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standard

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AAI

BE

BIA

BID

BRS BSA

BSI CABAS

CDA

CUC

BINC BOT

BEDA

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

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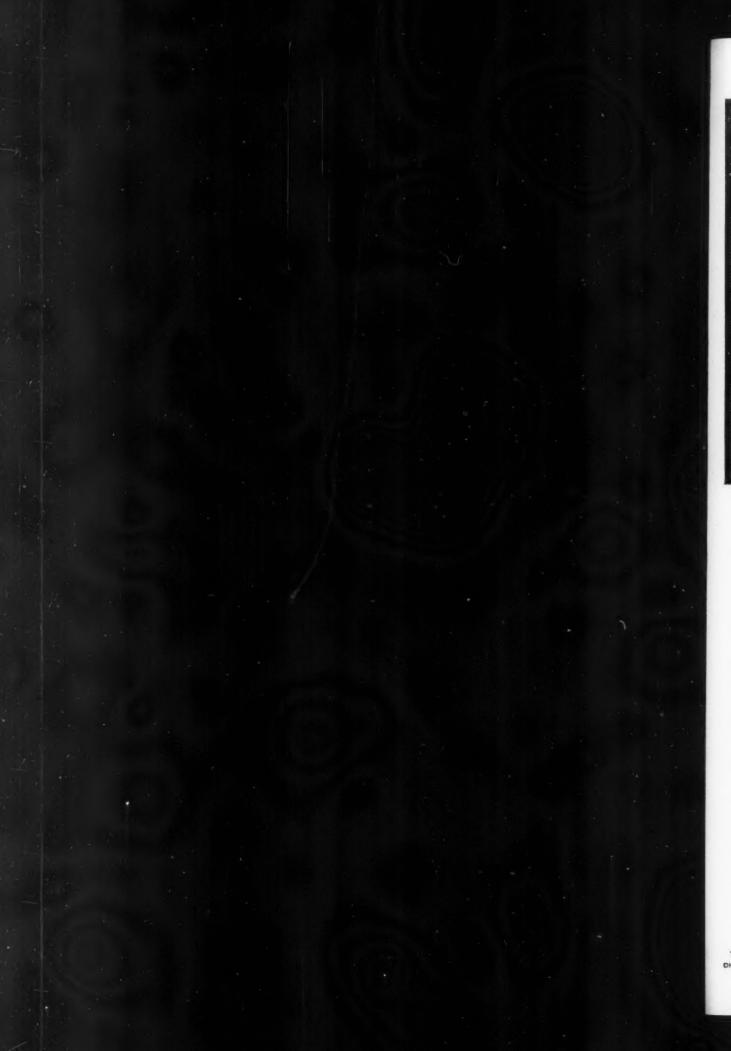












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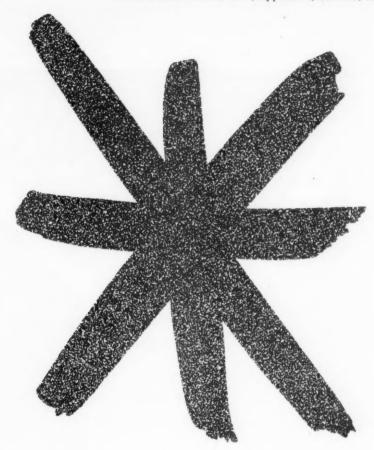
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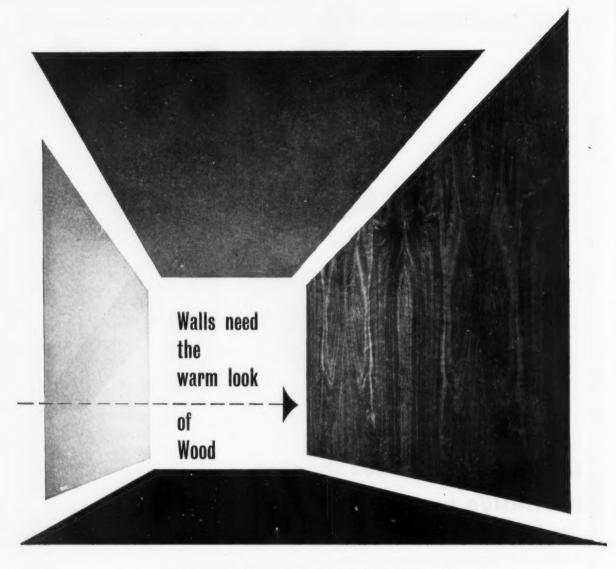
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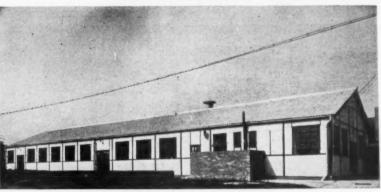
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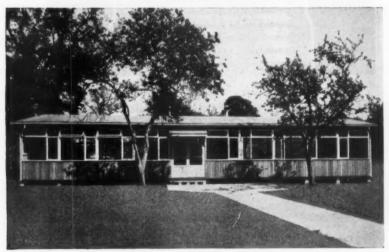
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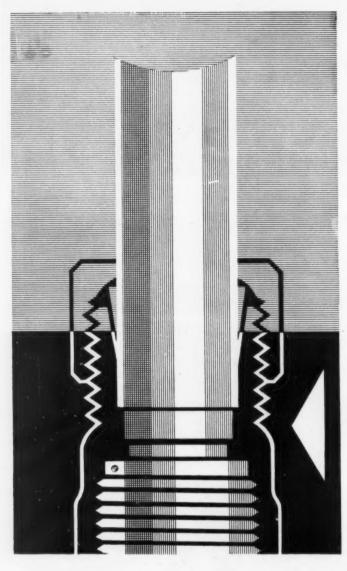
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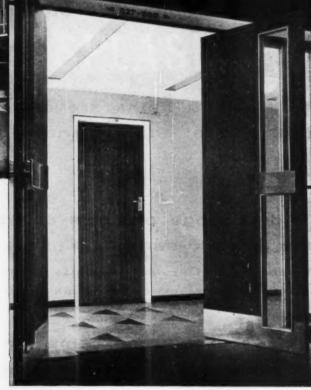


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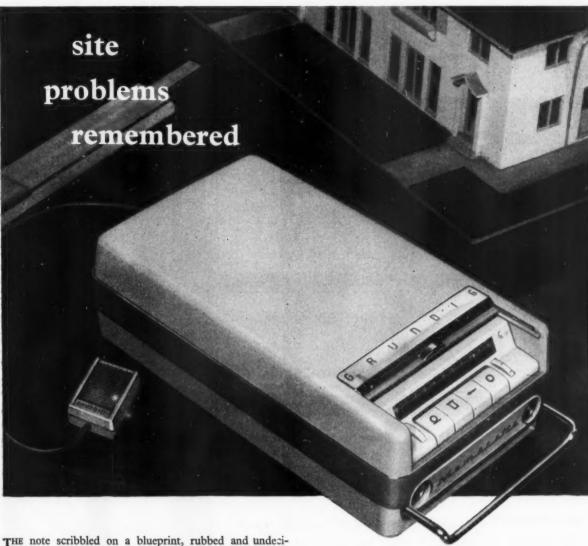
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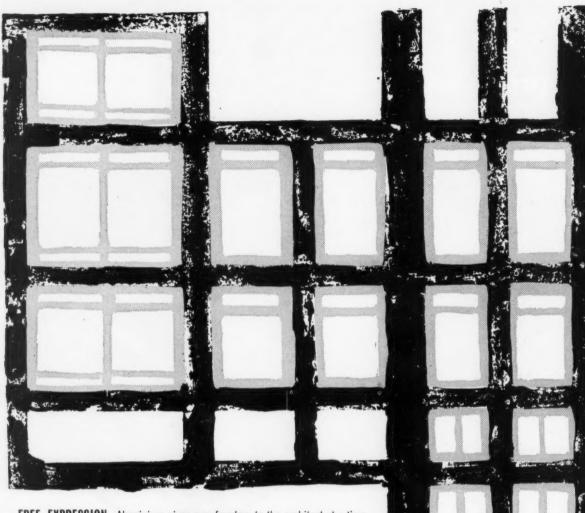
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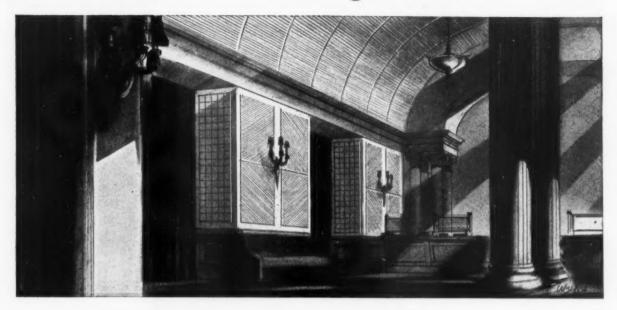
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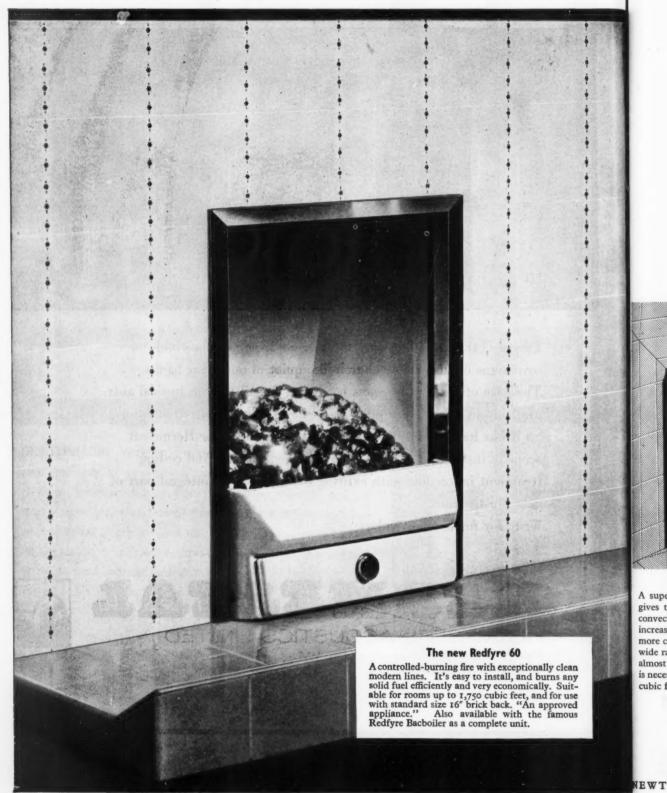
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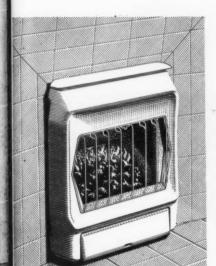


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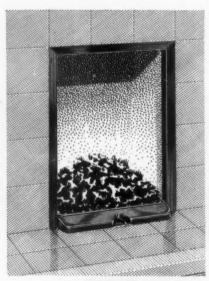
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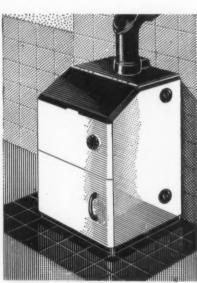
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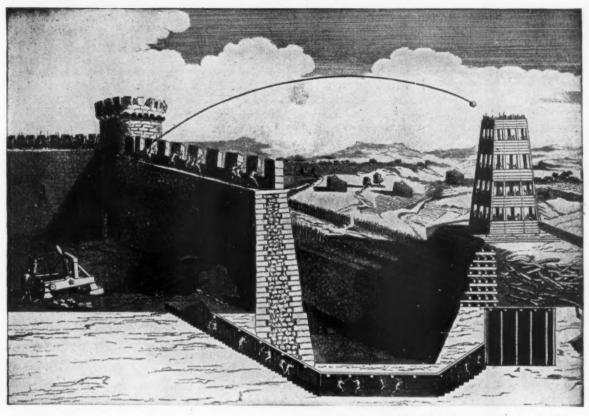
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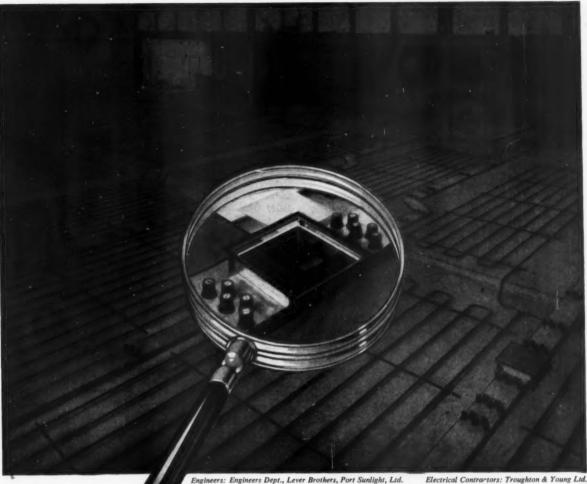
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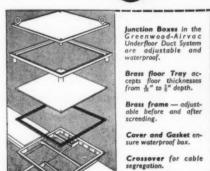
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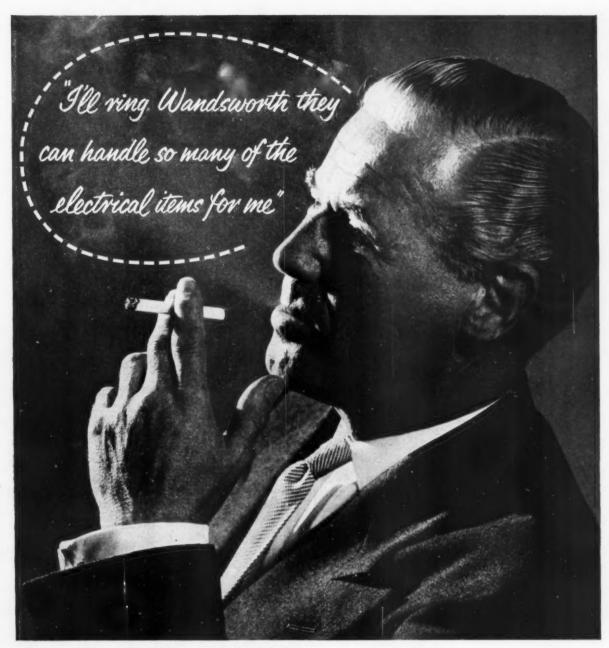






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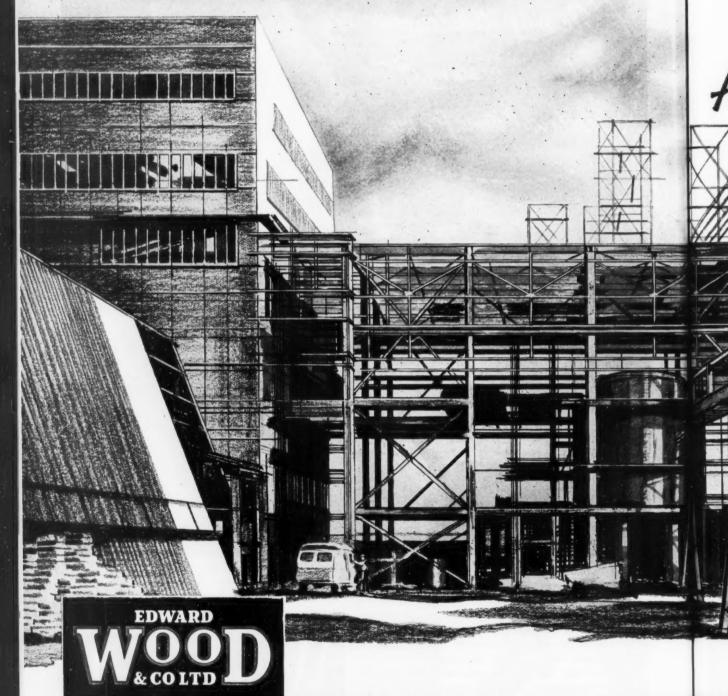
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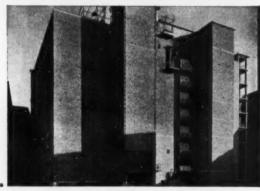
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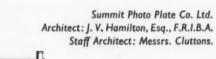


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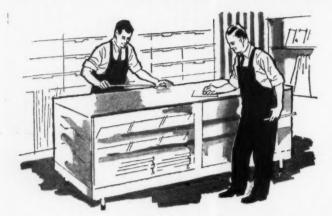
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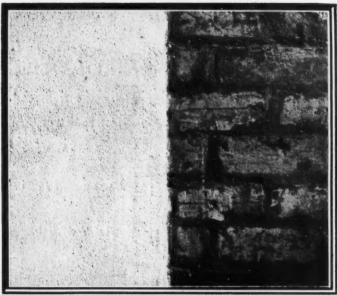
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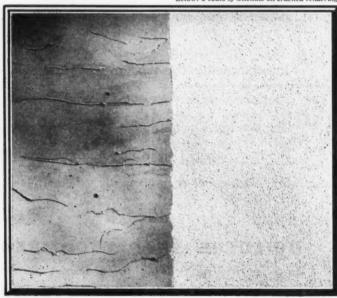


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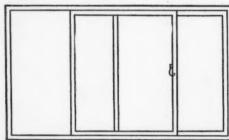
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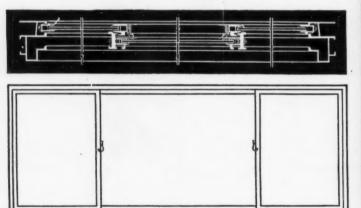


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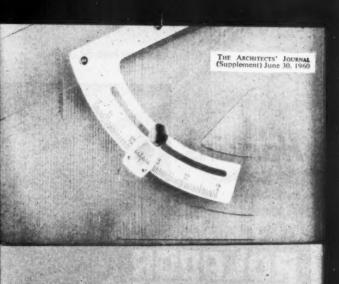
BUILDING DIVISION

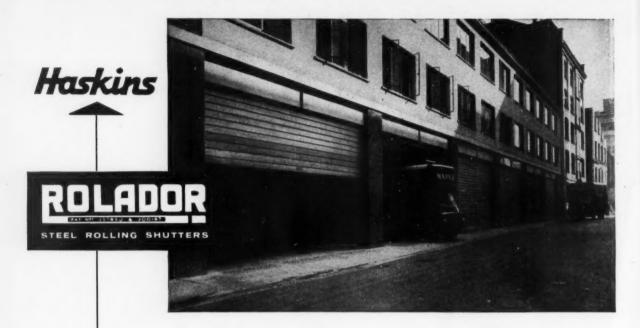




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Top: Rolador Shutters installed for Messrs. Maple & Co. Ltd., Tottenham Court Road, London. Architects: Dalgliesh & Pullen, FF.R.I.B.A.

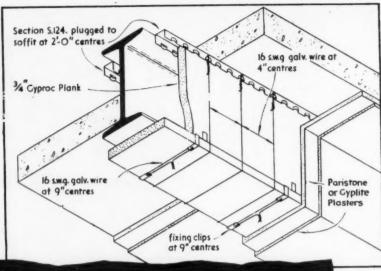
Left: Shutter Doors installed for South Devon Water Board, South Brent. Architects: Seagrim & Read, LL.R.I.B.A.

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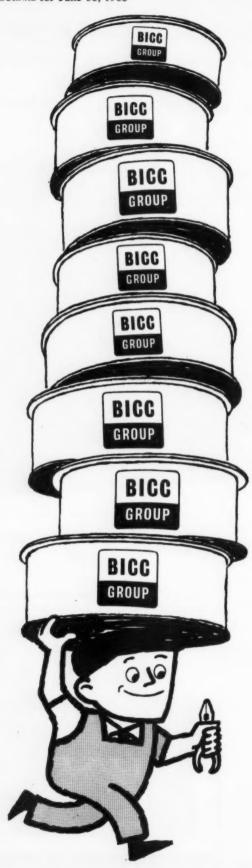
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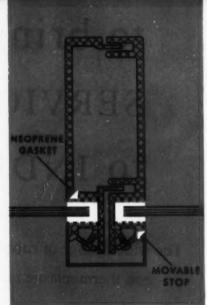
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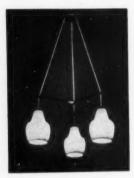
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Service 12<sup>a</sup> Triennale di Milano, 1960.

A model of the new school at Milan exhibition.

Photograph by permission of W. B. Lacey, Esq., A.R.I.B.A.,

A.M.P.I., Nottinghamshire County Architect.

