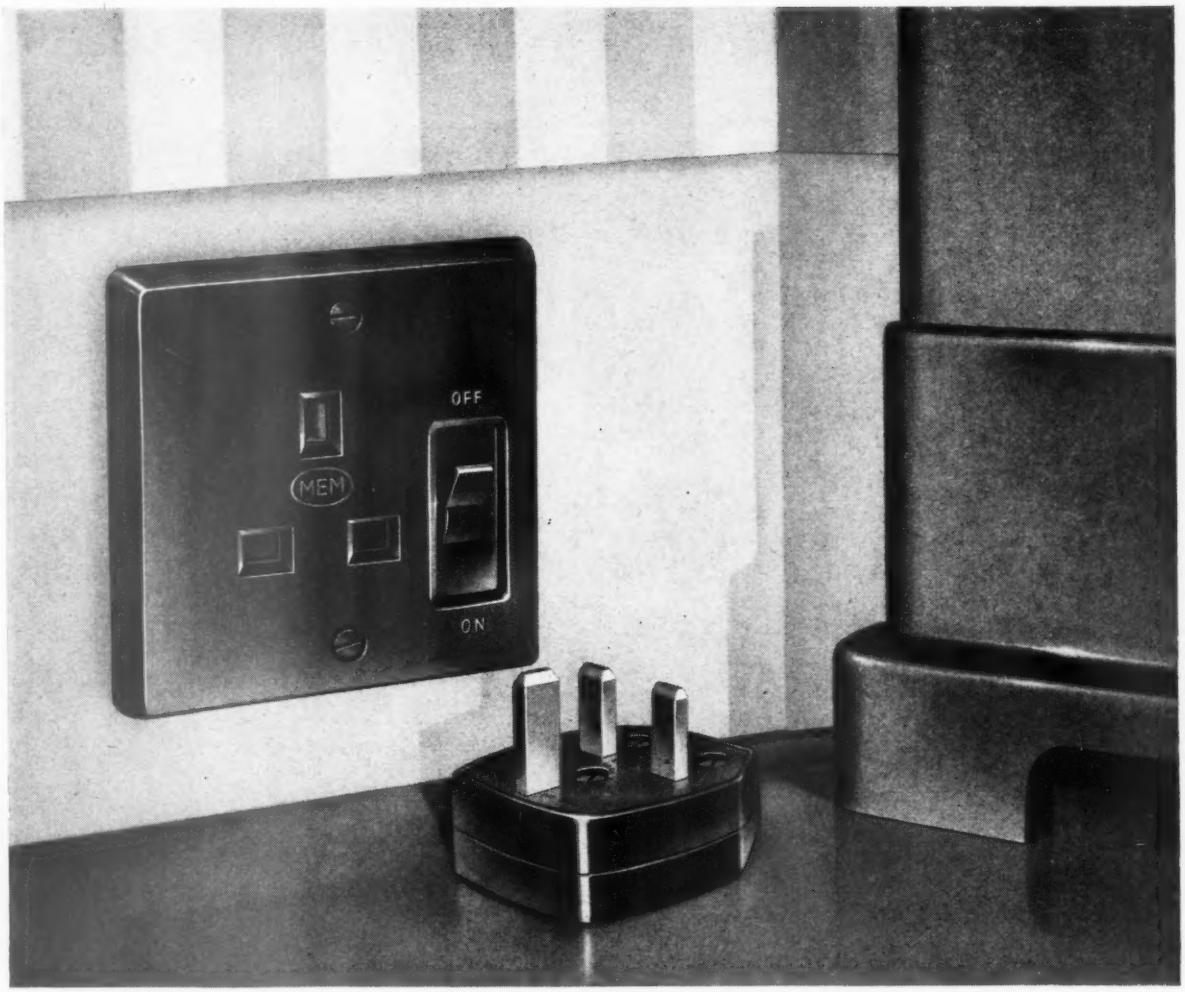

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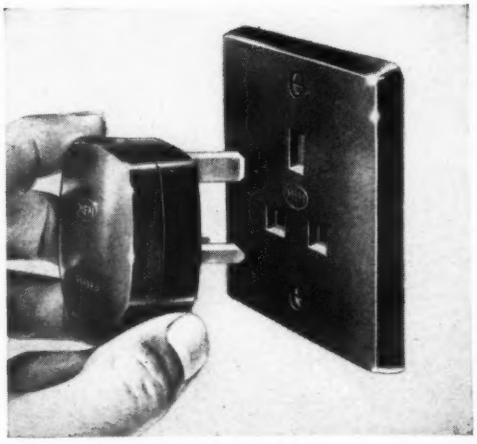

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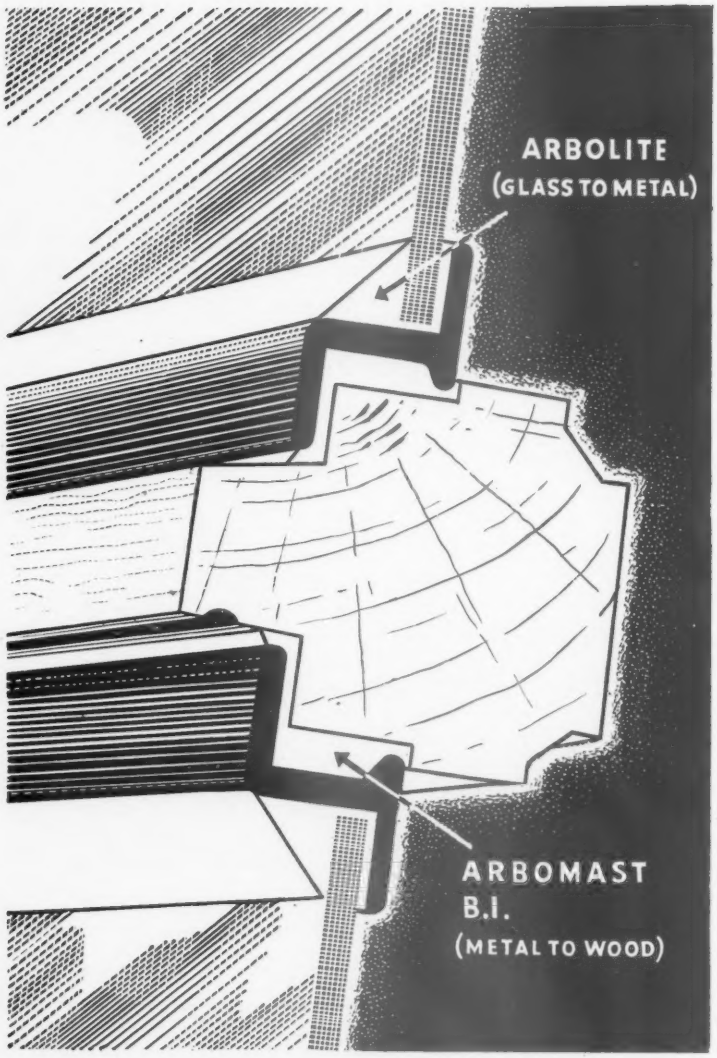

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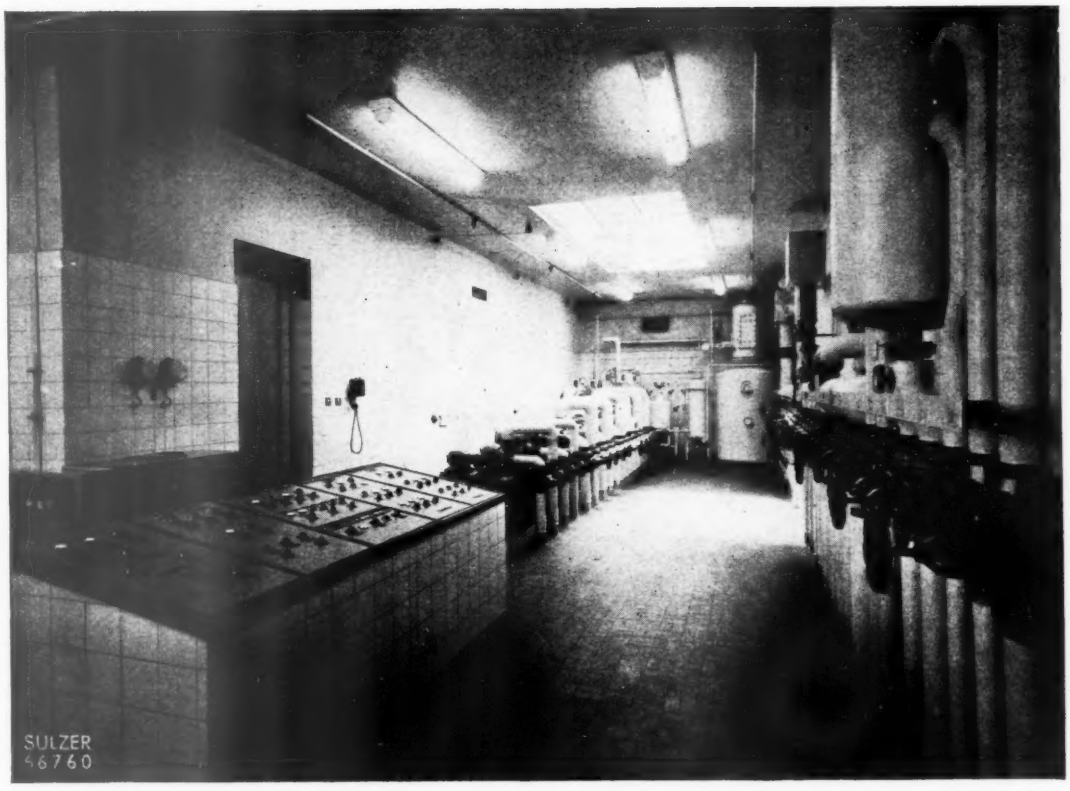

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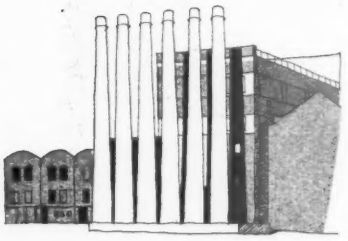

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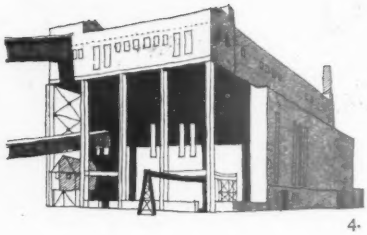

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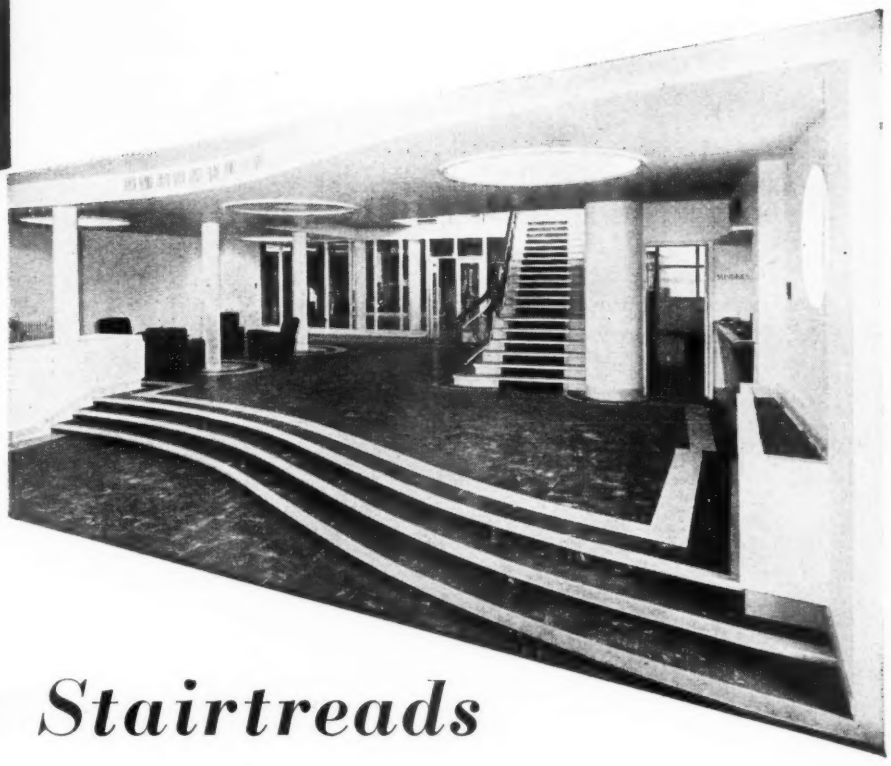

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Flooring Contractors: Semtex Ltd.
Architect: Edward Leicester F.R.I.B.A.

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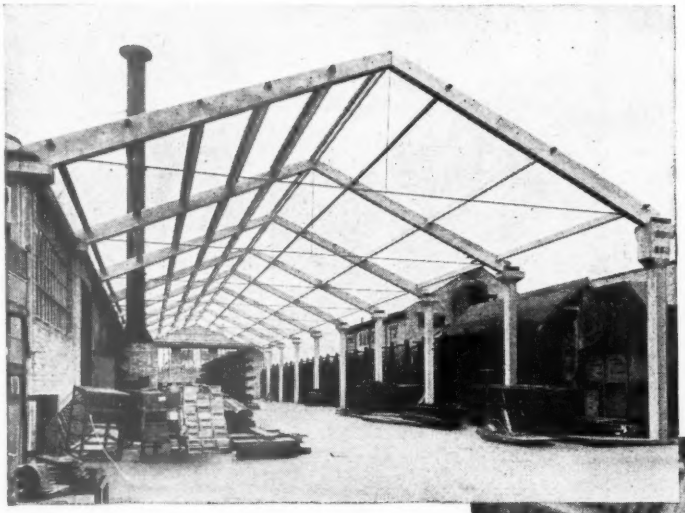

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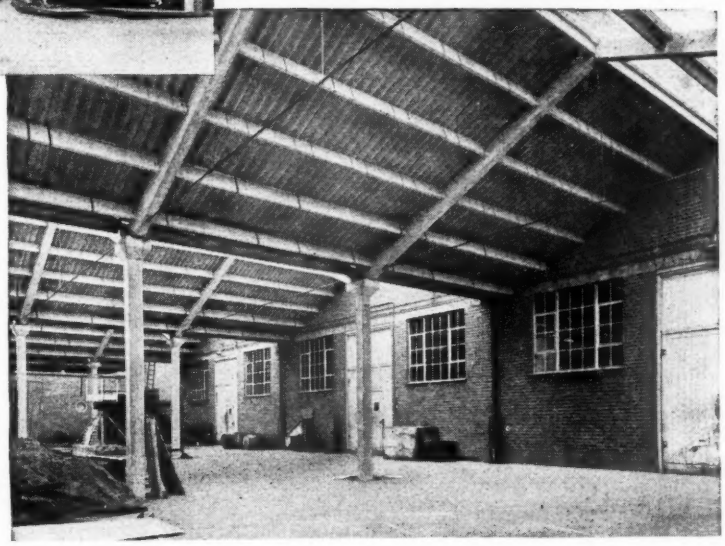

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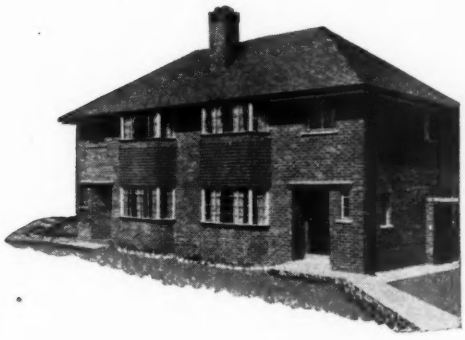
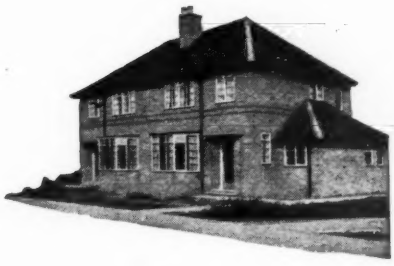
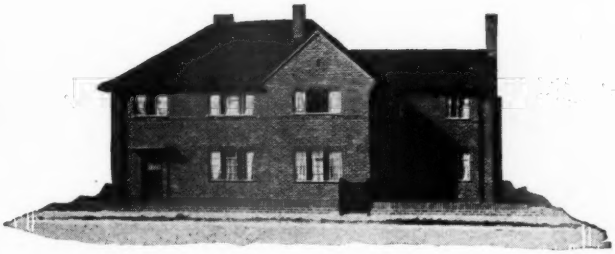
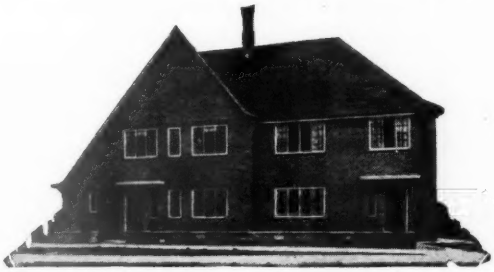
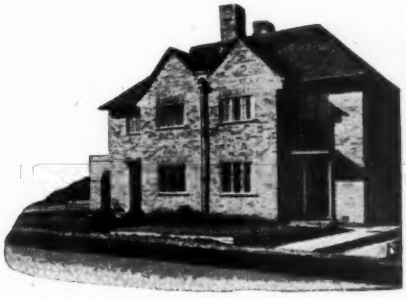


Avoid Monotony in Housing









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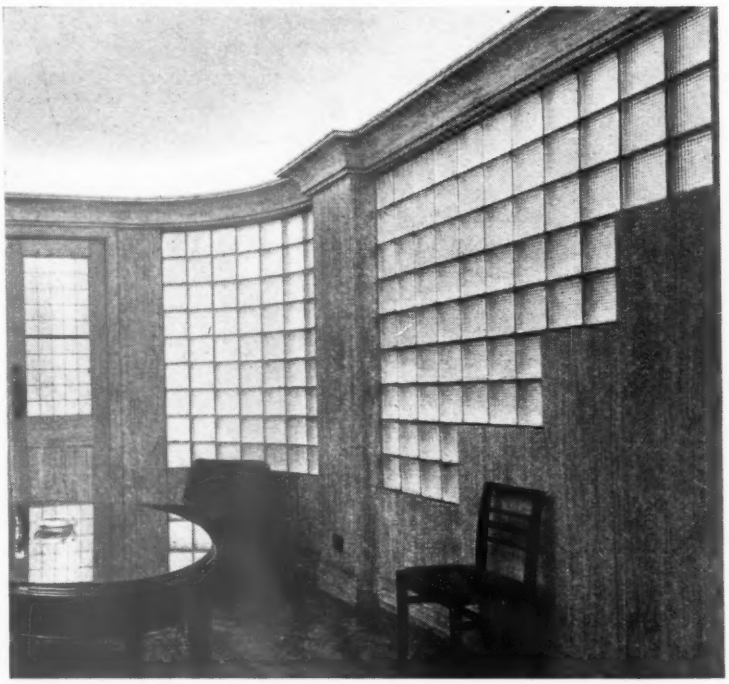

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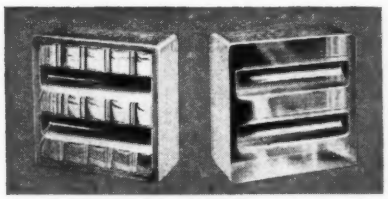
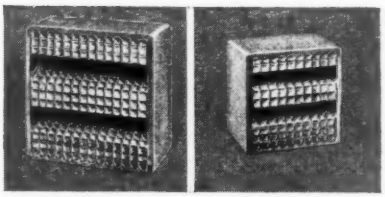
CLARK-EATON ALL-GLASS 'VENTIBLOCK'

Separately or in combination



'Ventiblock' Type 3—7¾" × 7¾" × 3⅛"

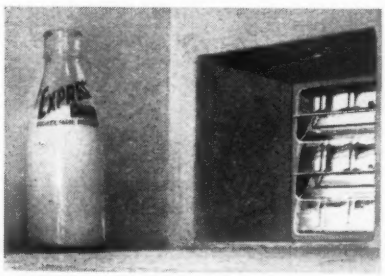


'Ventiblock' Type 32—7¾" × 7¾" × 3⅛"

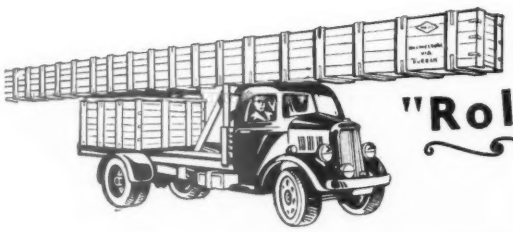
'Ventiblock' Type 2—5¼" × 5¼" × 3⅛"

The Clark-Eaton All-Glass 'Ventiblock' is made in three types, to match 'Insulight' Hollow Glass Blocks.

The 'Ventiblock' can be supplied with Shutter or Fly Screen, face-fitting or internal fitting pattern.

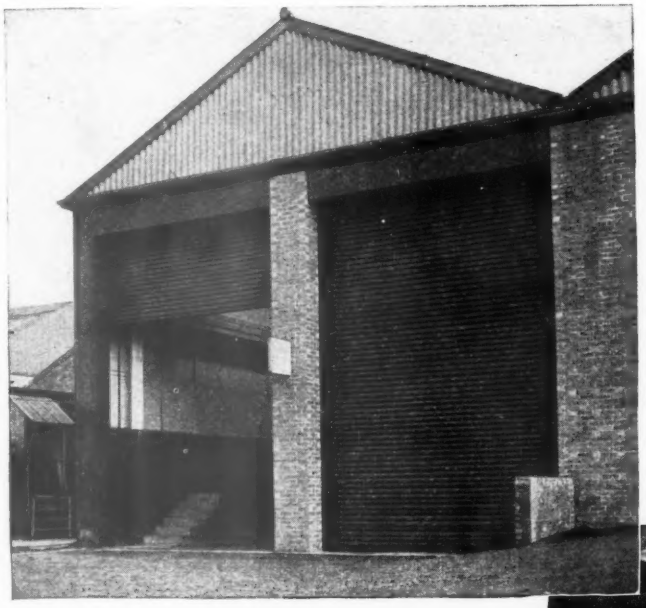


For larders and other purposes, the 'Ventiblock' can be used singly or in series to provide light and ventilation.

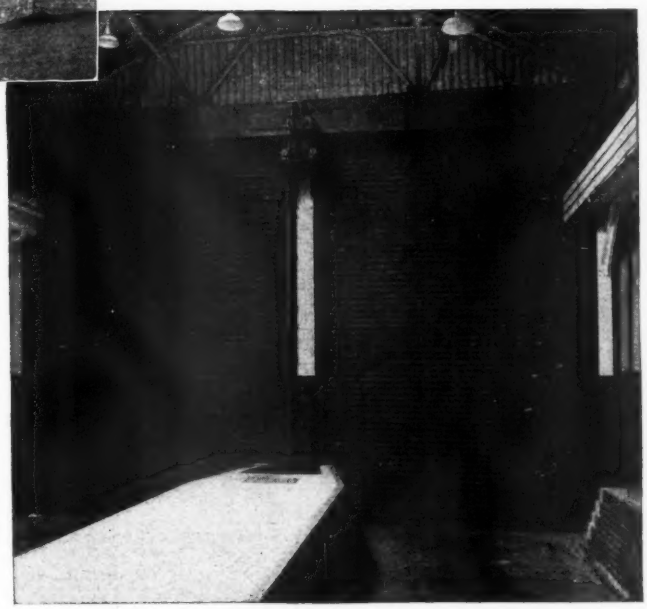


"Rolling round the World"

BOOTH STEEL ROLLING SHUTTERS



These shutters have a world wide reputation for efficiency and safety for the protection of openings, especially large openings. Overhead storage leaves unobstructed space in the immediate vicinity of the shutters.



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A terrace of typical Myton houses at Kingston-upon-Hull. Aesthetically they satisfy the most discriminating planner.

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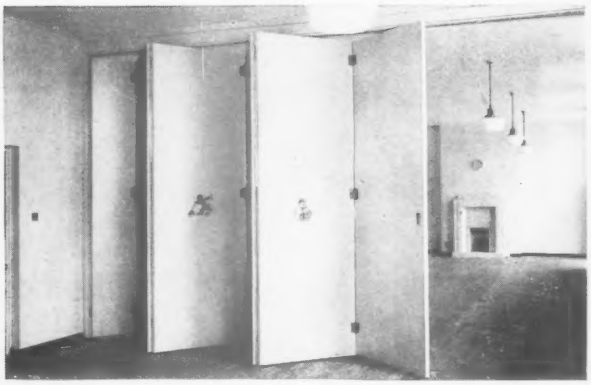
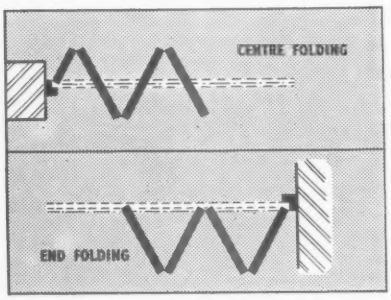


FOLDING DOORS AND PARTITIONS

Centre folding or end folding?
On the ground or overhead?



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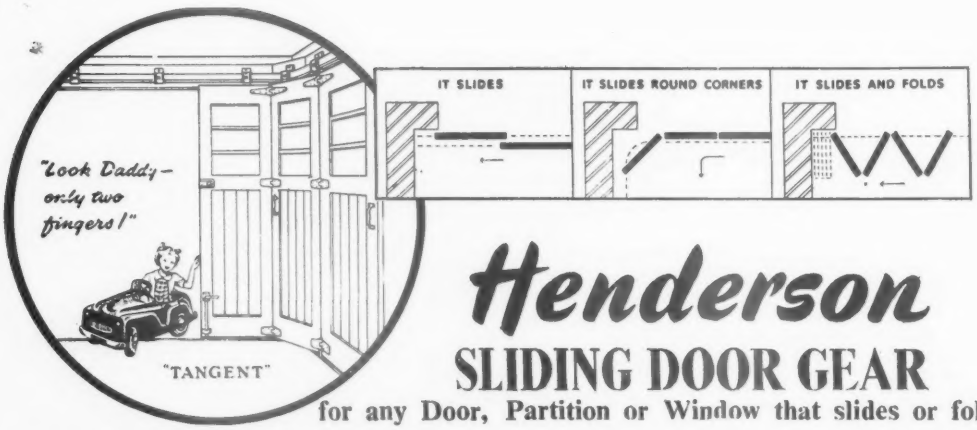
Handy Catalogue No. 52 contains diagrams and specification data.



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SLIDING DOOR GEAR
for any Door, Partition or Window that slides or folds

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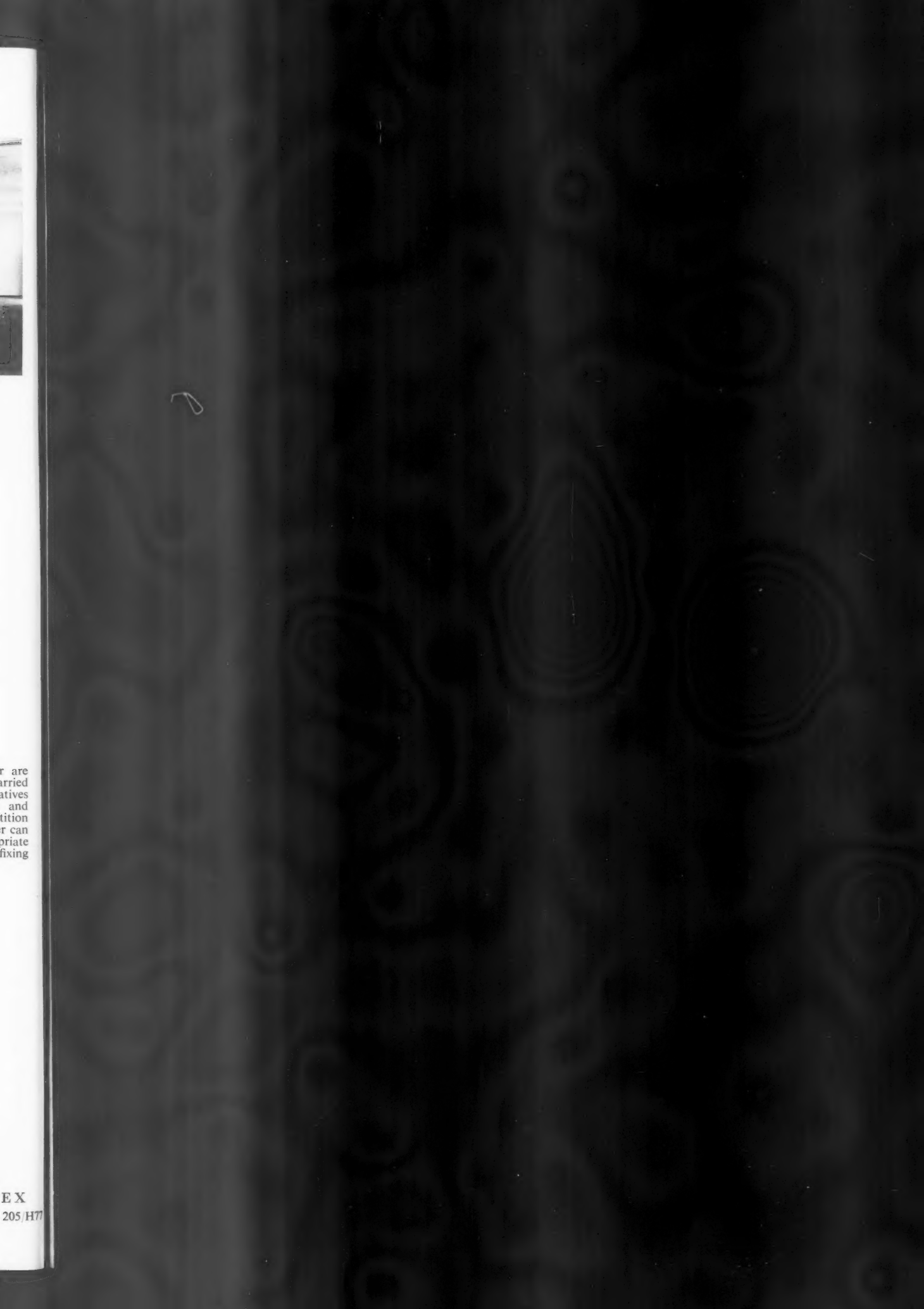

AJ

THE ARCHITECTS' JOURNAL

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

No. 3101 August 5, 1954 VOL. 120

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TREES IN THE SQUARES

It seems that some official or other has at last begun to get worried about the trees in the proposed Underground Garage Squares, and a survey is being made of existing water levels beneath the trees, in the hope that it will be found what changes are likely to occur after all the excavations have been made. This is a beginning, admittedly, but although we may be able to help such trees as are round the edge of the squares, I see little hope for those in the middle. Thus St. James's Square, for instance, may not be much altered, but Cavendish Square seems likely to be spoilt, except in the eyes of those who—like a certain London borough council—persist in regarding large trees as "not aesthetic."