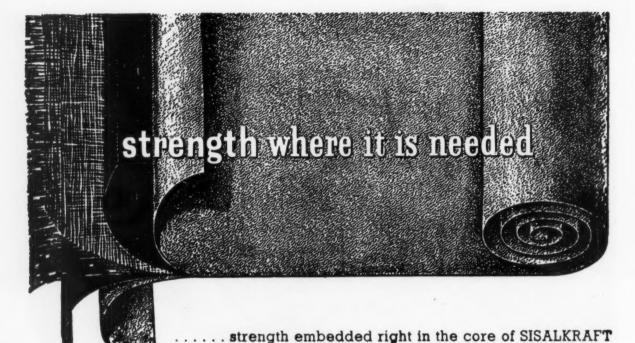
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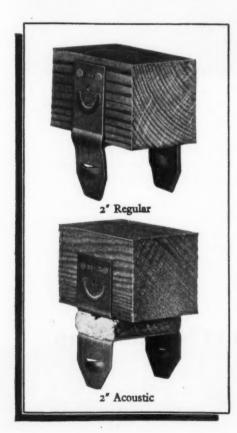
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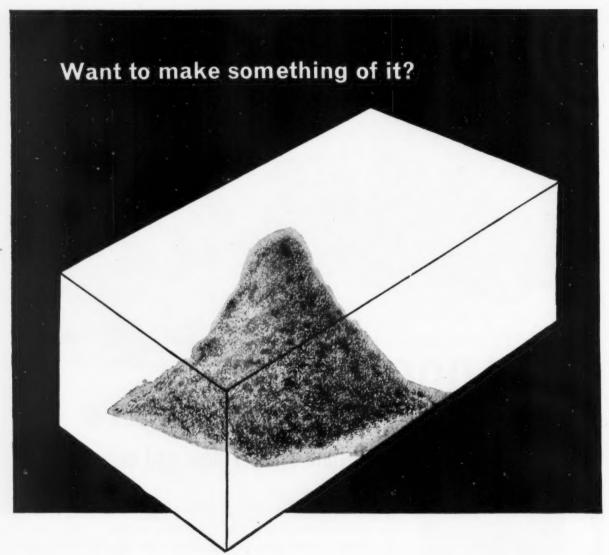
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#### The Architects' Journal

No. 3402, Vol. 131, June 30, 1960

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NOT QUITE ARCHITECTURE

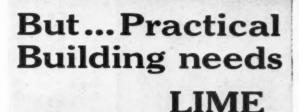
## Put your daughter on the stage, instead

An aspect of the profession's public relations, to which research might well be devoted, is the morale of architects' wives, who now constitute a sizeable body of disaffected persons with too much inside knowledge of what makes architects tick. This column has devened. affected persons with too much inside know-ledge of what makes architects tick. This column has drawn attention to the gravity of the problem before, but has no hesita-tion in publishing the document below since, by deterring intelligent girls from marrying architects at all, it may prevent further leakage of damaging information.

No one could have been more surprised-or more gratified-than I was to read in a March issue of The Tatler that the man to put your money on for a rich and rewarding future was the architect. Society photographers were temporarily the thoroughbreds of the marriage market, but the price on the head of the man at the drawing board was rising fast. Since the architect is also the new hero of the women's magazines, an "old wife's tale" seems timely before the rush starts. If you are thinking of marrying an architect-here is lesson number one.

Right at the beginning of this hazardous voyage of life with an architect, you must jettison your supplies. Preconceived ideas of gracious living have to be thrown overboard. You will find that the most famous, most admirable, most modern buildings (which were all built in the 1930s to your surprise) are the most tumbledown. If there are glass bricks, they are cracked, if there is plaster, it is crumbling, if there is paint, it is peeling. The most important thing about a woman's face (and to architects, buildings are women) is the "bones," not the lipstick.

Having avoided actually sinking the boat with your antiquated notions, you can set the sails. An intelligent interest is essential.





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This photograph was taken, not in Caracas or Mexico City, but in back, Bedfordshire. It shows one of the 29 hyperbolic paraboloid shells intro which roof part of the new factory at Manton Lane, Bedford, for hithe administrative block constituting the first development stage on Oscar this site are carried out in lift slab construction, seen in the Engil

background of the photograph. It is encouraging to see the introduction into this country of exciting structural forms hitherto more common on the other side of the Atlantic. Architects are O'Neil Ford & Richard Colley, consulting engineers Oscar Faber & Partners, general contractors Tarmac Civil Engineering Ltd., and lift slab contractors British Lift Slab Ltd.

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Bedfordshire Umbrellas Never let on that your endearing trait of calling east and west left and right is because you really can't manage the other method. An architect is easily shocked. For little dinner parties for his friends, you will need to add to your recipes two cover pages of THE ARCHITECTS' JOURNAL, secretly torn off and pinned up in the kitchen broom cupboard. When those strings of architectural initials get tangled up during after-supper conversation, pretend the coffee is boiling and dash out for a quick briefing. During the day, the list is a help when mugging up other, less considerate but equally telegraphic, architectural magazines.

Visits to buildings are choppy patches which will punctuate the calm of your journey. and need careful navigating. For once you will be useful-to charm the caretaker while your husband slips up the back stairs to the roof terrace. (One day, I am going to abandon him there). If you have the misfortune to penetrate the roof terrace, too, some piercingly observant remarks may be expected. Look for faults. Try and look over the balustrade (if you're short) and comment that it is much too high to show the view. Lean over it (if you're tall) and observe that it is much too low to be safe. If you have to commit yourself to a metaphysical appreciation, think of the most unlikely, unarchitectural word possible. I made an unexpected hit with, "not very articulated, is it?"

Your natural wiliness will be invaluable to your husband in the delicate business of getting inside locked buildings. If you are clumsy with a piece of bent wire, look about you. Someone I knew found the key to the Villa Savoie in the pocket of an old raincoat hanging over a bicycle. We had the place to ourselves, agricultural machinery and old hay included. It was the high-spot of our holiday.

Incidentally, snapshots of "us on the Continent" will never be the same again. Instead of muzzy 4 by 2 prints of happy sailing parties, revealing unsuspected scandals, all you will have to hand round to your chums is vast 16 by 12 (Golden Rule or Cartier Bresson, I forget which) glossy photographs—of buildings. The reward for your earnest study will probably be like mine: a provocative picture of me with my skirt flying up outside the Cité Radieuse went into the envelope marked "Corbusier." while a fuzzy snap of the cat was carefully filed in a rather empty envelope called "People."

The Tatler, however, seems to think that it's worth it. I am not so sure. As a well-read wife, I also saw that article showing the architect's pay scale as somewhere down among the skirts of a dentist's minimum income. When you get to that South Sea island of prestige and riches where this tricky voyage is supposed to take you, you may find only sand and coconuts. That's what I call Brutalism.

ANN BONE

The Editors

#### NEARLY DEMOCRATIC

THE architect in the provinces often sees the RIBA as a professional body organized by, and for the benefit of, London architects. Conversely London architects see the influx of Allied Society presidents on to the RIBA Council as a mass of reactionary backwoodsmen who hamper and impede the smooth progress of the professional body. Under the painstaking and determined chairmanship of Cleeve Barr both sides have been reforming each other for the past two years in the Constitution Committee. The result would seem to be largely a triumph for commonsense, if one accepts that the RIBA Council should consist of national and regional representatives. By insisting that in future the honorary officers be chosen from elected members of Council the likelihood of a clique running the RIBA has been diminished. And by insisting that the RIBA representative of Allied Societies must be voted for by the Institute membership of the Society, a welcome blast of democracy has been injected into the provinces.

It remains to be seen whether these worthy changes will result in any increase of interest by architects in national and local affairs.

In a number of details the RIBA constitution has been improved. For instance, 100 members can call a special general meeting, and 200 members can call for a referendum. There are, however, two failures. First, the Committee has entirely failed to see the advantages of electing Council through proportional representation.

Presumably to avoid the representation of "sectional" interests, the representative of the ABT has been dropped from the Council. It will be interesting to see whether the interests of salaried architects will be as well safeguarded without him.

The major omission, however, is the representation on Council of the London architects. 3,500 architects are ineligible for membership of Allied Societies because they live in London and Middlesex. They are therefore penalised by having only one, national, vote to everyone else's two votes. This is an extraordinary mistake, particularly as there is an old and reputable body, the Architectural Association, which has largely a London membership, which could serve to represent London architects. The AA, however, has had its president removed from his place on the RIBA Council. The AA has for many years been a progressive pace-maker to the RIBA. Now the RIBA has taken an opportunity to damage it. It is an appalling, monstrous action.



NO CHILDREN, NO PETS, NO ARCHITECTS With all this talk of building in green belts and generally sacrificing our green and pleasant land, you need not console yourself, dear reader, with the thought that it will at least bring you in more work. You'll be jolly lucky if you get a look-in, as this estate agent's advertisement in a recent Observer shows:

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Several readers have drawn ASTRA-GAL'S attention to this advertisement, and a very polite member of the firm responsible for it has explained what is behind the phrase. A number of the sites are owned by builders who may or may not have their own design staff but they have got a very strong prejudice against architects. So the question now is: are they inefficient builders who don't want to attain the high standard an architect sets? Or sane builders who do not want to be messed about by an inefficient architect?

#### TEN-PER-CENT-SPENCE

In his final speech as President, at the Manchester Conference Dinner Basil Spence spoke of the fact that architects' fees were the same rate, whatever the

age and experience of the architect, as a virtue.

It can, however, be thought of otherwise. It is a means whereby the local architect, the provincial architect, and particularly the young firm constantly loses out to the big firm, to the national names. Quite reasonably clients say: Why employ Mr. Jones when for the same fee we can have the famous Mr. X from London? It is a great inducement to local firms to discreetly undercut the professional fee. No, the sooner prosperous firms are judged not by the size of the office but by the size of their fee, the better for the profession and the better for architecture too.

#### MARKS MEN WOUNDED

At his first Press conference as president-elect of the RIBA Sir William Holford said that many types of commercial building gave no chance for an architect to design with the sort of feeling required to make a building memorable. In the Journal's report of this a correspondent wrote of the difference between the good taste of Marks and Spencers' clothes and the sort of buildings the firm puts up. It seems that Marks and Spencers' is (or are) wounded by this comment (which was not made by Sir William), and although we would hate to upset the people responsible for so many slips, let alone socks, in the Journal's offices. I hope they will be provoked to look at their buildings as critically as they now look at their merchandise.

#### REG BUTLER AND LES GIRLS

Reg Butler, whose name never seems to be out of these pages for long, has a one-man multi-girl show at the Hanover Gallery. It's not all just girls, sometimes it's girls undressing, or girls undressing on space frames, or even girls undressing on rotating space frames. If you feel that a particular theme is being worked pretty hard you are right. The female form is also much in evidence in the large drawings that form an important part of the show.

In making strong claims to be considered as a draughtsman (claims that many of the drawings justify) Mr. Butler has clearly come a long way from his simple blacksmith days, and some of us must shortly adjust our-



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" The Little Chef," single unit above, double unit helow

selves to the fact that he is now a major artist of world rank. Whatever he now is, and wherever he is going, he still keeps his technical abilities about him. There is no messy finish and if anything is rough, it's rough on purpose. I cannot say the same for Kenneth and Mary Martin, whose abstract mobiles and sculptures, respectively, are now on show at the ICA. Practically every exhibit is spoiled by bad workmanship or sloppy detailing. This isn't Brutalist ruggedness either-everything is supposed to be high precision stuff, and would obviously look much better if it were. It all seems very disappointing in artists who are held in high esteem by such high-precision architects as the Nuffield Trust boys.

#### FINGS AINT WHAT THEY EUSTON BE

Should Hardwick's Euston arch (or more properly propylaeum) be destroyed when the station is rebuilt? Earlier this year the LCC gave permission for its removal, on condition that it was rebuilt elsewhere. Since when nothing was heard until BBC Television's Tonight decided, last week, that this was a good controversial subject. They must have had some difficulty in getting an anti-preservationist to oppose John Betjeman. And the one they did get, Kenneth Robinson -usually game for an architectural lark-didn't seem to have much heart for the fight. He said, quite rightly, that is was almost impossible to see the arch today unless you lay down in the middle of the road, and that if the arch was worth seeing it must obviously be put where it could be seen. And then, without much apparent conviction, he argued against its reconstruction, resorting to last-ditch words like "effici-

ency" and "purpose." After Mr. Betjeman had disposed of Mr. Robinson with a straight left the two moved into the Great Hall, built by Hardwick junior some ten years after the arch, and discussed its fate. Here I might have had more sympathy with an antipreservation argument made grounds of efficiency, but the building looked so majestic on the screen (filmed from a part of the gallery where no-one ever thinks of going) that I felt it might well be incorporated in the new station. I gather this was a point discussed by Betjeman and his opponent in part of the twenty minutes of their conversation that didn't get past the editors scissors. I gather, too, that their unrecorded remarks on the inability of most architects to do such a job gracefully would have provoked a special meeting of the RIBA Information Committee.

#### NEW CAR FOR PULLMAN

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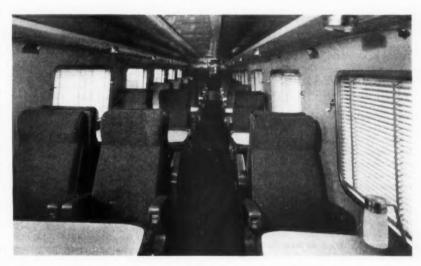
Talking of British Railways, I've just been impressed by a fast silent trip on the prototype of the Midland Pullmans quieter, at ninety m.p.h., than a Jaguar at the same speed on M1. All the gadgets worked (tilting and sliding seats, venetian blinds, lights, public address system) except the air-conditioning which failed, at first, to cope with thunderstorm humidity outside.

Some of the interior decor verged on the overdone. It was better in the second class (no adjustable seats) where it was simpler. Outside, the lettering was a bit arty and the wild and wonderful Pullman coat of arms should have been twice as big on the front to contrast its curly elegance with the satisfyingly brutal shape of the cab. But these are minor carps. Jack Howe and Metropolitan Cammell have done the best design job since nationalization and produced a diesel train that looks like a diesel train-not like a lot of steam carriages with the end one marginally modified to accept a windscreen.

#### GOOD PULL UP FOR CAR MEN

Look out for a newcomer to the streetscape—a prefabricated pull-up for car men. And I do mean car men. When these factory-built units have been dumped by lorry on to their prepared concrete bases they will be ready to serve "standardized and identical menus" for motorists with three minutes to spare, rather than lorry drivers who want a snooze. Fresh meals will be served within three minutes of





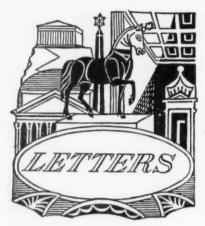
The Midland Pullman prototype, exterior above, first class interior below.

the motorist mounting his swivel stool, and if he hasn't time for this he can collect food and drink at a serving hatch. This sounds a very good alternative to the lukewarm instant coffee houses we know so well. But what will it look like? As you can see from the pictures, the basic eleven-seater unit is small and vulgar, and the larger version wears a really ugly nose "fin." The welded steel chassis has an aluminium roof and white painted, aluminium-panelled external walls. Inside there is plastic and stainless steel, and every inch of space is used for cooking, storage, refrigeration, food display and customer comfort. Efficient, no doubt, though I was a little disturbed that Lord Cottenham spoke so rapturously earlier this month about these units appearing from end to end of "this island of ours." However, I imagine we shall find the "Little

Chef," as it is called, cheering up the main subtopian highways, not topping Snowdon or Ben Nevis.

I must record with regret and indignation the sudden passing of Architecture and Building. It has joined the many other small, serious journals that have been wiped out because their publishers have been swallowed by larger organizations. If Odhams had stopped to think, after taking over the Tothill Press, they would have realized that there is immense value in a paper like Architecture and Building-a paper that doesn't have to hold its readers by offering free sets of draughtsman's tools. 'Congratulations to Donne Avenell and Arthur Shannon on the work they did to make their monthly lively, readable, and informative.

ASTRAGAL



Ewart B. Redfern, A.R.I.B.A.

J. Borthwick,

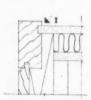
Sales Manager, Williams & Williams Ltd.

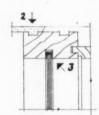
Robert Maguire, Peter Matthews, Peter Whiteley, A/A.R.I.B.A.

# Architectural Education—A Question for the Examiners

SIR: Candidates for election to the RIBA Council were asked by the ARCHITECTS' JOURNAL for comments on Architectural Education, and on May 19 they printed an observation by the writer to the effect that:—

"Technical perfection and the know-how arising from practical experience should be mastered before the student is allowed to let his hair grow and develop his 'art'." In the same issue, there was printed a "Working Drawing" by Messrs. Powell & Moya (a firm who are considered to be of some standing) showing doors at a hospital in Swindon (which is to be held up as a model at special courses to be held at the RIBA in July).





The question put to me by a student RIBA and now passed on to the examiners for the enlightenment of other students was:—

"If you were an examiner and I produced a detail like that for the Final, would I pass or fail?"

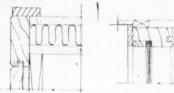
My answer was that he would fail and the reasons would be as follows:

At point (1) The expansion and contraction of hardwood in different conditions of humidity is such that cracks would inevitably develop round these frames.

At point (2) It is impossible for any plasterer or any architect to know whether he has been able to get plaster to the position shown and it wouldn't do any good anyway. At point (3) To show glazing direct into

a frame without beads causes unnecessary complications in making and fixing, makes it impossible to replace broken panes (to the same detail) and invite ribald comments about architects in general from those members of the building trade who have to carry it out.

But since I believe students should not be subjected only to destructive criticism the same items are re-detailed below in a way which would *look* almost the same, should avoid the criticisms, and would also be less expensive.



As this is by no means the first time that the examiners have been presented with copies of details by practising architects, it is not unreasonable to ask which they would favour?

EWART B. REDFERN

Exeter

The Technical Editor replies: The answers to Mr. Redfern's points are as follows:

1. Cracking of plaster at junction with hardwood frame. It is the practice of the architects to insert wire in their plastered partitions. Nails with hooked ends are driven direct into the backs of the hardwood frames. Wires are then run horizontally from frame to frame and tensioned. The tension in the wire is sufficient to prevent cracks from forming between plaster and frame.

2. Penetration of plaster above head of fanlight. It is, of course, unlikely that the plasterer will be able to insert his plaster as far as is shown on the drawing. Nor is it necessary for him to do so. Provided he reaches the rebate it will be enough and this is not impossible. As Powell and Moya have been using this detail for some years and have not had trouble with it, they do not think it critical.

3. Fixing and replacement of glazing. This problem has mystified many readers. The answer in respect of the vertical light is that the aluminium socket plate (visible in the photograph, but not on the drawing) screws off. The answer in respect of the fanlight is that the drawing is incorrect in that there should have been a removable bead at the fanlight head. In addition the groove for the glass at one side of the frame is sufficiently deep to enable the sheet to be manœuvred out.

We are of the opinion that these devices of Powell and Moya's achieve elegance which is often missed by the "commonsense" approach outlined by Mr. Redfern. The presentation of this detail is at fault, chiefly in the omission of the socket plate. Unfortunately, however, it is not possible to cover every constructional aspect in a detail.

Light Cladding

SIR: We have followed the series of articles on "Light Cladding" by Michael Rostron with great interest. The articles treat the whole complex subject in a very

thorough manner and we feel that it would be a good thing if they could be reprinted in book form as a guide to manufacturers, as well as users, of light cladding systems.

However, in the article which appeared in your issue of April 28 a passing reference has been made to the use of patent glazing as a form of light cladding and it is stated that the system is too crude to be used generally, and we feel that in this statement a well tried and economical system of light cladding, suitable for industrial buildings, has been dismissed too lightly.

We were the first firm to introduce a complete system of curtain walling in this country in the shape of "Wallspan" and are amongst the largest curtain walling manufacturers in the U.K. However, we manufacture also a system of aluminium patent glazing, employing aluminium spring clips and it is our experience that there are many cases where patent glazing of this sort is more suitable for special light cladding than curtain walling.

Examples of buildings on which patent glazing has been used for cladding of this sort are: The Doncaster Power Station, Stella Power Station, the Austin Car Assembly Building at Longbridge, Messrs. J. H. Sankey's extensive factories at Wellington and Bilston, the heating accumulator tower on the Churchill Estate at Pimlico and others too numerous to mention. Also the cladding of the 200 ft. high reactor building at the Hinkley Point Nuclear Power Station is being carried out in Aluminex patent glazing. These examples are ones where our own system has been employed but other patent glazing manufacturers have carried out installations of similar magnitude

Also it is inaccurate to say that it is impossible to use panels thicker than ½ in. as, by using special bars, panels in excess of this thickness can be used readily.

We do not think that this series of articles would be complete without fuller reference to the special problems involved in light cladding of industrial buildings and if you decided to publish such an article, we feel that full reference could be made to the part which patent glazing systems have to play.

J. BORTHWICK

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#### Ipswich Civic Centre Competition

SIR: Would any of your readers who entered a scheme for the above competition and never bothered to open the package which was returned to them, please do so and check whether they are in possession of their own drawings. The County Borough of Ipswich have lost the design submitted by the undersigned, although, as far as we know, they are still optimistic about finding them.