NEWS FROM THE EAST

Prof. Gordon Brown is in England for a few weeks at the end of a world-tour, studying housing in relation to south-east Asian problems. He was recently awarded a Rockefeller fellowship for this purpose. He is doing the research in conjunction with Prof. Kirby, Professor of Economics at Hong Kong University.

*

He reports that the school of architecture at Hong Kong is flourishing, in spite of its failure to get RIBA intermediate recognition last year. It seems likely that the school course will be recognized shortly as qualifying for practice in Hong Kong and Malaya by the governments of those colonies, after which it will be much less dependent on what the RIBA thinks.

*

One purpose of Gordon Brown's visit to this country is to find new staff for his expanding Hong Kong school: a chance for you young architects with ideas, and a flair for passing them on, to acquire invaluable experience.

EXPENSIVE INFORMATION

I've just seen a copy of BS2489, 1954, *Sequence of Measurements for Printed Matter* which says only that "dimensions . . . shall be expressed in the sequence:

depth (vertical)
width (horizontal."

This means only that if you write 10½ in. by 7½ in. it is upright, like the type on this page, but that if it is 7½ in. by 10½ in. it is horizontal. Not, one feels, very good value for money at 2s. Admittedly BSI's only income, apart from grants and donations, is from the sale of specifications, but must the cost of all specifications be quite so high. How much, for instance, does it cost a young man setting up in practice to buy himself a full building industry set? £100? And how much will it cost him in time, money and initiation to insist that his staff write their dimensions in the prescribed manner — another £100 p.a.?

FORMLESS FORM

Bertram Hume, in his *Form and Reform in Architecture*,* has written a curious document. He has summarized many of the legitimate arguments against the romantic origins of the Modern Movement—this takes him from Pugin to Corb—and many of the rather less legitimate arguments for an architecture controlled by an aristocracy. He has parodied, in fact, most of Geoffrey Scott's famous "fallacies," but in such a confused way as to defeat any serious purpose he may have had.

*

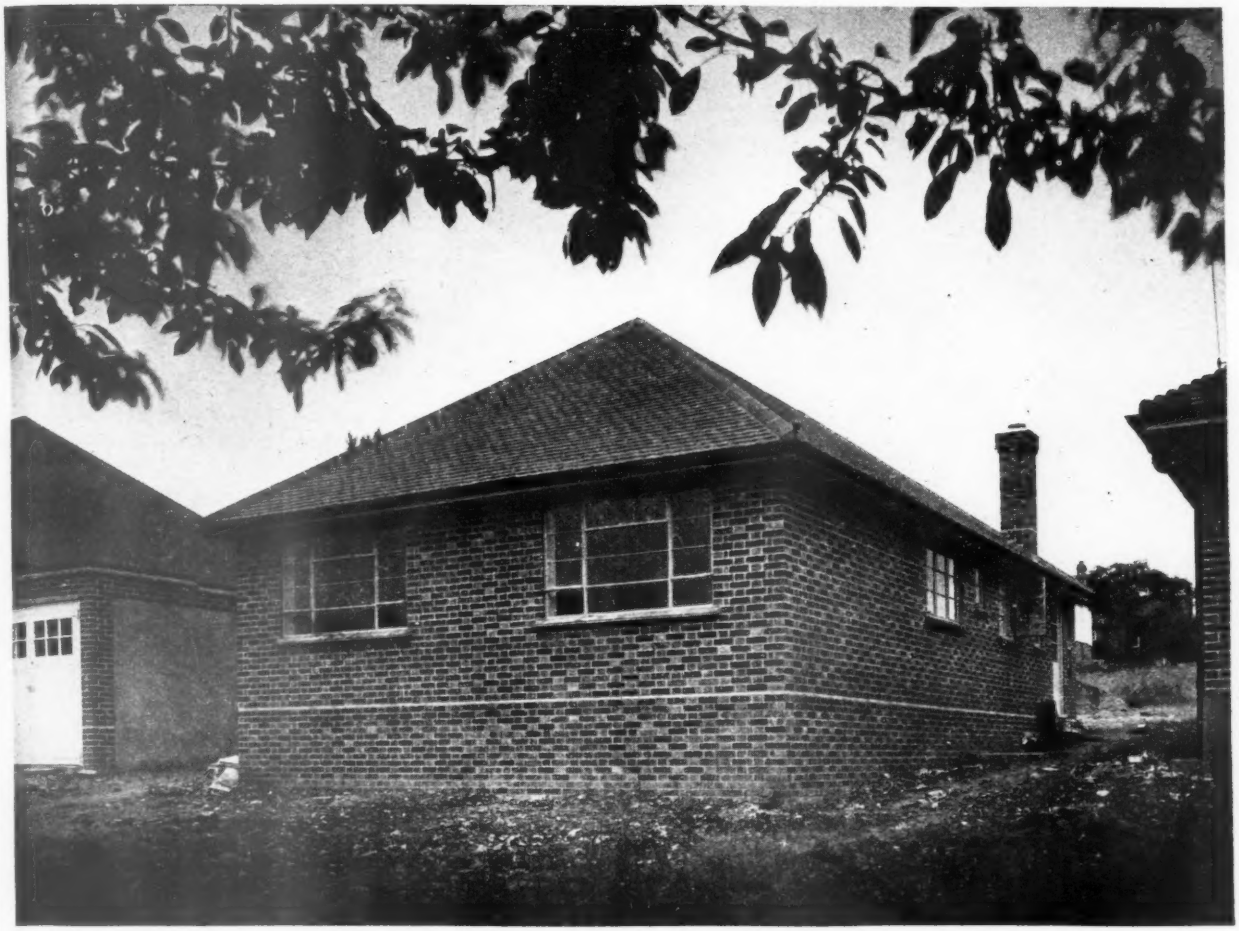
HOUSING: POST-FREE OR OTHERWISE

One would not expect the *News of the World*, of all papers, to be particularly interested in architecture, but ASTRAGAL has been shown—unlike Mr. Betjeman, staunch defender of this newspaper, ASTRAGAL never "sees" it, he is always "shown" it—an article by Desmond Donnelly in a recent issue on how to build a house for yourself.

*

There is nothing new in this article, but it *does* advise readers to go to an architect, on the grounds that he saves

* Halcyon Press. 15s.



It is sometimes difficult to realise that we have a Housing Minister, who is so interested in good housing design that he makes annual awards to architects. Or is he not really interested? Does he make the awards to architects simply because it is expected of him, even though he has struck a scarring blow at their profession by giving the spec. builder freedom to bang out his own design? Does he, perhaps, sympathize with the builder's point of view? And if you cannot believe that the builder has a point of view, *then turn to pages 154 and 156.*

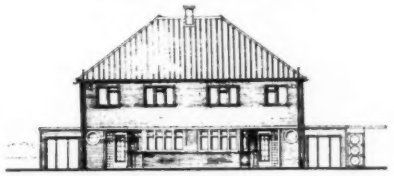
the client fees not only in building costs, but also as a trouble-and-worry-saver. Articles of this kind cannot be anything but useful to the profession as a whole no matter where they are published: anything that helps to put a stop to the private enterprise horrors deserves the profession's thanks. The sooner the public understands what the architect is for, the better it will be for everybody, even if they have to search for the reason among "serious offences."

*

More journalistic support for architects' plans comes from a recent issue of the mammoth circulation weekly, *Woman* .... ("next week a girl is faced with a momentous decision") .... in which readers are offered a sketch plan of a dream bungalow ("complete with elevation and helpful technical notes") for 9d., post free. The design, by a nameless consultant architect, is simple, unpretentious and compactly planned: the estimated cost (about £2,000) is not unreasonable, although it does involve Rosina and Vic—(I'm sorry, but that's what the imaginary clients are called)—in doing their own wall-papering and making their own dustbin covers: and the whole project seems pretty business-like. The difficulty with all post-free architecture—as the RIBA would no doubt find if it followed the Australian example of standard house plans at bargain prices—is of course that no one knows who to blame when, through amateur labour or poor construction, the job turns out not the dream it was supposed to be.

HELP!

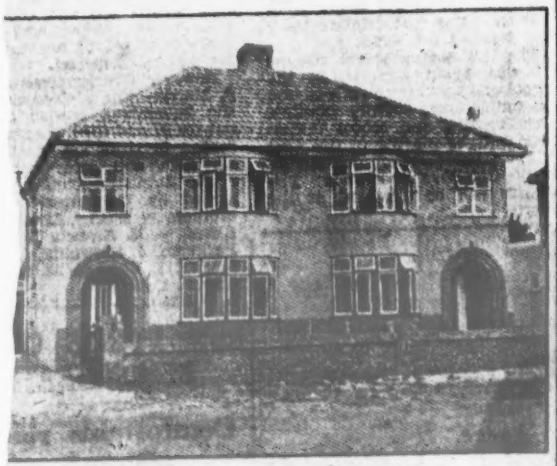
Having once laid one brick, ASTRAGAL always responds (with a faint misgiving) to the idea of building one's own house, and helping the neighbours in between whiles. But some self-build people seem



in need of rescue (see illustration). Co-operative work on the building of an estate should provide the material for real neighbourliness (or community spirit if you like) in future years. Yet the housing self-builders do, if this scheme in Surrey is any guide, belongs surely to the "We must grow a cupressus hedge, people can see right in!" era.

*

But sociology apart, couldn't they be



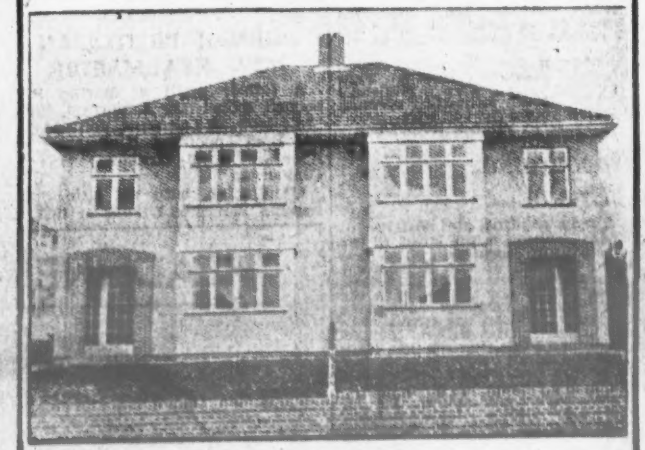
DOWNEND

ON THIS FINE NEW ESTATE.

Double Semi-Detached HOUSES

Comprising:—

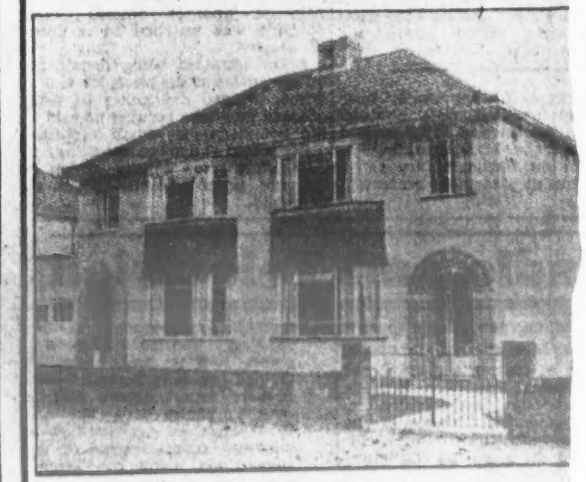
Three Bedrooms, Half-tiled Bathroom and Lavatory, Lounge, Dining-room, Hall, Half-



THIS WELL BUILT HOUSE *for* £2,000

has spacious accommodation and comprises:

Large well lighted Hall and Porch with Glass Screen, Kitchen, 15ft. x 8ft., with built-in Sink Unit; Dining Room with french doors; Lounge has a large bay added. Spacious Landing with Three Bedrooms and Front Bay with Bathroom and separate



NEW HOUSES AT FOUR ACRE ROAD, DOWNEND

(Off BADMINTON ROAD)

These Houses are offered for sale inclusive of Half Tiled Kitchen and Bathroom, Hot Water Circulation by Redfyre or Ideal

Spec. Housing: The Builder's Point of View

These examples of spec. housing are reproduced from a full-page advertisement in a Bristol newspaper. A reader, who sent us the advertisement, says that "it is not for old houses on old plots of land, but an entirely new estate (the roads of which are only on the drawing board stage of the Planning Authority) which is fully laid out with all amenities of school, church, pub, etc., yet these are the houses which are going to be put up." In illustrating spec. housing in the last few weeks we have repeatedly asked that the Minister of Housing, Harold Macmillan, should introduce legislation ensuring that all housing is architect-designed. But it is only fair that the builder should be given a chance of defending himself against the "interference" by architects that we are recommending. And this week we are pleased to print a letter (on page 156) giving a builder's point of view. Our builder correspondent has two main points to make: (1) "the customer's financial position, in many cases, is such that he cannot afford an architect's fee"; and (2) "an Englishman's home is his castle, and we feel that if your publication was shown to any one of our customers he would be most disgusted and very much annoyed at being told he must have something that he does not like." In other words, people cannot afford architects and even if they could they would be paying for something they did not want. We shall be pleased to print any more builders' views on the reasons why architects should not be used for house designing. In the meantime we renew, with even greater fervour, our appeal to Mr. Macmillan for legislation.

spared some of the complexities of traditional building (notice the porch and semi-bay window)? Or could they be put in touch with all the research knowledge we now have about houses (this house plan has an outside flue and *four* fireplaces).

*

Who should help these people?

FOREVER EDWARDIAN

As you go up the road from Florence to Bologna, or down beyond Vallombrosa on the road to Siena—and every architect should make these trips—you suddenly see, away in the valley, a patch of grass too green to be Italian, dwarf walls, garden-cypresses, an unmistakable enclave of Anglo-saxonry enclosing ranks of standardized white headstones. Whatever you think of Rupert Brooke you will agree, in these surroundings, that some plots of foreign soil *are* forever England.

*

But when you view the same scenes from England itself, as you may do in the new volume of photographs published by the Imperial War Graves Commission,* the image curiously reverses itself, and the unmistakable Englishness of a Tuscan half-acre becomes hauntingly exotic. This is partly due to the photographs themselves, which emphasize the qualities of the sites—and in Italy and Greece there are among the finest that any British architect has ever been asked to build on—but it is also due to the detailing and planning of the cemeteries themselves. The manner, very properly, is Edwardian Baroque, and upon the terraces and tempietti there gleams that warm and academic light which, in the experience of most of us, is to be seen only in the perspectives of Tite Prize entries. Even in the photographs of the new Airmen's Memorial at Runnymede you feel you are looking back into a lost world of architectural splendours and expertise, and that when the last of the great Edwardian houses has been pulled down, the last Gertrude Jekyll garden uprooted, it will require an enormous effort of the imagination to see how these Baroque gardens in the Appenines were connected with the life of England.

ASTRAGAL

* *Their Name Liveth*, Vol. I, published for the Imperial War Graves Commission by Methuen, 15s.

POINTS FROM THIS ISSUE

The Editors

THE BRS REPORT

THE annual report* of the Building Research Board is less interesting as an item of news than as an historical record of the way things are going. The highlights of the Report for 1953 are not difficult to pick out. Pride of place in the chairman's introduction is not unnaturally given to the work of the soil mechanics section in the aftermath of the East Coast floods, since this demonstrates so neatly the value of that kind of basic, long-term research which had to be curtailed because of the expenditure cuts.

But in the perspective of history this work is less important than the BRS productivity survey and its successful focusing of attention on mechanical equipment and site organization. The measure of this success can be to some extent gauged by the readiness with which the industry has taken up the tower crane which was the pivot of the survey. The tower crane implies so much in the way of changed building habits that it has become a symbol ; and the fact that there are now some two hundred in action in this country is evidence of an important revolution in contracting circles.

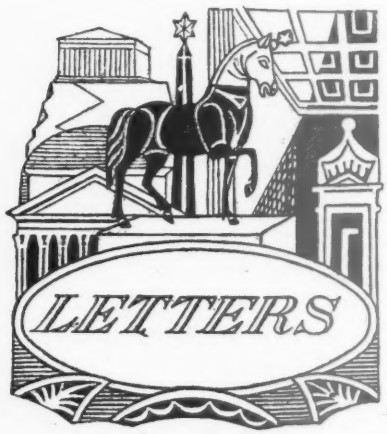
But if BRS have scored a success with the contractors there are signs that they have evoked less response from manufacturers. Thus the reform of the clay industries, which has figured by implication in so many previous reports, now seems further away than ever. Symptomatic is the change in the BRS manner of handling the problem of the waste of labour due to the size of the standard brick. The former (and common sense) answer was to change the size of the brick; the present answer seems to be to accept the brick and to concentrate on more efficient ways of handling it. This is the natural result of the willingness of the contractors to change and the unwillingness of the manufacturer ; but the solution itself may well be the wrong one.

The year also saw the successful completion of basic studies in daylighting and plumbing hydraulics. The daylighting studies have given us a tool for measuring inter-reflection

* HMSO. 3s. 6d.

of surfaces—a problem fundamental to our conception of architecture; and the plumbing hydraulics studies have resulted in a final understanding and vindication of the one-pipe system and should pave the way to a great clearance of palaeotechnic mumbo-jumbo.

Many problems persist: the effect of the human foot on a floor and the effect of the British climate on external surfaces still evade artificial testing. We don't know how to prevent condensation between claddings and linings and we don't know how to insulate light-weight walls against the passage of sound. And there are many other problems. It is reasonable to assume that the solving of any one fundamental building problem is worth millions of pounds: for this reason alone it is for architects to ensure that this work does not suffer through lack of funds—or of encouragement.



G. S. Hewitt, of Hewitt and Hillier Ltd., Building Contractors and Estate Developers

Jeffrey Webb, *A.R.I.B.A.*

Miss M. P. Stainer, Student R.I.B.A.

C. R. Vinycomb

Why architects are unnecessary

SIR,—We have been readers of your publication for quite a long period, and we were most surprised at your efforts on "running down" our building designs and also the Housing Minister, who, in our mind, has done a great job of work. We think that the Customers come first in their requirements, and our class of detached development cannot surely be classed with the awful terraced Council houses you have shown. We would also like to point out to you that:—(*a*) Our Estate is not built to "Ribbon Development" lay-out, as surely you must know the County Council does not allow same. (*b*) We are not speculative builders, all our houses are built to contract, plans passed and approved by the Customer before a brick is laid. (*c*) The houses are built to the Customer's own requirements and not ours. (*d*) Two of the houses you show, are architect-designed on the Customer's instructions. (*e*) All the houses are built to a first class comprehensive specification, and the brickwork is 11-in. cavity, and best materials are used.

We would also like to point out, that our Customer's financial position, in many cases, is such that he cannot afford an architect's fee.

The letters you print from B. A. F. Ellsmoor and A. A. Stuart Sharp (July 22), no doubt enlightened you on the subject.

The letter you print from Denys B. Coombe (July 22) has also been read, and he has most of his facts wrong. If he had visited us, we would have been quite prepared to build him a house to his own design, and arrange the mortgage, upon receiving a deposit of only 10 per cent. all in, including the freehold land.

We also think it was most unfair of you taking a photograph of the rear of the houses; in most cases, whether the building is architect-designed or otherwise, the rear always looks not to conform with the front elevation.

In conclusion, we would add that we have well over 500 customers waiting for us to develop elsewhere on the same designs, and have had only congratulations on our development. Our estate was sold out months ago, and we have been inundated with enquiries to build even individual houses on single plots all over the district where the Customer has his own plot of land, but we have had to refuse owing to our commitments.

However, we know that you must fill your publication with something, but think this time you have not really interested your readers, especially bringing in the Housing Minister.

Do not forget that an Englishman's home is his Castle, and we feel that if your publication was shown to any one of our Customers he would be most disgusted and very much annoyed at being told he must have something that he does not like.

G. S. HEWITT.

Shepperton-on-Thames.

[See page 154, ED.]

The Dangers of Mixing

SIR,—I am wondering how a young architect in private practice is to get work. The text-book beginning is an extension to Auntie's greenhouse. This is usually abandoned, but if it is not what next? One thing is said to lead to another, to a single small house or conversion and so on. But how does one thing lead to another? Something must happen to make it. The Port-Complexioned Fellow will say "Mixing, old boy, mixing. Only way."

Mixing? What exactly does this mean, having in mind Article 6 of the Code, as the young architect does? I take it to mean the making of contact with a lay person or persons in the hope that any conversation arising out of that contact will ultimately turn on a proposal to the architect's professional advantage. If this does not happen (and the architect is not allowed to do the steering) then the conversation must remain general and unhelpful. Now this arrangement might explain our accepted professional flair for giving tongue but it points also to the possibility of our technician talking himself into the grave without reward. It seems to me that he must make a gesture of some kind if he is to interest a building promoter and I cannot think of any gesture which could possibly be suitable and at the same time seemly in the eyes of the Code.

Success in a competition cannot nowadays be relied upon by the architect aiming to live on an earned income. Obviously he must fall back on Mixing—

"Odd that you should mention tomatoes, Mrs. Featherstone, as a matter of fact, a greenhouse I . . ." You see he is halfway into trouble already without saying anything really awful.

To the first of your readers to give me a helpful answer, Sir, I am in a position to donate a stick of rock bearing the name of my home town through its entire length.

JEFFREY WEBB.

Salop.

Mental Homes: Design Studies Wanted

SIR,—I was interested to read that one of the entrants to your students' competition wished to study the design and planning of mental hospitals. It seems, from my own limited observations, that this is one of the most neglected fields of architectural research.

The recent investigation by the Nuffield Trust into the Functions and Design of Hospitals produced some interesting results and most other classes of building have been officially studied and brought up-to-date. I would like to know whether a similar service has been rendered to mental hospitals in the last 20 years.

We are told that the stigma of mental illness has been removed and that there have been great advances in this branch of medicine; yet these facts would not be apparent from the study of most new mental hospital blocks. The private architect, much as he would like to, has neither the time nor the money to indulge in research; all he can do is to base his designs largely on what has gone before. The results are not always happy and are not very often published.

MOLLY P. STAINER.

Surrey.

No Stand-in Wanted

SIR,—Some weeks ago I addressed you in a letter under the above heading when I protested against the advertised terms of a newly-created appointment at Luton Municipal Borough where a qualified quantity surveyor was required to stand in and double up on the work of a valuation surveyor and estate agent.

Now I see that Luton's town clerk has declared by public advertisement that the borough engineer and surveyor is open to receive applications for a new appointment of a qualified valuation "assistant" who will be required to double up on quantity surveying.

Clearly, the higher-ups at Luton Town Hall have changed the key but not the tune!

Perhaps next month it will be an architectural assistant (qualified, of course) who will be required to stand in for both quantity and valuation surveying and as estate agent.

Luton. C. R. VINYCOMB.

COMPETITION

Liverpool Church

Sir Giles Gilbert Scott is to assess a competition, promoted by the Liverpool Diocesan Reorganisation Committee, for a new Church House and Chapel. The site is that of St. Luke's Church, Berry Street.

Conditions for the competition—for which prizes of £800, £400 and £200 will be given—may be obtained from P. Straw, secretary, Liverpool Diocesan Reorganisation Committee, Church House, 47, Moorfields, Liverpool (Deposit £2 2s.).

The last entry date is December 16.

SALTIRE SOCIETY

Housing Awards

For schemes completed during 1953, the Saltire Society is making two awards, one for houses and one for flats.

The winning scheme for houses is in Edinburgh, at The Inch, where Messrs. Stratton Davis and Yates, architects, have been responsible for carrying out large developments during the past few years, for Edinburgh Corporation. The road selected for special commendation is Lammermoor Terrace.

The Society says that "the area of housing completed during 1953 is characterized by careful siting and good proportion, while the variety of vista is a constant pleasure to the eye. The layout of roads and greens and the placing of each block combine to produce an interesting and varied environment, an achievement rare in a housing area as large as this—588 houses in the section completed in 1953.

"The architects were fortunate in the number of large trees on the site, and they have not only integrated them well into their layout but have also incorporated an encouraging amount of new planting: so that the setting of the whole scheme already has a feeling of maturity normally achieved only after a number of years.

"The Saltire Society Panel felt that the colour treatment of the exteriors might have been lighter and more courageous; and they also felt that in some details the interior planning could have been improved: but in general they felt that the design of details was good."

The award for flats has been made for the four blocks comprising twenty-four flats in Freeland Lane in the Murray First Development, East Kilbride, designed by Messrs. Gillespie, Kidd and Coia, architects, for East Kilbride Development Corporation. "These blocks," say the Society, "have been arranged in an unusual way, at right angles to each other, rather like dominoes, and linked together with glass-walled stairs serving adjacent blocks at intervals of half a flight, the blocks having been sited on a slope. Old trees have been incorporated in the site layout, which is charming and imaginative. The external colour treatment is good."

MOT

Underground Car Park

The contractors who have been asked by the Minister of Transport to prepare plans and estimates for underground garages in three London squares have had preliminary consultations with London County Council experts on the subject of safeguarding the trees in those squares. Contractors and experts will hold further consultations "on the site" as soon as the geology of the three squares has been adequately investigated.

The problem varies from square to square. In Finsbury Square there are only seven trees of mature age and they are all on the outer fringes of the square. In Grosvenor Square there are about 50 trees and most of them are also on the outer fringes of the square. But Cavendish Square is crowded with trees and shrubs in great variety.

It is not possible to safeguard these trees merely by prescribing a minimum depth for the underground garages. The chief need is to ensure that the underground water tables, on which the nourishment of the trees depends, are maintained.

AA

Japanese Landscape

The Japanese delegate to the Vienna conference of the International Federation of Landscape Architects, Akira Sato, reviewed the development of the Japanese garden through two thousand years, when he spoke at the AA, 34, Bedford Square, last week.

Mr. Sato, who before the war, designed the Royal Gardens in China, said that there were many common misconceptions about the origin, development and style of Japanese landscape architecture.

The Japanese garden layout, for example, had never been influenced by symmetrical factors, which predominated in China. Japanese landscape work had no formal guidance. Since earliest times, it had followed a natural style, reproducing and refining the best points of natural features like trees and plants. In Japan, there was no room for the rigid decorative plan. In its way, her landscape architecture closely matched her painting.

Mr. Sato said that the second century, which brought new religious influences to the Japanese from Korea, marked the first distinguished phase in Japan's landscape architecture; the Buddhist culture, in fact, had a notable impact then on every work of self-expression, yet it produced no garden in the present-day sense.

For this we had to wait until the start of the eighth century, when the arts of Japan and China combined to launch a "glorious era," three hundred years long, of fine houses, and finer gardens. The lake-and-island were the basis of the layout; the houses being arranged symmetrically. No relics of this period remained, although for many years priests upheld and preserved the fine arts—landscape architecture among them.

The tea ceremony—and the tea garden—came in with the 17th century. Tea houses sprang up right across the country; each of them had for its setting a small garden whose chief feature was simplicity and tranquility. The tea garden was always designed on a small scale, but this never prevented the creation of the essentially quiet atmosphere. Trees figured prominently in the layout of the tea garden.

From 1700 to 1860, said Mr. Sato, Japan's landscape art underwent significant changes; the period was marked by the setting up of Japan's military headquarters in the town which was later to become the capital, Tokyo, and the growth of this city and the social habits it created undoubtedly moulded Japan's landscape gardens in their modern pattern. City living produced the rock terrace and the leaf garden; the use of stones was picturesque from the start, but not fanciful. It was free, Mr. Sato claimed, from the fantastic influence of Chinese decorators—an influence implied by Chinese philosophy.

Japan's landscape architecture could be classified in the three broad groups of naturalistic, intermediate and near-escapist. But, in effect, it defied strict grouping and definition. Mr. Sato said that although he could commend for further study such books as "Japanese Houses and Their Surroundings," and "The Gardens of Japan"—both published just before 1900—they shared with the bulk of public opinion many misunderstandings about the development of the Japanese garden.