ROBERT MAGUIRE PETER MATTHEWS PETER WHITELEY

London



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# Constitutional Committee Report

After nearly two years of work and 25 strenuous meetings, the RIBA's Constitutional Committee, set up July, 1958, presented their Report at the Council's May meeting, which accepted all but one of the 34 recommendations made. The June Council meeting on June 21 accepted the amended report, which will be published in full in the forthcoming RIBA Journal.

The Constitutional Committee was set up to review the constitution of Allied Societies in relation to the RIBA, and to review the constitution of the Council, which had been asked by the May, 1958, General Meeting to ensure that honorary officers of the Council, other than the President and Past Presidents, be appointed only from elected members of the Council; that all members of Council who are entitled to vote should be elected by postal ballot, to be organized in the case of regional representatives by the Allied Societies; and to review the byelaws of the RIBA.

Under the chairmanship of Cleeve Barr, the committee based its work on two assumptions: that the Societies should be made as fully representative of the RIBA in all parts of the country as possible, and that the

# DIARY

Exhibition of Paintings by Picasso. Organized by the Arts Council at the Tate Gallery.

The Influence of Housing Standards. Housing Centre Annual Conference at County Hall.

JULY 6 TO 8

Exhibition of Cardiff Hospital Competition Entries. Organized by the Ministry of Health at Savile Row, W.1.

JULY 7 TO 14

New Hospital Buildings Exhibition. At the RIBA, 66, Portland Place, W.1.

**JULY 9 TO 23** 

Council of the RIBA should be made as representative of the membership as possible. The discussion at the 1958 Conference had made clear that the majority of members considered the Council out of touch and unrepresentative of the views of members, a situation which the Committee set out to end.

One of the problems which immediately came to light arose from the immense variety of membership, activities, and rules of the Allied Societies, and a number of recommendations for putting these on a more equal footing have been agreed with their representatives and accepted by the Council.

A weakness of the present system of Allied Society representation on the Council which came to light was the fact that, because they are committed to sending their Presidents to represent them, the Societies' representatives on the Council change annually or even bi-annually. This is too short a time in which for any member to begin to make a real contribution to the Council's work. and tends to reduce these representatives to being mere onlookers and voters. To overcome this the Committee has suggested that representatives of the Societies should serve for a minimum of three years, even though this means that the Societies will not necessarily be represented on the Council by their presidents.

The problem which aroused most discussion on the Committee, however, and the only one to be referred back from the Council's May meeting, was the recommendation covering qualifications of regionally elected members for candidature for and membership of the Council.

Originally the Committee recommended the following qualifications:

(a) Corporate membership of the RIBA.
(b) Membership of appropriate Allied Society Council

(c) Previous service on the Allied Society Council.

(d) A business or residential address in the area of the Allied Society.

After the May Council, the Constitutional Committee discussed this again with representatives of the Allied Societies, and after a meeting on May 20, the following revised version was agreed:

(a) That the qualifications for candidature for the RIBA Council as regionally elected member shall be:

(i) Corporate membership of the RIBA, and (ii) Membership of appropriate Allied Society Council, or a member who, having completed the maximum period of service on that Society's Council under the rules of that Society is not eligible on that account for re-election to the Allied Society Council, and (iii) Not less than 12 months' previous service on the Allied Society Council, or on the branch or chapter council or committee at any time in the past.

(c) That Allied Societies in revising their rules shall add a provision by which the regional representative or representatives on the RIBA Council during their term of office should become and remain ex-officio members of the Allied Society Council if they are not already serving thereon in any other capacity.

# Election Results: 1960-61

The following have been elected to the RIBA Council:

President

Prof. Sir William Graham Holford unopposed

Kenneth Cross and Basil Spence uncpposed
Fellow Members of Council:

Tellow Memoers of Council .	Votes
1. Alwyn Gwilym Sheppard Fidler	1,539
2. Peter Faulkner Shepheard	1,443
3. Arthur George Ling	1,408
Associate Members of Council:	
1. Tom Mellor	1,555
2. William Daniel Lacey	1,408
3. Andrew George Derbyshire	1,330
Licientiate Member of Council:	
Bernard Hugh Cox	1,484

# Architects and Apartheid

Careful readers of last week's JOURNAL may have noted our stop press footnote at the end of the RIBA Conference Report, that the three architects imprisoned in South Africa under the Emergency Regulations had just been released: in fact, confirmation that all three are now at liberty has yet to be received.

However, despite this good news, the first meeting of the RIBA Council after the Conference unanimously accepted a motion which expressed repugnance at any discrimination in admitting members to the South African Institute, and expressed readiness to do anything practical that could be done to help victims of such discrimination. The Council went on to approve the action of the South African Institute in supporting its members, to express repugnance at any racial discrimination in admitting members, and willingness to do anything practical to help the victims of this sort of "witch hunt," in the words of Basil Spence.

# COMPETITION

# All-Gas House

Architects are invited, in a competition promoted by the Scottish Gas Board, to submit designs for a small all-gas house which will demonstrate to local authorities, builders and the public the advantages of gas as a fuel. Professor F. Fielden, M.A., FRIBA, has been appointed as assessor. The closing date for acceptance is September 30. 1960. Prizes will be paid within two months of the promoter's acceptance of the assessor's award. Prizes are, first, £250; second, £150, and third, £75. The conditions and further technical information is available from: The Commercial Manager, The Scottish Gas Board, 1 Rothesay Terrace, Edinburgh 3.

# Dumbarton Central Area

The results of this competition are due to be announced as this issue goes to press.

As next week's JOURNAL is devoted to a special issue on hospitals, photographs of the winner's schemes together with a full report will be published in the AJ of July 14.

# RSA

# The Crisis of Urban England

Lionel Brett struck a powerful blow for SPUR's policies when he gave his paper at the Royal Society of Arts on June 1. In his lucid and provocative way he started with a devastating attack on our escapism from cities over the past 100 years. "Liking urban life is the mark of a fast-vanishing working class and the fad of a tiny intellectual minority."

He deplored that the things we admire in our cities, such as their neighbourliness, busyness, intimacy, convenience and grandeur are on their way out. "Sprawl and lack of parking space have made a mockery of the convenience and as for grandeur, we can no longer afford it; in any case there is no space to walk about in and enjoy it from." Because of the two-way action of the motor car-centrifugal in its ability to drop houses down every remote country lane, centripetal in its insatiable appetite for space at the centre-our cities continue to explode into the countryside yet continue to sieze up with central congestion. Yet, despite all these discouragements, an obstinate affection for our towns persists in us. In any case, our towns and cities exist as a greater investment than all our national wealth put together and they cannot be written off.

Mr. Brett suggested some solutions to this crisis of urban England under the three headings of transportation, internal decentralization and migration.

Transport: a simple way of relieving the pressure would be to change either the mechanism (e.g. miniature taxis) or the use made of it (e.g. taxation designed to force heavy goods on the railways and canals). Since public transport carries 90 per cent. of urban workers, it must be greatly improved by new equipment and a ruthlessly tidal use of it. Parking meters have shown the efficacy of reducing parking provisions and conversely there is a real risk in increasing multi-storey car parks by overloading the streets on to which they give. On segregation, Mr. Brett thought that the horizontal segregation resulting in precincts could produce delightful results but was limited in application "since vehicles have to creep in to service them and you can only reach them by crossing floods of traffic, which the existence of precincts obviously intensifies. Until we have adequate main arteries we cannot, as we should like to, create many residential precincts in our great cities." The speaker favoured vertical segregation, which with all its difficulties and costs, was undoubtedly the final answer: either in form of elevated motorways in areas which cannot be totally rebuilt provided existing streets were wide and straight enough to take them, (e.g. Brussels), or elevated footways with shops and all pedestrian entrances and facilities at first floor level (e.g. Barbican) which is considered nowadays the ideal pattern.

There is no doubt that Mr. Brett's views on transport are both realistic and imaginative but is he right when he says that we must make up our minds which system of segregation we want since we cannot have a patchwork. Surely, for instance, London's eight square miles of central area are vast enough to have a variety of systems of segregation, depending on whichever is the best answer in a particular situation.

Internal Decentralization. Lionel Brett diagnosed as the main trouble in our cities and towns the strangulation of the heart. Because most English towns have grown radially, only a handful like Chester and Canterbury have a ready-made inner ring Nobody has given thought to the expansion of the heart and all that has been attempted, at great cost, has been an inner ring road which helps to sort out the traffic at the centre but does nothing to reduce it. The growth of the present central areas into the surrounding residential areas must be checked, their present size should be frozen and new centres should be created in the suburbs.

The location of these new centres and their distances from the original centre must vary. in each place. In the case of London, Mr. Brett suggested a minimum distance of 5 miles from Charing Cross (e.g. Holloway or Ealing). These sub-centres should be linked with one another by motorway or by circular tube or monorail so that commuters can reach any of them from the outer residential areas by a single change. These groups of skyscrapers must be the nuclei of the "New Towns within cities". If they are rightly sited they will lead to (and incidentally pay for, Mr. Brett suggests) the renewal of some of the twilight areas. "The result, in terms of densities, traffic and land values. would be a range of smaller peaks instead of a single enormous pyramid. The great aim would be to spread the load, and to cope with one's own overspill by major concentrations of building in what is now suburbia."

Here we cannot but fully support everything Mr. Brett advocates. The sooner the councillors and planning officers of our major cities take these ideas seriously and follow them up, the better.

Migration. While a town's overspill could and should be absorbed by internal decentralization; natural growth, the rising standards of living with its greater space demands, and immigration still result in a migration problem. Mr. Brett thinks that the main error of the New Towns is that they are, in fact, satellites, administratively linked with their parent planets in decentralization of industry and population. He believes that there is an obvious danger that they would be caught by their parents' gravitational field and finally absorbed. These New Towns did nothing to stop the drift of the population to the south-east or to adjust the regional balance of the country as a whole. If we want to prevent the eventual running-together of the LondonBirmingham-Liverpool axis we must think of migration on a bold scale. "Towns like Dumfries, Hereford or Louth may be able to take half a million population each, or if such small beginnings are not feasible economically, old industrial areas like Teesside and South Wales, are well placed to grow into cities of that size. Nothing closer to the big conurbations will be any real relief in the long run to their problem of congestion."

It was inevitable that Mr. Brett's paper on urban amenities should get mixed up with regional planning, since urban amenity implies de-congestion and de-congestion involves "where-to?" Of course, a good deal of research was required to see what sense Mr. Brett's ideas make physically, financially, and socially. He contrasted the present Government's skimping of this rewarding of all forms of investments" with the war-time first-class research department of the then Ministry of Town and Country Planning. "Regional planning, advocated over the years by everybody interested in the subject, now presumably awaits decision on local government boundaries."

In the last section of his paper Mr. Brett sketched some ideas how urban renewal could be realised in our mixed economy. For instance, ways should be found how to finance the difficult areas by using the vast profits which are being made out of the easy ones, though additional national finance would be required since the difficult ones greatly outnumber the easy ones. A National Urban Renewal Agency was required and a start should be made on a full-scale pilot project in some deserving city. We shall need reconstruction committees to fight this case against the many other calls on local finance. Mr. Brett quoted John Stuart Mill: "Improvement in human affairs is wholly the work of the uncontented characters." The vital thing is that we should be uncontented, when we see the "human-sized public spaces of our towns turned into traffic circuses" and when "the water out of the moat is running straight through the drawing room, as at Oxford." It is not too late. In most of our towns the drawing rooms are still there and irremediable things have not happened everywhere. "We know the technique now, the rest is entirely a matter of will."

There are clearly two diametrically opposed approaches to the problems of overspill, decentralization and migration. Mr. Brett's ideas, based on the policy of SPUR and shared by the JOURNAL on the one hand, and the laissez-faire, defeatist acceptance of the present drift to south-east England and of the continued sprawl of our towns and conurbations, as voiced by some top planners in the Ministry of Housing and Local Government, like Messrs. Powell and James. Who is right? Surely, it is time that these two opposing policies were fully investigated and publicly debated.

Lionel Brett should be congratulated on an excellent and courageous paper which one can only hope will provoke thought in the right places.

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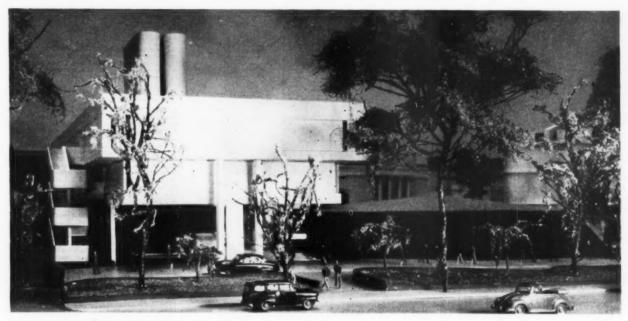
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The west elevation of the model, facing Regent's Park

# THE ROYAL COLLEGE OF PHYSICIANS BY DENYS LASDUN

The designing of a new building to stand beside the Nash Terraces in Regent's Park must face any architect with problems and decisions requiring bold solutions and strong nerves, if he is to avoid the temptation to take the easy way round and design something feebly Nashlike or timidly inconspicuous. When the Royal College of Physicians proposed to build new headquarters on the site now occupied by Someries House at the south-east corner of the Park, they might well have gone for such timid respectability, and it is good that they have chosen instead an architect, Denys

Lasdun who has produced a design which is boldly modern yet planned in relation to the surrounding Nash buildings, and that they are backing him, as is the Royal Fine Arts Commission, in his experiment.

The main block of the new building, that abutting on the park, at the junction of the outer circle road with Park Gate East, will contain the large, imposing, public rooms required by an organisation of this kind, while the administrative wing runs along the west side of Albany Street, behind. The architect has chosen to set his main building

The model from the south-west

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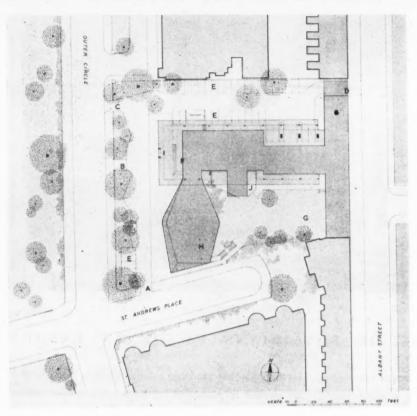
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#### ROYAL COLLEGE OF PHYSICIANS



SITE PLAN

A Main entrance for vehicles. B Main entrance for pedestrians. C Main exit for vehicles. D Service entrance. E Parking area (approximately 40 cars). F Main entrance to building. G Garden court. H Lecture Hall. J Pool.

KEY TO FOLLOWING PLANS AND ELEVATIONS

Lo

KEY TO FOLLOWING PLANS AND ELEVATIONS

1. Library—gallery. 2. Reading room. 3. Stack rooms for books. 4. Harveian librarian's office. 5. Librarian's office. 6. Library general office. 7. Photography and repair of books. 8. Library storage. 9. Library strong room. 10. Dining room—gallery. 11. Long room. 12. Dining room servery. 13. Changing room for caterer's staff, male. 14. Lawatory. 15. Secretaries' dining room. 16. Kitchen. 18. Small servery. 19. Kitchen yard. 20. Main lecture theatre. 21. Lecture theatre, projection suite. 22. Lecture theatre, projection suite. 22. Lecture theatre, projection suite. 22. Lecture theatre, proparation room. 24. Common room for Fellows. 26. Censor's room. 24. Common room for Fellows. 26. Censor's room. 27. Ante-room to Censor's room. 28. Council room. 29. Small committee room. 30. Large committee room. 31. Small lecture theatre. 32. Three small rooms. 33. Three professors' rooms. 34. Quiet room. 35. President's office. 36. Registrar's office. 37. Treasurer's office. 36. Assistant Registrar's office. 39. Secretary's office. 40. Assistant secretary's office. 34. Assistant Registrar's office. 39. Secretary's office. 44. M.R.C.P. office. 45. Additional office space. 46. Telephonist. 47. Entrance hall. 48. Main staircase, hall and picture gallery. 50. Upper picture gallery and hall. 51. Lower hall. 60. cloakroom. 61. Cleaners' cupboard. 62. Flat for head porter. 63. Flat for President. 64. Terrace. 68. Storage for pictures. 69. Store for chairs. 70. Strong room. 71. Boiler room. 73. Electrintake room. 74. Transformer chamber. 75. Ventilation plant room. 76. Ventilation plant room and extract chamber—main lecture theatre. 77. Lift motor room. 78. Cold water storage. 79. Staff staircase. 80. Escape staircase from library. 81. Escape stair from President's flat. 82. Escape stair from boiler room. 84. Main staircase. L. Lifts. Basement plan (not illustrated) contains wine cellar, boiler room, oil fuel storage, and storage for stationery and filling.

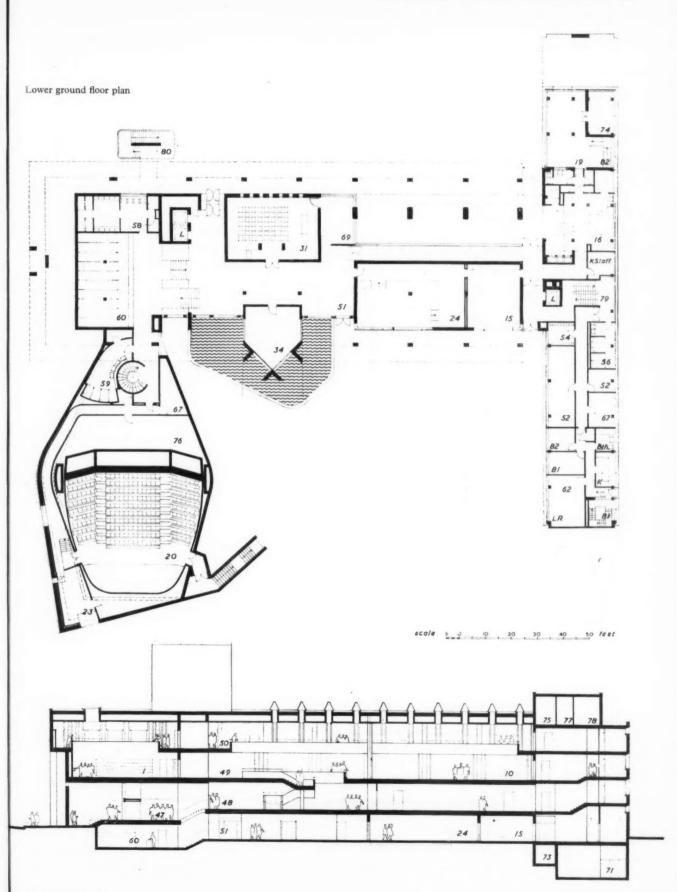
sideways to the Park, looking out south into a garden precinct, which is enclosed to the west by the lecture theatre block, a windowless, banked, single-storey building with a lowpitched copper roof, to the east by its office wing, and to the south by the beautiful Nash buildings which remain. Because of the noise of heavy traffic using the outer circle road (and liable to get heavier when Marylebone Road becomes one of London's new arteries), the west face of the building is without windows above the main entrance, and physicians using the library may regret that they cannot overlook the park, but this face of the building is designed rather to be looked at than looked out of.

It is a four-storey building, designed to preserve the scale of the existing terraces, and also to match them in colour, as it will be faced with ivory-coloured vitreous mosaic at the upper levels while the lower floors and rear will be faced with dark blue Baggeridge facing bricks, harmonising with Nash's slate roofs.

The college library occupies the upper floors immediately over the main entrance, and will house the famous historical book collection begun after the Fire of London and the College's portrait gallery, displayed on the walls of galleries surrounding the staircase. The library can seat 400 people (100 in the gallery) when lectures are held here. Both the library and the dining room, which faces it across the main staircase, are two floors high with galleries at the upper level, and to avoid deep overhangs within the rooms, these are projected outwards, giving the building a boldly stepped profile. Besides their books and portraits, the Physicians are bodily transporting the famous panelled Censor's room, with its superb long mahogany table at which the student faces the examiners for his viva-a room which was part of the original College in Warwick Lane designed by Wren, and was taken to the present College in Trafalgar Square in 1825. This will now be placed in the centre of the new building, opposite the foot of the main staircase and overlooking the garden to the south.

Running south from the entrance foyer towards St. Andrew's Place is the main lecture hall, designed to hold 300 people, and fully equipped for demonstrations, showing films and slides, with five translators' soundproof booths at the back of the hall, a small lecture room below at lower ground floor level and cloakroom accommodation. In the model this windowless, banked lecture hall looks rather uncomfortably like an air raid shelter: when the building is up, however, this façade will appear as a high raked garden wall.