Mr. Sato said one of his chief objects in coming to Britain was to view the Chinese pagoda in Kew Gardens. Before he went there, his feelings about Chinese gardens had ranged from the unmentionable to the enchanting. Once he saw Chambers's pagoda, he was lost in admiration for it. It was not a replica; it was a unique creative work. English and Oriental gardens were very different things. Yet he could see this pagoda, and a fine Japanese garden, and feel just the same way. Such was the universality of human mind, and the spirit of international landscape architecture.

Mr. Sato illustrated his talk with coloured drawings, and with photographs of Japanese towns and gardens of yesterday and today.

Committee to Advise on Works of Art

Wing Commander E. E. Bullus, M.P. for Wembley (North), asked the Minister of Works, Sir David Eccles, in the House of Commons last week, what arrangements he was making to review works of art at present displayed in the Commons area of the Palace of Westminster.

The Minister, in a written reply, said that he had invited six members to form a small Advisory Committee on Works of Art. In addition to reviewing the works of art at present displayed, the Committee would consider the means of obtaining additional works of art for the Commons area of the Palace of Westminster. Offers of works of art should be made to the Secretary to the Committee (A.S. 16), Lambeth Bridge House, S.E.1.

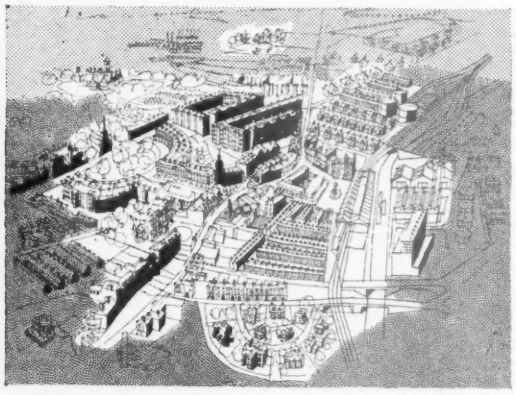
KENT

Heliport Proposed

James W. R. Adams, County Planning Officer for Kent, in his report on preliminary draft proposals for Maidstone, puts forward a suggestion for the building of a helicopter station.

Mr. Adams suggests that the valuable space which potentially exists over the East station, opposite the County Hall, and over the adjacent sidings, would provide a suitable site for a new transport centre incorporating a heliport, a bus sub-station and a certain number of shops. Mr. Adams writes that "it is fairly obvious that a helicopter station may quite soon be an essential provision

(continued on p. 159)



CONVERSIONS

Felix Walter, the JOURNAL'S *Guest Editor (Conversions), here reviews two books on the restoration and conversion of old houses. Mr. Walter has himself written on this subject in the* JOURNAL *(March 11, March 18, May 13, June 3 and June 17) and is shortly to contribute further articles. (On the left is a sketch by Gordon Cullen—published full size on March 11 — showing the types of property whose conversion Mr. Walter is writing about in his series).*

New Homes from Old Buildings
by H. Dalton Clifford
and R. E. Enthoven.
Country Life 18s.

In their foreword, the authors of "New Homes from Old Buildings" explain that they are writing for the layman rather than the architectural profession. While one agrees with them that a little knowledge can be dangerous, there are sections in this book where the reader would have benefited from more detailed information than is provided. For example, his immediate reactions to the illustrated section would be—What was the building like before it was altered? How much did it cost and what level of rents could be expected from these conversions? The inability to appreciate the scale of work involved in each project from the descriptions in the text will be shared alike by architects and laymen; so much more interest could have been derived from these examples had "before" as well as "after" plans supplemented the excellent photographs. A general note on the costs of each scheme would have brought into perspective the series of interesting but rather uninformative illustrations. Although licensing is considerably eased, the high cost of building creates its own control over constructional work; it is therefore disappointing that the layman, whose first consideration in any project must be his budget for capital outlay, can glean so little knowledge from these examples.

This careful selection of conversions, excellent as they may be in themselves, caters almost entirely for the small minority whose incomes are higher than the average. Have the authors overlooked the immense proportions of the conversion programme for housing those of slender means? This particular aspect is less noticeable in the main text which contains one or two chapters of great interest, especially those on financial and legal investigations. Amplification of the Housing Repairs & Rents Bill, which was in its early stages when the text of this book was being prepared, would have been impossible—but any future treatise on conversions for current reference should contain a simplified explanation of the essentials of this Bill once it emerges as an Act.

In the text one comes across odd statements which might be misleading. For instance, discussing the conversion of non-domestic buildings, the authors state that those who occupy unorthodox homes "have deliberately chosen to live abnormal lives." There seems little reason for living other than normally because your home was originally a non-domestic building. Again, on replanning houses with backyards, it is suggested that the best rooms should look on to them; this is a good idea so long as orientation is right or if there is dual aspect from within the rooms. It is also recommended when replanning basements that those which are damp or dark and cannot be improved should be used only for boiler rooms and stores. But surely, except for fuel, damp basements are useless for storage?

Finally, no reference is made to the engagement of a quantity surveyor or to his fees in the Summary of Professional Charges. In many areas contractors refuse to tender over a certain amount without bills of quantities and the layman should be aware of this additional outgoing. But he will find much to interest him in this book in spite of the omission of adequate supporting detail here and there. At the same time it is likely to encourage him to be more architect-conscious.

The Restoration of Old Houses
by Hugh Braun, FRIBA, FSA
Faber & Faber 16s.

In discussing the merits of antiquary versus architect in restoration work, Hugh Braun considers that the qualified architect can "easily recognise such discrepancies" as, for instance, original from restoration—or whether modern cladding conceals a structural frame of earlier date. But I am less convinced that in general, architects qualified over the past twenty years have either the feeling or specialised experience to support the author's crusade, worthy as it may be. Furthermore, his zest for restoration offers too predominant a position for "replacement" which can only increase archaeological confusion for later generations and retract from the value of the original.

This immense subject cannot be covered in detail by this small book which contains many interesting observations and methods about which Mr. Braun writes authoritatively —but at times his dogmatism raises the eyebrows. Although he encourages copyism to fill missing portions, he dismisses every alternative to white in the painting of all external architectural woodwork. His reference to gravity grouting of rubble walls, roof timbering and his section on cladding and rendering contain a number of useful suggestions but its value as a book of reference is reduced by an excess of generalisations.

Disappointing also is the lack of photographic illustration and the complete absence of any line details which might have elucidated recommendations left partially unexplained. For instance, the author suggests fireclay flue liners in some large chimneys, but does not explain how these are installed when lack of space precludes access. And again, in his chapter on fireplaces and the problems of the large open fire, one might have expected some reference to Count Rumford's late 18th century essays which offer valuable assistance in overcoming down-draught and in hearth design.

In general, the text of each chapter might have benefited from sub-headings for easier reference, particularly in the section on materials—and this might also have eliminated the intrusion in Chapter XIV, on floors and ceilings, the author's views on shrubs and the virtue of white painted gates in the landscape.

Of the creation of ruins, Mr. Braun recommends that worthy houses beyond economic repair should be divested of all valuable objects from their interiors, the more perishable parts of the structure and the removal of roofs and all timber—with only structural material easily maintained preserved in a setting of mown lawns. But where are the patrons who would undertake such philanthropic transformations for the benefit of posterity, and is this the best solution to the problem?

NEWS—*continued from page* 157

in such a town as Maidstone. The element of noise had heretofore led many persons to assume that landing and taking-off places for helicopters would have to be remote from places of residence or even businesses. It is understood, however, that this problem is likely to be solved." Mr. Adams makes the suggestion on the assumption that this will prove to be a case.

This idea is put forward as a counter-proposal to a suggestion by some local architects who thought the space would be particularly well suited for a "High-Maidstone" in the form of a modest skyscraper. Mr. Adams thinks such a project is an unrealistic one and would be unlikely to be carried out even if it were generally accepted. One of the reasons against the skyscraper proposal is the experience a number of towns have had in letting space in expensive new buildings at profitable rents.

IDEAL HOME

Design for Next Exhibition

Malcolm John Haylett, of St. Ives, Cornwall, has been chosen to design the setting for the Grand Hall section of next year's Ideal Home Exhibition, at Olympia.

No details have been given of the theme of Mr. Haylett's design, but a publicity handout points out that "it is a brilliant conception, full of colour and sharp original conceivings, shaping the vast hall into a form and atmosphere so different from the formal world outside that it will command a joyous response."

BRUSSELS

Summer School

An international summer school "dealing with planning and sociological matters" will take place in Brussels from August 17 to September 4. It will be held at the premises of the organisers, Institut Supérieur et Internationale D'Urbanisme Appliqué, . who write modestly: "We think useless to insist upon the great interest of this international meeting."

The summer school "consists of Improvement training for students in architecture, planning or social careers, as well as for already graduated technicians." The aim of the Institute is to ensure that "the participants get a synthetic view of the methods applied in the Institute to face the problems of our present world." Visitors to the summer school are "cordially invited to bring documents, maps concerning the problems they have to solve in their own country and to expose them to their fellow participants."

Anyone interested in this school, which will deal with "methods of urban analysis and survey; social topography; methods of synthesis for the urban texture; polyphonic organization; space planning; the architectural art in civilization, and so on," should write to the Institute at 78, Avenue Mozart, Paris.

DIARY

Exhibition of Students' Work. At the AA, 34, Bedford Square, W.C.1. Monday to Friday: 10 a.m. to 6 p.m. Saturday: 10 a.m. to 2 p.m. UNTIL AUGUST 14

New Life for Older Houses. Conversion of early nineteenth century houses to modern flats by the MOHLG. At Holles Street, off Oxford Street, W.1. UNTIL END OF AUGUST

LCC Open-Air Sculpture Exhibition. Holland Park. Daily, including Sundayr. 10 a.m. until dusk. UNTIL SEPTEMBER

BUILDINGS IN THE NEWS

Flats, Brixton Hill, London, S.W.2.

One of the 8-storey blocks, containing 40 flats, on the Roupell Park Estate, Brixton Hill, S.W.2. The estate, designed by Clifford Culpin (consulting engineer, W. W. Dewar) is for the Wandsworth Borough Council.

Showroom in Regent Street Re-modelled

The service centre of the London Electricity Board, in Regent Street, originally designed by Maxwell Fry in 1938, has been re-modelled since it was damaged by fire. The re-modelling was the work of Misha Black, Alexander Gibson and John Diamond.

BUILDINGS IN THE NEWS (*continued*)

Factory at Stevenage New Town, Herts.

A view from the south-east of the recently-completed factory for British Visqueen Ltd., at Stevenage New Town, Herts. The factory was designed by D. P. Reay, Chief Architect, Stevenage Development Corporation, L. G. Vincent, Deputy Chief Architect, and L. W. Aked, Group Leader. The factory, which is the largest production unit of polythene film in the world outside the USA, is owned jointly by the Imperial Chemical Industries, Ltd., and The Visking Corporation of Chicago. The factory will be illustrated in a later issue of the JOURNAL. *The general contractors were Gilbert-Ash Ltd.*

Children's Hospital: Out-Patients' Department

The new out-patients' department (architects: Easton and Robertson) to the Hospital for Sick Children, Great Ormond Street, W.C.1, is a reinforced concrete structure. The terrazzo floors are laid to slight falls to floor channels and gullies. Cleaning, is carried out by pressure spray nozzles at skirting level. A waterproof membrane is provided beneath all floor screeds. To reduce noise the ceilings are of absorbent backed slotted fibrous plaster panels. Heating is provided by embedded floor panels from a calorifier in the basement. Mechanical ventilation ensures adequate changes of air.

Shop in St. George's Street, Canterbury, Kent

This newly opened shop for David Greig Ltd. in St. George's Street, Canterbury, was designed by Robert Paine and Partners (Robert Paine, Charles Wright, Patrick Brown and Michael Crux). The consulting engineers are Ove Arup and Partners. The building comprises a shop and arcade, meat preparation room and cold stores, warehouse and despatch room, garages and yard, offices and flats. Shown here is the east facade, and the office entrance on the right. The reinforced concrete roof over the shop spans between the party wall on the west and the circular columns, seen in the photograph, which are faced with mosaic in three colours.

Following are extracts from the talk given by Michael Pattrick, principal of the AA School, at the school's recent prize-giving day.

THE AA SCHOOL

Michael Pattrick's Prize-Day Address

WE know quite well that the trends of thought appearing in Schools today are likely to be seen in the buildings of, say, five years' time. Sometimes it is easier to follow these new trends when they appear, perhaps a little magnified and exaggerated in school work, and before they have been damped down by the influences of real practice.

Architecture, unlike the other arts, does force itself upon the public. We have to live with it, whether we like it or not, and I am sure you will agree that we stand a better chance of liking it if we have some appreciation of what the designer is trying to say.

What, then, can we learn from this Exhibition? We should not look just to notice trends in fashion but rather to see if we can detect in it anything significant in the development and unfolding of a main theme. In fact, the working out of the idea of modern architecture. Naturally, students' work is in part affected by what has been going on in actual building. To understand just where we are today, one has got to take a quick glance backward to see what influences have appeared over the last few years.

On the whole, progress in establishing a contemporary vernacular has been rather erratic. There have been too many theories and it is still difficult to draw up any definite criteria on which to judge present building. For my part I am sure that the greatest cause for hindrance has always come through the misapplication of æsthetic principles. How often have we seen an architect with a complete understanding of what he was about, achieving, by patient experiment, something new and vital; in fact, something which might be considered as a work of art, and then, hardly before his building is finished, a host of imitators appear who mis-use and mis-apply any feature of his work that has taken their liking. Students might have got on better if there had been a little less "follow my leader" and some more basic thinking.

Even now I believe that occasionally some students' work is still influenced by those pre-war ideas when so many architects relied upon the elimination of all ornament as the sole basis for their designs. In external appearance their buildings looked new, but in sense of structure and plan development they were really little advanced on their predecessors. Frequently in their striving for simplicity they achieved nothing but an acute dullness. Then, when the war was over, and the pendulum began to swing the other way, we see a reaction against plainness and a desire for pattern-making on building façades. But so often designs have become almost aggressive in their anxiety to avoid anything that might be considered traditional form. Windows have protruded instead of being recessed; there is a conflict between vertical and horizontal emphasis, and at the corners of buildings, where one might expect to find strength, the supporting members have been deliberately concealed. Some of the forms produced by this outlook on architecture were no doubt interesting by reason of their novelty, but it has been a shock to some of us to see how soon the novelty can wear off.

I am sure that we can see in the student's work of today that he has profited by these mistakes, but we must have some sympathy for the post-war generation who have had to draw their ideas from such a perplexing world, and have been searching out their own philosophy in a maze and jungle of conflicting opinions.

Now, I believe, at long last we can see a change, and the uncertain period of the last ten years is drawing to a close. At any rate, as far as the AA is concerned, we have now had a clear indication over the last few years that there are one or two dominant and complementary lines of thought which seem to be quite unshakable. They are now forming the basic reasoning for a great deal of the work that is done in the School.

One of these has taken form in a determination to make structural expression and structural honesty a means of achieving unity in building. This idea is neither new nor revolutionary; we have heard a great deal about a structural expression many times before, but if one makes a really close examination of some past buildings, whose designers might claim that this idea is a virtue, we can see all too frequently that it has meant nothing more than the architect's whim to express only certain parts of the structure that have taken his fancy, and the whole approach has actually been romantic and intuitive with structural members used as stage props in a piece of purely scenic design. Such an attitude really presents a contradiction in terms. If the part played by structure in architectural æsthetics is to have any meaning at all, then there must be a more consistent and commonsense line of approach. It is precisely this which I hope is now beginning to make itself shown in students' work.

There is also a tendency towards formalism. Elements in design are being brought under stricter control. There has been a reaction against the dispersed and irregular plan form, and a return to symmetry. Ten years ago these developments might have been misunderstood, but in looking at this year's Exhibition, it would be quite impossible to imagine that the present efforts to retain something of classical order and precision could be interpreted as heralding a return to the extravagances of the Beaux Arts. I feel this is the time to pay tribute to our consulting engineers and lecturers, Mr. Samuely, and Mr. Arup and his Partners. We have been most fortunate in having at this time men who have made it their first duty to give students an enlightened attitude towards structure and its possibilities, and by doing so have turned a difficult and sometimes tedious study into an interesting and exciting subject.

Another influence which seems to have become established relates to the æsthetic value of enclosing space by related plains rather than by a sequence of separate rooms. This idea is also not new; in fact it has been evident in Oriental architecture for centuries, but it is comparatively new to Europe, and I feel may have a helpful influence on our own work. By following this approach one can achieve privacy and enclosure and at the same time retain a feeling of lightness. The use of glass and the opening up of the interiors of building can give a three-dimensional quality which enables us to understand and appreciate the structure as a whole.

In coming years we shall see the reconstruction of the congested areas of our cities. For economic reasons, buildings are likely to be both dense and high. For a long time we have been preaching on the merits of letting in more light and now that we have got it inside we must be sure to make the best use of it. There are occasions when transparency, rather than solidity may be a quality to be looked for in good building.

These remarks I fear are rather general, but I must not elaborate them any further as I also wish to say some-

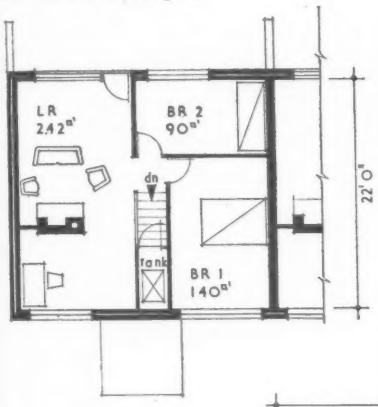
thing about some of the new developments in the School which we have brought into the curriculum during the last year.

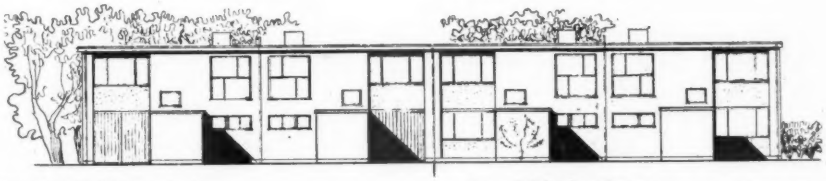
First of all, there is the Office Adoption Scheme. This provides for small groups of three or four students to have an official contact with an architect's office in London, so that they can make regular visits to work in progress. By the end of next session there will be some thirty-five offices helping with this scheme which, I hope, will go some way to bridging the inevitable gap between theory and practice.

Secondly, we have made arrangements this session to link up our own training with that of students of Engineering and Building Crafts. Engineering students from the Borough Polytechnic and from the City and Guilds College have been co-operating in our studio work. This scheme is only in its infancy, but they have given invaluable help, and I believe that on their side this early contact with the architect should be most useful, it will certainly give them a foretaste of some of the peculiar questions which architects are apt to ask their engineering consultants.

DESIGN FOR A FLEXIBLE TERRACE HOUSE

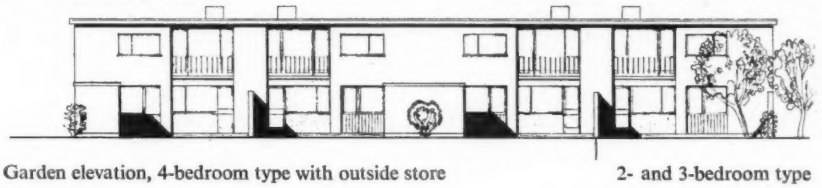
Standard first floor plan





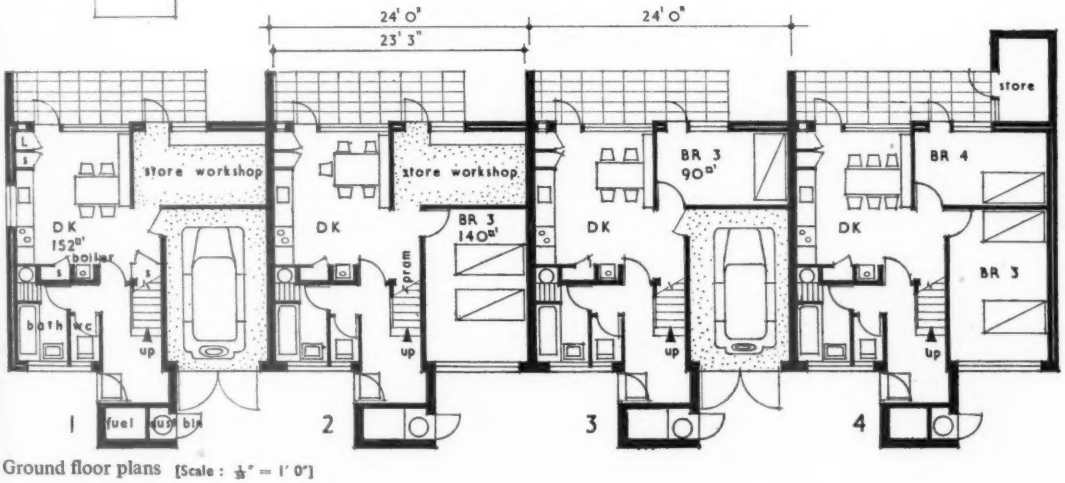
Front elevation, garage type

3- and 4-bedroom type [Scale : 1/8" = 1' 0"]



Garden elevation, 4-bedroom type with outside store

2- and 3-bedroom type



Ground floor plans [Scale : 1/8" = 1' 0"]

This scheme for a house was designed by Christian Hamp (Colcutt and Hamp) to try to overcome the problem of the inflexibility of the normal terrace house. Without structural alteration to the walls a 2-bedroom plan (1, above), 3-bedroom plans (2 and 3), or 4-bedroom plan (4) can be achieved. The basic layout and overall size of each house remains standard although a diversity of types may be built in one terrace according to the needs of occupiers. The changes in number of bedrooms takes place on ground floors, and the first floor arrangement remains constant throughout. For simplicity and economy of structure all internal load-bearing walls are continuous vertically through the houses, the staircase is one straight flight and all plumbing is kept to the ground floor. The cold water storage tank is accommodated in a bulkhead over the staircase; since the bathroom is on the ground floor there is a sufficient head of water without the necessity to project the tank above roof level. The total area of the 4-bedroom house, excluding stores, is 1,074 sq. ft. and the estimated cost £1,775, which is 32s. 4d. per ft. super including outbuildings, and 2s. 9d. per ft. cube, based on London rates of wages.

HOUSES

1. at LEZIATE, KING'S LYNN, NORFOLK

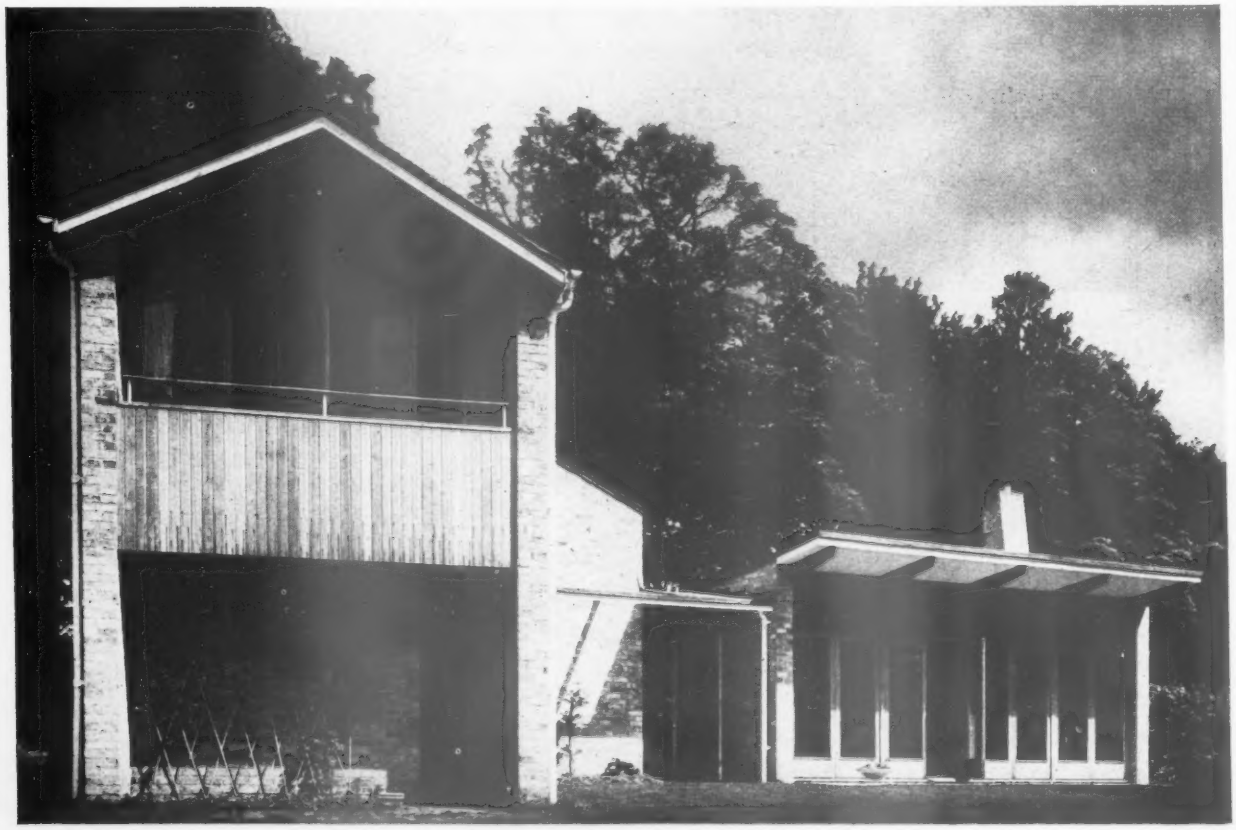
designed by MICHEL F. BOULESTEIX

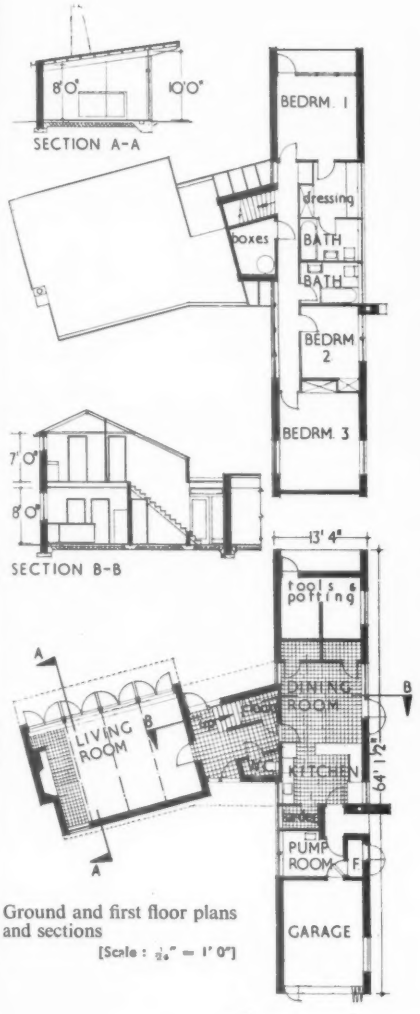
2. at LONGLEAT, FARNHAM COMMON, BUCKS

designed by H. C. BISHOP

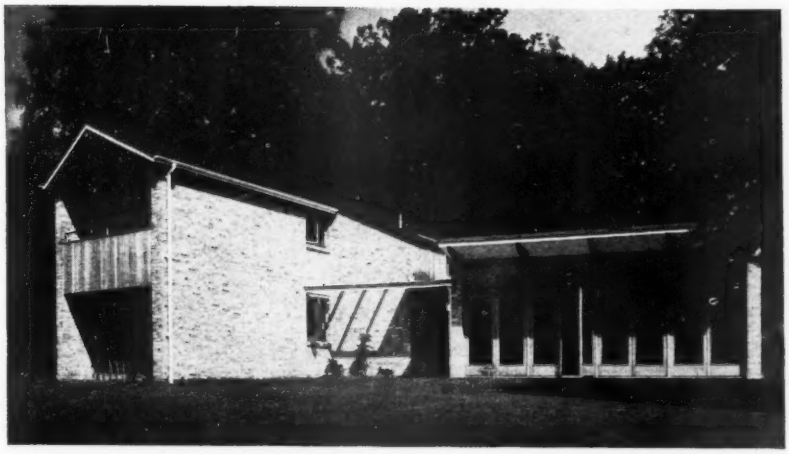
The garden on this site of 1½ acres near King's Lynn had been developed by the client for many years before the house, illustrated here, was built. A belt of trees borders the site to the north, and to the south there is a view across a golf course. There is a slight fall from north to south and a line of trees marks the southern boundary of the site.

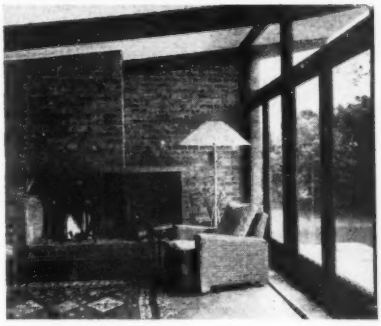
The house at King's Lynn from the south.

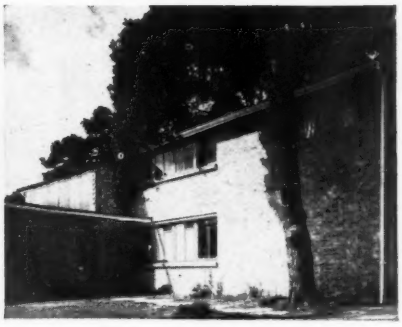




Ground and first floor plans and sections
[Scale : ⅛" = 1' 0"]





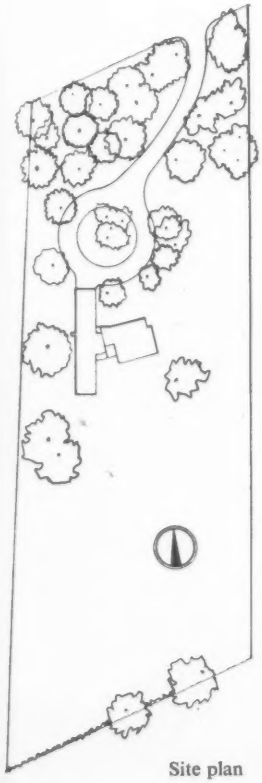


Top, from the south-east. On the right is the single-storey living room. Above, part of the living room, showing the large south windows. Above right, the two-storey wing from the north-east.