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Longitudinal section

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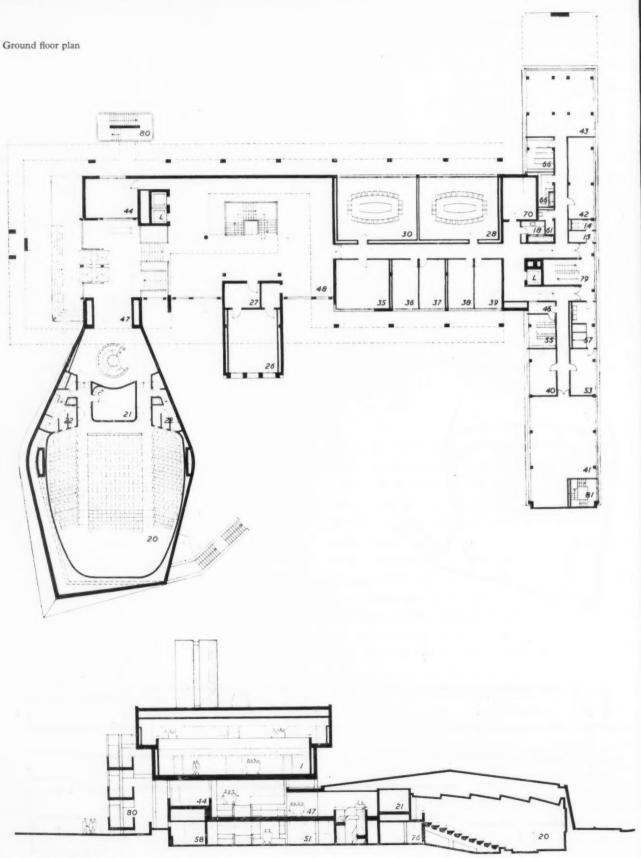
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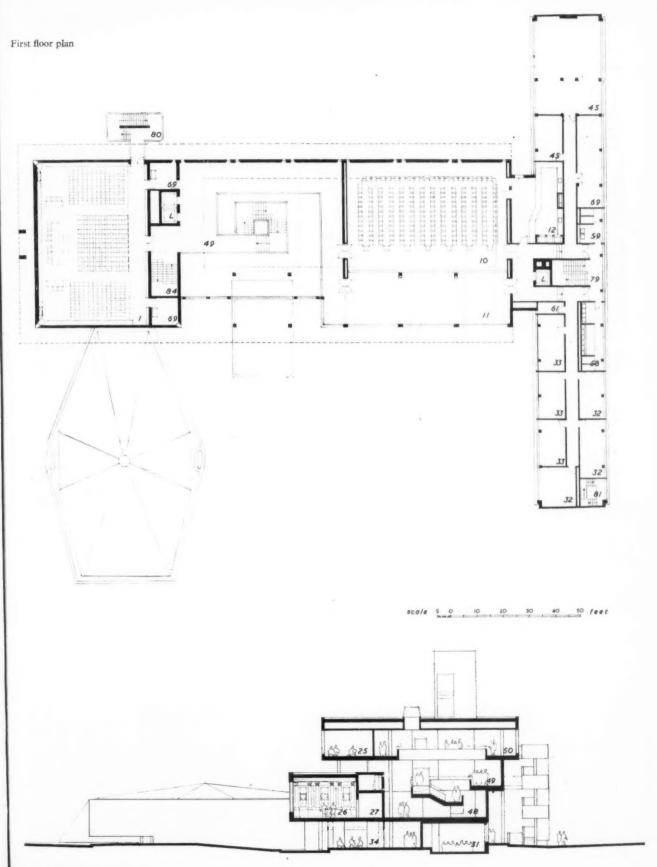
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# ROYAL COLLEGE OF PHYSICIANS



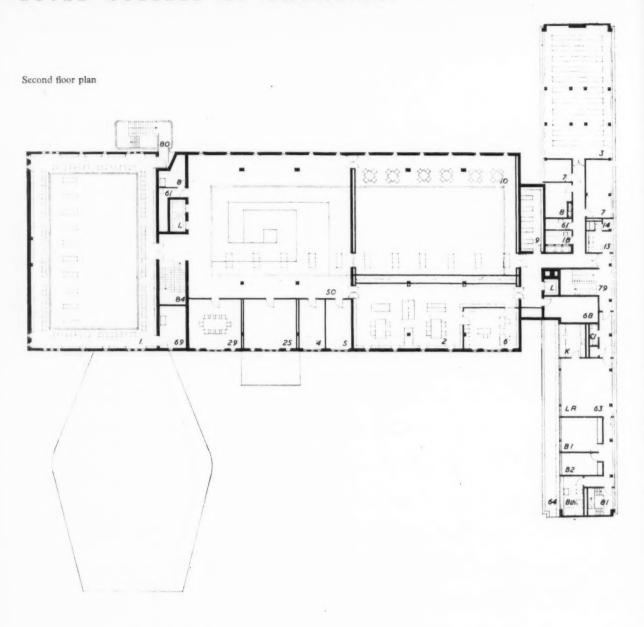
First

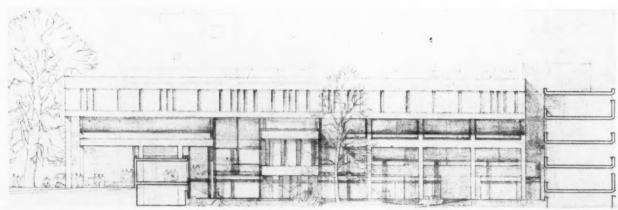
Section through lecture hall



Section through censor's room

# ROYAL COLLEGE OF PHYSICIANS





South elevation

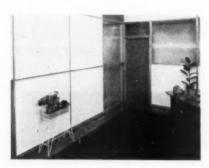
# THE INDUSTRY

This week Brian Grant describes a system of internal partitioning, a handbook on heating by gas, a new oil fired boiler, and a new method of jointing copper pipes.

### Office partitioning

There is now a new system of internal partitioning produced by Shannon and known as Interlock. As the diagram shows, a simple wood moulding is used to form both uprights and cross rails, which, together with a floor plate, form a framework which can be filled with fabricated panels or glass. The floor plate is made so that it will accommodate electrical wiring and the skirtings are separate to allow for variations in the floor line. Frame members are fixed with a simple keyhole slot device, and the panels are held in the groove formed by the floor plate and skirtings and locked by the moulding of the uprights and cross members. Provision is made for either single or double thickness glazing and the filling panels are finished in a wide range of coloured vinyl plastics and in various wood veneers. Doors can be arranged where necessary.

(The Shannon Ltd., New Malden, Surrey.)



Shannon interlock partitioning.

#### Heating by gas

North Thames and the South Eastern Gas Boards have jointly issued a loose-leaf handbook giving information about the services and appliances available for central heating and hot water, with special emphasis on domestic work. Separate sections deal with boilers for central heating, warm air heating systems, water heaters and convector room heaters, with photographs of recent installations, most of which would be improved by the addition of plans. Each section is followed by a series of manufacturers' leaflets, mostly quite informative, though in two instances the firm concerned has managed to omit its address. The publication is completed by a reprint of the AJ's supplement on Gas Flues of April, 1958. (Copies from either Gas Board.)

# New oil fired boiler

Valor have just added a new larger model with an output of 45,000 B.Th.U. per hour to their range of oil fired boilers. It is of the same design as the two smaller models and has a copper rod heat exchanger and a thermostat to keep the water temperature within a temperature range of 140 to 180° F. Fuel consumption is a maximum of 3 pints an hour at full load, and the pilot flame has a turn down device for economical running. Heat output is enough for a 30 gallon cylinder and 220 sq. ft. of radiating surface and the price, in white enamel finish, is £90. (The Valor Co. Ltd., Erdington, Birmingham.)

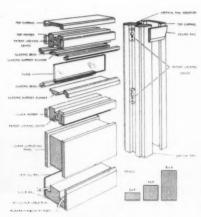


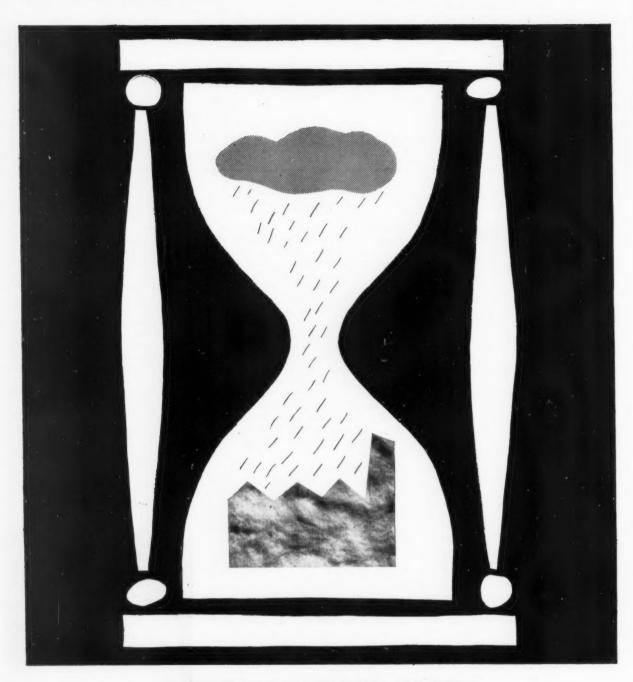
Diagram of Shannon partitioning.

#### Jointing copper pipes

Johnson Matthey, in conjunction with British Oxygen and Allen Tool & Engineering, have developed a method of jointing copper water service pipes by low temperature silver brazing, which, they claim, shows a saving over the more usual method with compression or capillary joints. The new technique produces joints by brazing with a silver-copper alloy, and a simple kit of tools has been evolved for producing socket joints by expanding one pipe end so that it slips over the other for brazing. Tee joints are made by drilling a small hole and forming an upstand with a small jig, which can also be used to give the end of the branch pipe the right shape. Tools are produced to make joints in all sizes from ½ to 2 in. and tees up to 1½ in. with outlets from  $\frac{1}{2}$  to  $1\frac{1}{2}$  in. The technique has been approved by the British Waterworks Association, and full details of it are given in a well illustrated publication. (Johnson Matthey & Co. Ltd., 73/83, Hatton Garden, London, E.C.1.)



The Valor oil fired boiler.



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# INFORMATION

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18.212 construction: theory

#### FACTORY LOADINGS

Structural Loading in Factories. No. 4 in the series of Factory Building Studies prepared by the Building Research Station. HMSO. 1960. 1s. 9d.

This booklet considers every aspect of factory loading under the headings of Roof Surface Loading, Internal Suspended Loading and Floor Surface Loading. Roof Surface Loading covers the live and dead loads used in design generally. Dead loads are directly determined by the choice of cladding and supporting structure and two tables are provided one giving typical weights per square foot for the usual types of roof coverings and one giving weights of framings of various kinds. Live loads are discussed briefly as reference is made to C.P.3, Chapter V, for detailed information. Internal suspended loading comprises the

weight of equipment for the heating, ventilating and artificial lighting of the factory space, of service trunking, of piping for liquids or gases, of mechanical handling or production equipment, and occasionally of overhead walkways for inspection and maintenance. Tables are provided to give sizes and weight of electric fan unit heaters, radiant heaters, ducting, natural extractor ventilators, powered extractor ventilators, single lighting units and closed spaced inline low fluorescent tubes. Reference is made in the text to piping, mechanical handling equipment and tools mounted overhead.

In considering floor surface reference is made to C.P.3, Chapter V, and a table is provided showing loads, sizes, spacings, etc., for typical machines. Handling equipment is discussed in the texts.

In conclusion, some assessment is made of the build up of loads in typical factories and records of existing factories are quoted at 7 lb. to 25 lb. per sq. ft.

From the figures in the booklet suspended electrical and heating and ventilating equipment can account for about ½ to 2½ lb. per sq. ft. which is not critical in any design. It would appear that the important aspects of suspended loading are conveyors, monorails, cranes, etc. The booklet aims at "factory managements and their designers" and its value would appear to depend on their experience. A team of architect, structural and mechanical engineers and the client's

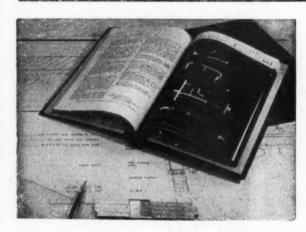
production engineer are normally best capable of deciding the immediate and future factory requirement.

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17.119 construction: general

The Construction of Buildings. Vol. 2. R. Barry, A.R.I.B.A. Published by Crosby-Lockwood & Son Limited, 25s.

The first volume of this work received high praise in Information Centre. This second volume which includes masonry, windows and doors, partitions, fireplaces and flues, stairs, plastering and rendering, retains some of the virtues of the first-among them simplicity and clarity-but suffers from an odd choice of content. The centre of gravity is altogether too far over towards traditional construction. It is now surely out of place to include in a short text book such items as the classical cornice in ashlar, vermiculated stone and walling in knapped flints. On the other hand, it is a pity to omit any serious mention of sound reduction when discussing partitions, and to confine the discussion of windows to those of the hole-inthe-wall type. In staircases the stone stair gets a mention but the open tread hardwood stair does not. The Brixton School (whence this comes) must be slipping back to 1886.



THE LIBRARY OF INFORMATION SHEETS COMPLETE TO JUNE 1960

All Information Sheets published since the new series started in October 1947 have been reprinted. Readers requiring sets or single sheets should fill in this form. The publishers will quote for sets not detailed here.

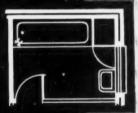
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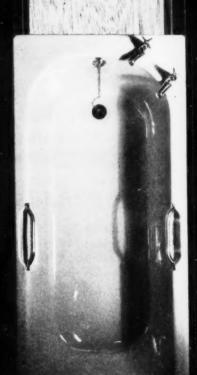
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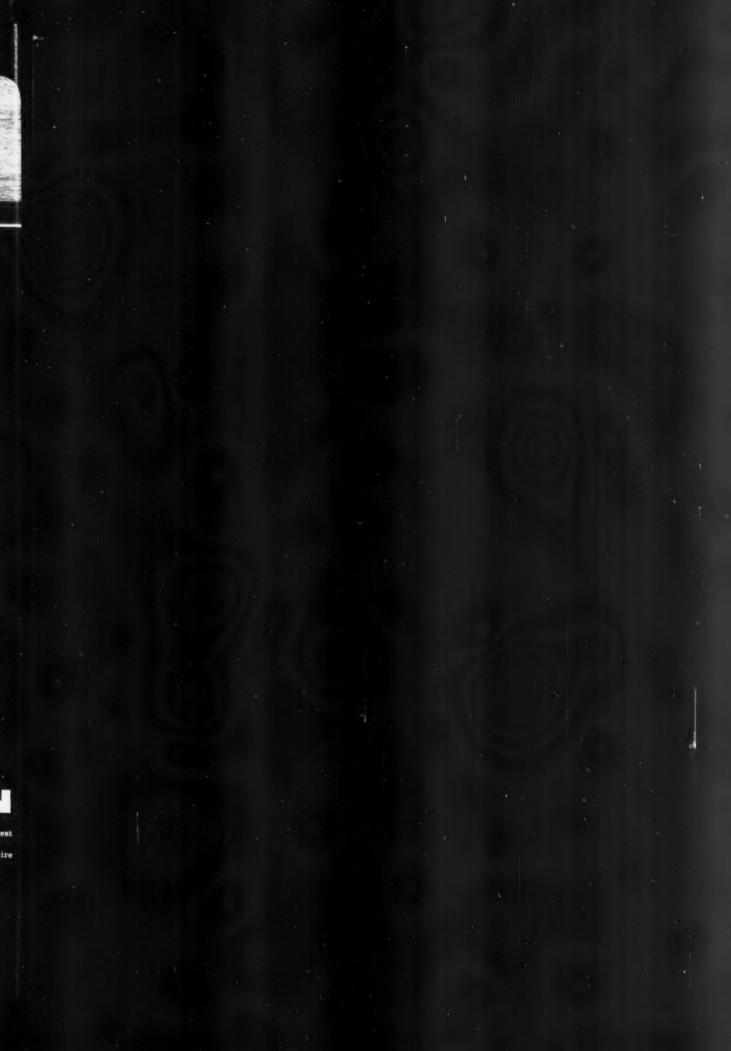
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# ESTIMATING

# current wage rates, market prices and measured rates

This quarter's feature begins to show evidence of the rise in the price of materials forecast last quarter. There are marked increases in the prices of stock bricks, stoneware and cast iron drain goods, timber, lead, zinc and cast iron rainwater and soil goods. As against this there have been some reductions in the cost of the following: certain types of asphalt, Welsh slates and some roofing tiles. The prices are prepared by Davis, Belfield and Everest, Chartered Quantity Surveyors.

#### Wage rates

Rates of wages as from April 18, 1960, are as follows:

	Croftsmen			Labourers		
London District Within 12 miles radius From 12 to 15 miles radius	s 5 5	d 1 0½	4	d 5½ 5		
Liverpool and District	5	1	4	51		
Grade classifications A Al	4 4	1112	4 4	4 34		

#### Market prices

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

#### Measured rates

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

# **Abbreviations**

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

# **Preliminaries**

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

Price changes
\* Shows changes in market prices and measured rates since the last issue (April 7, 1960).



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#### technical section EXCAVATOR s d s d Market prices spreading and levelling not Suspended floors and roofs exceeding 200 yds. (using YC 21 4 Carting away, up to 8 miles not over 41-in. thick YC 2 11 6 yd. cube scraper) Suspended floors over 41-in. YC 18 8 Removing excavated material and depositing, not exceeding 200 yds. (using 3 yd. cube Hand loaded Machine loaded \*5 6 Suspended floors over 6-in. Hardcore YC \*9 0 to 12-in. thick YC 16 0 dumper) Beds not over 41-in. thick YC 10 8 Planking and strutting Beds 44-in. to 6-in. thick YC 8 0 Planking and strutting to sides of surface or Beds 6-in. to 12-in. thick YC Measured rates basement excavation Hand excavation and disposal Depth up to 5 ft. Hollow tile floor of clay Depth up to 10 ft. Depth up to 15 ft. 10 tiles 4-in. thick at 15-in. 0 NB: the following are centres laid on formwork applicable to excavation Planking and strutting to (measured separately), nibs filled in with concrete in heavy soil. sides of surface and basement trenches (1:2:4) and finishing top of Excavating over site to Depth up to 5 ft. 2 tiles with bed of concrete remove top soil and veget-Depth up to 10 ft. 14-in. thick including tamping around reinforcement (mea-YS able matter, 6 in. deep As above, 12 in. deep Depth up to 15 ft. 2 8 17 9 sured separately) 10 2 Hardcore, etc. Excavating over site to reduce levels and getting Hardcore filled-in in layers, Ditto, but tiles 8-in. thick YS 27 YC \*19 6 YC 10 8 each layer well rammed Exeavating for basement Sundries YC YS +3 4 5 and getting out Bed of ditto, 4-in. thick Finishing concrete with trowelled face to receive Depth up to 5 ft. 12 0 Depth between 5 & 10 ft. 17 4 Depth between 10 & 15 ft. 22 8 YS linoleum 1 4 CONCRETOR Applying horizontal damp-proof membrane of Excavating surface trenches and ditto Synthaprufe in three coats Market prices to surface of concrete and Depth up to 5 ft. 14 8 Depth between 5 & 10 ft. 20 0 Depth between 10 & 15 ft. 25 3 Portland cement, 6 tons and T III 6 blinding with sand to form YS 5 10 Rapid hardening, 6 tons and T 122 0 Excavating basement Supplying floor clips (p.c. 6d. each) and fixing No. trenches and ditto YC 1 1 3-in. down, washed, crushed Commencing 5 ft. below YC 15 6 and graded shingle existing ground level 20 0 Commencing 10 ft. below Formwork including strutting YC 14 6 I +in. ditto existing ground level 25 3 Commencing 15 ft. below easing and striking: YC 19 6 Sharp sand existing ground level 30 7 Vertical faces of foundation YS \*19 7 §-in. diam. mild steel rods to BS 785 delivered station T 860 0 Wheeling surplus excavated 10 2 material not exceeding 100 yards and depositing YC 5 4 }-in. ditto T 922 6 Vertical faces of wall YS \*20 Add to last for: Roughly spreading and Soffite of floors not over 12-ft. YC 1 7 levelling YS \*20 0 high Spreading, levelling and consolidating to make up Measured rates YC 3 6 Portland cement mass Sloping soffite of stairs YS \*24 concrete in foundations etc. Returning, filling-in and 1:12, 1½-in. " all-in " well ramming excavated material around foundations Sides of columns 2 7 58 8 aggregate YC 4 8 66 3 5 1:3:6, 11-in. aggregate Sides and soffites of lintols Loading surplus material into \*2 9 and beams lorries and carting to tip, 1:2:4, 4-in. aggregate 73 11 YC \*14 3 not exceeding 8 miles 1:11:3, 1-in. aggregate 75 10 Add to the above to mind formwork including rubbing Add to the above for wrot Excavating from spoil heaps selected top soil, wheeling not exceeding 100 yards, and spreading, levelling and Add for: Working around rod or mesh Reinforcement consolidating, not exceeding 6 in. to receive turf YS 5 4 reinforcement 2 4 3-in...diameter mild steel Walls not over 6-in. thick YC Walls 6-in. to 12-in. thick YC Walls over 12-in. thick YC rods, hooked, bent and tied Mechanical excavation and disposal C 69 8 and fixing 13 4 52 3 Excavating for shallow surface excavation and loading into lorries or dumpers (using Columns not over 72 sq. }-in. 75 3 YC 50 7 2 54 YC Columns 72 to 144 sq. inches yd. cube excavator) 3 0 YC 39 11 }-in. 82 2 Excavating for surface Columns over 144 sq inches YC 31 11

excavation and removing,

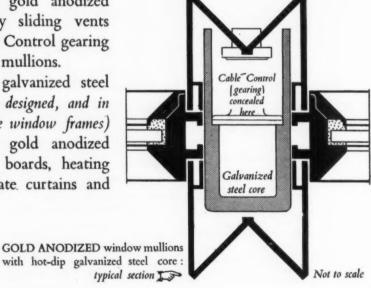
# HOPE'S aluminium



UNITED STATES EMBASSY, GROSVENOR SQUARE, LONDON Architects: Eero Saarinen & Associates, U.S.A. Associate Architects: F. R. S. Yorke, E. Rosenberg & C. S. Mardall, FF.R.I.B.A.

Ground floor windows are gold anodized aluminium with horizontally sliding vents at head operated by our Cable Control gearing concealed within the window mullions.

Other floors have hot-dip galvanized steel windows (special fittings were designed, and in many cases, concealed, inside the window frames) with featured mullions in gold anodized aluminium. Metal window boards, heating grilles, and trim accommodate curtains and avoid costly plastering.





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#### technical section Concretor continued d d d S s 96 **Partitions** 4-in. 60 8 Measured rates Clinker concrete solid Clinker concrete some partition blocks and setting Steel wire mesh fabric weighing 4-32 lb. per yd. super and laying in concrete Reduced brickwork in cement lime mortar, cement lime mortar, Lingfields in cement mortar YS 21-in. 12 6 10 Flettons 3-In-8 4 7 8 Second stocks \*57 Ditto weighing 6-57 lb. per 41-in. 19 0 yd. super 11 5 Lingfield Grade B 53 6 34 0 Thermalite ditto YS Ditto weighing 9.32 lb. per 12 11 2\frac{1}{2}-in. YS 8 Half brick wall ditto YS yd. super 8 6 Flettons 19 0 3-in. 15 3 Second stocks \*30 8 Precast concrete 5 4-in. 19 19 11 Lingfield Grade B Precast concrete (1:2:4) finished fair on exposed faces Hollow clay ditto YS II-in. hollow wall with 2-in. and hoisting setting and 24-in. 10 11 jointing: cavity and wall ties 3-in. 13 (6 cavity) Flettons 41 3 41-in. × 6-in. lintols reinforced with one 1-in. rod (ditto) 4-in. 16 2 8 6 Second stocks \*64 41-in. × 9-in. ditto with two 40 Wood wool slabs ditto YS 1-in. rods One brick wall built fair and pointed both sides. 2-in. 3 10 2+-in. 16 6 2 Piling Flettons 41 12 4 8 3-In. Second stocks Reinforced pre-cast concrete piles, approximate prices for \*64 13 supplying, unloading, pitching Lingfield Grade B 59 DRAINLAYER and driving 12-in. × 12-in. up to 30 ft. Market prices FR 35 0 Sundries 14-in. × 14-in. up to 50 ft. Salt glazed stoneware pipes and fittings. "Best" quality: long Extra over common brick-Sheet steel piling, ditto T\*1125 0 work for internal fair face \*1210 0 Ordinary pipes and flush pointing 1 6 FR 4-in. 6 Horizontal damp proof course of two courses of slates and bedding and pointing 6-in. BRICKLAYER 9-in. \*4 04 Bends No. Market prices 4-in. 6 \*6 6-in. Horizontal damp proof course of hessian base bitumen FS YC 18 0 Soft sand 9-in. \*18 21 0 T 110 0 Hydrated lime Pitch fibre pipe FR 3-in. 1 103 M 118 0 Plain Flettons 4-in. 6 **Facings** 6-in. 5 Second hard stocks M\*335 0 Cast iron s. and s. pipe to Extra over ordinary brick-work with bricks P.C. 118s. per 1,000 for facings as BS 437 YR Lingfield Engineering wire cuts Grade B 4-in. \*29 M 267 6 6-in. \*43 described 9-in. \*81 Hessian base damp-course To solid wall in Flemish to BS 743 YS 5 Spun iron s. and s. pipe to YR BS 1211, Class B Facings P.C. 250s per M Damp course slates, 14"x 9"100 76 3 4-in, \*13 11 6-in. \*21 10 9-in. \*36 6 Facings P.C. 350s per M 23 5 Wall ties, galvanised 100 15 8 16 11 Facings P.C. 450s per M **Partitions** Measured rates Clinker concrete, solid YS Trenches and beds 24-in. 3-in. 579 7 To cavity wall in stretcher 4 Excavate trenches by hand in heavy soil, including planking and strutting, part returning, 41-in. Facings P.C. 250s per M 13 5 Thermalite YS Facings P.C. 350s per M 18 11 filling and ramming and wheeling and spreading surplus, for pipes 4-in., 6-in. 7 0 24-in. 12 11 3-in. Facings P.C. 450s per M 0 and 9-in. dia. YR Average depth of trench 3-ft. \*17 10 4-ft. \*23 10 6-ft. \*41 0 Hollow clay 24-in. 3-in. Half brick wall in facings built fair and pointed on (6 cavity) 5 (ditto) 4-in. 6 10 one side Facings P.C. 250s per M 31 0 Excavate trench as last but by mechanical trencher YR Normal quality wood wool 3-ft. \*13 6 4-ft. \*18 6 6-ft. \*33 6 Facings P.C. 350s per M 36 YS Average depth of trench 8 10 2-in. 21 2 24-in. 3-in. 2 5 Facings P.C. 450s per 42 5 10



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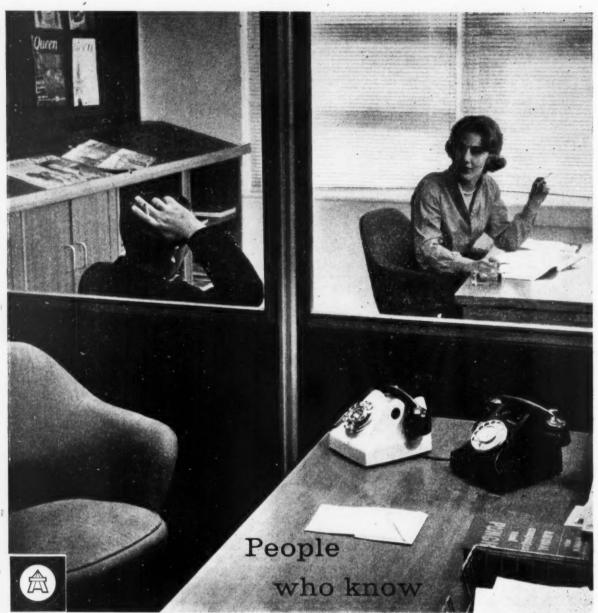


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technical section						
Drainlayer continued		s	d	s d   s	s c	1
6-in. concrete bed and	YR	9	3	Pitch fibre drains BS1097 17 BS1418 *25	7 4	
As above, for 6-in. pipes	YR	5	4 9	Pitch fibre drain pipes and laying and jointing in trench Roofing	•	
		6	3	FR		
6-in. concrete bed and surround for 4-in. pipes	YR	15	0	3-in. 2 3 4-in. flat laid to falls in two thicknesses on and including		
As above, for 6-in. pipes	YR	8	8	4-in. 2 111 thicknesses on and including felt underlay YS BS988 12		1
		10	5	6-in. 5 10 BS1162 *16	8	5
Stoneware drains "Seconds" quality salt glazed stoneware drain p				Extra over pitch fibre pipe fillet at bottom and rounded edge at top turned into		
and laying and jointing in trench	FR			9 1 BS988		1
	4-in.	*2	4 7	4-in. 14 6 BS1162	2	7
	6-in.	*3	4	6-in. 27 8 6-in. fascia with solid water check roll at top and under-		
	9-in.	*5 4	5	Cast iron drains Cut drip at bottom FR BS988	4	2
" Best " quality salt glaz		·		Cast iron spigot and socket	4	9
stoneware drain pipes as laying and jointing in	nd			drain pipes and laying and jointing in trench FR		
trench	FR	*2	7	4-in. *13 7 PAVIOR		
	4-in.	1	10	6-in. *19 11 Market prices		
	6-in. 9-in.	2 *6	9	9-in. *37   Granite chippings, ‡ in. to		
	<i>y</i> -111.		ıî	dust T 4	45	1
Extra over "Seconds"				hand No 6 in. X 7 in. YS I	13	
quality pipes for:				4-in. *31 0	13	
Bend	No.			6-in. *73 8 Measured rates		
	4-in. 6-in.	*3 *5	0	9-in.*188 4 Cement and sand floated		
		4	6	‡-in.	4	3
	9-in.	*14		Spun cast iron spigot and socket drain pipes and laying	5	0
Single junction	No.			and jointing in trench FR 4-in. *7 8		7
Single junction	4-in.	*6		5 6	3	4
	6-in.		7	6-in. *11 6 8 9 Cement and sand paving trowelled hard and smooth		
	9-in.		11	14 9 YS		_
			7	‡-in.	4	7
Double junction	No.			Cast iron gullies	5	
	4-in.	*10		Cast iron gully trap with high invert and setting on and	6	1
	6-in.	*14	9	surrounding with concrete	3	4
	9-in.	*28	9	and jointing to drain No. 4-in. *44 4 Concrete YS		
		25	0	6 in.*109 10	7	3
Stoneware gullies				99 4 9 in.*247 3	5	4
Salt glazed trapped gull	v			232 6	6	8
with galvanized grating including setting gully of	on			ASPHALTER   1-in. red composition paving laid on prepared screed YS	16	6
and jointing to drain	No.			Measured rates   §-in. terrazzo paving laid on prepared screed YS	38	
6 in. × 6 in. grati	outlet	*25	0 6	Damp proof course and tanking	30	•
9 in. $ imes$ 9 in. grati	ng 6 in.		45 11	½-in. vertical damp proof laying in rolls YS	39	5
	outle		40 3	course in two thicknesses on brick or concrete YS BS1097 17 4 laying in rolls YS	63	0
Grease and mud gully				BS1418 *21 6	03	9
diameter with 4-in. out galvanized bucket and				I-in. horizontal damp proof   12 in. × 12 in. and fixing		
and setting gully on an surrounding with conc	d			course in one thickness on with mastic and including	30	
and jointing to drain		. *8		BS1097 10 6	91	
Road gully with 6-in. o	utlet	7.	4 10	BS1418 *13 8 4-in. thermoplastic tile flooring and laying-on screed		
including setting on an surrounding with conc	d			Vertical tanking in three YS *	to	
and jointing to drain	No			BS1097 24 8	17	
15-in. dia. 30-in	. deep	*110		B.1418 *29 II 4.5mm coloured linoleum and		
18-in. dia. 48-in	. deep	*23		Horizontal tanking in three fixing with mastic to cement screed or boards YS *	24	9



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#### technical section Pavior continued d s d Measured rates s d 1-in. Broughton Moor slate Softwood and fixing in plates FS \*27 3 3.2 mm, coloured linoleum and 3·2 mm. coloured information fixing with mastic to cement YS \*19 9 \*15 4 sleeper joists and lintels SLATER, TILER AND ROOFER In floor and ceiling joists 1-in. red quarry tiles laid on YS 25 I In stud partitions, purlins Market prices prepared screed FC \*20 I -in. red quarry tiles Welsh slates, best quality M iaid on prepared screed 16-in. × 10-in. \*1042 9 20-in. × 10-in. \*1923 6 In hip and valley rafters FC \*22 11 YS 28 3 2-in. Noelite paving laid on Battening and boarding Best hand made sand faced prepared bed, in random sizes YS 20 5 plain tiles, 104-in. × 64-in. M\*323 6 and mixed colours Slate or tile battens I in. x a in. and nailing to fixing for Grey corrugated asbestos 12 in. × 12 in. anchor steel YS 7 0 cement sheets plates laid complete YS 60 0 16-in. × 10-in. slating to Measured rates 61-in. gauge \*39 9 16-in. × 10-in. best Welsh MASON 20-in. × 10-in. slating to Sq.\*293 0 slates laid 3-in, lap 84-in. gauge \*29 6 Market prices 20-in. × 10-in. best Welsh $10\frac{1}{2}$ -in. $\times$ $6\frac{1}{2}$ -in. plain tiling Sq.\*397 0 Stone in blocks in truckloads slates, 3-in. lap to 4-in. gauge \*58 0 at stations in the London area: Westmorland green slates in 141-in. × 10-in. pantiles to FC 9 2 random sizes laid 3-in. lap Sq.\*603 0 12-in. gauge \*21 0 S.E. boarding in batten widths close jointed and fixing to Portland FC 9 4 Best hand made sand faced plain tiles, 101 in. ×61 in. laid Sq.\*215 6 Woodkirk Blue building to a 4-in. gauge flat or sloping roofs 1-in.\*120 0 FC 18 7 quality Best hand made sand faced 85 Broughton Moor slate in plain tiles, $10\frac{1}{4}$ in. $\times$ $6\frac{1}{4}$ in. hung vertically to $4\frac{1}{4}$ -in I-in.\*147 blocks at stations in the 112 London area FC \*60 0 Sq.\*236 0 gauge T. & g. boarding in batten widths close jointed and fixing Berkshire hand made sand Marble in blocks at works: faced red pantiles, 14½ in. × 10 in. laid 2½-in. head and FC 70 0 Dove to flat or sloping roofs Sq. 3-in.\*140 0 Roman stone FC 65 0 11-in. side lap Sq.\*211 0 96 I-in.\*171 Measured rates Grey corrugated asbestos 127 0 cement sheets fixed to wood Sq. 123 0 Stone and all labours in 1-in. wrot and cross tongued pilasters and quoins FC eaves soffit FS \*2 0 Portland 55 2 Grey corrugated asbestos Beer cement sheets fixed vertically Sq. 133 0 3-in. × 6-in. wrot and lambe FC grooved eaves fascia p.o. +10 Portland Cedarwood shingles laid 5-in. Sq.\*245 0 55 0 Beer gauge Wall and ceiling boards fixed FC Lintels Metal roof decking and fixing with hook bolts, finished to softwood 58 10 **Portland** Beer 56 0 4-in, fibre board with $\frac{1}{4}$ -in. insulation board and three layers self finish 6 10 FC 5 0 Portland \*72 felt roofing 18 gauge for spans up to 10 ft. \*60 6 Beer \*69 in. hardboard 5 10 Ashlar average 7-in. on bed 20 gauge for spans up to 8 ft. 6 in. \*52 6 f-in. insulating gypsum wallboard 5 7 Portland a-in. asbestos cement flat sheeting 31 Two layer one ply bitumen felt and fixing with bitumen to concrete or boarding 8 10 Extra for each additional I-in. 9 6 4 11 FS thickness 1-in. asbestos cement flat sheeting Portland \*4 Three layer bitumen felt YS 12 7 10 7 Beer 6 8 Patent ribbed aluminium 2-in. Stramit, showerproof 4½ in. × 4 in. sill sunk, weathered, throated and roofing and fixing to purlins quality fixed to joists with Sq. 297 6 16 0 butt joints grooved for water bar, set and 6 jointed in cement mortar FR Portland JOINER CARPENTER Beer Artificial \*5 0 Market prices Measured rates 4 in. × 12 in. coping, weathered and twice throated Floors and skirtings Softwood, carcassing quality Std.\*1840 0 FR Tongued and grouved soft wood flooring and nailing to Portland \*22 I Beer Softwood, joinery quality Artificial \*12 2 Std. \*2300 0 7-in.\*165 0 Marble and slate Sq. 46 6 1-in, fibre board I-in. \* 190 0 1-in. Dove marble lining and in. standard hardboard Sq. 40 0 149 n fixing on brick backings FS 37 10

in. insulating gypsum

wallboard

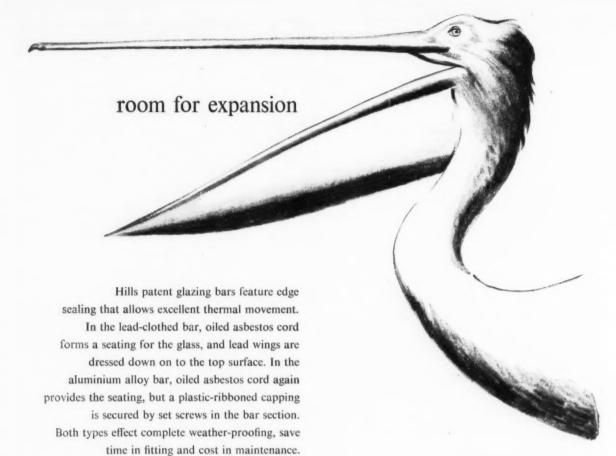
YS 3 0

3-in. Roman stone lining

FS 35 9

I-in. nominal double grooved

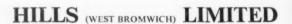
t. and g. Swedish softwood



For full information on Hills patent glazing please contact our Technical Department.



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P8

technical section					
Joiner continued	s d		s	d	s
blast flavoire and in month		Oak	5	9	3-in. steel butts Pr.
	30 0	048		8	to softwood 4 to hardwood 6
	32 6	Shelving and fittings			Double action floor springs
African Muhuhu YS *	35 9	3-in. shelving of 2-in. slats		1	No. to softwood 23 I
Burma teak YS *	37 9	spaced 1-in. apart on bearers (measured separately) FS			to hardwood 31 I
Moulded skirtings, 3-in. to		Softwood	2	8	6-in. barrel bolts
6-in. sectional area planted on (per inch in sectional	1		_		to softwood 2 to hardwood 2 l
FR FR		‡-in. solid shelving on bearers FS		ĺ	Cook and lasts
Softwood	3	Softwood	2	5	Cupboard locks to softwood 4
Oak	*10	Oak	·4	0	to hardwood 6
Our	9		4	4	Cylinder night latch
Extra for grounds plugged to		2-in. shelf bearers plugged		ĺ	to softwood 7
brickwork FR		to wall FR		. !	
Softwood	10	Softwood		54	Mortice latch to softwood 6
Windows	-	Oak	1	4	to hardwood 8
2-in, rebated and moulded			,	,	Mortice lock
sashes divided into squares		Staircases			to softwood 7
FS Softwood	*3 11	I-in. treads and 3-in. risers tongued together on and			to hardwood 10
	11 10	including framed carriages FS			Casement fastener
Extra for side hanging Each Softwood	3 0	Softwood	*5	10	to softwood 1 to hardwood 2
Oak	4 6	Oak	*14	10	to nardwood 2
Doors			13	2	Casement stays
		14-in. × 11-in. wall string			to softwood 1
2-in. framed, ledged and braced doors, filled in with		plugged to brickwork FR Softwood	*4	10	
I-in. t. and g. and V jointed			3	9	
boarding and hanging FS Softwood	*6 8	Oak	*12		STEEL & IRONWORKER
SOILWOOD	5 10				Market prices
Four panelled door square		14-in. × 9-in. outer string			Structural steel joist
both sides and hanging FS		Softwood			sections, basis sizes,
Softwood	*7 2 6 5	Only	*8		ex mills T*792
Oak	*21 2	Oak	7		Extras for other than
	20 1	Ends of treads and risers			basis sizes vary between 10s, and 70s, per ton
14-in. Standard flush door, hardboard faced size 2 ft. 6 in.		housed to strings No.			•
× 6 ft. 6 in. and hanging No.	44 5	Softwood Oak		- 3	Measured rates
	32 5	Oak	- 1	2	Rsj in steel framed
Linings and frames		21-in. × 3-in. moulded handrail FR			structures hoisted and fixed complete T 1625
Window and door linings,		Softwood	3		Riveted compound girders
6-in. to 12-in. sectional area		Oak	*7		including plates and rivets T 1915
(per inch sectional area) FR		Oak	6		Rs stanchions including caps,
Softwood	4	ILin v Illin square			bases, cleats etc. T 1885
Oak	3 10	litin. × litin. square balusters FR			Metal windows including
Car	9	Softwood	1	64	cutting and pinning lugs to brickwork and bedding
Frames wrot all round and		Oak		5	frames in cement mortar No.
framed (per inch sectional			-	2	Domestic type 4 ft, high
area) FR Softwood	21	Framed ends to balusters No.			to BS 990
Oak	*10	Softwood	1	7	Type ND2F 3 ft. 3\(\frac{1}{4}\) in. wide *96
Mullions, transomes and sills		Oak		10	Type HD2F 3 ft. 31 in. wide*103
(per inch sectional area) FR					86 Type NDIIF 6 ft. 64 in. wide*164
Softwood	10				134
Oak	10	IRONMONGER			"Z" range, 4 ft. high
Mouldings, architraves, etc. 4-in. to 6-in. sectional area		Market prices			Type ZND1 2 ft. 01 in. wide *65
(per inch sectional area) FR					53 Type ZND4F 6 ft. 01 in. wide *166
Softwood	4 3	As prices for ironmongery vary so greatly depending			136
Oak	11	upon the type and quality			
	10	required, no prices are quote	d		PLASTERER
** * * * * * * * * * * * * * * * * * * *					
6-in. window boards, 1-in.					
thick with rounded nosing		Measured rates			Market prices
	3 3	Measured rates  The rates which follow are for fixing only and are			Market prices Plastering sand YC 19