HOUSE

1. at KING'S LYNN, NORFOLK

designed by MICHEL F. BOULESTEIX



Site plan

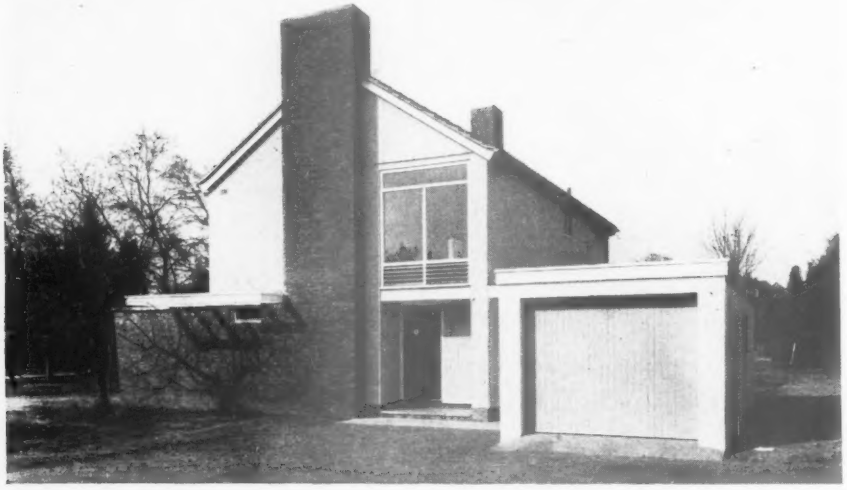
PLAN.—The clients required accommodation for two people as permanent residents in the house, and additional rooms, including a second bathroom, for frequent visitors. The house is divided into two distinct parts: firstly the two-storey wing, on a north to south axis, containing the dining-kitchen, garage and utility room on the ground floor and bedrooms above; and secondly the single-storey living-room wing. The latter is placed at an angle to the main part of the house to avoid too much feeling of enclosure and to gain a better outlook over the garden. This room is completely glazed on the south side.

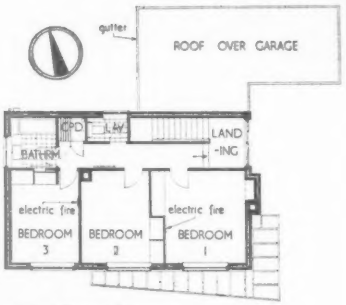
CONSTRUCTION.—External walls are of 11-in. cavity construction with an outer leaf of brickwork and inner leaf of cement and sawdust blocks. The roof of the main block is a simple double pitch on timber trusses and the living room roof is single pitch with timber primary beams and light secondary joists. Ground floors are of concrete and the first floor is of timber construction.

FINISHES.—External walls are faced with Leicestershire straw-coloured bricks or red cedar vertical weather-boarding; windows and frames are in varnished Columbian pine and are purpose-made. The roof of the two-storey block has insulating board under the rafters and is covered with cedar shingles. The living room roof is finished with felt on strawboard panels. The south wall of this room has double glazing with special insulating glass. Floors are finished with cork tiles in the living room, polished deal boarding on the first floor and quarry tiles elsewhere.

SERVICES.—Heating is by built-in electric convector heaters, thermostatically controlled, except in the living room, where electric tubular heaters are sunk in a floor channel with a grille along the glazed walls. The cost was 50s. per ft. super, excluding garden works and some fittings. The licence for the house was granted in November, 1951.

The general contractors were A. F. P. Hill & Son. For sub-contractors see page 180.



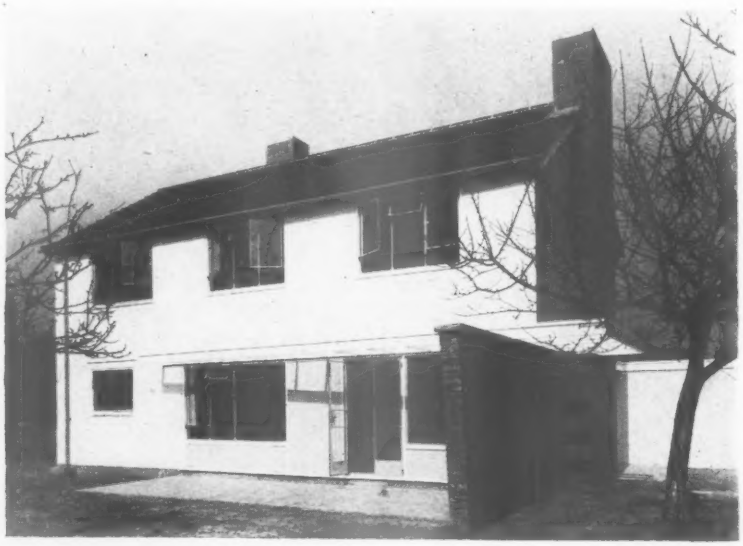


First floor plan

Ground floor plan [Scale : $\frac{1}{8}$" = 1' 0"]

Above, the house and garage from the east. Below left, the terrace outside the living room windows, with an open rafter roof over it. Below, the south facade.

GENERAL.—The house illustrated on this page is one of a pair built on adjoining sites for sale. The client's requirements were that each house should have a floor area not exceeding 1,500 sq. ft., one large living-dining room with space for dining in the kitchen when required and as many rooms as possible to have a south aspect. The site has a 10 ft. high hedge on the north boundary, screening a pre-war housing estate and existing orchard trees that were retained. Because of a wood of tall trees to the south of the site, the houses were built to the north of the site. A rectangular plan was chosen with a main entrance at the east end and all the main rooms, including the kitchen, on the south side. The living room can be divided by a curtain hung from a curtain track concealed in the ceiling. All bedrooms are large enough to take a double or two single beds. External walls are of 11-in. cavity brick construction. The brickwork is colour washed ivory or grey externally, except for the chimney stack screen wall and plinth, which are faced with Buckingham grey facing bricks. The ground floor is concrete and the first floor is of 8-in. by 2-in. joists at 16-in. centres and boarding, ceiling heights are 8 ft. on the ground floor and 7 ft. 6 in. on the first floor. The roof is timber framed and covered with brown pantiles on felt and battens. Generally walls are distempered internally, except the end wall of the living room, which is in grey facing bricks, continued externally to form a screen to the terrace. The price for sale, including all site works and fees, was £5,250. The general contractors were William Hartley & Sons. For sub-contractors, see page 180.



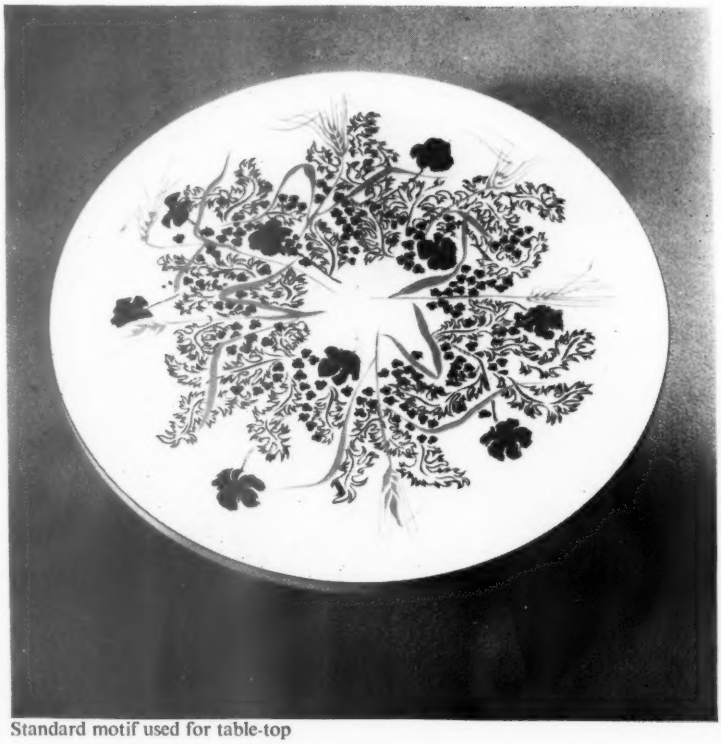
HOUSE

2. at FARNHAM COMMON, BUCKS

designed by H. C. BISHOP

The Architects' Journal Library of Information Sheets 479. Editor: Cotterell Butler, A.R.I.B.A.

Interlaminate mural designs in gymnasium



Standard motif used for table-top

Interlaminate mural designs in hotel restaurant

'FORMICA' LAMINATED PLASTICS: PATTERNS AND COLOURS 2

15.S8 'FORMICA' LAMINATED PLASTICS: PATTERNS AND COLOURS 2

This Sheet is one of a series dealing with Formica laminated plastics. It illustrates the standard motifs and original mural designs which can be incorporated within the abrasion-resisting surface of Formica sheets. This Sheet should be read in conjunction with Sheet 15.S7, which describes the standard patterns in which Formica is obtainable and the three types of decorative treatment from which selection may be made. Other Sheets in the series give general data on the material and details of its applications.

General

All Formica decorative laminated plastic sheets are faintly patterned in one or other of a range of standard patterns. Using these standard patterns as backgrounds, it is possible to superimpose on them various designs, some of which are available, as standard, in a choice of colour combinations and others carried out to order. Details of the standard pattern range are given on Sheet 15.S7. The sheets may be obtained with a matt or glossy finish and it should be borne in mind that a matt finish makes colours appear several shades lighter than the glossy and considerably softens the contrast in patterns.

Decorative Treatment

The constructional principle and method of manufacture of Formica plastic laminates makes possible certain variations in the standard patterns and colour combinations. They also permit of the incorporation of special motifs or mural paintings within the abrasion-resisting decorative surface of the material. A choice of three types of decoration is available as follows:—

Interlaminate all-over designs: This range (outside the standard pattern range) is fully dealt with on Sheet 15.S7.

Standard motifs: A range of standard border patterns and floral motifs is available, designed for 24 in. table-tops and adaptable for door panels, etc. For table tops they are supplied as 8 imprints on an 8 ft. by 4 ft. sheet. Each print is in several colours on any standard background, excluding dark woodgrains. A choice of colours is available for some designs. The photograph on the face of the Sheet shows an example of one of these designs used for a table-top.

The cost varies according to the number of colours used, but averages from about 20 per cent. to 60 per cent. above the price of standard sheets.

Original designs can be produced in consultation with the production studio.

Interlaminate mural designs: These are designed individually for each scheme. The technique and medium for this type of decoration are new and the painting must be carried out under controlled conditions by the staff of the production studio. Drawings and patterns can extend over several sheets and an accurate register of line and colour can be made. The normal size of sheet for this work is 8 ft. by 4 ft. in $\frac{1}{16}$ in. veneer for bonding rigidly to plywood panels. The photographs on the face of the Sheet show two examples of original mural designs for differing applications.

Costs for mural designs must be individually estimated.

Further Information

The manufacturer maintains a technical advisory department and a production studio which is available to answer questions and advise on problems relating to this subject generally.

Compiled from information supplied by:
Thomas De La Rue & Co. Ltd.
Address: Plastics Division, Imperial House, 84/86, Regent Street, London, W.1.
Telephone: Regent 2901.
Telegrams: Delinsul, Piccy, London.

PAINTS GENERAL DATA

The Architects' Journal Library of Information Sheets 480. Editor: Cotterell Butler, A.R.I.B.A.

Surface	Preparation
New woodwork.	The wood must be dry, smooth, clean and free from grease. It should be rubbed down well with sandpaper, across the grain, finishing along the grain. Screws should be countersunk and nails punched just below the surface, depressions being stopped or filled after priming. The surface should be dusted off. Bad knots should be cut out, filling with sound wood. Normal knots or resinous areas should be coated with two thin coats of Hall's Knotting. For softwoods, Brolead red and white lead primer should be used. When hard, it should be rubbed down wet and stopped. For low grade resinous softwoods, e.g. Douglas fir, Columbian and Oregon pine, Brolinium aluminium primer should be used. For hardwoods, especially teak and cedar, Brolinium aluminium primer is recommended, after thorough washing with white spirit to remove natural oil from the surface. A very open grain should be filled with a paste filler after the primer has dried.
Old woodwork (previously painted).	If paintwork is reasonably sound it should be washed down thoroughly to remove dirt and grease, rubbed down with sandpaper or pumice to a matt surface, any bare patches primed, and all cracks stopped and made good with filler where necessary. Where in bad condition, it should be completely stripped off with Ripping Paint Remover or a blow lamp. If damp has penetrated considerably, the latter process will assist drying. The surface should then be primed as for new wood. Where the surface has been previously tarred, creosoted or coated with bitumen paint, it should be scraped down to the bare wood and sealed with two coats of Brolinium aluminium primer before applying the undercoat and finish. A similar treatment is recommended where red colouring, previously applied, is " bleeding " through.
New iron and steel.	The surface must be dry, clean and free from oil, grease and rust. Mill scale must be removed by chipping, scraping, or oxy-acetylene flame; rust, by mechanical cleaning or wire-brushing. To eliminate remaining traces of corrosion the surface should be treated with Bristol Phosphate Rust-inhibiting Solution, brushed on with a clean brush or dabbed on with a cloth. When all the rust has dissolved (in a few minutes), excess solution should be removed and the surface left over-night to dry. The solution has no weathering properties and *must* be protected by normal painting, after a priming coat of Brolac Anti-corrosive Primer. Where new metalwork has been primed before leaving the factory, but rust and flaking have occurred, the surface should be thoroughly cleaned down and all particles removed. It should then be primed completely or where affected, with Brolac Anti-corrosive Primer. If the factory coat is satisfactory it should be simply cleaned down.
Old iron and steel (previously painted).	If paintwork is intact, firmly adhering and free from all traces of rust, it should be washed down thoroughly to remove dirt and grease. It should then be rubbed down with sandpaper or pumice to a matt surface, and bare patches " spot-primed " with Brolac Anti-corrosive Primer 570/25. Where paintwork is in bad condition it should be completely stripped off with Ripping Paint Remover or a blow lamp, then primed as for new work. Where traces of rust remain, Bristol Phosphate Rust-inhibiting Solution should be applied before priming.
New aluminium.	This should be cleaned thoroughly and degreased, then rubbed lightly with fine emery paper or steel wool and white spirit, removing all traces of corrosion (this takes the form of a white powdery deposit). A first coat of Hall's Grey Chromated Primer 570/7 should then be applied.
New galvanised iron.	The zinc coating offers a poor key for painting and must be treated by either: (*a*) Weathering for at least six months, by which time a minute film of oxide will have formed, giving sufficient key. (*b*) The use of copper-sulphate solution to etch the surface slightly (after thorough degreasing). One coat Mordant Solution 527/4 should be applied by brush and left for 10 minutes. It should then be washed down with water, using hot water for final wash if possible, as heat dries the metal. A first coat of Brolac Anti-corrosive primer should then be applied.
Lead, copper, brass, etc.	These surfaces should be cleaned free from grease and etched slightly with steel wool and white spirit to form key, before priming with Hall's Grey Chromated Primer 570/7.
Old aluminium, lead, copper, brass, galvanised iron, etc. (previously painted).	If paintwork is sound it should be washed down thoroughly to remove dirt and grease and rubbed down to a matt surface (as previously described). Where in bad condition it should be completely stripped off with Ripping Paint Remover and primed as for new work.
New lime plasters, brickwork, masonry, cement rendering, asbestos-cement. Hardwall (retarded hemihydrate plasters). Anhydrous (Keene's, Parian) and anhydrite (Pioneer) plasters.	All new surfaces *must* be allowed to dry thoroughly before applying a permanent oil finish. (If decoration is required within 6 months on a still " wet " surface, Murac P.E.P. or Bristol Oil-bound Water Paint should be used.) All loose material should be scraped off, including sand and any efflorescence. Cracks, defective masonry, pointing, etc., must be made good. When the surface has dried out, it should be given one or two coats of Brolaceal Damp- and Alkali-resistant Primer to minimise the risk of breaking through of any remaining moisture and to ensure adhesion. *Note:* Very porous outside walls should be coated with Bristol Silicone Water-repellent Solution to prevent seeping of moisture through to the inside.
Building boards.	Many building boards are in use, ranging from very soft and absorbent types to hard and smooth types. Many are liable to absorb large quantities of water and should be primed with Brolaceal to prevent the penetration of moisture and/or to assist adhesion. It is advisable to paint the backs and sides with the same material. In general, it is recommended that the advice of the manufacturer of the particular type of board to be used, should be obtained.

38.A1 PREPARATION OF SURFACES FOR PAINTING

This Sheet describes the general preparation of different surfaces for any type of painting. The table gives detailed instructions and the following notes explain the steps that must be taken to protect the surface and the paint film from the effects of chemical reactions. Sheets 38.C3 and 38.D2, published 13.5.54 and 8.7.54 respectively, deal with the use of Brolac Enamel Paint and Murac P.E.P. Plastic Emulsion Paint for finishing the surfaces.

General

The quality of the finishing coat and its suitability for the particular application will greatly affect the life of any paintwork and the manufacturer's recommendations, in the latter respect especially, should be carefully followed. However, no paint film, of whatever type or quality, will successfully fulfil its decorative and protective functions for as long a period as may reasonably be expected unless the surface to be painted first receives the correct preparatory treatment, followed by a build-up of primer, undercoat and finish, each compatible with the others. This often entails not only the preparation of a surface that will take the paint well, but also some chemical treatment to prevent any reaction that may have a deleterious effect on the paint or the surface itself. This cannot be carried out better than by using a complete paint system made and recommended by one manufacturer.

Removal of Old Paint

Where it is required to remove old paint rapidly and effectively, Ripping Paint Remover is recommended. It may be used for all types of paint, e.g., enamels, cellulose, plastic emulsion paints and oil-bound distempers. It is in liquid form ready for use and is non-caustic and non-inflammable. It softens the old paint film and remains wet for some considerable time; it will strip easily to the bare wood. Two coats should be applied, the first brushed on in one direction and the second dabbed on a few minutes later. After 5 to 15 minutes, the old film should be removed with a rag, scraper or wire brush. When it is proposed to repaint with plastic emulsion paint it is essential to wash the stripped surface with white spirit, allowing it to dry out thoroughly, but this is not necessary when followed by other types of paint.

Priming of Woodwork

The function of the primer is to fill up the pores in the wood, prevent suction and form a key for subsequent coats. Bare wood soaks up the oil from paint and John Hall's primers are carefully formulated to overcome this tendency. The table on the face shows the types of primer for various types of woodwork.

Priming of Metalwork

Exposed layers of metal become oxidised and crumble and this rusting process, once started, bites deeper and deeper into the metal, even where there is no longer any contact with the atmosphere. It is therefore essential that all trace of rust should be removed and that the subsequent paint film should be completely impervious to moisture. Bristol Rust-inhibiting Phosphate Solution, applied after the removal of all loose rust and mill-scale, is a useful pretreatment that neutralises and absorbs into the dried film any remaining rust and leaves a phosphatic coating over the metal surface which can be painted after 24 hours without further washing down. It provides a quick and efficient protection for iron and steel pipes, gutters, radiators, roofs, etc., such as was formerly only available as a factory process. The solution has no weathering properties and *must* in turn be protected by normal painting, including an anti-corrosive primer. Brolac Anti-Corrosive Primer 570/25 is specially prepared for this function, having an alkyd resin medium with special rust-inhibiting pigments, including zinc chromate, red oxide and aluminium flakes.

Priming of New and/or Absorbent Wall Surfaces

Where any moisture is imprisoned beneath the surface it will eventually break through and attack an unprotected paint film, especially where chemicals are present (as in many plasters, etc., which release strong alkalis). It is therefore essential that all new surfaces be allowed to dry out thoroughly and this may take months. After the drying-out process is complete to all appearances, one or two coats of Brolaceal Damp and Alkali-resistant primer should be applied before normal painting. This preparation seals and primes the surface, offering strong resistance to any dampness remaining in the surface and preventing the formation of alkaline deposits. It is grey-green in colour and less easy to apply than ordinary coats, but it is unsurpassed for the purpose for which it is intended. Very absorbent old surfaces should be treated in a similar way to new surfaces.

Note: Where it is essential to paint new surfaces without allowing time for them to dry out fully, Murac P.E.P. should be used in accordance with instructions given in Sheet 38.D2.

Damp Resistance

Where dampness from outside the building is likely to seep through porous materials and cause staining and disruption of the interior paint film, Bristol Silicone Water-repellent Solution should be applied externally. The solution is colourless and can therefore be used on brickwork and masonry without altering its appearance, but the special resins used in its composition make it proof against normal weathering. It soaks into the pores of the material, giving protection to a depth below the surface, with the vital advantage of still allowing the masonry to " breathe." The surface should be cleaned and made good and the solution applied when the weather has been dry for several days and is likely to remain so for a further 6 hours. Where two coats are necessary on coarse or absorbent surfaces, 6 hours should be allowed between each.

Further Information

The manufacturer maintains a technical advisory bureau which may be consulted on colour schemes and techniques of paint application.

Compiled from information supplied by.

John Hall & Sons (Bristol and London), Ltd.
Address : Hengrove, Bristol, 4.
Telephone : Whitchurch 2162.
London Office : 1-5, St. Pancras Way, London, N.W.1.
Telephone : Euston 2262.

SECONDARY SCHOOL

in MIDFIELD WAY, ST. PAUL'S CRAY, KENT

designed by E. D. LYONS, L. ISRAEL and T. B. H. ELLIS

in collaboration with S. H. LOWETH, formerly County Architect

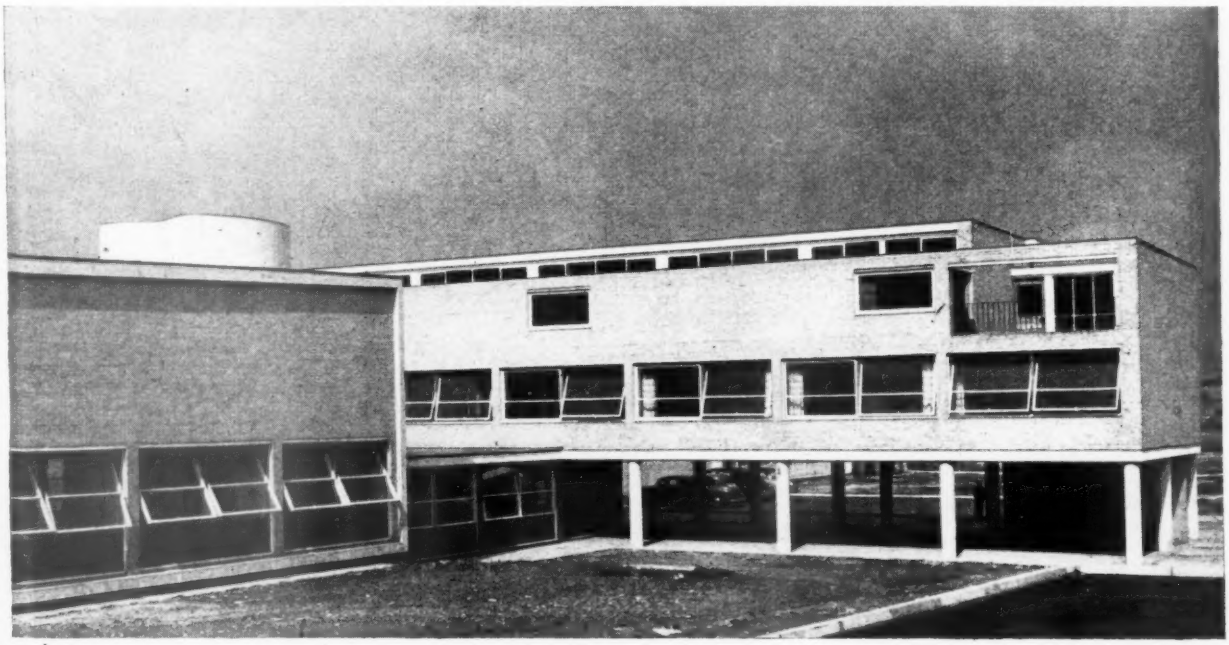
consulting engineers, structural, W. V. ZINN, services, J. STINTON JONES and PARTNERS,

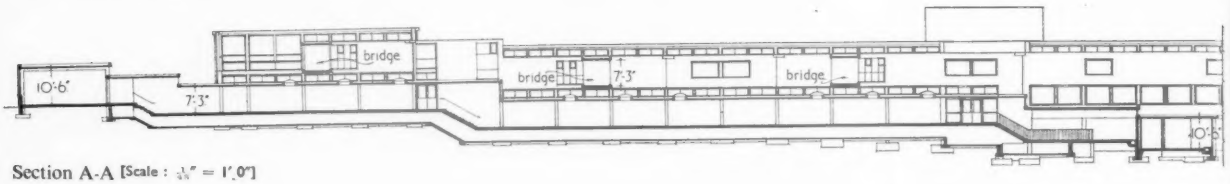
quantity surveyors, ALFRED J. H. SPRAGUE and SON

The north facade of the main block.

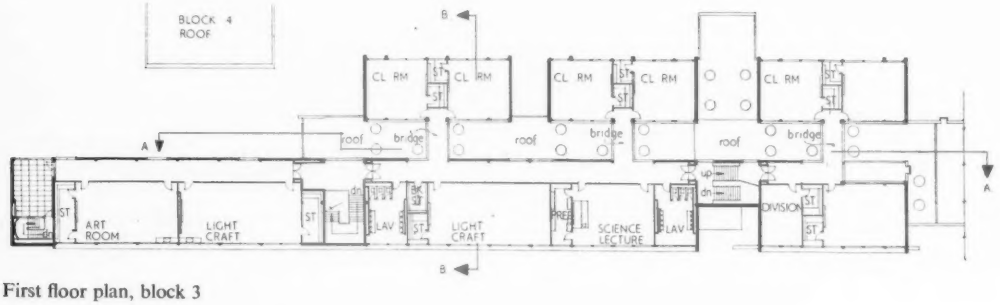
The Chislehurst and Sidcup Midfield Secondary School for boys is a four-form entry secondary modern school for 680 pupils and serves the Chislehurst, Sidcup and St. Paul's Cray areas, as well as the LCC St. Mary Cray estate, which surrounds the site on three sides. The school, planned in 1949, allows for the addition of a community centre and library to connect with the canteen and assembly hall. The main spine block, the east end of which is seen below, is on an east-west axis and runs across the contours of the site.

The two-storey block and assembly hall, on the left, from the south-east.