#### technical section s d Plasterer continued d s d Sprayed "Limpet" asbestos Class B in loads of 2 tons Gutters and flashings Approximate prices for sprayed "Limpet" asbestos on the Т to 3 tons 19 cwt. **Browning 168** 9 20 SWG commercial quality Fibred browning 171 Board finish 168 following surfaces to the aluminium Flat roofs thickness shown for quantities of 1,000 yds. super. Gutters and flashings in. plaster lath, over Normal pressed finish. 600 yds. YS 2 34 Rainwater gutters and bibes New concrete soffits and YS in. in. i-in. in. cast iron half round eaves gutter jointed and fixed to fascia with brackets 6 in. $\times$ 6 in. $\times \frac{1}{4}$ in. white glazed wall tiles YS \*18 3 4-in. \*3 7 New structural steelwork Measured rates YS 16 in. 8 Metal lathing 18 gauge pressed steel half Î-in. 23 10 FR round eaves gutter No. 24 gauge expanded metal 4-in. 2 Extra over the above prices 3 lathing and fixing 11 for coloured texture finish YS 3 5 To softwood soffits 2 Wall tiling Asbestos cement half round 7 To metal 6 in. $\times$ 6 in. $\times \frac{1}{4}$ in. standard quality white glazed wall tiles set and jointed on FR eaves gutter 4-in. Lime blaster prepared screed YS \*43 6 6-in. 7 Render float and set on brick Egg shell matt or glossy Aluminium half round walls and partitions 7 5 YS \*53 6 glazed enamelled tiles FR eaves gutter 4-in. R.F. and S. on concrete including hacking 2 Cast iron medium section **EXTERNAL PLUMBER** rain water pipes jointed and fixed to walls with pipe nails R.F. and S. on expanded FR metal lathing YS 6 Market prices 3-in. \*6 0 Sheet lead, 31 lb. and 4-in. upwards, in quantities of Gypsum plaster C\*117 9 5 cwt. to I ton Render in cement-lime-sand FR Pressed steel Copper sheeting, 23 gauge, (1:1:6) and set in gypsum plaster on brick walls and 3-in. 60 C\*340 0 in 1-ton lots 4-in. Zinc sheeting, 14 gauge, in 1 11 C\*130 0 1-ton lots Render in gypsum fibred browning-sand (1 : $1\frac{1}{2}$ ) and FR Asbestos cement Aluminium sheeting 20 SWG C 3 10 3-in. Super purity 522 8 Commercial quality 336 0 set in gypsum on concrete soffits including bonding 4-in. coat 7 Cast iron rainwater and soil goods Aluminium Render and set on expanded metal lathing including 3-in. \*5 Medium weight pipe to BS 416 and BS 460 in 0 pricking up coat 4-in. No. 6 ft. lengths 3 11 3-in. \*21 5± 4-in. \*27 5 4-in. \*27 Soil and ventilating pipes Half round gutter in 6 ft. Plaster board No. Lead soil, waste and ventilat-ing pipes (15 lb. per yd. for 3-in. and 19 lb. per yd. for 4-in. diameter) fixed to walls 4-in. \*10 6½ 6-in. \*17 3½ in. gypsum plaster lath fixed to softwood soffits finished to receive plaster YS The above are Standard-List 4 10 prices plus 25%. FR with lead tacks Gypsum board finish setting 3-in. \*11 9 Measured rates 8 4-in. \*16 Milled sheet lead Flat roofs\*204 0 Gutters and flashings\*204 0 Plain face Cast iron soil, waste and ventilating pipes with caulked joints fixed to walls with pipe FR Cast iron soil, waste and 24 SWG copper sheet FS Flat roofs 4-in. Portland cement and \*5 10 sand (1:3) plain face Gutters and flashings trowelled smooth on brick 3-in. heavy 6 FS 23 SWG copper sheet \*8 11 4-in, heavy Flat roofs Gutters and flashings \*6 Tyrolean rendering Asbestos cement soil and 14 gauge zinc Render in cement, lime sand ventilating pipe fixed to walls Flat roofs \*3 7 (I: I: 6) and finishing with with holderbats FR \*3 7 Gutters and flashings 3-in. 3 11 three coats patent coloured mix preparations applied with hand operated machine YS

20 SWG super purity

aluminium

FS

5

Flat roofs

10

2 5 3

4-in.

0 2

# technical section

s d	s d	s d
INTERNAL PLUMBER	Flushing and warning pipes	Medium weight tubing fixed to
Market prices	fixed to softwood FR	walls FR I-in. 2 8
Lead pipe in quantities of	1 9	10
5 cwt. to I ton	I-in. 5 *4 7	3-in. 3 1
BS 602*120 0 BS 1085*127 0	14-in. 6 *5 8	1-in. 3 4
	14-in. 7 *6 2	1½-in. 3 10
Polythene tubing, heavy gauge, in quantities of 500	2 11	1 ½-in. 5 0
to 999 ft. per 100 ft.	Waste pipes and fixing to	2 0
1-in. 152 6	softwood FR	Extra for malleable iron:
Ĩ-in. 194 6	1 ½-in. 6 *5 8	Bend No.
Steel tubes to BS 1387	1½-in. 7 *6 2	I-in. S I
medium weight galvanised FR $\frac{1}{4}$ -in. 0 9	3 1	3 0
Î-in. 1 1 1≟-in. 1 5	Joints to fittings No.	14-in. 7 2 4 4
14-in. 1 5 14-in. 1 8	4-in. *6 5	14-in. 9 4
The above are Standard List	1 6	6 5
prices less 37%.	1-in. *7 3	Tee No.
Galvanised malieable fittings.  No.	I-in. *7 IC	100.100
Bend No. I-in. 2 8½	1½-in. *8 (	‡-in. *3 4
11-in. 4 I	3 8	3-in. *3 7
Tee No.	11-in. *9 4	1 4
1-in. 0 113 1-in. 1 41		1-in. *4 3
∄-in.   4⅓  -in.     1⅓	Extra for: Bend No.	14-in. *5 9
11-in. 2 8½ 11-in. 3 10½	1½-in. *2 II	14-in. *7 I
The above are Standard List	l <u>1</u> -in. *4 (	4 3
rrices less 26%, less 6½% plus		
40%. Copper tubes to BS 659 FR	Branch joints No.	Copper tube
-in. *I 0	‡-in. *8 !	Copper tube to BS 1386 as
1-in. *2 I		supply pipe laid in trench (measured separately) to the
The shows are relevanted as a	3-in. *9 4	following size and gauges FR
The above are calculated on a basic price of 2s. 4d. per lb.	I-in. *9 I	1-in. 18 *1 11
plus C.T.A. extras.	1½-in. *11 10	1-in. 17 *2 10
Measured rates	3 (	1-in. 16 *4 0
Lead pipe to BS 602	1½-in. *13 3	3 0
		14-in. 16 *3 4
Main supply and laying in trench (measured separately)	Polythene tubing to BS 1972	14-in. 15 *6 11
at the following sizes and weights in lbs.	Heavy gauge as supply pipe	5 4
1-in. 7 *3 11	laid in trench (measured separately) FR	Copper tube to BS 659 as
2 // 2-in. 11 *5 10	-in.	distributing pipe fixed to walls FR
4 6	1-in. 2	-in. 19 *2 0
I-in. I6 *8 2 6 8	1 9	1-in. 19 *2 8
14-in. 28 *13 10	I-in. 2 8	1 6
14-in. 35 *17 9		1-in. 18 *3 7
14 4	Heavy gauge as supply or distributing pipe fixed to	11-in. 18 *4 6
Main supply fixed to walls	walls FR	14-in. 18 *5 3
and ceilings FR	1-in. 2	3 5
3 0	<del>1</del> -in. 3 (	
3-in. 11 *6 6 4 7	1-in. 3	Extra for brass compression
I-in. 16 *8 11	2 4	fittings joining copper to copper No.
1½-in. 28 *14 7		
11 7	Galvanised steel tubing to BS 1387	Coupling 1-in. 5 1
14-in. 35 *19 1	Heavy weight with screwed red	3 3 1-in. 6 4
Distributing pipes fixed to	lead joints as supply pipe laid in trench (measured	4 0
walls and ceilings FR	separately) FR	1-in. 8 11 5 10
1-in. 4 *3 3	1-in. 2 5	14-in. 11 2
4-in. 5 *3 10	2-in. 3 2	. 7 7 7 11-in. 15 3
1-in. 7 *5 0	1-in. 3	11 0
3 2	1 :	Bend 1-in. 6 4
14-in. 9 *5 10	1 4-in. 3 1	4 6 3-in 7 11
4 0	14-in. 5	

of glass with lead spacers

#### technical section d s d S Internal plumber continued 2 d and glazing with mastic or 11 4 beads (supplied). In panels 16 to 40 ft. super FS 32 oz. sheet Add for each additional coat 10 I-in. 8 10 11 1 1-in. 10 6 1-in. polished plate 22 3 Prepare, prime and apply one coat heat-resisting paint on heating surfaces of radiators 14-in. 23 18 Patent glazing Tee 1-in. 4 Patent glazing with rolled Basis price 3 10 10 steel lead capped bars for 4-in. 8-ft. spans and glazing with Add for each additional coat FS \*4 9 1-in-15 10 4-in. Georgian wired cast Aluminium alloy patent 14-in. 21 FS \*4 8 glazing 1 32 14-in. Knot, prime, stop and apply 26 5 one coat oil colour on PAINTER YS general surfaces Basis price GLAZIER Market prices R Add for each additional coat 8 Market prices Washable distemper C 120 0 10 Gal. 45 0 FS **Emulsion** paint Sheet glass cut to size On work not exceeding 3-in. 24 oz. 0 114 girth Gal. 32 oz. 61 Hard gloss paint: Basis price 0 Undercoat Finishing 1-in. Polished plate glass, 46 0 Add for each additional coat 21 glazing quality in plates FS Measured rates not exceeding: 2 ft. super For each additional 3-in. YS 5 ft. super On walls and ceilings 5 6 6 01 girth YR 45 ft. super Basis price 71 Twice whiten plastered 100 ft. super 2 1 6 3 ceilings Add for each additional coat Rolled plate glass ‡-in. rolled plate ‡-in. Georgian wired Two coats distemper on 6 Stain and varnish plastered walls or ceilings 0 Attention is drawn to Prepare, size, stain and twice reduction in certain glass varnish on general surfaces Two coats distemper on prices offered by manufacof woodwork fair-faced brick or concrete turers for acceptance of 2 specified minimum quantities walls On work not exceeding 3-in. of one size and substance delivered to one address at girth one time Two coats emulsion paint on 2 11 walls or ceilings 8 For each additional 3-in. Measured rates YR girth Prepare, prime and apply one 14 Glazing to wood coat oil colour on plastered 3 11 walls Oiling and polishing Ordinary quality sheet glass and glazing with putty in Twice oiling general surfaces of hardwood with linseed oil squares . Add for each additional coat 24 oz. O.Q. 1 6 2 1 32 oz. O.Q. On metal On work not exceeding 3-in. in. rolled plate glass 1 8 3 girth Prepare, prime and apply one }-in. rough cast glass 2 1 coat oil colour on general surfaces For each additional 3-in. Prismatic glass 2 9 Basis price 3 8 3 girth 6 1-in. wired glass 2 3 Add for each additional coat Staining and wax polishing general surfaces of hardwood 10 1-in. Georgian wired plate glass 8 4 1 1 On metal casements Basis price \*5 2 9 1-in. Polished plate glass (glazing quality) in plates 5 to 45 ft. super Staining bodying-in and fully French polishing on general surfaces of hardwood 2 add for each additional coat \*2 7 11 Glazing to metal On bars, angles etc., not exceeding 3-in. girth Basis price Add to above rates Id. 6 **Papering** per ft. super Add for each additional coat Preparing and sizing walls Sundries 1 and hanging plain lining 11 1 paper On small pipes YR Hacking out broken sheet 22 1 3 Basis price 1 0 Hanging wall paper, p.c. 10s. 5 Piece Add for each additional coat per piece Black ribbon velvet and 2 bedding to edge of glass YR Hanging border p.c. Is. per Double glazing Insulight units of two skins On large pipes Basis price 2 0

SIB File No.

(97)

# TWO VILLAGE SCHOOLS

at FINMERE for the OXFORDSHIRE C.C. and at GREAT PONTON for the

QUANTITY SURVEYORS, M.O.E., who prepared these analyses

UDC No. 727 - 1 LINCOLN DIOCESAN BOARD OF EDUCATION AND COUNTY OF LINCOLN-PARTS OF KESTEVEN-C.C. designed by THE DEVELOPMENT GROUP M.O.E. architects in charge MARY CROWLEY, DAVID MEDD, PAT TINDALE quantity surveyors DEVELOPMENT GROUP

The Ministry of Education's Development Group, in collaboration with the local education authorities concerned, has designed and built two new village schools, at Finmere, Oxfordshire, and Great Ponton, Lincolnshire. Here the Oxfordshire Director of Education, A. R. Chorlton, describes Finmere school and explains the educational principles involved in the planning of village schools. There follow cost analyses of Finmere and Great Ponton schools, both given for purposes of comparison. In many aspects both schools were based on the development project at Amersham, published AJ August 1, 1957.

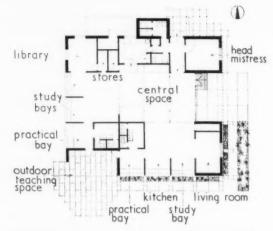
The outside of Finmere village school, from the east. A low pitched roof was chosen to give extra height in the central space for gym equipment and to contain water tanks. The gable end is of painted softwood.



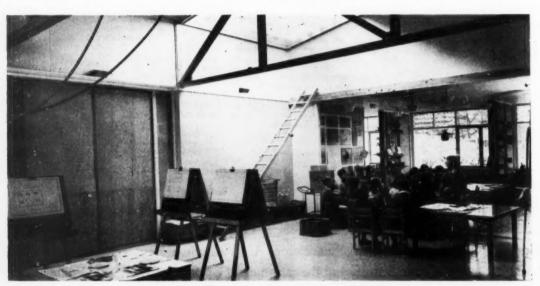
# building illustrated



Finmere, site plan



Finmere, floor plan, juniors' space left, infants' lower right



Finmere: the central space, with junior class beyond. The infant class is closed off in this picture by the folding-sliding screens on the left. The central space is equipped as a small gymnasium.



The whole school, opened out for the midday meal.

APPRAISAL: Finmere is a two-class school serving the villages of Newton Purcell, Mixbury, and Finmere itself at the point where the counties of Northamptonshire, Buckinghamshire, and Oxfordshire join. In rural areas of England and Wales this is the characteristic unit of primary education for village children. Of the 190 primary schools in Oxfordshire, for example, no fewer than 120 are of either one-or two-class size, that is to say with not more than 25-50 children in average attendance.

The Ministry's building regulations allow a minimum area of about 1,000 sq. ft. of teaching space for a school of up to 25 children; 1,500 sq. ft. for a school of up to 50 children; and 2,400 sq. ft. for a three-class school of up to 75 children. In none of these schools is a hall a requirement of the regulations. In all, the size of classes will be a good deal smaller than the average in primary schools.

The problem in the design of Finmere essentially was how to utilize this allowance of space to the best advantage, how to foster and stimulate through it the kind of environment, the kind of growing medium in which the village child could develop its interests and capacities most effectively; obtain the experiences for its social training, and also learn the simple art and practice of living and working together in a small community most happily.

There has been a tendency in some quarters to dismiss the small village school of the size of Finmere as an unsatisfactory and uneconomic medium of education. This is far from the case. Indeed, the small school has many advantages which larger schools do not possess in anything like the same degree; under a sympathetic and understanding Head Teacher it is able to embody and express many of the virtues of a closely knit family group which provides a favourable environment for the growing child in the process of discovery of the world about him, the older helping the younger, the bright child the slow, and all taking their part with purposeful pride in the chores of the classroom.

Because in Oxfordshire so many children will receive the whole of the first stage of their education in one- or two-class schools, teaching methods, teaching approaches, the problems of the wide age range in the single class and the wide range of intelligence within the class, have had to be given continuous thought, side by side with a gradual process of assessment and clarification of the associated problems of the design of a school building which will allow them fullest and most favourable solution. Indeed, the needs of the village primary school have been one of our chief preoccupations in Oxfordshire. There are other schools of this size in the county representing different answers to these problems, both new schools, as at Finmere, and existing schools which have been the subject of modernization schemes-a special and intriguing problem on its own. The Finmere school represents one conception, one solution of a suitable environment, and perhaps the most advanced one to date. It is the result of a fruitful collaboration between the Development Group of the Ministry of Education and officers of the Local Education Authority, and great praise is due to the former for the exceedingly skilful and sympathetic way in which they have translated the needs of these children in terms of a suitable learning environment.

The securing of a favourable teaching and learning environ-

ment is of the first importance—favourable for what? Favourable of course to the kind of activities that will most effectively and harmoniously contribute for children of primary school age to the process of learning and personal development. Let me refer to a few that have been successfully accounted for in the design:—

1. The occasions in the timetable when the whole class in a village school will be brought together are few. A great variety of activities may be going on profitably at the same time, the class being broken up into a number of small groups, each working on its own.

This need has been met by dividing part of each classroom into bays by fixed screens of ceiling height, each providing for a different kind of activity. A bay in the infants' room, for example, is like a kitchen and has a sink, cupboards, work bench and cooker, for cooking is a natural activity for young children and, apart from connected work in measuring, weighing, writing and so on, it gives scope for the entertaining of parents and friends and thus leads naturally to the acquisition of social graces. The w.c.s and washbasins lead directly off each room, so that the supervision of social training is unobtrusive and easy.

2. The creation and fostering of a family atmosphere are important, particularly with the youngest children. The rooms have therefore been designed to reproduce a domestic scale. The transition from home to school, especially for country children, needs to be made as easy as possible physically and psychologically.

A special feature, for example, of the infants' accommodation, where this is particularly important, is a simply and delightfully furnished sitting-room. The walls are papered; there is an attractive woven rug on the floor toning with the curtains on the window and the long curtains which divide this room into a sitting-room and bedroom, should the children wish; at one end is an electric fire and plenty of book-shelves; there is a window seat, a rocking chair and small round table; at the other end is a divan which serves a dual purpose, since it can be used for house play or for a sick child; there is a chest of drawers for the dolls' clothes and the dressing-up clothes, and a mirror and narrow shelf for the dressing table. It is in this homely atmosphere that the teacher can collect all her children around her when she wants to create the right family feeling for stories, poetry and music appreciation.

3. The study and exploration of the environment will be one of the chief vehicles of learning in a village school. Children will go out and explore, collect, measure, observe and return to the classroom with their findings and specimens. This will be the inspiration and stimulus to study, writing, creative work and research. This is particularly the case with juniors. To meet these needs, a space outside the classroom, but under cover, has been provided so that specimens can be sorted, small animals housed, stone carved, wood and clay modelled, without disturbing the other children. Inside the classroom there is a library bay, study bays and a practical bay with sink and work bench. In the junior room there are occasions, particularly when all the children are sitting together at their tables doing what are known as the three Rs, hat sufficient space is necessary for this, and a part of the room is therefore a straightforward teaching area.

#### building illustrated





Finnere: two views of the infants' sitting-room, furnished to provide a domestic atmosphere, with wallpaper, curtains and rug, plenty of bookshelves, a rocking chair, and a bed, which can be used for a rest or a sick child.

4. A large space which can be quickly freed of furniture is required for more active occasions in the school day, for physical activities, drama and movement.