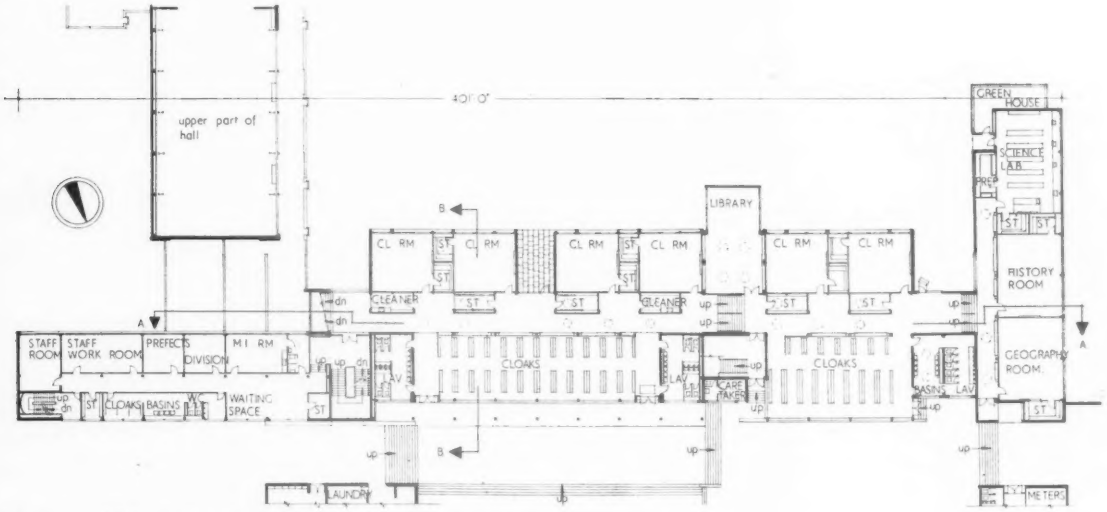




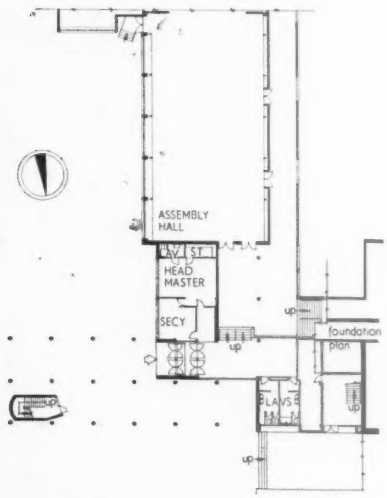
Section A-A [Scale : $\frac{1}{16}$" = 1'-0"]



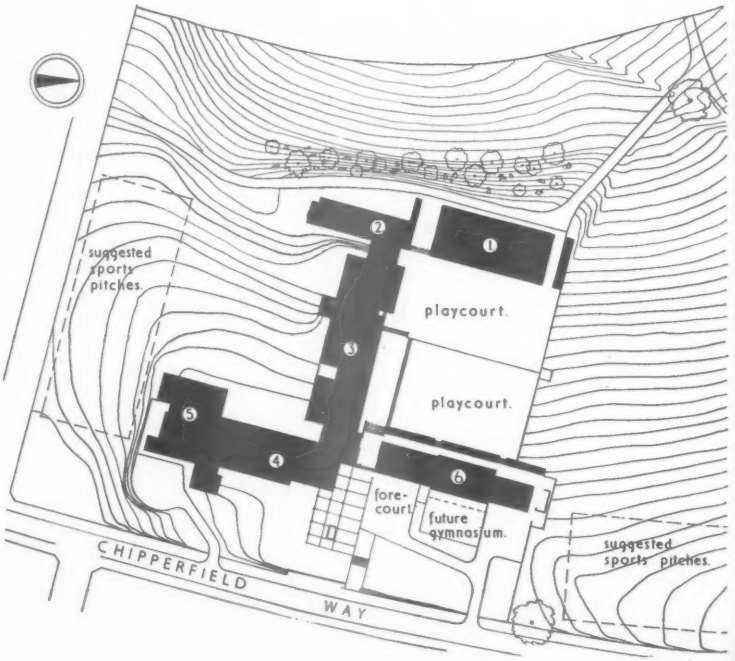
First floor plan, block 3



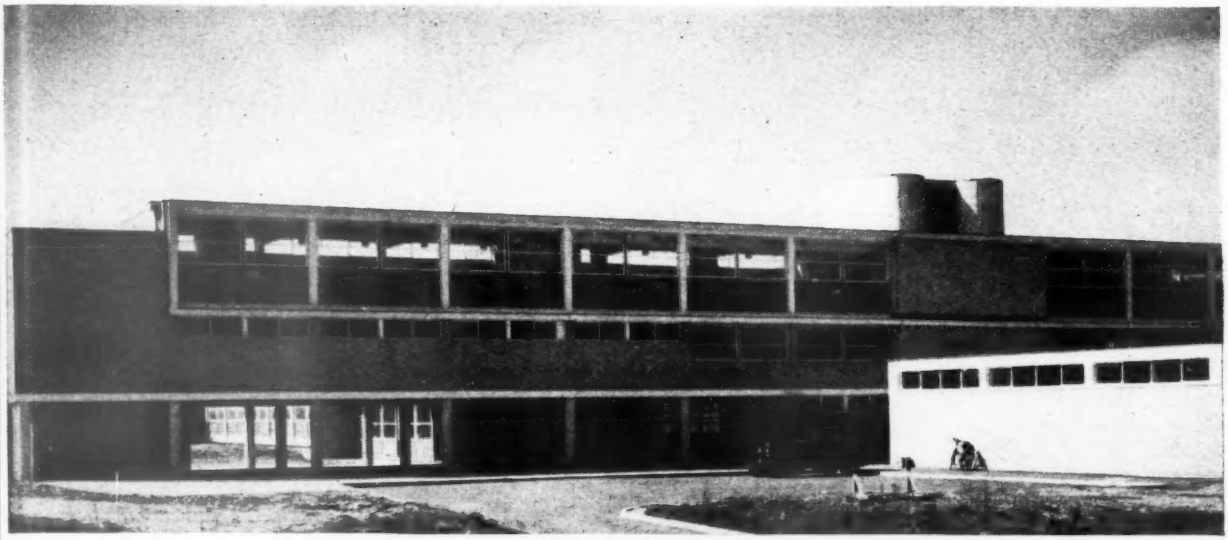
Upper ground floor plan, blocks 4, 3 and 2 [Scale : $\frac{1}{16}$" = 1'-0"]



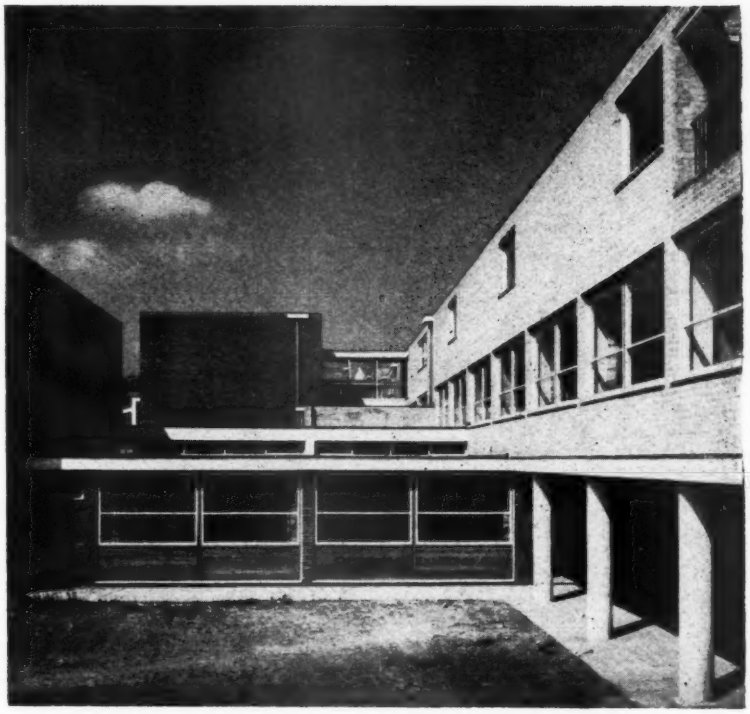
Ground floor plan, blocks 3 and 4



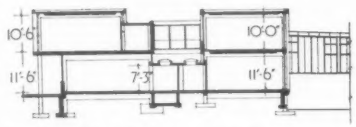
Site plan



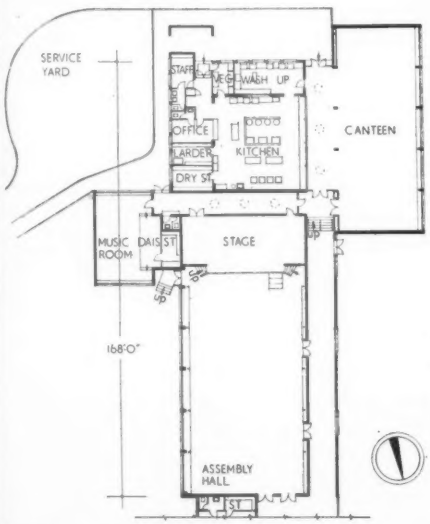
Above, the east-end of block 2, the main classroom wing. Right, in the centre, is the link between the classroom wing on the right and the north wall of the assembly hall, on the left.



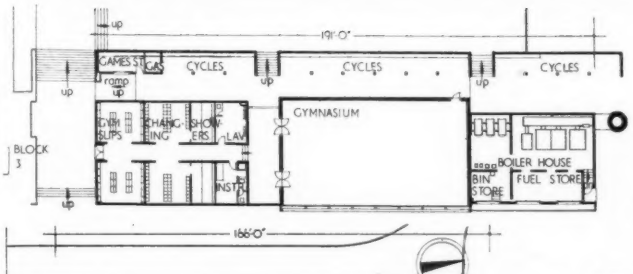
SITE.—The ground rises steeply to the west from a hollow below the level of the main road, and contains no trees. The lowest part of the site is occupied by wings containing canteen, kitchen, assembly hall and gymnasium. At the higher end of the site are the science laboratories and workshops and the connecting wing is a two-storey spine block containing classrooms, cloakrooms, staff rooms, etc.



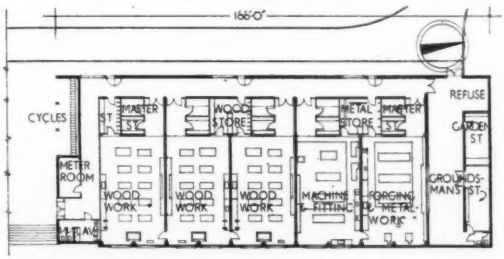
Section B-B [Scale : $\frac{1}{16}$" = 1' 0"]



Ground floor plan, blocks 4 and 5



Ground floor plan, block 6

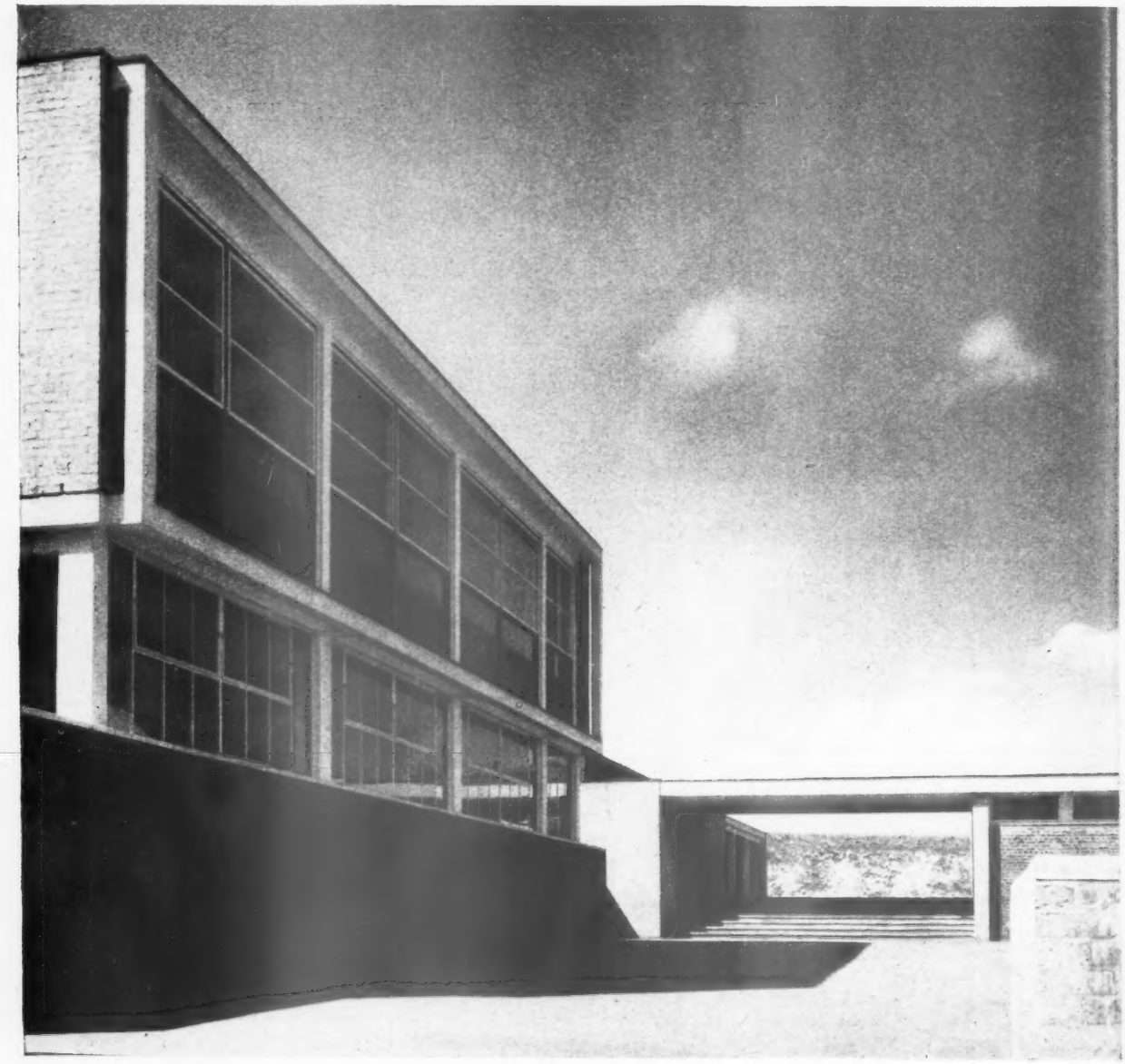


Upper ground floor plan, block 1. [Scale : $\frac{1}{16}$" = 1' 0"]

SECONDARY SCHOOL

at ST. PAUL'S CRAY, KENT

designed by E. D. LYONS, L. ISRAEL and T. B. H. ELLIS

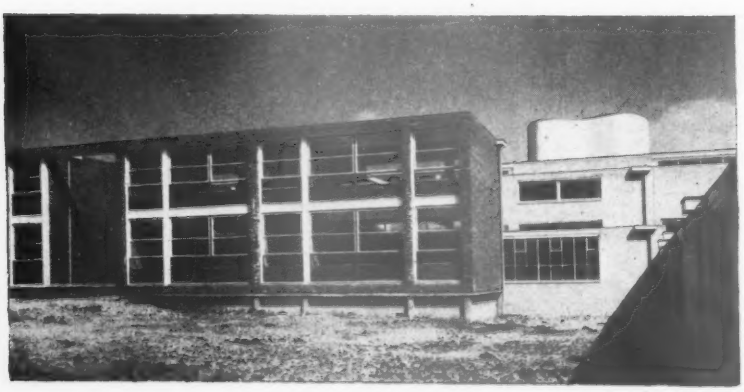


Above, part of the north facade, block 2, and the link with the workshop, block 1. Below left, part of the south facade of the classroom wing, block 3.

SECONDARY SCHOOL

at ST. PAUL'S CRAY, KENT

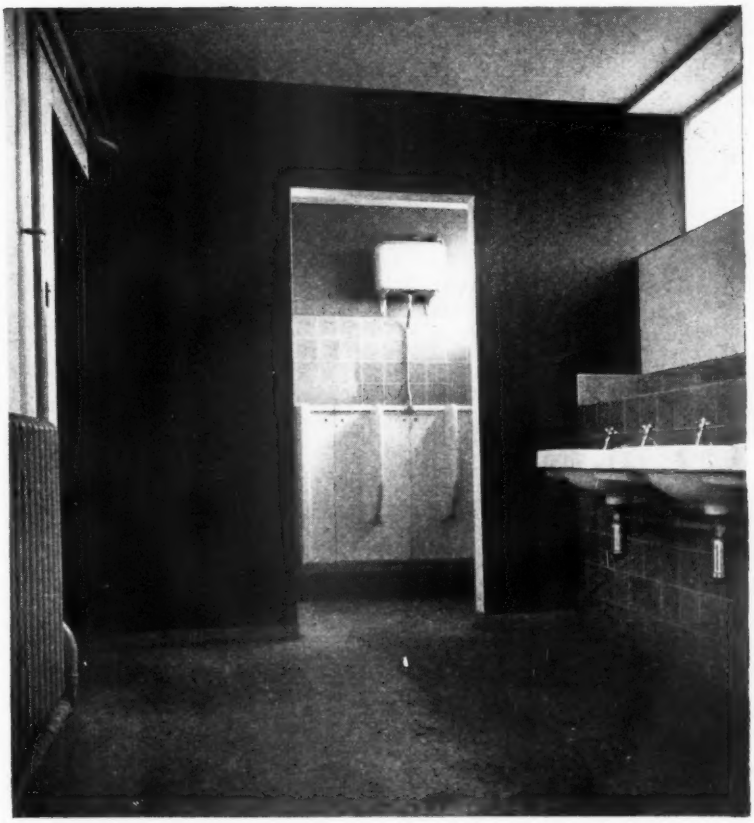
designed by E. D. LYONS, L. ISRAEL and T. B. H. ELLIS



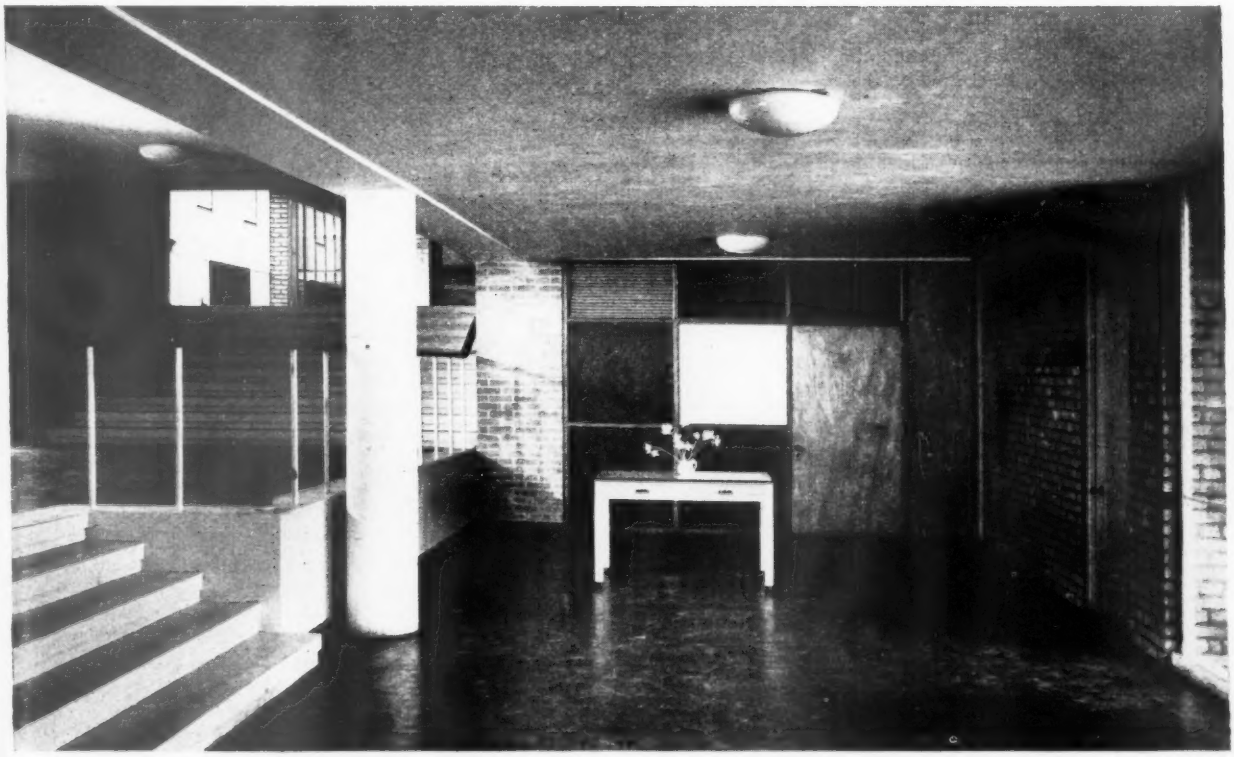
PLAN.—Classrooms are planned to get maximum sunlight and are on the quiet side of the school. Through-ventilation is provided in all teaching rooms, including those in the two-storey wing. The boys enter the school from the terraces on the north side of the spine block and pass through the cloakrooms to the main corridor which serves the classrooms on the south side. Above the cloakrooms, overlooking the playcourts, are the art and light crafts rooms, and from the corridor on the south side of the rooms are bridges to pairs of classrooms. The most noisy parts of the school are isolated.

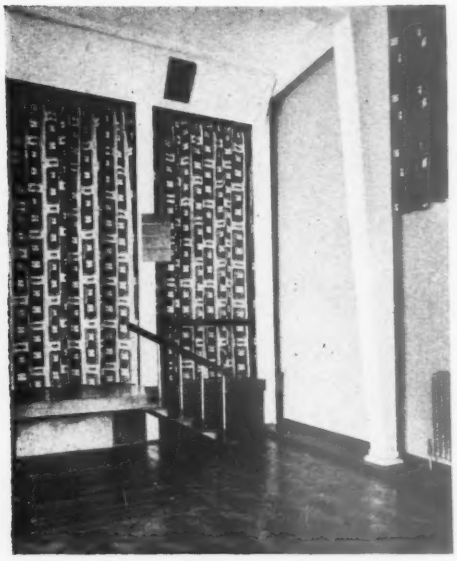
CONSTRUCTION.—All the buildings are of reinforced concrete frame construction, with the exception of the assembly hall and gymnasium, which are steel frame. Brick is used for the external panel walls. Floors, and roofs, apart from the barrel vaulting to the workshops, are of precast r.c. slabs.

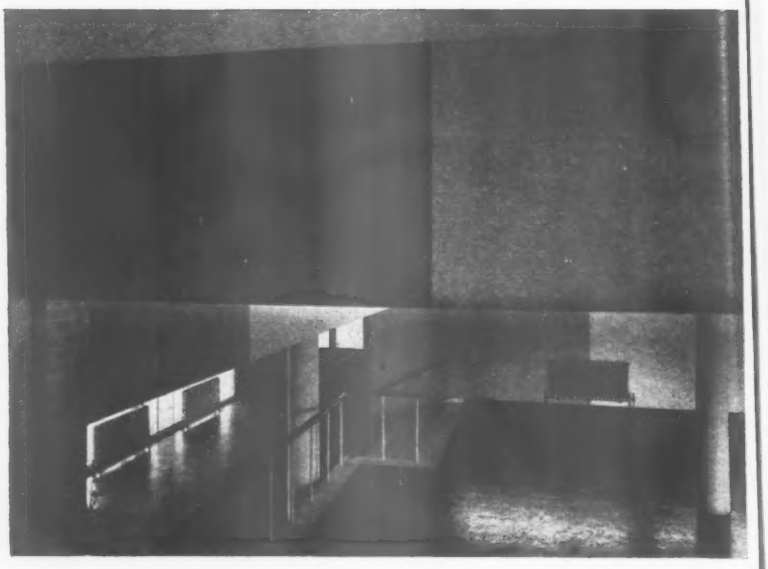
FINISHES.—Yellow and dark brown stock bricks have been used for the external wall panels, with light cream coloured pointing. For clerestory lights, and also in corridors and cloakrooms, there are metal windows with sash-type opening lights. Elsewhere there are wood-framed, double-glazed, centre-side-hung windows. Internally most of the walls are of fairfaced brickwork with blue pointing or finishes of emulsion paint. In the entrance foyer and on the staircases the wall surfaces (and spandrels over the stairs) are divided into panels of various colours. This is intended to give the effect of a Mondrian painting in three dimensions. The colours used throughout the school are from the Monsell range and are cadmium scarlet, dark slate grey, mustard, Wedgwood blue, grey, cerulian blue-grey and pale duck-egg blue. Floors are covered with thermoplastic tiles with a black marble



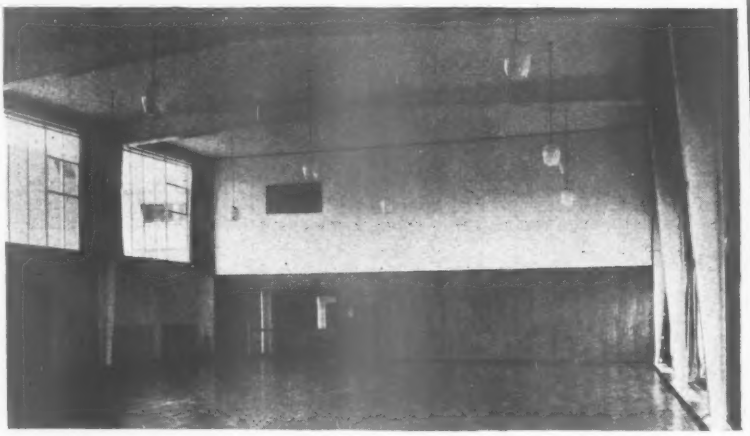
Above, the staff lavatory. The near wall is coloured slate-grey with white reveals; the far wall is cadmium red; tiles are Wedgwood and cerulean blue-grey.







Above, steps leading to the assembly hall stage. Top right, looking down from the assembly hall foyer into the main entrance in the north-east corner of block 3. The colours used are slate grey and Wedgwood blue in the foreground, mustard and white in the background and cadmium red and white on the left. Right, a general view of the assembly hall which, together with the gymnasium, is the only steel framed part of the school.



SECONDARY SCHOOL

at ST. PAUL'S CRAY, KENT

designed by E. D. LYONS, L. ISRAEL

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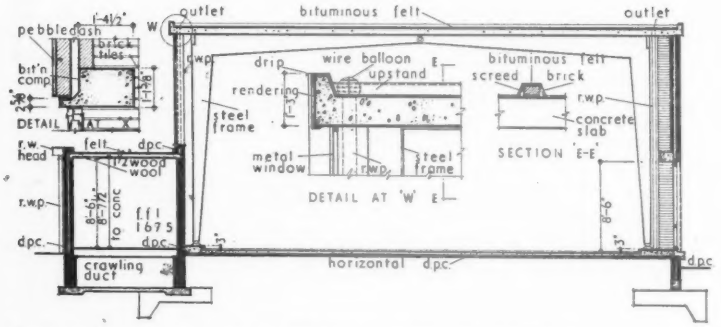
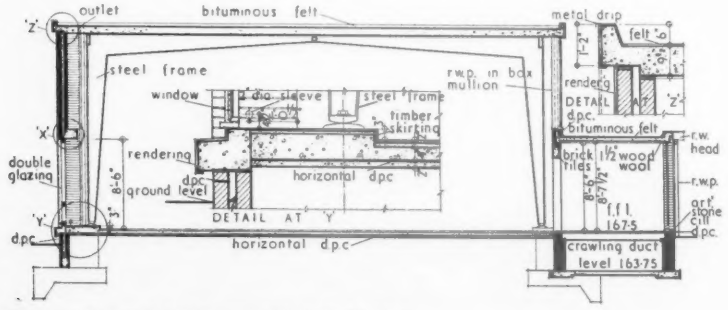


Cross section on a west-east axis and details [Scale : $\frac{1}{16}$" and $\frac{1}{4}$" = 1' 0"]



Cross section and details, assembly hall, block 4

finish in corridors and grey marble finish in classrooms; in the assembly hall and workshops the floor finish is hardwood blocks. All external and internal joinery is in hardwood, left oiled or varnished. W.C. screens are of terrazzo. There are fittings in African mahogany in the library, kitchen, cloakrooms, etc., all specially designed by the architects.

SERVICES.—The school is heated by radiators served by solid fuel boilers situated at ground level at the north end of block 6. Hot water is from calorifiers and service ducts are below ground throughout the school. The kitchen is equipped with electric cookers and gas-fired rinsing sinks. The assembly hall and all classrooms are wired for radio and a bell system for class changing. The school forms part of the 1949 programme. Its contract price was £160,000.

The general contractors were F. J. Moreton & Son, Ltd. For sub-contractors see page 180.

TECHNICAL SECTION

The proposals put forward by P. H. Parkin and E. F. Stacy of BRS for modifying the BRS standard for sound insulation (RIBA Journal, July issue) represent something of a major departure. Briefly these proposals amount to the abandonment of the 55 db overall standard in favour of a set of graded standards which will be computed at different values for different frequencies and which will have different values in different contexts. The first of these modifications arises because the old standard did not take sufficient account of low frequency sound, which is the cause of most actual annoyance and is also the most difficult to stop. The second modification is inspired by the wish to make our standards accord more closely to structural feasibility and to the capacity (and the desire) of building occupants to pay for their insulation. It is in the nature of the idea of standards that they should become more exact as research advances, and we need therefore have no real regrets for any misconceptions that the 55 db "flat rate" standard may have engendered. But it is as well to realise what the new proposals would mean in practice. The graded standard would certainly mean more anxious work for architects in designing for the different frequencies, and the idea of linking standards of insulation with the ability to pay will certainly involve the sponsors of housing schemes in most invidious decisions.

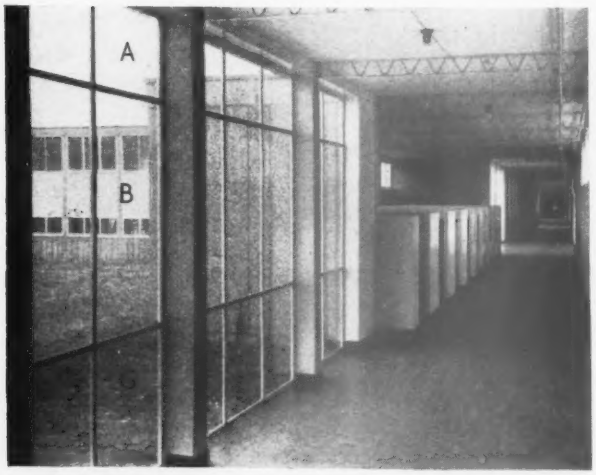
This week's special article

24 LIGHTING
reflected daylight

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

For some time it has been realised that the calculation of the amount of daylight entering a room provided only a very incomplete account of the room's daylight conditions. This week, Dr. R. G. Hopkinson, of BRS, discusses the problem of reflected daylight, and presents architects with a method of calculating it.

The daylight in a room is made up of that which comes directly from the sky through the window to the point in the room, and that which reaches the point after reflection from buildings outside or from other parts of the room itself. The light which comes directly from the sky is well looked after by devices like the BRS Daylight Factor Protractors. The indirect light, which is often the main source of lighting, especially in built-up areas, has so far been left to look after itself. The attitude of the scientific advisers on lighting has been either to recommend that indirect daylight should be ignored, a policy which has something of commonsense in it, or else they have produced elegant mathematical solutions to the problem which have not been



understood, and so have not been used.

The point of compromise on which architect and scientist can meet is not easy for either to determine. The architect naturally wants the simplest possible solution in a form suitable for the immediate use of a busy man. If a problem cannot be solved simply, it tends to be left on one side and forgotten. "Please," says the architect to the scientist, "will you be good enough to put down on one half sheet of notepaper all you know about indirect daylight?" This task poses the same problems as if the scientist were to say to the architect "Draw on one diagram all you know about Georgian architecture." It cannot be done well. One should marvel if it is done at all.