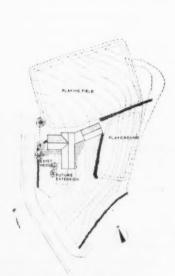
There is no provision for a hall in the Building Regulations for this size of school. The requirement has therefore been met very successfully by creating a general purpose area, separated from the classrooms by folding screens. It is thus possible for the two classes to work as entirely separate units cut off from the general space by these screens, for one class to use its own space and the general space, or for both screens to be folded back with the whole school working at group activities as one unit.

The successful solution of this problem at Finmere has contributed substantially to the effectiveness of the building. Moreover, the ability quickly to open out in this way the whole school, or alternatively for other occasions to shut off each space, is a factor of considerable importance in the intention of the design to link the school with its local

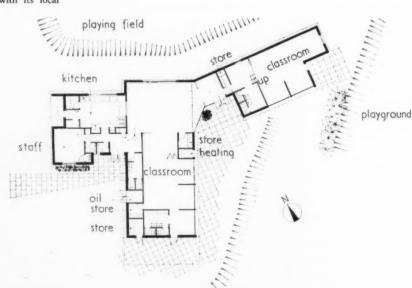
community. Here in the general space, for example, parents can be entertained, village functions held, friends received, while the rest of the school is at work. Here also the visiting speech therapist, physiotherapist or remedial teacher can work while the rest of the school carries on undisturbed.

The whole of the building is on a domestic scale to help the transition from home to school. There is no sense of confinement despite the small scale of the building and the breaking up into bays. On the contrary, when both screens are folded back there is a remarkable feeling of space.

The solution at Finmere represents an almost complete breakaway from the customary square or rectangular classroom pattern, and it may well herald a new era in the design of the small primary school in this country.



Great Ponton, site plan



Great Ponton, floor plan



General view of Great Ponton school.

# Finmere

### CLIENTS REQUIREMENTS

A two-teacher school for 50 children, replacing two schools in adjacent villages.

#### SITE

The school is at the east end of the village on an almost square site of  $1\cdot375$  acres approached from a road along its northern boundary. A busy traffic road runs along its southern boundary and in the interests of the children's safety no access from this road has been provided. The site slopes up gradually from north to south.

#### PLANNING AIMS

Teaching accommodation consists of three spaces, each of about 600 sq. ft., one for infants, one for juniors, and a space which links them together when the sliding, folding partitions between are opened.

#### PLAN ANALYSIS

Gross teaching area	Area sq. ft.	Area per place sq. ft. 29:40	Per cent. of total 71.87
Teaching storage Storage of pupils' belongings and sanitary accommoda-	100	1.53	3.73
tion	196	3	7.31
Administration	366	5.63	13.90
Circulation	105	1.65	3.19
Total superficial area	2,679	41.21	100.00

(Excluded from this analysis are external covered areas totalling 532 sq. ft.)

## Great Ponton

#### CLIENTS REQUIREMENTS

A three-class school for 70 children. At the present stage only two of the class spaces have been built: a third will be added later. The following analysis is based on the present building.

#### SITE

The 1.375 acre site, on the outskirts of the village, slopes sharply from west to east towards the River Witham, originally divided by a thick hedge running from west to east and continuing down to the river. There is also a hedge along most of the west boundary.

#### PLANNING AIMS

The slope and the hedge have had considerable influence on the design: the compact type of plan used at Finmere was obviously not suitable. The two class spaces and administrative accommodation built in the first instalment are therefore in three separate wings with the central space at their meeting point and contained str and parallel with the chedgerows. The third class space, which will be for the infants, has been designed as an independent unit within a covered way to the central space.

A playground has been made to the south-east, and the south of the site has been planted as an orchard.

#### PLAN ANALYSIS

Area sq. ft.	Area per place sq. ft.	Per cent
1,689.5	25.99	59.24
136.7	2.10	4.80
S		
· 262·I	4.03	9.17
541.8	8.34	18.97
222.9	3.43	7.82
2,853.0	43.89	100.00
	sq. ft. 1,689·5 136·7 ss • 262·1 541·8 222·9	Area place sq. ft. sq. ft. 1,689 · 5 25 · 99 136 · 7 2 · 10 38 262 · 1 4 · 03 541 · 8 8 · 34 222 · 9 3 · 43

(Excluded from this analysis are external covered areas totalling 628 sq. ft.)

#### building illustrated

# Finmere

#### SUMMARY

Number of cost places: 65.

Floor area: 2,679 sq. ft., excluding covered verandah

Area per place: 41.21 sq. ft.

Net cost: £9,359 16s. 1d.

Net cost per place: £143 19s. 11d.

Net cost per sq. ft.: 69s. 10½d. Gross cost: £10,919 os. od.

Tender date: February 1959.

Market conditions: Average prices by negotiations.

### Preliminaries and insurances (net cost) Contingencies (net cost)

# Work below ground floor level

Strip surface 6-in. deep, excavate to reduce levels. Surface trenches.

Hardcore (3-in, minimum). Concrete foundations to brick walls.

3-in. and 2-in. concrete sandwich slab with No. 126 fabric reinforcement and \(\beta\)-in. coal tar pitch membrane. Concrete edge beams under windows.

#### STRUCTURAL ELEMENTS

#### External walls

111-in. cavity wall generally. Timber stud wall and cladding to external skin of cavity wall to one external wall of 3 rooms.

Ratio:  $\frac{\text{solid wall}}{\text{floor area}} = \frac{0.56}{1}$ 

### Windows and external doors

Softwood with oak sills. Louvred ventilators. Plywood fascia over window head.

Ratio:  $\frac{\text{Openings}}{\text{floor area}} = \frac{0.33}{1}$ 

#### Glazing

Windows and external doors: 24-oz., 26-oz., 32-oz. C.S.G., \(\frac{1}{4}\)-in. G.W.P.P. and \(\frac{1}{16}\)-in. rough cast lass lo 1 vres

Internal doors: 4-in. G.W.P.P., 26-oz. C.S.G.

fanlights

Roof lights: 1-in. rough cast wired

#### Roof

Glued timber roof trusses, timber purlins and

Copper and compressed straw board panels. Timber studding and cladding to gable ends.

#### Rooflights

Softwood framing, hardboard lining. Area, 106 sq. fr.

Total of Structural Elements: 22s 7 d

#### PARTITIONS

#### **Internal partitions**

3-in. and 4½-in. clinker concrete blocks. B.S. 2028 type B

2 sliding folding partitions, single leaf. Decibel reduction of 28.

Room heights, 8 ft. 3 in.

#### Great Ponton

#### SUMMARY

s d

3 21

Number of cost places: 65.

Floor area: 2,853 sq. ft., excluding covered arches.

Area per place: 43.89 sq. ft. Net cost: £9,394 5s. 10½d.

Net cost per place: £144 10s. 6½d. Net cost per sq. ft.: 65s. 10¼d. Gross cost: £12,210 os. od.

Tender date: February 1959.

Market conditions: Competitive tenders from selected list.

# Preliminaries and Insurances (net cost) 3 0½ Contingencies (net cost) 1 0

4 113

4 51

4 71

1 3

2 81

#### 5 21 Work below ground floor level

Strip surface 6-in. deep, excavate to reduce levels. Surface trenches.

Hardcore, minimum 3 in. Concrete foundations to brick walls, 3-in. and 2-in. concrete sandwich slab with No. 126 fabric reinforcement and  $\frac{1}{h}$ -in. coal tar pitch membrane.

Concrete edge beam under windows.

#### STRUCTURAL ELEMENTS

#### External walls

114-in. cavity wall generally.

Ratio:  $\frac{\text{solid wall}}{\text{floor area}} = \frac{0.78}{1}$ 

#### Windows and external doors

Softwood frames and casements, hardwood doors and sills.

Cavity ply panels below sills. Plywood fascia over window head.

Ratio:  $\frac{\text{Openings}}{\text{floor area}} = \frac{0.36}{1}$ 

# 1 31 Glazing

Windows and external doors: 24-oz., 26-oz., and 32-oz. C.S.G. \(\frac{1}{4}\)-in. reeded obscured glass, \(\frac{1}{4}\) P.P., \(\frac{1}{4}\)-in. G.W.P.P., \(\frac{1}{36}\)-in. rough cast louvres. Internal doors: 26 oz. C.S.G., \(\frac{1}{4}\)-in. G.W.P.P.

Rooflights: 1-in. G.W. cast glass.

#### Roo

# 13 03 Mainly pitched with small flat area.

Timber roof trusses with softwood purlins and rafters. Aluminium foil insulation with concrete slating on battens.

Softwood vertical boarding to gable ends. Area: pitched, 3,840 sq. ft.; flat, 280 sq. ft.

#### Rooflights

10}

Softwood framing, hardboard linings. Area, 48 sq. ft.

# Total of structural elements : 19s 23d

### PARTITIONS

### 8 Internal partitions

3-in, and 4½-in, clinker concrete block partitions. B.S.2028 type B.

I sliding folding partition, single leaf, giving insulation of 28 decibels.

Room height generally, 8 ft. 3 in.

#### Finmere Great Ponton Internal doors 1 61 Internal doors 51 Skeleton framed softwood flush doors faced with Skeleton framed softwood flush doors, faced with beech plywood, and softwood framed, glazed. beech plywood and hardwood framed doors. No. of single doors: 21. 1 pair double. No. of single doors, 24; No. of pairs of double, 2. Total of internal partitions : 6s 21d Total of internal partitions: 4s 13d FINISHES FINISHES Floor finishes 4 0 Floor Snishes Cost includes screeds. 4 2 246 sq. yd. linoleum. Cost includes screeds. 242 sq. yd. linoleum. 23 sq. yd. quarry tile paving. Quarry tile, cement and sand and hardwood 42 sq. yd. quarry tile paving. Hardwood and quarry tile skirtings. Fibre link mats and steel mat-well frames. Fibre link mats and steel mat-well frames. Rubber nosings to steps. Wall finishes 1 10 Hardwood dado rails and cappings to end of Wall finishes 1 32 partitions. Hardwood dado rails and capping to ends of Gypsum plaster. partitions Metal picture rail and angle bead. Gypsum plaster. Wall tiling. Tiling. Plasterboard lining in roof space. Ceiling finishes 2 101 Softwood bearers. **Ceiling finishes** 2 111 a-in. plasterboard, asbestos insulation board, and Softwood bearers. fibreboard. Softwood cornices and blind boxes. Asbestos insulation board linings to stores and verandahs. Gypsum plaster insulating lath and vermiculite **Decorations** 3 51 plastering to kitchen. Internally: plastered walls, 2 coats emulsion. Fibreboard generally. Fair faced concrete block partitions, 2 coats Softwood cornices and blind boxes. emulsion. Softwood, 3 coats oil. **Decorations** 3 11 Hardwood, 2 coats plastic polish. Internally, plaster, 2 coats emulsion paint. Fibreboard ceiling, 1 coat sprayed distemper. Metal, 3 coats oil. Plastered ceilings, plasterboard and rooflight lining, Softwood, 3 coats of oil colour. 2 coats emulsion. Hardwood, two coats plastic seal. Externally: softwood, 3 coats oil, asbestos board, Fibreboard, one coat sprayed distemper. 2 coats emulsion. Plastered ceilings, two coats emulsion. Rooflight linings, three coats oil colour. Total of finishes: 11s 10d Externally, softwood and metal, three coats oil colour. **FITTINGS** Total of finishes: 11s 11d Chalkboards and pin-up panels. Curtain track. **FITTINGS** Balustrade and handrail. Coat rails. Window seats. Mirrors. Library shelving. Serving hatch. Water-Working tops and seats, wall cupboard and shelves. heater compartments. Store shelving and fittings. Chalkboards and pin-ups. Kitchen draining board and draw unit. Worktops. Coat rails, hatches, mirrors, curtain tracks, water Kitchen equipment, fixing only included in cost. heater cabinets. Cost includes fixing only of furniture, kitchen equipment and rope suspension. SERVICES 2 111 SERVICES 3 3 External plumbing 113 Aluminium rain-water pipes and gutters. **External plumbing** 5 Aluminium rainwater pipes and gutters. Internal plumbing 1 111 Galvanized mild steel cisterns, with 90-gallon Internal plumbing 1 61 storage capacity. 2 galvanized mild steel cisterns, each with 70 gallons Copper piping and wastes. capacity, copper piping and wastes. **Sanitary fittings** 1 10 Sanitary fittings 1 111

21 white glazed fireclay. Spray taps.

17 white glazed fireclay. Spray taps.

#### building illustrated

#### Finmere Great Ponton d 2 **Electrical installation** 61 **Electrical installation** 4 66 light points, 12 power points. 57 light points, 22 power points. Lighting requirements: 10 lumens per sq. ft. on Lighting requirements: 10 lumens per sq. ft. on working planes in classrooms. working plane in classrooms. **Heating installation** Heating installation 3 51 Automatic oil-fired heat exchanger. Underfloor hot Automatic oil-fired heat exchanger. Underfloor air air ducts to low level grilles. Galvanized steel ducts to low level grilles. Galvanized steel return return ducts from high level grilles. ducts from high level grilles. Temperature: 62 deg. F. when external temperature Temperature: 62 deg. F when external temperature is 32 deg. F. is 32 deg. F. Air changes: 2 per hour. Air changes: 2 per hour. "U" value of walls and roofs: 0.3. "U" of walls and roofs: 0.3 "U" value of floor: o.1. "U" of floor: 0.1 Total of services : 12s 103d Total of services : 11s 8 d Drainage (net cost) 2 31 Drainage (net cost) Salt glazed ware drain pipes and fittings, brick Salt glazed drain pipes and fittings. Brick manhole. manholes External works (net cost) External works (net cost) 3 10 Tarmac playground, 500 sq. yds. Tarmac playground, 500 sq. yds. Total cost per sq. ft. of floor area: Total cost per sq. ft. of floor area: £9,359 16s. Id. (net cost) £9,394 5s. 101d. (net cost) 69 104 2,679 sq. ft. (measured inside external walls, 2,853 sq. ft. (measured inside external walls, excluding covered areas) excluding covered porches)

#### COST COMMENTS

A cost comparison between these two schools is intriguing, not only because each was cost-planned and built for the same number of pupils but also because Finmere was negotiated with a nominated contractor whereas Great Ponton was sent out to competitive tender.

Great Ponton has the greater over-all area as there a kitchen featured in the client's requirements, whereas a scullery only was found adequate at Finmere.

Generally speaking, the specifications of both schools are identical, except for the element "roof" where Finmere's at 13s. 0\(^3\)d. per sq. ft. floor area compares with Great Ponton's 8s. 2d. Initially the roofs of both schools were designed to the same proportionate value, but a last minute client requirement was incorporated at Finmere and the roof was clad in copper whilst still keeping the over-all cost within the Ministry limit.

Other differences in the cost analysis are due in the main to the effect of plan shape on cost. Finmere is more compact and requires additional rooflights, lighting points and an additional sliding folding partition. Great Ponton has a higher perimeter to floor area ratio and therefore has spent more on external walls, eaves, gutters, etc.

Finmere's tender was negotiated before Great Ponton's tenders were received; it is therefore interesting to note that the average unit cost of Finmere's solid external walling is 3s. 2 ld.

0.56 4s. 5\frac{1}{4}d. 0.78

5s. 9d. sq. ft. and Great Ponton's is

sq. ft. and Finmere's windows and

external doors work out at 12s. 9d. sq. ft. unit cost compared with Great Ponton's 12s. 9½d. sq. ft.

The cost of piercing the more steeply pitched roof at Great Ponton, where a cost per f.s. floor area for rooflights of 8\(^1\)d. represents a unit cost of 43s. 4d. f.s., can be compared with Finmere where the unit cost dropped to 21s. 7d. f.s. The type of heating installation adopted seems ideal for the size of the building, at least from the viewpoint of initial expenditure, and especially with the saving in size of boiler house.

#### CONTRACTORS

#### Finmere

Nominated Sub-Contractors—Sliding folding partitions: Esavian Ltd. Electrical Installation: Barnett & Soans Ltd. Electric intake: Southern Electricity Board (Oxford District). Firing and balancing of heating installation: Waterbury Ltd. Copper roofing: Broderick Insulated Structures Ltd.

s d

41

3 81

2 61

3 2

65 101

Nominated Suppliers-Roof trusses: Rainham Timber Engineering Co. Ltd. Heat exchange unit and time switch: Waterbury Ltd. Tipper and screen to septic tank: Adamsez Ltd. Uxbridge flint semi-engineering bricks: Cape Building Products Ltd. Facing bricks (Woodham buff smooth faced): Obtained through: Proctor & Lavender. Clinker concrete bricks: Stephensons Ltd. Linoleum: Linoleum Manufacturing Co. Ltd. Quarry tiles: Dennis Ruabon Ltd. Medium hardboard: The Sundeala Board Co. Ltd. Asbestolux: The Cape Asbestos Co. Ltd. Celotex: Celotex Ltd. Slotac: Treetex Acoustics Ltd. Royal hardboard: Spencer Lock & Co. Ltd. Phosphor bronze strip: Contravent Ltd. Draught proof woollen cord: Tano Trading Co. Ltd. Threshold treads: Ferodo Ltd. Plugs: The Rawlplug Co. Ltd. " Bostik" adhesives: B.B. Chemicals Co. Ltd. "Libraco" shelving: Libraco Ltd. "Plymax": Vanesta Ltd. " Naco" ventilators: N.V. Appleton Pty. Ltd. Ironmongery: Wilkes Berger Engineering Co. Ltd. James Gibbons Ltd. W. N. Froy & Sons. Gardiner Sons & Co. " Silent Gliss" curtain fittings: Silent Gliss Ltd. "Richafix": Richard Tiles Ltd. Plasterboard "Gyproc" insulating lath: Gyproc Products Ltd. "Denso" tape: Winn & Coates Ltd. "Soferbed": J. F. Finnegan & Co. (Sheffield). "Gleem": Fioor Treatments Ltd. Paints and primers: Goodlass Wall & Co. Ltd. "Ledlock" glazing bars: The Wolverhampton Patent Glazing Co. Ltd. Metal angle bead: Expanded Metal Company Ltd. "Typrod" mats: Tyre Products Ltd. Rope and rope ladder suspensions: Hunt & Son Ltd. " Sonairduct' pitch fibre pipes: T.P.T. Construction Products. Plannair grilles: Plannair Ltd. "Kingsway" fire safety valve (to oil burner): R. S. London & Partners. Canotex: A. Sanderson & Son. Sanitary fittings: Adamsez Ltd. Electric switches:

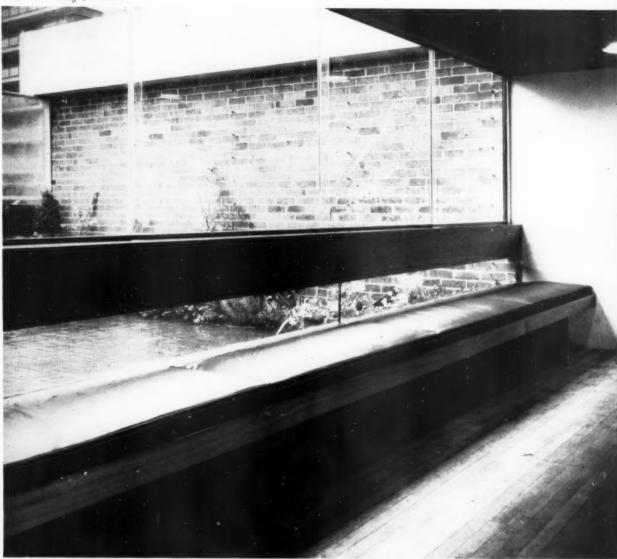
(Continued on page 1013)

FURNITURE AND FITTINGS: 96

#### working detail

WINDOW SEAT: CHILDREN'S LIBRARY IN LONDON, S.W.1

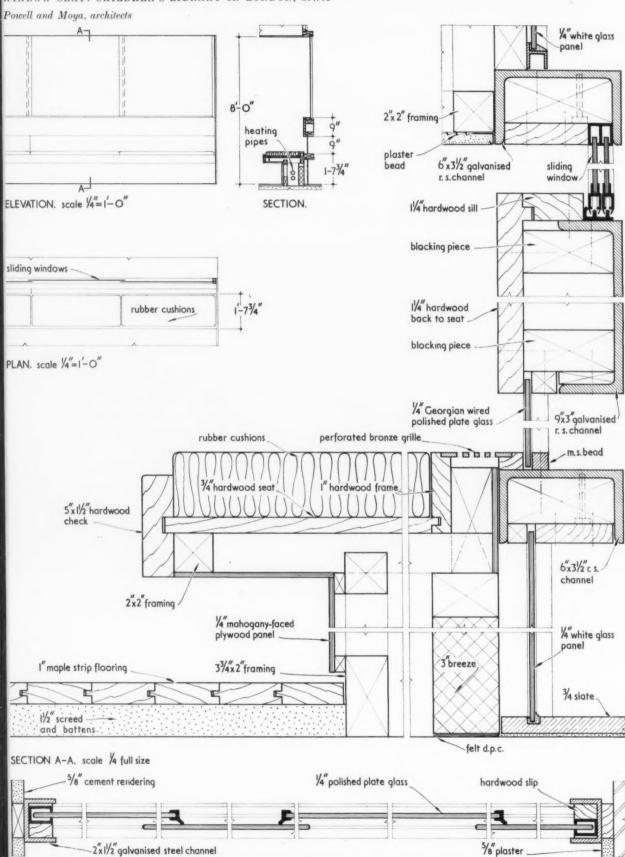
Powell and Moya, architects



Light penetrating beneath the backrest is reflected on the top surface of the seat and thus contributes to the lightness of the room and to the reduction of glare. Heating grilles behind the back edge of the seat protect against downdraught in winter.