A SUMMARY OF THE POSITION

All that can be put on one half sheet of notepaper about indirect daylight amounts to the following:—

(*a*) The Indirect Component of the daylight at the worst-lighted part of the usual box-like shape of room is from about one-half to twice the amount of the Direct Component if the room is fenestrated and decorated in the fashion of a typical modern building. (Do not ask for an expansion of this term in one half sheet.)

(*b*) The Indirect Component increases with lighter wall, floor, and ceiling finishes.

(*c*) The smaller the windows and the greater the outside obstructions, the more important is the Indirect Component.

(*d*) The Indirect Component often gives roundness and softness to the lighting, which might well be harsh and irritating if only direct lighting were present.

(*e*) Indirect lighting can be calculated by the use of the Arndt-Petherbridge-Hopkinson formula, called APH for short, or by the Longmore Nomograms. Its calculation is no more difficult than the derivation of direct daylight with the BRS Protractors; it involves a little arithmetic (to add up the window area and relate it to the total surface area in the room) and the use of a simple nomogram.

(*f*) If the architect does not want to know separately the direct and the indirect components, he can obtain the total daylight for simple rooms by using the BRS Daylight Factor Slide Rule, which was devised by J. Longmore.

This ends the half sheet. Beyond this the subject becomes more difficult.

The nomograms and slide-rules which are the end-point of the recent BRS studies have not drawn on any major new scientific developments. It is simply that some careful sacrifice has been made of precision in the interests of the necessity of giving the architect data on indirect daylight in a readily-usable and, as far as possible, foolproof form.

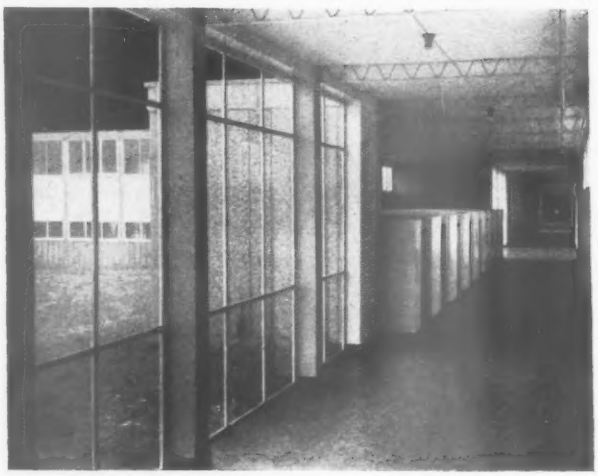


Figure 1 (*above left.*) *Light reaches a point in the corridor* (*the camera lens*) *from A the sky direct, from B by reflection from buildings and obstructions outside, from G by reflection from the ground outside. In addition more light reaches the point after reflection from the ceiling, walls, and floor, and so by inter-reflection backwards and forwards. The Total Daylight Factor includes all this light, direct and indirect. Figure* 2 (*above*). *Light from the sky only.* (*Direct Component*). *Figure* 3 (*left*). *Indirect light only.*

THE THEORY OF INTER-REFLECTION

The theory of inter-reflection of light in an enclosed space is complex, even when the room is considered merely as a cube with five closed sides and one open side (the window). The basic studies were made many years ago, when the theories of the totally reflecting sphere (Ulbricht) and of the totally reflecting cylinder (Buckley) were worked out. In the BRS work, it is the sphere basis which has been chosen.

It can be shown that if light enters a hollow sphere whose internal reflection factor is uniform, the light will be reflected again and again in such a way that every part of the sphere has the same brightness. If a room behaved like a sphere it would be possible to determine the reflected light very simply, but it does not. No harm is done, however, in seeing how much error is introduced by assuming that it does, and this is what several Continental workers did, among whom Pleijel, Arndt, and Dresler deserve special mention.

It was found that the error was often so great that little better accuracy could be achieved than would be given by an experienced guess. A search was therefore made to see where the main source of error lay. Once found different methods were employed to avoid it. Dresler has given an excellent resumé of the story in a paper in the Transactions of the Illuminating Engineering Society (Vol. 19, No. 2, Feb. 1954).

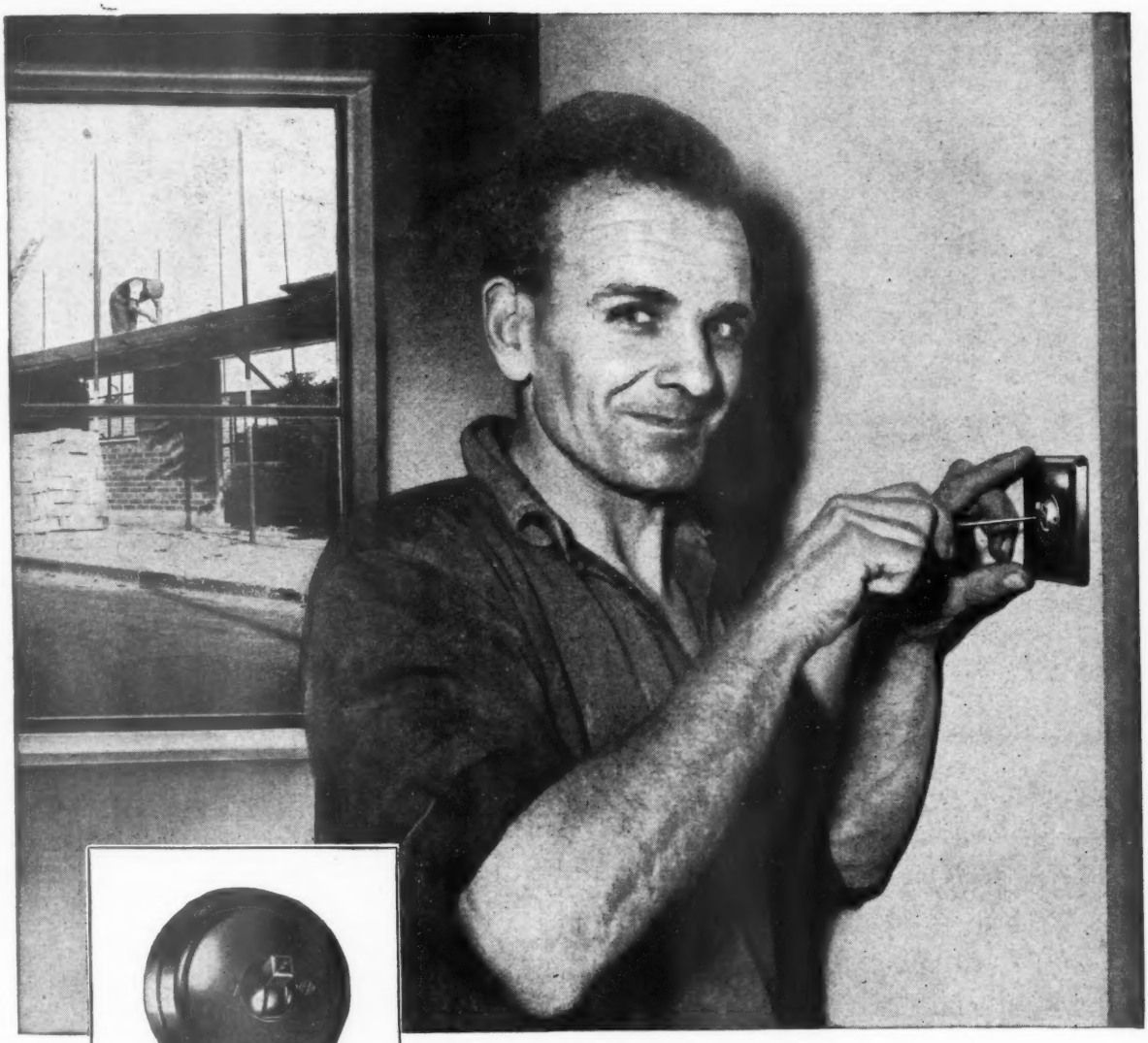
The BRS work has had the benefit of extensive model studies on the one hand, which taught us what to expect of reflected daylight, and so to get the "feel" of the problem, while on the other hand we were able to study the ingenious proposals of Arndt and of Dresler and so see our way through the maze.

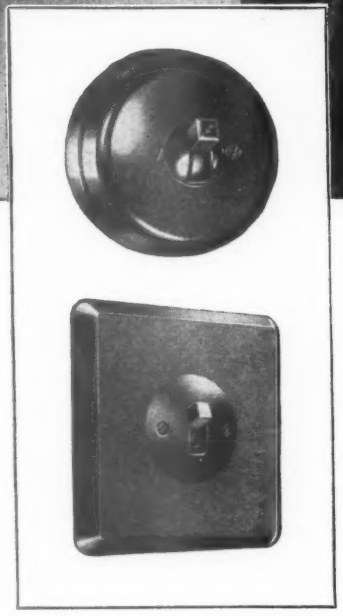
Arndt's proposal was to take all the daylight that reached the window, both from the sky itself, and by reflection from the ground and neighbouring buildings, and add it up in the form of a "sky factor" at the window. (Thus for a top-light facing an unobstructed sky, the sky factor would be 100 per cent., and would be less if obstructions prevented a full view of the sky). The reflected light from outside was calculated on the basis of an assumed reflection factor for all ground and buildings of 10 per cent. All the incident light on the window having been evaluated in this way, it was then let in through the window and the room assumed to behave like a sphere. This gave an average figure for the indirect daylight.

This simple method worked in a few simple cases, but in most practical conditions almost as good an answer could be obtained by an intelligent guess based on a knowledge of the problem. Dresler therefore proposed that the direct light incident on all parts of the room should be evaluated separately, each part multiplied by the reflection factor of the surface on which it falls, and all these "first reflected fluxes" added together and then put into the "sphere formula." This again gave an average figure for the indirect daylight, but much more accurately than Arndt's method. On the other hand it demanded ten times more work.

THE BRS SOLUTION

The BRS solution uses Dresler's principle





My point of view . . .

. . . is that the Avon Range of A.C. Switches has been designed with considerable thought. For instance when fitted in their plaster depth boxes they have a simple method of adjusting the switch depth whilst the switch is in position.

Points like these mean a great deal to chaps like me. They also show that apart from producing a jolly good switch at a very competitive price Ediswan Designers have given quite a lot of thought to making them simple to install.

Publication CE. 1693A. gives full details of the Avon range. We'll be pleased to send a copy on request.

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A catalogue and price list of the complete range of Ediswan electrical accessories is available on request.

E 32

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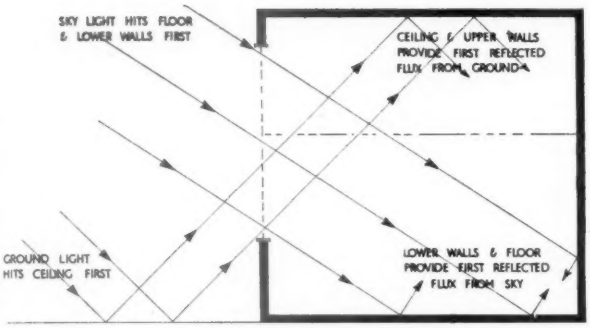


Figure 4. The Principle behind the BRS (A.P.H.) system for the computation of the Indirect Component of Daylight.

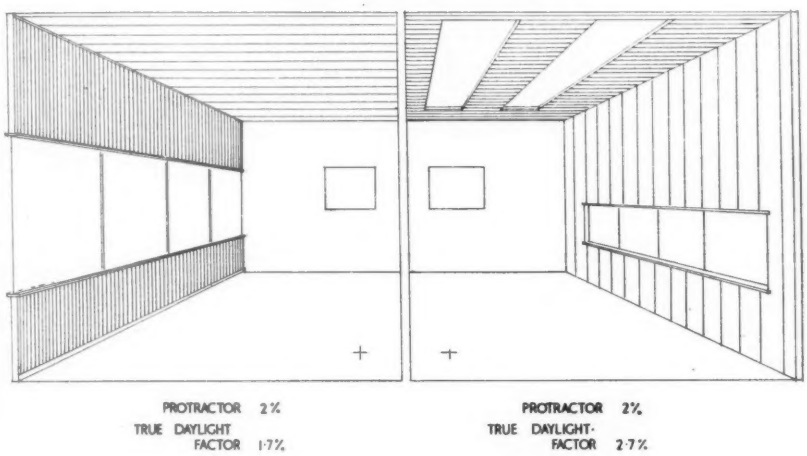


Figure 5. The Daylight Factor is not always greater than the Protractor Value. This is especially true of side-lighted rooms. A room with a Protractor Value (minimum) of greater than 2 per cent. may be found to have a Daylight Factor of, say, only 1·7 per cent., when measured in the completed building. This is because the real sky has a very low brightness near the horizon, and it is the horizon light which illuminates the remoter corners of a side-lit room. The Protractor Value, on the other hand, assumes a uniform sky brightness. Top lighting always gives a higher Daylight Factor than Protractor Value except on days with quite an exceptional sky (e.g., heavy overhead clouds and bright horizon.)

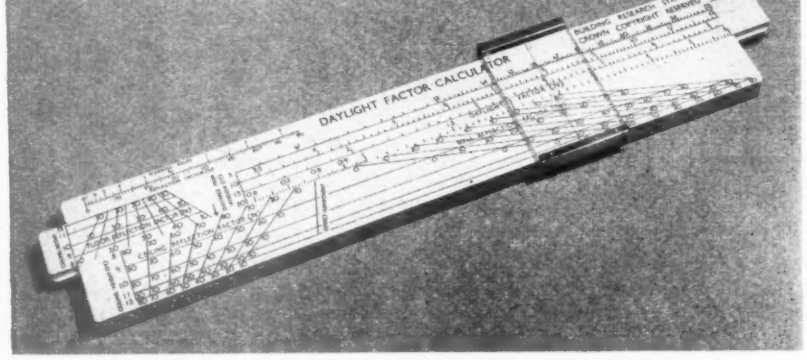


Figure 6. BRS Daylight Factor Slide Rule.

in Arndt's setting. The light incident on the window is divided into two parts, that which comes through the window to fall first on the floor and lower parts of the walls (most of this comes from the sky or obstructing buildings), and that which falls first on the ceiling (most of this comes in the window after reflection from the ground or the lower parts of obstructions). The two parts, the floor flux and ceiling flux, are each multiplied by the reflection factor (averaged out for the lower and upper parts of the room respectively), and these resultant light fluxes, are then added and put into the sphere formula. This gives an average value for the indirect daylight, which is in very good agreement with the value which is measured in practice, and with very little more work than is demanded by Arndt's simple formula.

The next stage was to put this method in a form which architects would use rather than admire. Fortunately the method can be cast into the form of a nomogram, and so a nomogram was constructed. Two nomograms were made, in fact, one which gives the average indirect daylight over the whole room when this is lit from the side, and the other which gives the minimum indirect daylight in the worst-lit parts of the room (for the use of architects charged with compliance with Regulations on Minimum Daylight Factor). A further nomogram (not shown here) enables the indirect daylight from roof and monitor lights to be assessed.

Whether or not architects will use nomograms, remains to be seen. Some architects do use them. The point is not fundamental, for the method can be cast in the form of slide-rules, rotating calculators, tables, graphs, or push-button electronically-operated computers

To determine a Daylight Factor completely, therefore, the procedure is as follows:

THE PROCEDURE TO BE FOLLOWED

(1) Find the Protractor Value in the usual way (every architect knows how to do this) by laying the BRS Protractors on the scale drawings, or by looking up the value in the NPL (Code of Practice) Tables.

(2) Find the average altitude of the window, and multiply the Protractor Value by the Sky Brightness Factor in Table I (figure 7). This gives the Direct Component, the daylight which will reach the point directly from an overcast (non-uniform) sky.

TABLE 1
Table of Sky Brightness Factors

Mean Altitude of Upper and Lower Sight Lines to Visible Sky (Degrees)	Sky Brightness Factor
5	0·50
10	0·58
20	0·72
30	0·86
40	0·98
50	1·09
60	1·17
70	1·24
80	1·27

Figure 7. Table of Sky Brightness Factors.

Thus: — Direct Component = Protractor Value × Sky Brightness Factor. Suppose, for a point in a room, the Protractor Value is 2·5 per cent. and that the average altitude of the upper and lower sight lines of the visible sky from the point is 20 deg., then from the table the Sky Brightness Factor is 0·72. Hence, Direct Component = 2·5 × 0·72 = 1·80 per cent.

(3) Work out the relative areas of the window and of the total of the room surfaces, *i.e.*, windows, walls, ceiling and floor surfaces. In a classroom 10 ft. × 24 ft. × 40 ft. with a window along the whole of one long side, glazed from the ceiling to a 3 ft. cill, this would be:—

Window area = $40 \times 7 = 280$ sq. ft.

Total surface area = $2 \times (10 \times 40 + 10 \times 24 + 24 \times 40) = 3{,}200$ sq. ft.

Ratio, $\frac{\text{window area}}{\text{total area}} = \frac{280}{3{,}200} = 0{\cdot}0875$

(4) Work out the relative areas of the walls and of the rest of the surfaces.

Wall area = $2 \times (10 \times 40 + 10 \times 24) = 1{,}280$ sq. ft.

Ratio $\frac{\text{wall area}}{\text{total area}} = \frac{1{,}280}{3{,}200} = 0{\cdot}4$

(5) Find the average reflection factor of the room from the table in Nomogram I (this assumes that the reflection factors of the ceiling and floor will approximate to 70 per cent. and 15 per cent. respectively, which is most likely). If the walls are dark, *e.g.*, oak panelling, the reflection factor will be of the order of 10 per cent., whereas a modern colour treatment in strong colours will be of the order of 30 per cent. Assume the latter. Then from the table, wall/total ratio 0·4, wall reflection factor 30 per cent., gives an average reflection factor for the room of 37 per cent.

(6) *To obtain the Average Indirect Component.* Take Nomogram I. Lay a straight-

edge across the nomogram between the graduation 0·0875 on scale A (this is the ratio of the window to total area found in (3) above), across to the graduation 37 per cent. on Scale B (this is the average reflection factor of the room, found in (5) above). The line intercepts scale C at 1·3. This figure, 1·3 per cent., is the *Average* Indirect Component in the room.

(7) The *Total Daylight Factor* for a given point in the room is then given by:
T.D.F. = (Protractor Value × Sky Brightness Factor) + (Indirect Component).
In the case of the example for the point chosen:

$$\text{T.D.F.} = (2{\cdot}5 \times 0{\cdot}72) + (1{\cdot}3)$$
$$= 1{\cdot}80 + 1{\cdot}3$$
$$= 3{\cdot}1 \text{ per cent.}$$

This is a simple example. In many cases, where there are Regulations on the levels of *Minimum* Daylight Factor, and where there are obstructions to a full view of the sky, a few more steps have to be introduced. In the example above, the effect of a 10 deg. obstruction outside the window would be allowed for as follows:

Stage (6) above resulted in an Average Indirect Component of 1·3 per cent., found on Scale C on Nomogram I. Place the straight-edge on the graduation for 1·3 on scale C, and on the graduation for 10 deg. on Scale D. The intercept on Scale E is found to be 1·2. Therefore, 1·2 per cent. is the Indirect Component with the 10 deg. obstruction. To obtain the T.D.F., this figure is added to the Direct Component, due allowance having been made for the obstruction in obtaining the Protractor Value and the Sky Brightness Factor.

If the Minimum Daylight Factor is required, the Indirect Component should be obtained from Nomogram II in exactly the same way as before. For the conditions of the example, it will be found that the Minimum Indirect Component is 0·82 per cent. with no obstruction, and 0·75 per cent. with the 10 deg. obstruction. These values are added to the Minimum Direct Component which is, of course, the Minimum Protractor Value multiplied by the revelant Sky Brightness Factor.

After performing this calculation, the Total Daylight Factor may sometimes be found to be less than the Protractor Value. This may cause alarm, for it has often been said that the fact that the Protractor Value ignored the indirect light allowed a factor of safety so it would be expected that the Total Daylight Factor would always be greater than the Protractor Value. The fact is that rooms lighted from low side windows will often have a Total Daylight Factor less than would be expected from the Protractor Value, whereas rooms lighted from top-lights will *always* have a greater Daylight Factor than is given by the Protractor Value. The reason is to be found in the low horizon brightness of the real overcast sky, as compared with the fictitious sky of uniform brightness which is the basis of the Protractors. This, however, is a story which must be told another day. If the Total Daylight Factor comes out at almost the same figure as the Protractor Value as it often does for typical side-lighted classrooms, why perform the extra calculation for the Indirect Component? The answer is, there is no need to, once the subject has been so mastered that the conditions in which Total Daylight Factor is the same as Protractor Value can be recognised. But this concordance occurs only in a limited set of special circumstances, in which the Protractor gives the Total Daylight Factor purely by chance.

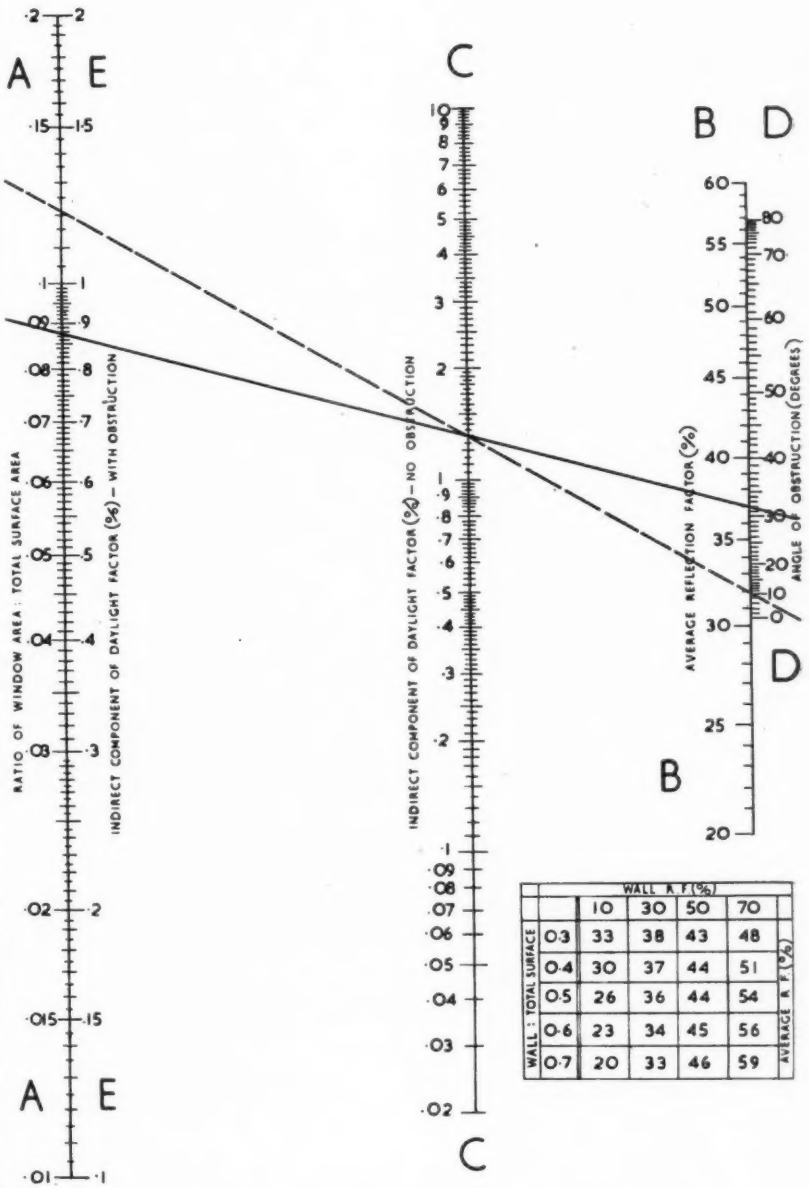
THE PRACTICAL ISSUE FOR ARCHITECTS

What, therefore, is the correct drill for the ordinary practising architect now that this recent work is available? Are the Protractors outmoded? Is the subject now so complex that the architect had better have none of it?

It depends on the nature of his work and interests. The school architect who is face to face with a clearcut Regulation on lighting which is expressed in terms of Daylight Factor must either go through the whole drill himself, or ask the services of a consultant, until he acquires the experience to dispense with these aids. The lighting artist who wants to know how much direct and how much diffused light he will get at a point where the modelling is important, must also go through the whole drill, but having done so, he has at his disposal a new tool of very great value. The busy general architect who uses the Protractors only occasionally may find the Slide-Rule a sufficiently rough guide round the problem, or he may continue to use the Protractors with no more error than before.

Those who have tried to follow the argument right through will be left with many questions unanswered. It is not possible to do more, at the moment, than to give an outline of the way in which the problem of Total Daylight Factor is handled.

The method is described in a paper entitled "An Empirical Formula for the Computation of the Indirect Component of Daylight Factor" by R. G. Hopkinson, J. Longmore and P. Petherbridge, in the Transactions of the Illuminating Engineering Society, 32 Victoria Street, London, S.W.1., from whom reprints can be obtained. This paper describes both the theory behind the method, and also gives the Nomograms with worked examples in greater detail than can be given here.



WALL : TOTAL SURFACE	WALL A F (%) 10	30	50	70
0·3	33	38	43	48
0·4	30	37	44	51
0·5	26	36	44	54
0·6	23	34	45	56
0·7	20	33	46	59

AVERAGE R F (%)

Figure 8. Nomogram I for the Computation of Average Indirect Component in Side-lit Rooms. Lay a straight-edge across the nomogram between the Scale A (ratio of window to total surface area) and Scale B (average reflection factor of the room). Then the intercept on Scale C gives the unobstructed Indirect Component. If there is an obstruction, lay the straight-edge from the unobstructed I.C. on scale C to the angle of the obstruction on scale D. Then the intercept on Scale E will give the I.C. allowing for the obstruction.

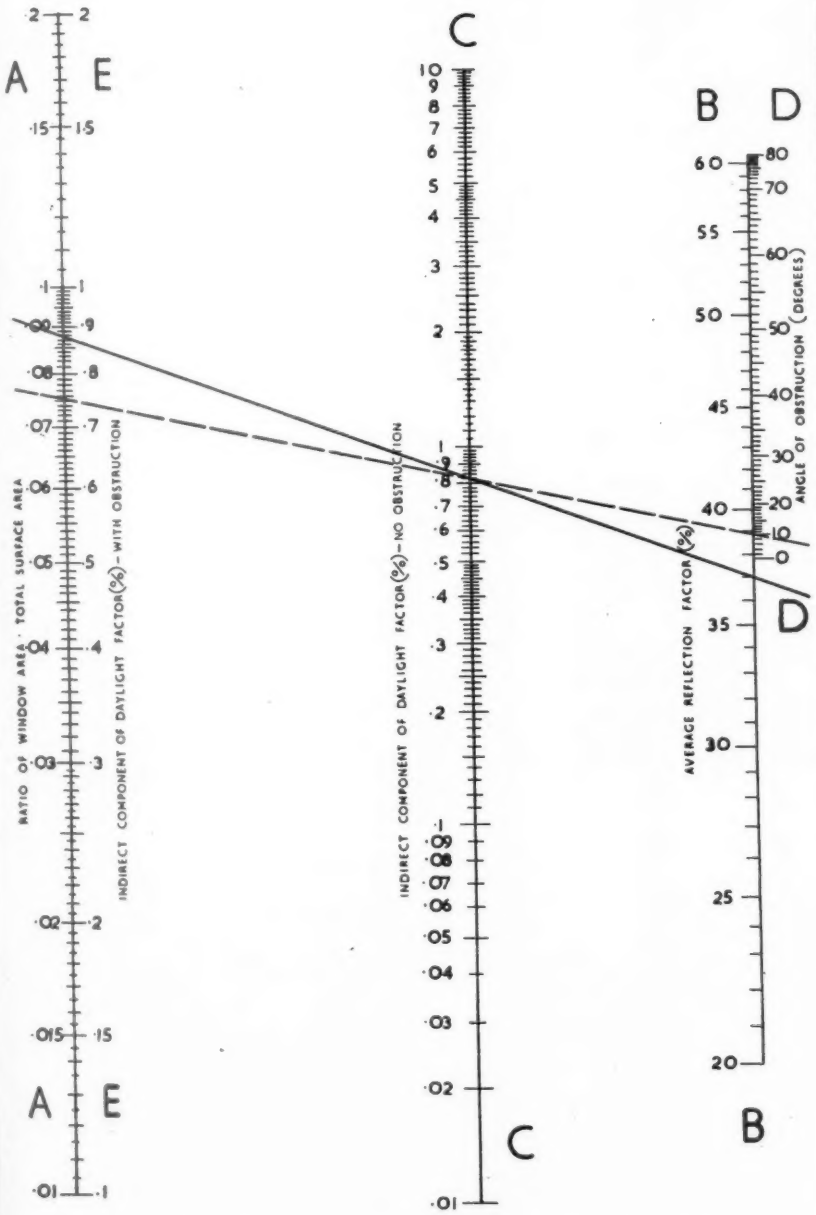


Figure 9. Nomogram II for the Computation of Minimum Indirect Component in Side-lit Rooms.

The BRS Daylight Factor Slide-Rule is in limited production but is not yet generally available. Groups of architects who are interested in its use, and who are prepared to keep in touch with the BRS while they use it, should make enquiries to the Station. It is appreciated at the Station that the computation of Total Daylight Factor is more difficult for the architect than the obtaining of the Protractor Value. During the coming months we want to find out if such computation is suitable for putting directly into the hands of practising architects, or whether it is best handled by specialist consultants. We know it can be handled by working architects, for at the moment groups of architects are using it in their day-to-day work, but we would like to obtain more experience in order to decide on the best form in which to put out the method.

None of this work invalidates the Protractors. They still do the job that they were designed to do. You may still ride to work on a horse if you prefer to do so; he goes no slower than he did before the invention of the internal combustion engine.

The question remains as to whether it is reasonable to expect the busy general practitioner to steep himself in a specialist subject like lighting, or whether, as in the installation of a heating system, he should refer the problem to an "expert." The BRS Protractors enable the architect to take a quantitative interest in daylight (he must inevitably have a qualitative interest) but on the whole they lead to over-fenestration. The recent work rectifies this tendency, but makes the subject a little more difficult. The slide-rules and nomograms are an attempt to provide the architect with "rule-of-thumb" methods in which he can have confidence, and this article has been written to give him an understanding of their basis, so that he can use them with keenness and understanding.

THE INDUSTRY

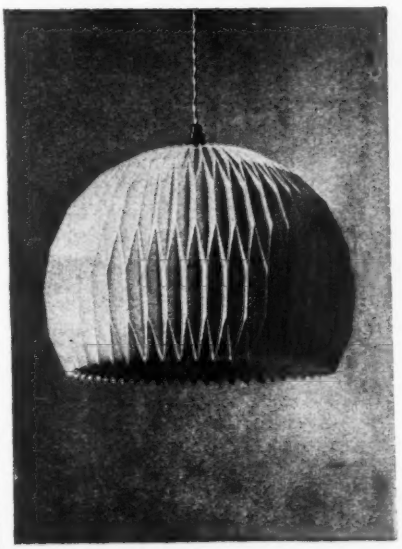
From the Industry this week Brian Grant reports on food protection by ultra-violet lamps, Scandinavian furniture, school equipment, glass cement, and a leaflet on sliding doors.

STERILIZING BY ULTRA-VIOLET

For some years, particularly in America, ultra violet lamps have been used for air purification, the short wave radiations apparently being lethal to the small bacteria which are present in the air and are continually being circulated by air currents. Philips Electrical have now produced a TUV germicidal tube which has been used in retail food stores and is also being applied to domestic food-keeping. The tube is rated at 6 watts, and its radiation is enough to deal with a shelf area of 4 sq. ft. or a 4 to 6 cu. ft. refrigerator. The radiation cannot, of course, prevent food from going bad from the inside, but it protects food from surface decay by moulds and other forms of attack. Installation is simple and the only point of importance is that fats and butter may be turned rancid if they are placed too close to the tube. Price is 58s. 6d. and it is suitable for normal 200 to 250 volt A.C. supply. (*Philips Electrical Ltd., Century House, Shaftesbury Avenue, London, W.C.2.*)

SCANDINAVIAN FURNITURE AND FITTINGS

Many architects will be certain to remember Professor Alvar Aalto's bent wood furniture, imported before the war by Finmar Ltd. During the war imports naturally came to an end, but were restarted in 1949, and imported from Denmark and Sweden as well as Finland. The only imports then allowed were furniture which complied with the Utility regulations, plus a limited amount of light fittings and glass. As import restrictions have been relaxed the firm has brought



A Le Klint shade sold by Finmar Ltd.

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Above: A new table and stacking chair by Arne Jacobsen on sale by Finmar Ltd. Table: £13 17s. 0d.; chair £5 1s. 0d. (in mahogany or beach). Right: A museum case made wholly of glass (except for the base) with glass to glass bonding.

in newer Scandinavian designs and now has on display (in new showrooms) furniture, glass, porcelain, light fittings (Le Klint), stainless steel table ware and fabrics, from Germany and Italy as well as Scandinavia. (*Finmar Ltd.*, 26, *Kingly Street, London, W.*1.)

SCHOOL EQUIPMENT

The Gas Council has just issued two new booklets, "The Planning and Equipping of Domestic Science Classrooms" and "Gas Equipment for Practical Rooms, Workshops and Laboratories in Schools and Colleges." The first gives advice on the layout of this type of classroom, most of the apparatus illustrated, such as cookers and water heaters, naturally being quite familiar. The second, however, lists and illustrates quite a lot of equipment of a kind not very much used except for jobs of this kind or in small workshops, including blowpipes, soldering irons and brazing torches, furnaces of many kinds, ovens, boilers, sterilizers, incinerators, pottery kilns and many other pieces of equipment. The lists and illustrations should be of considerable help to designers and for many of the items typical dimensions are given. (*The Gas Council*, 1, *Grosvenor Place, London, S.W.*1.)

CEMENTING GLASS TO GLASS

With the current fashion of still greater display areas and a minimum of obstruction there is still the need for proper support for glass windows and shelves, and the usual small plated clips are not always a satisfactory solution. In the past cements have not been satisfactory but a new one has now been produced by Glasbau Hahn, of Frankfurt, and is being marketed in this country by James Clark & Eaton under the name of S.H. glass cement. Judging from various tests the new cement does for glass what the various synthetic resins and bonds have done for timber and metals, in that when a joint is tested to destruction it is more often the glass that fails than the cement. The material is suitable for plate glass in thicknesses of ¼ in. and upwards; joints may be butted or mitred and plates may be cemented together to form a self-supporting structure. The cement is white in colour, and the illustration of the showcase gives an idea of the appearance of the joint and the type of work which can be done. Trained fixers are available, and the cement will be supplied only to firms whose employees have taken an instructional course. (*James Clark & Eaton Ltd., Scoresby House, Glasshill Street, Blackfriars, London, S.E.*1.)

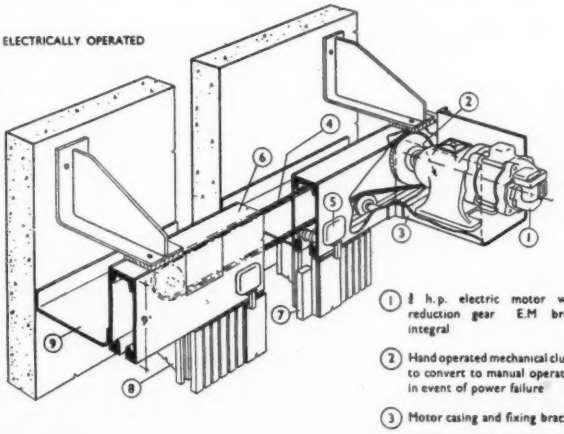
SLIDING DOORS

A new leaflet describes Haskins's shutter doors and sliding leaf doors. Both types are built up on a lattice type gate made from steel channel-section pickets, which are faced either with interlocking steel slats to form the external surface of the door, opening and closing concertina-fashion, or with steel leaves which slide one behind the other.

In the shutter doors the pickets of the lattice gate are hung from the top track by twin ball-bearing rollers, the bottom track acting only as a guide. The doors are robustly made and are suitable for industrial work, being weatherproof and fire-resisting. Operation can be electrical or pneumatic, or, of course, by hand. Electrical drive is by ½ h.p. motor having a hand controlled clutch which can be disengaged if the supply should fail. The doors have a false leading edge which cuts off the current if there should be any obstruction to movement.

Pneumatic operation can also be used in factories where there are often existing compressed air lines, and control here is by a hand operated valve admitting air to the opening or closing sides of the double-acting pneumatic cylinders. With this equipment also hand operation is possible if the air supply should fail.

The sliding leaf doors are intended mainly for entrances to lifts and may be either manually or power operated, or they may be worked by a pick-up from a power operated lift gate. (*E. Pollard & Co., Ltd., Gnomte House, Blackhorse Lane, Walthamstow, London, E.*17.)



Electrically operated sliding door gear (reproduced from Haskin's leaflet).

1. ½ h.p. electric motor with reduction gear E.M brake integral
2. Hand operated mechanical clutch to convert to manual operation in event of power failure
3. Motor casing and fixing bracket
4. Roller type chain sprocket wheels with spring tensioner and equaliser
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6. Special extra-deep box-type top track and supporting bracket
7. Spring loaded false edge with electrical contacts causes door to stop immediately when obstructed
8. HASKINS Shutter door
9. Mild steel cover plate

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5.8.54

Buildings Illustrated

House at Leziate, King's Lynn, Norfolk. (Pages 164-165). Designer: Michel F. Boulesteix. General Contractors: A. F. P. Hill & Son. General Foreman: K. Cawston. Sub-contractors: cedar shingle roofing, Dawber-Townsley & Co. Ltd.; built-up felt roofing, Macartney Ltd.; cork tile flooring, Asbestos & Cork Insulation Co.; plumbing, Grome & Son; joinery, H. E. Taylor & Co. Ltd.; electrician, Eastern Electricity Board; suppliers, BMA; door and window furniture, A. J. Binns Ltd.; quarry tiles, Carter & Co. Ltd.; folding and sliding door gear, P. C. Henderson Ltd.; immersion heater, Aidas Electric Ltd.; convectors and heaters, E. K. Cole Ltd.; de-scaler to immersion heater feed, Radiation Ltd.; electric water pump, Worthington-Simpson Ltd.; light fittings, Troughton & Young (Lighting) Ltd., Libertys, Primavera; sanitary fittings, Adamsez Ltd.; separate contractors: internal decorations, D. B. Powell; paints, International Paints Ltd.; papers, John Line & Son Ltd. and Arthur Sanderson & Sons Ltd.; polisher, P. J. Gibson.

House at Longleat, Farnham Common, Bucks. (Page 166). Architect: H. C. Bishop, A.R.I.B.A. General contractor: William Hartley & Sons. General Foreman: D. Watkins. Sub-contractors: bricks, London Brick Co. Ltd.; tiles, Marley Tile Co. Ltd.; patent flooring, Semtex Ltd.; boilers, Ideal Boiler & Radiator Co. Ltd.; electric wiring, J. Bridger & Son; sanitary fittings, Miller Morris & Broder Ltd.; casements, Crittall Manufacturing Co., Ltd.

Chislehurst & Sidcup Midfield Secondary School in Midfield Way, St. Paul's Cray, Kent, for the Kent Education Committee. (Pages 167-172). Architects: E. D. Lyons, L. Israel and T. B. H. Ellis, A/A/A.R.I.B.A., in collaboration with S. H. Loweth, F.S.A., F.R.I.B.A., former County Architect for Kent; Consultants (structural), W. V. Zinn, B.SC. (ENG.), LON., M.I.C.E., M.I.STRUCT.E., M.CONS.E., (services), J. Stinton Jones & Partners. Quantity Surveyors: Alfred J. H. Sprague & Son. General Contractor: F. J. Moreton & Son Ltd. Clerk of Works: F. T. Salmon. Sub-contractors: foundations, Thomas Bates & Sons Ltd.; dampcourses, The Ruberoid Co. Ltd.; asphalt, Kent Asphalte Co. Ltd.; bricks, Wills & Packham Ltd., Sevenoaks Brick Co.; artificial stone, The Liverpool Artificial Stone Co.; structural steel, John Booth & Sons; roofing felt, Kent Asphalte Co.; glass, Aygee Ltd.; woodblock flooring, Viger Bros. Ltd.; patent flooring, Armstrong Cork Co. Ltd.; central heating, C. S. Thompson; electric wiring, Drake & Gorham Ltd.; electric light fixtures, Troughton & Young Ltd.; electric heating, Bratt Colbran Ltd.; sanitary fittings, Obrien Thomas & Co. Ltd.; stairtreads, Fenning & Co. Ltd.; door furniture, Nettlefold & Moser Ltd.; casements, Holcon, Ltd., The Crittall Manufacturing Co. Ltd.; plaster, E. E. Cheezeman & Sons; metalwork, G. H. Shephard & Co., Clark Hunt & Co. Ltd.; joinery, Rippers Ltd.; textiles, Gerald Holcon, A.R.C.A.; wallpapers, John Line & Sons Ltd.; cloakroom fittings, Clark Hunt & Co. Ltd.

Corrections

We are sorry that an error appeared in the Callow & Keppich advertisement in our July 8 issue. The buildings illustrated were awarded a bronze medal by the Minister of Housing and Local Government not a gold star as stated.

Mills, Kormanic & Partners were responsible for the Kirkcaldy Crematorium competition design illustrated on page 72, on July 15. Their names were given wrongly on that page.

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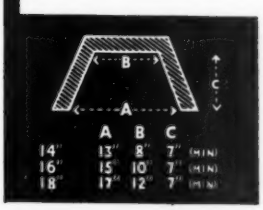

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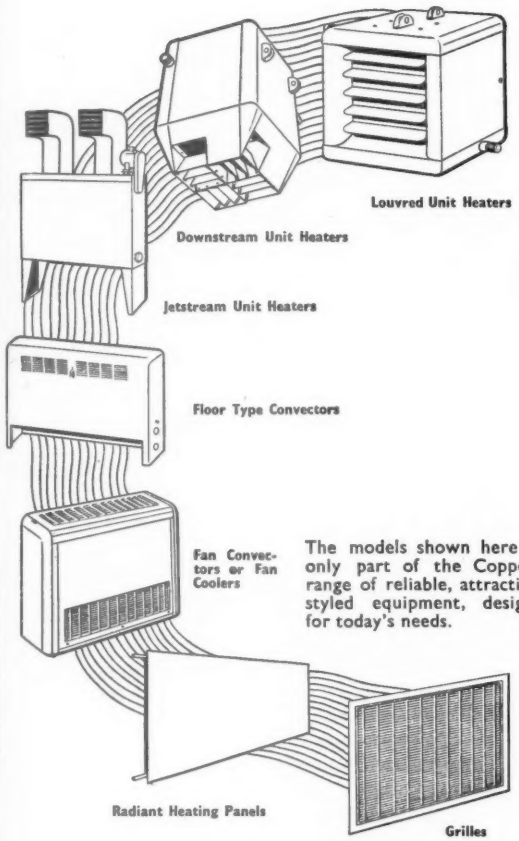

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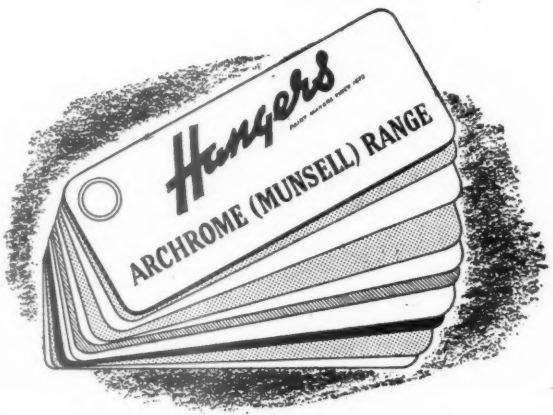

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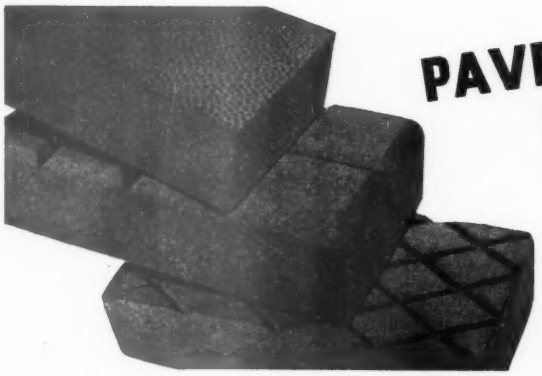

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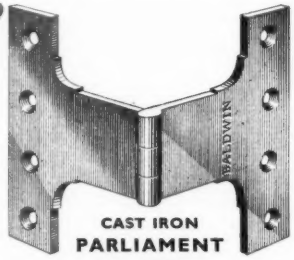

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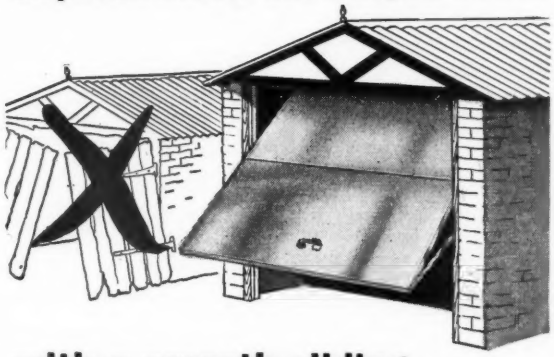

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The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 *inclusive or a woman aged* 18-59 *inclusive unless he or she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

MINISTRY OF WORKS.
ARCHITECTURAL ASSISTANTS are required for drawing office work in London and various Regional Offices. Candidates must have had at least three years' architectural training, some experience in an architect's office, and be of Intermediate R.I.B.A. standard.
London salary scale per annum: £420 (at age 21) to £670 (slightly less in the provinces). Starting rate up to £580, according to age and experience. Although unestablished, these posts have long-term possibilities and promotion prospects, and competitions are held periodically for establishment.
State age, nationality, and full details of training and experience, to W.G.10/CA5 (F), Ministry of Works, Abell House, John Islip Street, London, S.W.1. 2892

CITY OF ROCHESTER.
ARCHITECTURAL ASSISTANT.
Applications are invited for the above appointment in the City Surveyor's Department at a salary in accordance with Grade V-Va (Administrative, Professional and Technical Division) of the National Scale of Salaries, viz., £620-£710 per annum.
Preference will be given to candidates who are Registered Architects.
A good general experience is desirable, particularly in the preparation of drawings and specifications for Municipal Housing Schemes.
In an appropriate case the City Council will provide the successful applicant with suitable housing accommodation.
The appointment will be subject to:—
(1) The Scheme of Conditions of Service of the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services.
(2) The Local Government Superannuation Acts, and the successful candidate will be required to pass a medical examination.
(3) One month's notice on either side.
Applications, stating age, qualifications and experience, together with names and addresses of three persons to whom reference may be made, should be delivered to the City Surveyor, Maidstone Road, Rochester, not later than 25th August, 1954.
Canvassing, directly or indirectly, will be deemed a disqualification, and applicants must state whether to their knowledge they are related to any member or senior officer of the Council.
PHILIP H. BARTLETT,
Town Clerk.
Guildhall, Rochester.
22nd July, 1954. 3445

BOROUGH OF WREXHAM.
ENGINEER & SURVEYOR'S DEPARTMENT.
Applications are invited for the following appointment:—
(a) ARCHITECTURAL ASSISTANT—Salary A.P.T. III. £550-£595 per annum.
Applicants should possess the Intermediate examination of the R.I.B.A. or its equivalent of one of the recognised Boards of Architecture and have a general experience in architecture.
The Council is prepared to offer housing accommodation to the successful applicant, if married.
Particulars and Conditions of Service may be obtained from the Borough Engineer and Surveyor, 31, Chester Street, Wrexham.
Applications on the prescribed form together with two copies of testimonials and the names and addresses of two persons from whom reference may be obtained, should be delivered to the undersigned in an envelope bearing the appropriate endorsement not later than the first post on Saturday, August 14th, 1954.
PHILIP J. WALTERS,
Town Clerk.
Guildhall, Wrexham.
19th July, 1954. 3428

COUNTY BOROUGH OF READING.
BOROUGH ARCHITECT'S DEPARTMENT.
Applications are invited for the appointment of:
THREE ASSISTANT ARCHITECTS
Salary: A.P.T. Grade VI (£695-£760 p.a.).
Commencing salary within the grade being according to qualifications and experience. Applicants must be Associate Members of the Royal Institute of British Architects. Applications should be received by the Borough Architect, Town Hall, Reading, by Monday, 23rd August, 1954, from whom application forms can now be obtained. 3501

CITY AND COUNTY OF NEWCASTLE UPON TYNE.
APPOINTMENT OF CHIEF ASSISTANT ARCHITECT (HOUSING).
The Housing Committee of the Corporation invite applications for the above position in the City Architect's Department, at a salary in accordance with A.P.T., Grade X (£920-£1,050 per annum).
Applicants must be Members of the Royal Institute of British Architects, and should have received a sound architectural training, preferably at a recognised School of Architecture. The Officer appointed will be responsible under the direction of the City Architect for the control of all work undertaken by the Housing and Flats Sections of the Department, and should have had extensive practical experience of the administration of large Building Contracts and the control of staff.
Forms of application, together with further particulars of the appointment, may be obtained upon application to George Kenyon, Dip.Arch., A.R.I.B.A., Dip.T.P., A.M.T.P.I., City Architect, 18, Cloth Market, Newcastle upon Tyne, 1.
Closing date for receipt of completed applications, Monday, 23rd August, 1954.
JOHN ATKINSON,
Town Clerk.
Town Hall, Newcastle upon Tyne, 1.
21st July, 1954. 3456

RURAL DISTRICT COUNCIL OF HATFIELD.
ARCHITECT'S DEPARTMENT.
Applications are invited for the appointment of JUNIOR ARCHITECTURAL ASSISTANT, on the staff of the Architect to the Council, at a salary in accordance with Grade I, A.P.T. Division (£490×£15—£535).
Preference will be given to candidates who have studied at a Recognised School of Architecture.
Applications, with full details and accompanied by copies of two testimonials, are to be addressed to Mr. J. H. Parker, A.R.I.B.A., Architect to the Council, 82, Great North Road, Hatfield, not later than Friday, 27th August, 1954.
E. F. CULL,
Clerk to the Council.
22nd July, 1954. 3457

SOUTH-WEST METROPOLITAN REGIONAL HOSPITAL BOARD.
Applications are invited for the following appointment on the Board's Architectural Staff:—
ARCHITECTURAL ASSISTANT. Salary scale: £440 (at age 21 or over)×£25(1)×£20 (8) to £625 p.a., plus London weighting allowance, £10 to £30 p.a., according to age. Applicants must have passed the Intermediate Examination of the Royal Institute of British Architects (or an examination recognised by the Institute as equivalent), have had good architectural training and general experience, and be capable of preparing working and detail drawings. Previous experience of Hospital Architectural work is not essential.
Applications, stating age, qualifications, present appointment and salary, training and experience, together with the names and addresses of three referees, should be forwarded to the Secretary (S.2), South-West Metropolitan Regional Hospital Board, 11a, Portland Place, London, W.1, marking the envelope "Architectural Assistant," by not later than 9th August, 1954. 3377

MIDDLESBROUGH EDUCATION COMMITTEE.
Applications are invited for the following appointments in the Education Architect's Office:—
(a) Two ASSISTANT ARCHITECTS, Grade V.
(b) JUNIOR DRAUGHTSMAN or DRAUGHTSWOMAN, Miscellaneous Grade III.
The building programme in hand offers excellent opportunities in the design and construction of modern school buildings. Forms and particulars obtainable from Director of Education, Education Offices, Woodlands Road, Middlesbrough, to whom completed forms should be returned not later than Monday, 16th August, 1954. 3450

BRITISH ELECTRICITY AUTHORITY.
MIDLANDS DIVISION.
Two SENIOR DRAUGHTSMEN (Architectural) are required in the Generation (Construction) Department at Wolverhampton. N.J.B. service conditions, superannuable appointments, salaries within Schedule "D" of the Agreement, Grade 5, £567/£671 per annum.
Applicants should preferably have had experience in the layout and design of main and auxiliary buildings associated with generating stations. Sound technical education and training are required. Appropriate technical qualifications an advantage.
Good conditions of employment and holidays; opportunities for broadening experience in all branches of civil engineering; canteen facilities available.
Apply, quoting Vacancy No. 729MD on form AE6, available from the Establishments Officer, 53 Wake Green Road, Moseley, Birmingham, 13, by 28th August, 1954. 3508

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.
(a) PLANNING OFFICERS, Grade III (up to £862 10s.).
(b) PLANNING ASSISTANTS (up to £721).
Professional qualifications: A.R.I.B.A., A.R.I.C.S. and/or A.M.T.P.I. required. Application forms and particulars from Architect (AR/EK/P/4), County Hall, S.E.1. (1322) 1330

COUNTY BOROUGH OF DERBY.
APPOINTMENT OF CHIEF PLANNING ASSISTANT.
Applications are invited for the above permanent appointment in the Borough Engineer & Surveyor's Planning Department.
Salary in accordance with Grade IX (£840 to £960) of the A.P.T. Scale. National Scheme of Conditions of Service, pensionable and subject to medical examination and one month's notice.
Candidates must be Members or Associate Members of the Town Planning Institute and also be A.M.I.C.E., or A.M.I.Mun.E., or A.R.I.C.S., or A.R.I.B.A., and have considerable experience in planning, preferably in urban areas.
Forms of application and further details may be obtained from Mr. M. L. Francis, F.R.I.C.S., M.I.Mun.E., Borough Engineer & Surveyor, The Council House, Derby, to whom they must be returned, together with the names of at least two persons to whom reference can be made, not later than 9 a.m., 6th September, 1954.
Canvassing will be a disqualification, and the Council cannot assist in the provision of housing accommodation.
G. H. EMLYN JONES,
Town Clerk.
July, 1954. 3418

BOROUGH OF BASINGSTOKE.
ARCHITECT'S DEPARTMENT.
Applications are invited for the appointment of CLERK OF WORKS. Salary: Miscellaneous, Grade V (£480-£540). Considerable experience of Housing is essential. Applications, together with either copies of two recent testimonials or the names and addresses of two referees, must be submitted not later than Tuesday, the 10th August, to the Borough Architect (E. Almond, Dipl.Arch., A.R.I.B.A.), Municipal Buildings, Basingstoke.
MEIRION O. JONES,
Town Clerk.
3459

LONDON ELECTRICITY BOARD.
ASSISTANT QUANTITY SURVEYOR.
Applications are invited for the above position in the Construction Branch of the Chief Engineer's Department in Central London.
Applicants should be experienced in the preparation of Bills of Quantities in all their stages, measurement of variations and remeasurement of contracts, and the successful candidate will work under the direction of a Chartered Quantity Surveyor.
The post is graded under Schedule "C" of the National Joint Board agreement as Grade 5—£681 9s. 0d. per annum, rising to £900 18s. 0d. per annum, inclusive of London Allowance.
Application forms obtainable from Personnel Officer, 46, New Broad Street, E.C.2, to be returned completed by 21st August, 1954. Please enclose addressed envelope and quote ref.: V/1788/A. on envelope and all correspondence. 3509

NOTTINGHAMSHIRE.
APPOINTMENT OF COUNTY ARCHITECT.
The Nottinghamshire County Council invite applications from Registered Architects who are either Fellows or Associate Members of the Royal Institute of British Architects for the appointment of County Architect.
The salary will be £2,450 per annum rising by annual increments of £100 to £2,750 per annum together with a motor car allowance in accordance with the Council's scale.
Candidates must possess sound administrative and organising ability and have a wide knowledge and experience of architectural work with a local authority. Full particulars of the appointment may be obtained from my office and completed applications should reach me by 17th September, 1954.
Canvassing directly or indirectly will be a disqualification.
A. R. DAVIS,
Clerk of the County Council.
Shire Hall, NOTTINGHAM.
July, 1954. 3507

CITY OF PETERBOROUGH.
CITY ENGINEER AND SURVEYOR'S DEPARTMENT.
Applications are invited for the appointment of a Senior Architectural Assistant, subject to National Conditions of Service and at a salary in accordance with A.P.T. Grade V (£620-£670).
Applicants must be qualified architects, experienced in school building and capable of carrying out sketch designs, working and detail drawings and site control, with the minimum of supervision.
In a suitable case, the Council will, if desired, provide housing accommodation.
Applications, stating age, qualifications and experience, and giving the names of two persons to whom reference may be made, must be delivered to the City Engineer, Town Hall, Peterborough, not later than 20th August, 1954. Canvassing will disqualify.
C. PETER CLARKE
Town Clerk.
Town Hall, PETERBOROUGH.
July, 1954. 3477

NATIONAL COAL BOARD, East Midlands Division, Architects' Department, Nottingham, require:—

S.V. 338—ARCHITECT. Appointment will be made in salary grade appropriate to qualifications and experience, *viz.*:—

(*a*) £600×£25—£650×£30—£900 or

(*b*) £525×£25—£650 (Exceptionally to £800).

For (*a*) candidate must be corporate member of R.I.B.A. with not less than 1 year's subsequent practical experience; for (*b*) passed the R.I.B.A. Final examination but have not had 1 year's practical experience, or have passed the R.I.B.A. Intermediate examination and have had 3 years' subsequent practical experience.

S.V. 339—QUANTITY SURVEYOR GRADE II. Salary £600×£25—£650×£30—£900.

Candidates must be corporate members of the R.I.C.S. with not less than 1 year's subsequent practical experience.

S.V. 340—QUANTITY SURVEYING ASSISTANT (GRADE I. Salary £525×£25—£650. (Exceptionally to £800.) Preference will be given to candidates who have passed the Intermediate examination of the R.I.C.S.

S.V. 341—QUANTITY SURVEYOR'S ASSISTANT. Salary according to qualifications and experience. Candidates should have had considerable experience in a Building Contractor's office as an Estimating or Increased Costs Clerk and be capable of settling accounts.

Applications, stating age, education, qualifications, experience and present appointment, with salary, should be submitted within 14 days of publication to:—

The Secretary,
National Coal Board,
East Midlands Division,
Sherwood Lodge,
Arnold,
Notts.

Envelopes and applications should be marked with the appropriate "S.V." number and original testimonials should not be sent. 3481

UXBRIDGE URBAN DISTRICT COUNCIL.
ENGINEER & SURVEYOR'S DEPARTMENT.
ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of Architectural Assistant on Grades IV and V of the A.P.T. Division of the National Scales (£580 to £670 per annum plus London Weighting, at present £30 for age 26 and over).

Applicants should have had a good architectural training and preference will be given to candidates with experience of Local Authority Housing Schemes and holding a recognised professional qualification. The appointment will be subject to the National Scheme of Conditions of Service, to the provisions of the Local Government Superannuation Acts, and to the passing of a medical examination. Applications, stating age, marital state, present and previous appointments, qualifications, and details of experience, together with the names and addresses of three persons to whom reference may be made, should be forwarded to Harold E. G. Stripp, Esq., A.M.I.C.E., F.R.I.C.S., Engineer, Surveyor and Architect, 263, High Street, Uxbridge, not later than Monday, 23rd August, 1954. Candidates are required to disclose in writing whether, to their knowledge, they are related to any member or senior officer of the Council.

JOHN POOLE,
Clerk of the Council.
3490

CITY OF BIRMINGHAM.
CITY ARCHITECT'S DEPARTMENT.
APPOINTMENT OF ASSISTANT ARCHITECTS.
SCHOOLS SECTION.

(*a*) Senior Assistant Architect—Grade A.P.T. IX (£840/£960 per annum).

(*b*) Senior Assistant Architects—Grade A.P.T. VIII (£785/£860 per annum).

(*c*) Assistant Architects—Grade A.P.T. VI (£695/£760 per annum).

HOUSING AND GENERAL SECTIONS.

(*d*) Assistant Architect—Grade A.P.T. VII (£735/£810 per annum).

(*e*) Assistant Architect—Grade A.P.T. V (£620/£670 per annum).

The Department is carrying out a large major School Building Programme and for (*a*) and (*b*) the successful candidates will be required to have an extensive knowledge of the planning, design and erection of all types of school buildings in both traditional and non-traditional construction.

Applicants must be Associate Members of the R.I.B.A., or hold an equivalent qualification.

The posts are permanent, superannuable, subject to a medical examination, and to one month's notice on either side.

Applications, endorsed with the heading of the post, stating age, present position and salary, qualifications and experience, together with the names of two persons to whom reference can be made, should reach the undersigned not later than 16th August, 1954.

Canvassing disqualifies.

A. G. SHEPPARD FIDLER,
City Architect.
Civic Centre, Birmingham, 1.
CCA/DC. 3505

WEST RIDING COUNTY COUNCIL.
ARCHITECTS required for first class architectural work in the Education Section of the office of the County Architect—applicants must be capable designers. Salary scales from £490-£810. Application forms may be obtained from the County Architect, Bishopgarth, Westfield Road, Wakefield. 3500

OXFORDSHIRE COUNTY COUNCIL.

Applications are invited from suitably qualified persons for the following appointments in the County Architect's Department:—

(*a*) ASSISTANT BUILDING SURVEYOR—A.P. & T. Grade IV/V (£580—£670)

(*b*) ASSISTANT ARCHITECT—A.P. & T. Grade IV (£580—£625)

(*c*) ARCHITECTURAL ASSISTANT—A.P. & T. Grade III (£550 to £595).

Candidates for (*a*) must have experience in surveying and maintenance work and preference will be given to those who have passed the Final Examination of the R.I.C.S. (Building Surveying); and for (*b*) and (*c*) should have had experience in the preparation of working drawings and details in connection with Schools and other County work, and should be neat and accurate draughtsmen and preference will be given to those who have passed the R.I.B.A. Intermediate Examination and/or attended a School of Architecture.

The appointments are subject to the provisions of the Local Government Superannuation Act 1937/53 and to medical examination.

Forms of application may be obtained from the County Architect, Park End Street Offices, Oxford, and should be completed and returned to him not later than the 16th August, 1954.

GERALD GALE BURKITT,
Clerk of the Council.
County Hall, Oxford. 3494

BOROUGH OF SOLIHULL.
APPOINTMENT OF:

(*a*) QUANTITY SURVEYOR, GRADE A.P.T. VIII (£785×£25—£860)

(*b*) ARCHITECTURAL ASSISTANT, GRADE A.P.T. VA (£650×£20—£710)

Applications are invited for the above appointments in the Borough Engineer & Surveyor's Department, 90, Station Road, Solihull.

The appointments will be subject to the provisions of the Local Government Superannuation Acts, to the terms of the National Scheme of Conditions of Service and to one month's notice on either side. Housing accommodation will be made available within a reasonable period to the successful applicants, if married.

Applications, giving full details as to age, present position and salary, qualifications and experience, together with the names and addresses of two referees, should be delivered to the Borough Engineer and Surveyor at the above address not later than Tuesday, 24th August, 1954.

W. MAURICE MELL,
Town Clerk.
3495

COUNTY BOROUGH OF WALLASEY.

Applications are invited from appropriately qualified persons for the following positions in the office of the Borough Architect:—

1 Senior Architectural Assistant. Grade APT. VI £695—£760.

1 Architectural Assistant. Grade APT. V(*a*) £650-£710.

1 Architectural Assistant. Grade APT. V £620-£670.

1 Architectural Assistant. Grade APT. IV £580-£625.

1 Architectural Assistant. Grade APT. III £550-£595.

1 Junior Architectural Assistant. General Division £170-£470 according to age.

1 Temporary Architectural Assistant. Grade APT. V £628-£670.

1 Quantity Surveying Assistant. Grade APT. VI £695-£760.

1 Quantity Surveying Assistant. Grade APT. V £620-£670.

The Council will favourably consider the provision of Housing Accommodation in approved cases. Applications, on forms obtainable from the Borough Architect, are to be returned by 20th August, 1954.

A. G. HARRISON
Town Clerk.
3497

COUNTY BOROUGH OF ST. HELENS.

Applications are invited for the appointment of SENIOR ARCHITECTURAL ASSISTANT, Grade A.P.T. VII (£735-£810) in the Borough Engineer's Department.

Applicants should be Registered Architects, preferably holding a recognised architectural qualification and have had experience in the design of educational buildings.

Housing accommodation will be made available if required by the successful candidate.

The appointment will be terminable by one month's notice and will be subject to the Local Government Superannuation Acts and medical examination.

Candidates must, when making application, disclose in writing whether to their knowledge they are related to any member of the Council or to a holder of any senior office under the Council.

Applications stating age, qualifications, present and past appointments, and details of experience, accompanied by copies of three recent testimonials must be forwarded to M. Ward, M.I.Mun.E., A.M.T.P.I., Borough Engineer, not later than Monday, 16th August, 1954.

Canvassing in any form will be deemed a disqualification. 3461

LONDON COUNTY COUNCIL.

Grade III ENGINEERS (salary up to £892 10s.) and SURVEYING ASSISTANTS (up to £739 10s.) required in District Surveyor's Service. Qualifications A.R.I.B.A., A.M.I.Str.E., or A.R.I.C.S.; structural knowledge essential. Particulars and application forms from Architect (AR/EK/DS/2), County Hall, S.E.1. (1025). 3511

FAREHAM URBAN DISTRICT COUNCIL.
APPOINTMENT OF TEMPORARY
ARCHITECTURAL ASSISTANT
A.P.T. GRADE Va (£650×£20—£710).

Applicants must possess R.I.B.A. final examination qualification, and be able to take charge, under supervision of Engineer and Surveyor, of all Council's architectural work, especially Housing Schemes and Contracts.

Appointment subject to N.J.C. Conditions of Service, to medical examination and provisions of Local Government Superannuation Acts. N.J.C. Car Allowance (8 h.p.) payable.

Applications stating name and address, date of birth, full details of education and training, qualifications held, past and present posts and salary, previous experience, etc., together with names and addresses of two referees, must reach me by 16th August, 1954.

B. W. RANDS,
Clerk to the Council.
"Merton", 5 Grove Road,
Fareham, Hants. 3492

CARDIGANSHIRE COUNTY COUNCIL.

Applications are invited for the post of Assistant Architect, Grade A.P.T. VI £695-£760, in the County Architect's Department, Aberayron. Applicants must be members of the R.I.B.A. and must disclose whether to their knowledge they are related to any Member or Senior Officer of the Authority.

Forms of application may be obtained from the County Architect, County Hall, Aberayron, and should be returned to the undersigned by not later than 12 noon on the 21st August, 1954.

J. E. R. CARSON,
Clerk of the Council.
Swyddfa'r Sir, Aberystwyth. 3493

ESSEX COUNTY COUNCIL.
LEYTON COMMITTEE FOR EDUCATION.
APPOINTMENT OF JUNIOR
ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of a Junior Architectural Assistant to work in the School Architects' Section of the Borough Engineer and Surveyor's Department at Grade A.P.T. I £520-£565 including London Weighting which is reduced according to scale when the age of the successful applicant is less than 26 years.

Details of the appointment and form of application may be obtained from Mr. H. D. Peake, M.Sc.(Eng.), Borough Engineer and Surveyor, Town Hall, Leyton, London, E.10, to whom they should be returned not later than TUESDAY, 17th AUGUST, 1954.

D. J. OSBORNE,
Town Clerk.
Town Hall, Leyton, E.10.
24th July, 1954. 3496

FLINTSHIRE COUNTY COUNCIL.

Applications are invited for the appointment of QUANTITY SURVEYORS (2 vacancies) in the County Architect's Department; salary according to qualifications and experience up to Grade VII/VIII (£735 p.a. rising to £860 p.a.). Applicants should be Members of the Royal Institute of Chartered Surveyors (Quantities) and should be capable of preparing Bills of Quantities, estimates, measuring up and dealing with Contractors' accounts for large contracts, and should preferably have had good experience in the office of a Local Authority. Applications, on a form to be obtained from the undersigned, should be returned by 23rd August, 1954.

W. HUGH JONES,
Clerk of the County Council.
County Buildings, MOLD. 3498

EAST ANGLIAN REGIONAL
HOSPITAL BOARD.
ARCHITECT'S DEPARTMENT.

(1) ARCHITECTURAL ASSISTANTS. Intermediate Examination of R.I.B.A. or recognised equivalent essential. Applicants must have had experience in architectural work. Commencing salary within grade £440-£625 per annum, will depend on age and practical experience since obtaining qualification but will not exceed £525.

(2) DRAUGHTSMEN (Architectural). Applicants must have had suitable training and experience in architectural work. Salary £360 at age 21 or over—£545.

Applications stating age, qualifications, experience, details of present position and names and addresses of three referees to Secretary of Board, 117 Chesterton Road, Cambridge, by 16th August, 1954. 3506

ARGYLL COUNTY COUNCIL

Applications are invited for the appointment of a QUANTITY SURVEYING ASSISTANT for the County Architect's Department. Salary scale Grade IV-V (£580-£680) with placing according to experience and qualifications. The post is superannuable. HOUSING ACCOMMODATION WILL BE AVAILABLE IF REQUIRED.

Apply giving details of qualifications and experience along with copies of two recent testimonials to County Architect, County Offices, Dunoon, not later than one week after the date of publication of this advertisement.

A. D. JACKSON,
County Clerk.
3467

LONDON COUNTY COUNCIL.

Architects and surveyors required for safety regulations of theatres and special buildings, and for general building regulation work, salaries up to £892 10s. 0d. according to experience. A.R.I.B.A. or A.R.I.C.S. essential. Particulars and application form from Architect (AR/EK/TBR/3), The County Hall, S.E.1. (848) 3487

DERBYSHIRE COUNTY COUNCIL.
COUNTY PLANNING DEPARTMENT.
Applications are invited for the following posts: (*a*) Junior Assistant (N.J.C. Scale A.P.T. II £520-£565); (*b*) Assistant (N.J.C. Scale A.P.T. III £550-£595). Applicants must have passed the Intermediate Examination of the Town Planning Institute and in the case of post (*b*) have had some architectural training and experience.
The posts are subject to N.J.C. conditions. Applications stating age, qualifications and experience accompanied by one testimonial and the names of two referees should reach the County Planning Officer, 8a Bold Lane, Derby, not later than August 30th. 3426

HERTFORDSHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
Applications are invited for the appointment of a SENIOR ASSISTANT ARCHITECT Grade VII (£735-£810), and an ASSISTANT ARCHITECT, Grade II (£520-£565). Previous Local Government experience not essential. Applications, together with the names of two referees, to County Architect, County Hall, Hertford, Herts., not later than first post 17th August, 1954. 3503

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT.
(*a*) PLANNING OFFICERS, Grade III (up to £892 10s.).
(*b*) PLANNING ASSISTANTS (up to £739 10s.).
Professional qualifications: A.R.I.B.A., A.R.I.C.S. and/or A.M.P.T.I., required. Application forms and particulars from Architect (AR/EK/P/4). County Hall, S.E.1. 3420

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.
Vacancies for Architects Grade III (up to £892 10s.) and Architectural Assistants (up to £739 10s.) for programme including fire stations, homes for the aged, welfare, clinics, children's homes, a power station, and other industrial buildings. Qualifications—A.R.I.B.A. or R.I.B.A.. Final Exam. Details and application forms, returnable by 20th August, from Architect (AR/G/1009/1), County Hall, S.E.1. 3488

KENT EDUCATION COMMITTEE.
MEDWAY COLLEGE OF ART,
Eastgate, Rochester, Kent,
Principal: C. Stanley Hayes, A.R.C.A. (Lond.).
DEPARTMENT OF ARCHITECTURE.
Required as soon as possible, part-time Studio Masters for the above Department. Applicants should be members of the R.I.B.A. qualified by examination. Full details should be given in application.
Application by letter giving brief outline of professional and teaching experience, should be forwarded to the Principal within 14 days of the appearance of this advertisement. 3483

HARLOW DEVELOPMENT CORPORATION.
Applications are invited for the post of Architect Grade III, from candidates who are qualified A.R.I.B.A. or equivalent. Salary £862 10s. 0d. to £1,135 per annum.
Considerable experience essential in the design and construction of factory buildings, supervision of works in progress and control of staff engaged upon working drawings and details.
Superannuation. Housing.
Detailed applications to be sent with names of two referees to the General Manager, "Terlings", Gilston, Harlow, Essex, within seven days. 3485

LONDON ELECTRICITY BOARD.
ARCHITECTURAL DRAUGHTSMEN.
Applications are invited for the above positions in the Construction Branch of the Chief Engineer's Department in Central London.
Applicants should be neat draughtsmen and preferably have had several years' experience in an Architect's Office.
The post is graded under Schedule "D" of the National Joint Board agreement as Grade 6—£458 to £595 7s. 0d. per annum, inclusive of London Allowance.
Application forms obtainable from Personnel Officer, 46, New Broad Street, E.C.2. Please enclose addressed envelope and quote ref.: V/1785/A on envelope and all correspondence. 3486

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.

ASSISTANT (at Intermediate stage) required for Architects' London office engaged in major works of restoration and construction of Schools and Colleges. Appointment offers excellent opportunities for supervision of works and calls for a candidate with initiative. Salary £350-£460 per annum. Box 2974.

A SENIOR ARCHITECTURAL ASSISTANT required, full experience in preparation of Working Drawings, Details, and supervision of office and Industrial Buildings in the London Area. Good knowledge of construction and design essential. Apply in writing giving full particulars of qualifications, age, experience and salary required to Box 9829.

SOUTH DEVON.—ASSISTANTS, about Inter. standard, required immediately for busy general practice. Salary by arrangement. Box 3437.

SENIOR AND JUNIOR ARCHITECTURAL ASSISTANTS and Draughtsmen or women required in busy office in the Home Counties. Some experience essential. Large varied practice. Please state experience and salary required. Box 2137.

ARCHITECTS' ASSISTANTS required by a large Chain Store organisation. Commencing salary £600 to £750 per annum, according to experience. Staff canteen. Pension scheme. Write Box AJ 333, LPE, 110, St. Martin's Lane, W.C.2. 3048

ARCHITECTURAL ASSISTANT required, Intermediate standard, with some office experience, for small busy practice. Shaw & Lloyd, F.R.I.B.A., 74, Gt. Russell Street, W.C.1. Museum 9693. 3244

REQUIRED for Architects' office, Central London area, young qualified ASSISTANTS interested in design and construction. Write, stating experience and salary required. Box 2325.

CO-OPERATIVE WHOLESALE SOCIETY, LTD.,
ARCHITECT'S DEPARTMENT, LONDON.
APPLICATIONS are invited for the following appointments:—
(*a*) ASSISTANT ARCHITECTS, of Intermediate and Final R.I.B.A. standard (salary range: £320-£680 per annum, according to age and experience), for work on varied and interesting projects.
(*b*) WORKER-UP (commencing salary up to £600 per annum, according to age and experience).
The appointments are permanent and offer prospects of up-grading.
Successful candidates will be required to undergo medical examination for compulsory superannuation scheme.
Applications, stating age, experience, qualifications and salary required, to W. J. Reed, F.R.I.B.A., Chief Architect, Co-operative Wholesale Society, Ltd., 99, Leman Street, London, E.1. 3248

REEMA CONSTRUCTION LTD., MILFORD MANOR, SALISBURY, require DRAUGHTSMEN; additional draughtsmen required. Sound experience of building details for work on precast concrete prefabricated houses and other buildings up to £600 a year. YOUNG ARCHITECT. The position advertised has been filled. 3292

NEWLY formed Architects' Section of a manufacturing company, specialising in timber structures, requires further staff. Applications are invited from:
(1) Qualified school trained men up to 30 years of age, with a minimum of one year's experience. Enthusiasm essential. The position is an attractive one, offering security and interest.
(2) ARCHITECTURAL DRAUGHTSMAN, experienced in the preparation of working drawings and surveys. Interesting work, with good prospects.
Applications, stating age, training and experience, to: Company Architect, Vic Hallam, Ltd., Valley Works, Langley Mill, Nottingham. 3359

ARCHITECTURAL ASSISTANT required in busy West End office engaged on commercial work. Able to prepare sketch schemes and working drawings. Ability to prepare perspectives an asset. Reply stating age, experience and salary required to Box 3339.

ARCHITECTURAL ASSISTANT required for expanding City practice. Quick and accurate draughtsman with sound knowledge of construction. Minimum five years office experience. Salary £500-£700 according to qualifications. Apply with full details to Box 3362.

CLIFFORD TEE & GALE, F/F.R.I.B.A., require SENIOR and JUNIOR ASSISTANTS in their offices in Westminster and Birmingham for work on Power Stations, Research Laboratories and other interesting projects. Please apply to 5, Buckingham Palace Gardens, S.W.1 (SLOane 2296), or 43, Frederick Road, Birmingham, 15 (Edgbaston 3676). Five day week. 3335

SENIOR ARCHITECTURAL ASSISTANT.—Littlewoods Mail Order Stores, Ltd., require a Senior Architectural Assistant for their Construction Department. The position offers exceptional scope for a keen man, with sound experience of commercial buildings, factories and shops, and who is able to undertake surveys, prepare details and supervise erections. Preference will be given to applicants who have reached at least Intermediate R.I.B.A. standard. Attractive salary, Pension and Life Assurance Scheme. 5-day week. Applications, in confidence, stating age and full details of experience to date, to Personnel Manager, Littlewoods Mail Order Stores, Ltd., Endbutt Lane, Crosby, Liverpool, 23. 3406

ARCHITECTS' JUNIOR ASSISTANT required, London office, West Central. Good prospects, varied practice, 5-day week. Luncheon vouchers. Should be good draughtsman, completed National Service. Write, age, experience, salary required. Box 3386.

ARCHITECTURAL ASSISTANTS REQUIRED.
SENIOR ASSISTANTS, with ability to work on own initiative on schemes of a contemporary nature, which include schools and industrial buildings.
JUNIOR ASSISTANTS also required, of Intermediate standard. All applicants must have completed National Service, and apply in first instance by letter to Greenhalgh & Williams, A.R.I.B.A., Court Chambers, 15, Mawdsley Street, Bolton. 3379

QUALIFIED or experienced ASSISTANT required in Architect Department of multiple Company in the Midlands, conversant with design, alterations and maintenance of retail shop premises, working drawings, specifications and surveys. Salary according to ability. Five-day week and pension scheme in operation. Applicants are requested to furnish details of training, age, experience, to Box 3462.

ARCHITECTS in South-East Scotland require ASSISTANT, qualified or Final standard. Apply, stating age, experience, and salary required. Box 3388.

ARCHITECTURAL ASSISTANT required immediately. Interesting and varied work, including housing, shops, halls and churches, etc. Apply, stating age, experience, and salary required, to McCarthy Collings & Co., 187, Forest Road, Coalville, Leicestershire. 3424

ARCHITECTURAL ASSISTANT with experience required for general practice. Reply, stating age, experience and salary required, to Thomas Worthington & Sons, 178, Oxford Road, Manchester, 13. 3455

ARCHITECTURAL ASSISTANT (25-30 years old) London, W.C., small varied practice. Intermediate standard. Working drawings, details. Office experience essential. Box 3449.

ARCHITECTS Department of Progressive Furniture Combine with H.Q. in London and branches throughout the country, have vacancies in expanding Architects Department for the following:— ARCHITECTURAL ASSISTANT. Capable of working on own initiative with the minimum of supervision. Appointment will entail a certain amount of travelling to control contracts throughout the country. Work covered ranging from new shops and stores, alterations to existing buildings and general maintenance to present properties. YOUNG ASSISTANT to work in conjunction with the above appointment. Ability to survey existing premises and prepare working drawings and details with minimum of supervision. Occasional travelling involved. Both appointments will be subject to Company's superannuation scheme. Write giving full particulars of age, experience and salaries required to Box 3447.

ARCHITECTURAL ASSISTANTS &
ARCHITECTURAL DRAUGHTSMEN
REQUIRED:—Architectural Assistants, preferably up to or over Intermediate R.I.B.A. standard, with experience in Industrial and Commercial work. Also Architectural Draughtsmen. All applicants should preferably have experience in precast concrete and reconstructed stone. Superannuation scheme. Apply in confidence with details of experience, copies of references and salary required to Deputy Managing Director, The Croft Granite, Brick and Concrete Co. Ltd., Croft, Leics. 3442

ARCHITECTS require SENIOR and JUNIOR ASSISTANTS with good all round office experience. Salaries £400-£650, according to experience.—Stephenson and Gillis, 2, Saville Chambers, Newcastle. 3406

JUNIOR and SENIOR ASSISTANTS required for Architect's Norwich office. All classes of works being carried out. Reply, giving age, experience and qualifications, if any. Box 3410.

ARCHITECTURAL ASSISTANTS required, preferably up to or over Intermediate R.I.B.A. standard. C. H. Elsom, A.R.I.B.A., 44, Catherine Place, Westminster, S.W.1, Victoria 4304. 3412

EXPERIENCED ASSISTANT required. Must have sound knowledge of construction and be a good draughtsman. Salary according to capabilities. Reply to E. D. Lyons, L. Israel & T. B. H. Ellis, 26 Seymour Street, London, W.1. 3489

DRAUGHTSMEN and SURVEYORS (Senior and Junior) required by Building and Civil Engineering Contractors, Weybridge, Surrey. Permanent and progressive positions for suitable applicants. Apply stating age, experience and salary required to Box 3478.

AGENTS and SUPERVISORS required by Building and Civil Engineering and Sports Ground Contractors, Weybridge, Surrey. Permanent and progressive positions for suitable applicants. Apply stating age, experience and salary required to Box 3479.

ARCHITECTURAL ASSISTANT required immediately. Experienced in the preparation of working drawings and details from sketch drawings, and with at least three years' office experience. Apply stating qualifications, age, experience and salary required to Welch & Lander, 38, Gloucester Place, London, W.1. 3480

SENIOR ARCHITECTURAL ASSISTANT required for detailed working drawings. Previous office experience essential. Apply Brian L. Sutcliffe & Partners, 5, Manchester Square, London, W.1 WELbeck 9237 3482

GOLLINS, Melvin, Ward & Partners require SENIOR and JUNIOR STAFF with office experience and interest in contemporary architecture; capable working drawings essential. Telephone Welbeck 9991. 3476

ONE ASSISTANT required. Intermediate standard. General practice and interesting work. Some office experience essential. Salary according to experience, qualifications and ability, especially ability. William Crabtree, F.R.I.B.A., 8, Robert Adam Street, W.1. Wel 8918. 3469

J. BRIAN COOPER, F.R.I.B.A., requires in his Birmingham Office a high grade SENIOR ASSISTANT for important work. Salary approximately £900-£1,000 per annum. Apply to 177, Corporation Street, Birmingham. 3475

INTERMEDIATE Standard ASSISTANT, preferably office trained, accurate draughtsman, required urgently, Brighton/Hove area office. Box 3474.

ARCHITECTURAL ASSISTANT required in London Office. Intermediate standard. Office experience essential. Walters & Kerr Bate, 14, Gray's Inn Square, W.C.1. HOL. 9850. 3473

SENIOR ARCHITECTURAL ASSISTANT required to supervise drawing office. Industrial design experience essential. Commencing salary about £900 per annum. Apply stating experience and age, to Box 3472.

SENIOR and JUNIOR ARCHITECTURAL ASSISTANTS required for general and commercial practice. Apply stating age, experience, qualifications and salary required to Duncan Clark & Beckett, F/L.R.I.B.A., F/F.R.I.C.S., Architects & Surveyors, 7, West Stockwell Street, Colchester. 3468

JUNIOR ARCHITECTURAL ASSISTANT required for old established Architects business. Please write giving experience and salary required to Arthur W. Whydale Faggs Folly Studio, Tanery Drift, Royston, Herts. 3499

SENIOR ASSISTANT required Must be experienced and qualified. Reply in confidence, giving full experience and salary required, to Messrs. W. Illingworth & Son, 15, Sunbridge Road, Bradford 1.

LONDON ARCHITECT requires assistants of Final standard with experience in flat, housing and shop development. Some knowledge of industrial work an advantage. References, experience, age and salary required to Box 3502.

Architectural Appointments Wanted

SENIOR ARCHITECT, Dip. Arch., Liverpool, A.R.I.B.A. (45), seeks stable position with responsibility and prospects in company or private practice. London preferred but would consider provinces. Works varied but mainly industrial and commercial. Experienced in handling all phases of large projects and control of staff. Highest references. Box 3401.

A. R.I.B.A. requires position three days per week, London area. Experienced in design, specifications, working drawings, supervision, etc. Box 3371.

MIDDLE EAST CANDIDATE (30), M.C.D., B.Arch., A.R.I.B.A., A.M.T.P.I., over 3 years public and private experience, limited own private practice, car, fluent Arabic, shorthand typing, good M.E. connections. Would consider short spell in London prior to going out. Box 3484.

ARCHITECT, A.R.I.B.A., A.M.T.P.I., experienced, available for part-time work in London area. Box 3435.

Other Appointments Vacant

6 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.

WEST END Architect requires SECRETARY with shorthand-typing speeds of 120/50. Salary £7 10s. per week plus luncheon vouchers. Reply with details of age, experience, etc., to Box 3337.

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OLD-Established firm have opening in Scotland and the North, in connection with sales development, for men with good background: knowledge of building trade or architectural profession an advantage, but must have ability to make and follow up contacts on all levels. Full particulars, including age, training, experience and present salary to Box 3466.

LARGE London Company requires DESIGNER DRAUGHTSMAN, capable of producing own schemes for Interior Decoration and Shopfitting. Preparation of Working Drawings and Specifications. Experience in Hotel and Restaurant work an advantage. Good prospects, Pension Scheme. Apply Box 3414, stating experience and salary required. 3414

QUANTITY SURVEYOR required by Civil Engineering and Building Contractors' organisation for works in the Rhodesias, with eventual position as Chief Area Surveyor. Successful applicant will be based at the area office in Lusaka. Must be capable of controlling staff and compiling measurements and final accounts. Experience in tendering an advantage. Permanent position with pension scheme. Write, stating experience, age and salary required. Box 3404.

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ARCHITECT with provincial practices requires accommodation address or small self-contained offices in city or West End of London. Reply, giving full details, to Box 3462A.

WELDING. We are specialists in Furniture, fixtures and all types of metal work to Architects. Designers own specifications. We shall be pleased to give quotations. PATRICK HARRINGTON Albion Yard, Balfe Street, N.1. 3510

Partnership

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

A. R.I.B.A., Dip. Arch. (40), at present Chief Assistant (£900 p.a.), accustomed to responsibility and working on own initiative, seeks senior and progressive position/partnership. Own car. Capital available. Preferably Midlands or N. England. Box 3374.

PARTNERSHIP or position leading thereto is available in old established busy practice in the home counties. The practice is largely commercial and extends to all parts of the United Kingdom. Live up-to-date qualified applicants should send particulars in the first instance to Box 3504.

ARCHITECT (34) wishes to purchase a practice from a London City member about to retire, and who would be prepared to carry on as a paid consultant. Box 3077.

Educational Announcements

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

R.I.B.A. and T.P.I. EXAMS.—Stuart Stanley (Ex. Tutor Sch. of Arch., Lon. Univ.), and G. A. Crockett, M.A./B.A., F./F.R.I.B.A., M./A.M.T.P.I. (Prof. Sir Patrick Abercrombie in assn.), prepare Students by correspondence. 10, Adelaide Street, Strand, W.C.2. TEM. 1603/4.

I.A.A.S.

FORTHCOMING EXAMINATIONS.

THE Incorporated Association of Architects and Surveyors will hold the following examinations during the week beginning 15th November, 1954.

Quantity Surveyors Section :—
- Intermediate grade (Relegations only).
- Final grade—Part I (Relegations only).
- Final grade—Part II.
- Direct Final grade (Relegations only).

Building Surveyors Section (including Municipal) :—
- Intermediate grade (Relegations only).
- Final grade—Part I (Relegations only).
- Final grade—Part II.
- Direct Final grade (Relegations only).

The examinations will be held in London, and at selected provincial centres. Applications from candidates for permission to sit, made on the prescribed form, must be received not later than Monday, 23rd August, 1954.

Full information on application to the General Secretary, I.A.A.S., 75, Eaton Place, London, S.W.1. 3135

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