WINDOW SEAT: CHILDREN'S LIBRARY IN LONDON, S.W.1



17-0"

#### working detail

CONTROL DESK: CHILDREN'S LIBRARY IN LONDON, S.W.1

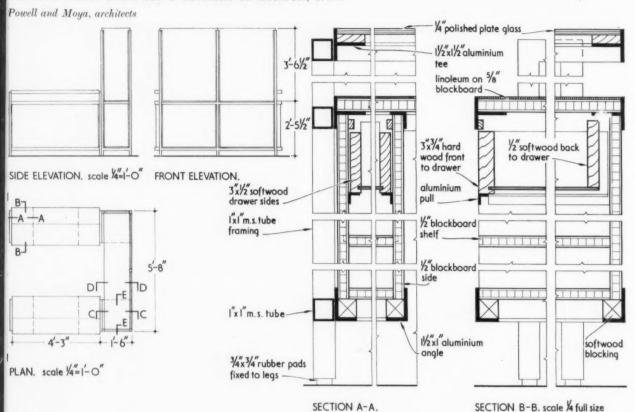
Powell and Moya, architects

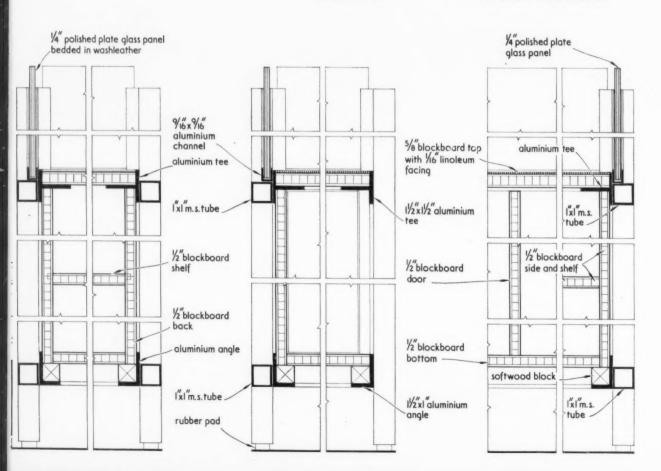


This library control desk is a companion piece to the book trolley detailed in the issue of June 16. Note the aluminium trim and the use of linoleum for the desk top.

#### working detail

CONTROL DESK: CHILDREN'S LIBRARY IN LONDON, S.W.1







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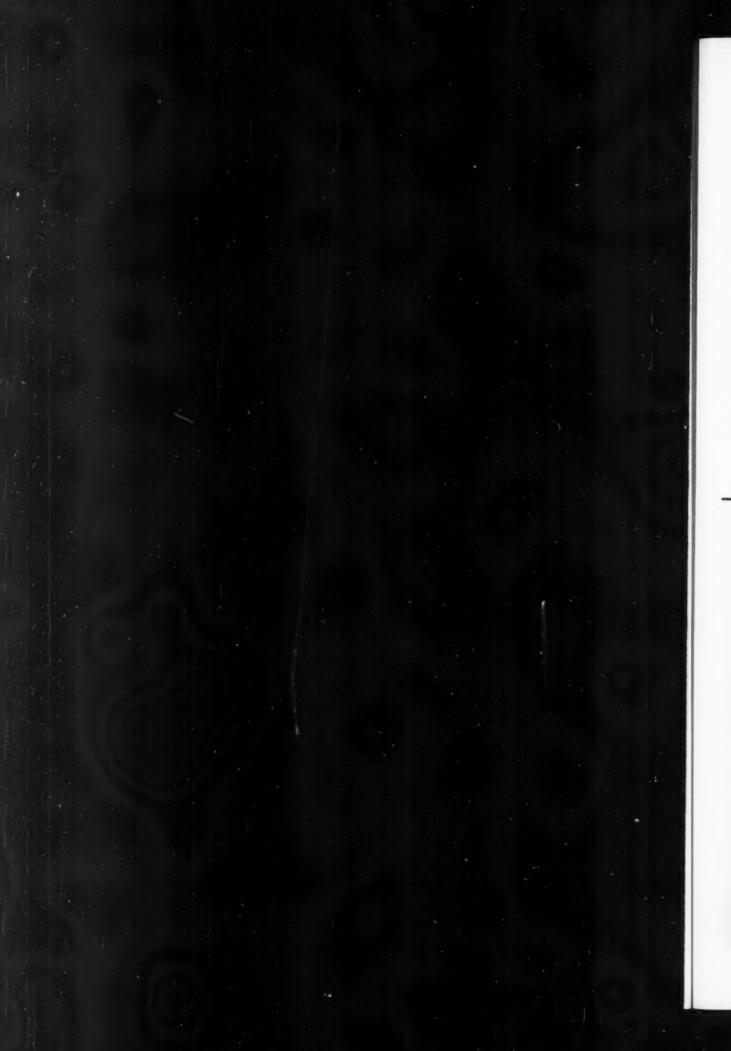
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(Finmere contractors continued)

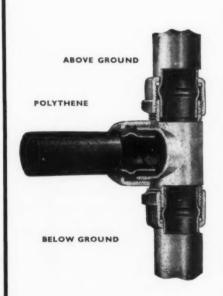
Britmac Electrical Co. Ltd. Under-sink water heaters: The General Electric Co. Ltd. Clage water heater: I.C.G. Ltd. Batten lamp holders: Nettle Accessories Ltd. "Percon" and "Cornalux" light fittings: Fulford Brown. "Cornalux" lamps: Philips Electrical Ltd.

#### Great Ponton Primary School

Nominated Sub-Contractors—Planting: Ogden's Landscapes. Folding and sliding partition: Esavian Ltd. Electrical installation: D. J. Spire & Co. Ltd. Electric intake and transformer station: East Midland Electricity Board. Firing and balancing of heating installation: Waterbury Ltd.

Nominated Suppliers—Linoleum flooring: Linoleum Manufacturing Co. Ltd. "Bostik" adhesives: B.B. Chemicals Co. Ltd. Quarry tile paving: Dennis Ruabon Ltd. Concrete roof slates: Robert Abraham Ltd. Alfol insulation: Alfol Insulation Ltd. "Juneboard": Masters and Andren & Co. Ltd. "Bartrev": Merchant Trading Co. Ltd. Medium hardboard: The Sundeala Board Co. Ltd. "Asbestolux": The Cape Asbestos Co. Ltd. "Royal" hardboard: Spencer Lock & Co. Ltd. "Phosphor bronze strip: Contravent Ltd. Draught proof woollen cord: Tomo Trading Co. Ltd. "Ferodo" threshold

treads: Ferodo Ltd. Plugs: The Rawlplug Co. Ltd. "Libraco" shelving: Libraco Ltd. "Plymax": Vanesta Ltd. "Naco" ventilators: N. V. Appleton Pty. Ltd. Ironmongery: Wilkes Berger Engineering Co. Ltd. James Gibbons Ltd. W. N. Froy & Sons. Gardiner Sons & Co. " Silent Gliss" curtain fittings: Silent Gliss Ltd. Plannair grilles: Plannair Ltd. "Richafix": Richard Tiles Ltd. Plasterboard and "Gyproc" insulating lath: Gyproc Products Ltd. " Denso" tape: Winn & Coles Ltd. " Saferbed": J. F. Finnegan & Co. (Sheffield). "Gleem": Floor Treatments Ltd. Paints and primers: Imperial Chemical Industries Ltd. Roof trusses: Rainham Timber Engineering Co. Ltd. Aluminium condensation channel: Blackburns (London) Ltd. Ventilators, wire mesh: G. A. Harvey & Co. Ltd. Metal angle bead: The Expanded Metal Co. Ltd. "Typrod" mats: Tyre Products Ltd. Brasswork: Barking Brassware Co. Ltd. Heat exchange unit and time switch: Waterbury Ltd. Sanitary fittings: Adamsez Ltd. "Sonoairduct" pitch fibre pipes: T.P.T. Construction Products. Oil tank, fire safety valve: R. S. London and Partners. Galvafroid: Uni-Seco Ltd. Electric clock: Gents & Co. Ltd. Radiant heaters: E. K. Cole Ltd. Electric switches: Britmac Electrical Co. Ltd. Common bricks (Lincoln bricks) and facing bricks: Ibstock Brick & Tile Co. Ltd. Xpelaire fan: G.E.C. Clage heater: I.C.G. Ltd.



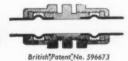
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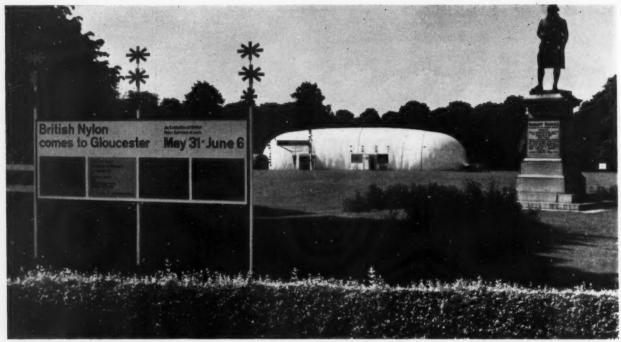
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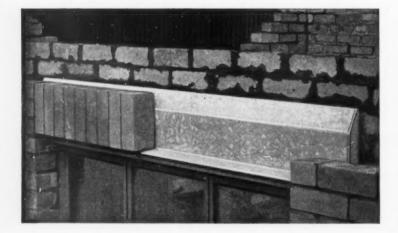
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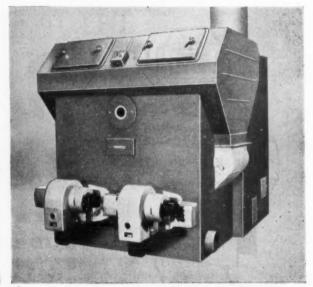
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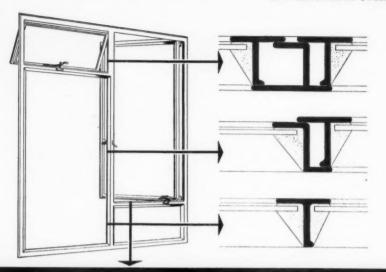


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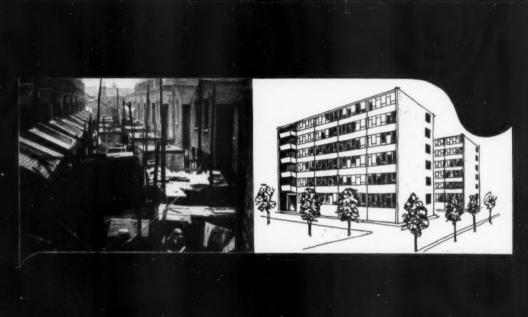


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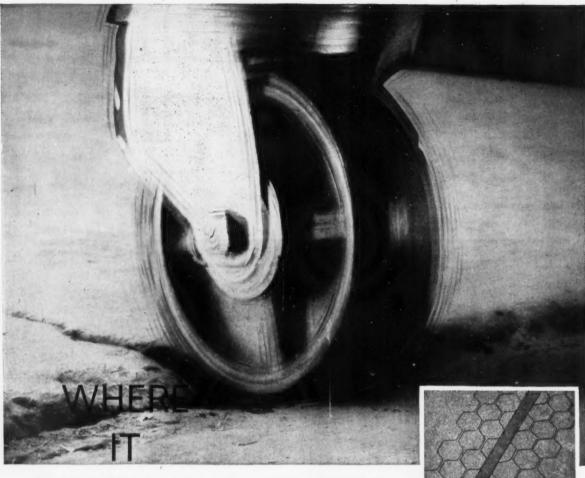
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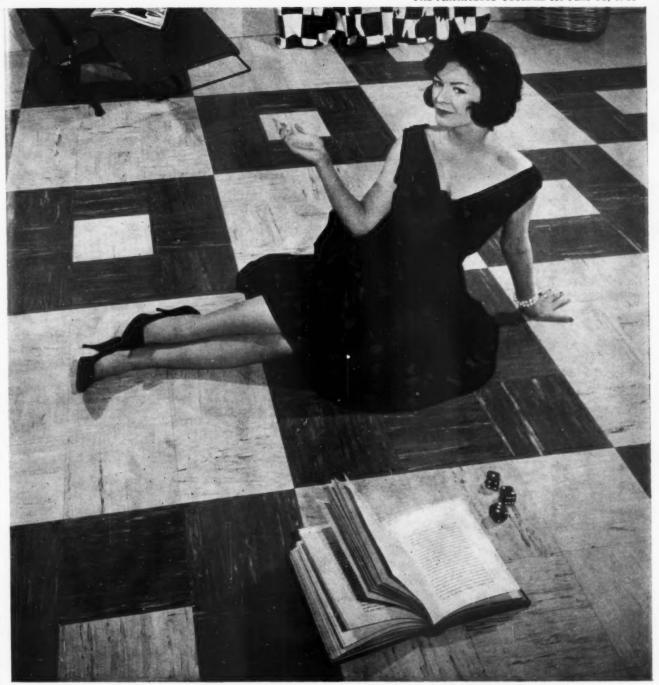
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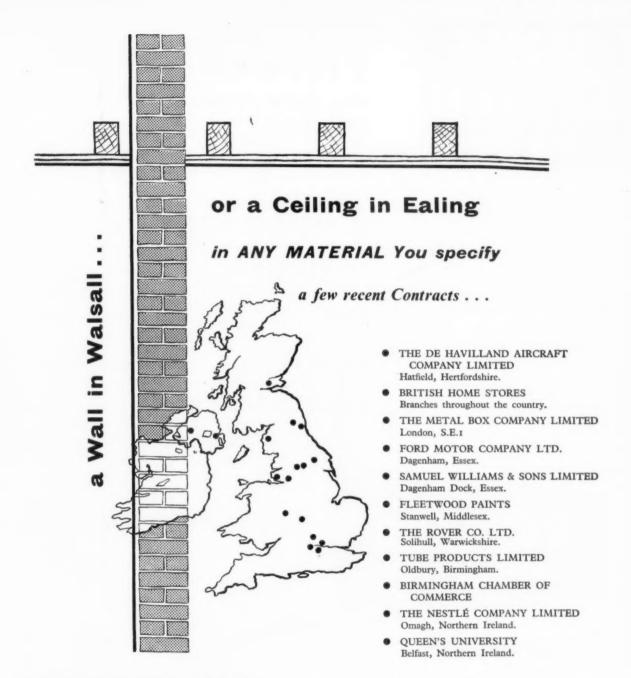
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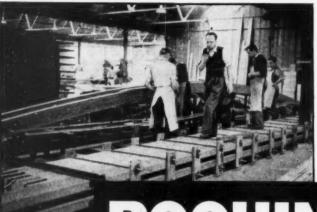
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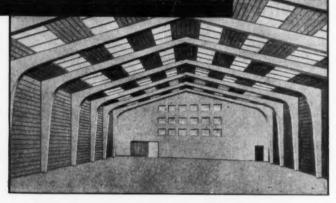
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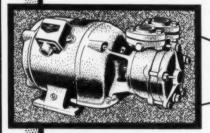
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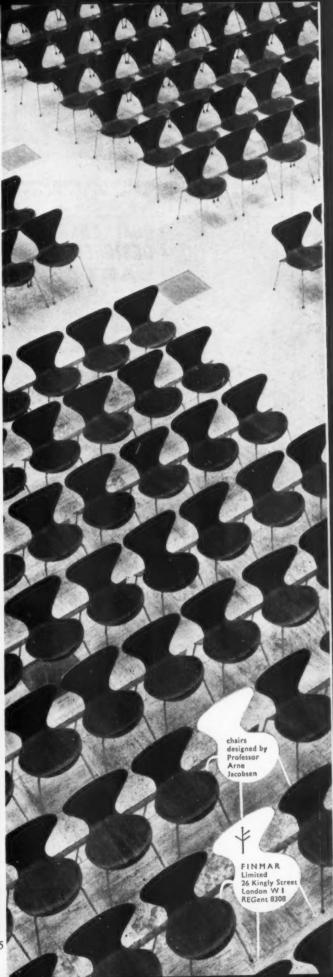


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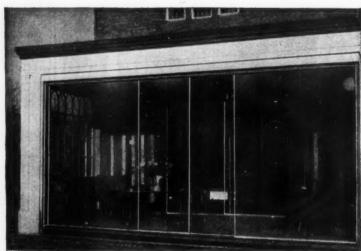
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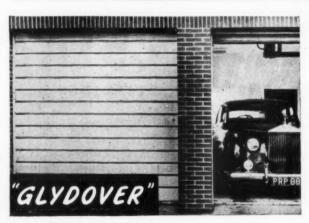
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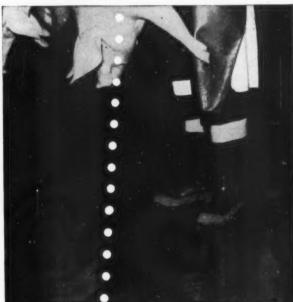


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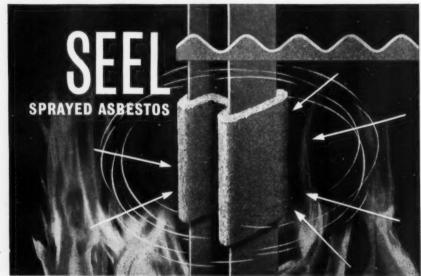
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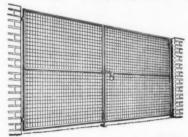


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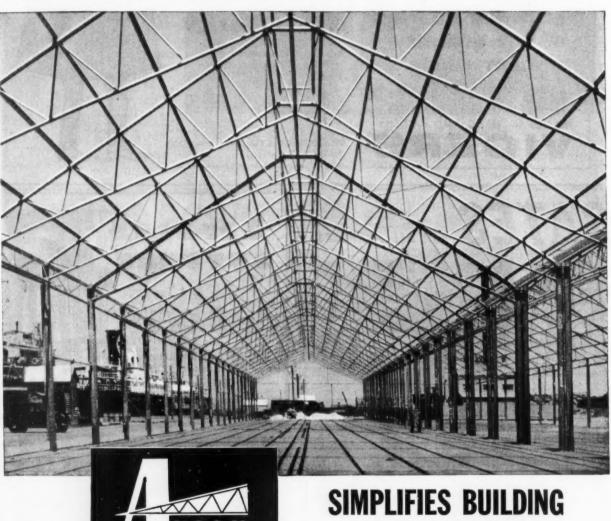
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It is intended that initially the research will be directed towards means of achieving easily cleaned finishes in operating suites and to establishing a small permanent exhibition of models, samples, photographs and drawings to illustrate approved types. The investigation will subsequently deal with the design and equipping of a number of other hospital departments.

Applicants should preferably be within the age group 28 to 32, should be registered architects and Associate Members of the Royal Institute of British Architects, and should possess both enthusiasm and a marked ability for architectural research and the presentation of its results. The man appointed will be given opportunities for travel both in the British Isles and on the Continent to see modern hospital buildings.

To a keen and able architect the post offers an exceptional opportunity for becoming well versed in the techniques of designing and equipping modern hospitals and thus for fitting himself for future advancement.

A REFERENCE OF THE STAFF

modern hospitals and thus for fitting himself for future advancement.

2. ARCHITECTURAL STAFF
As the Board is in the process of increasing considerably its Architectural Department in Newcastle to deal with a programme at present totalling about £12 million, applications are also invited for the following (superannuable) posts:—
ASSISTANT ARCHITECTS £995 × £35 (1) × £45 (6) × £50 (2)—21,310). Applicants must be registered architects. Increments can be given above the bottom of the grade in accordance with relevant practical experience since qualifying.

ARCHITECTURAL ASSISTANTS £625 × £30 (8) × £35 (1)—£900). Inter R.I.B.A. and some practical experience.

practical experience.
ARCHITECTURAL DRAUGHTSMEN (£475 × 225 (6) × £30 (2)—£685). Applicants should have had 3 years' previous experience in an architect's drawing office and be neat and quick draughts.

men.

Evening study facilities are available at King's College of Durham University in Newcastle.

Applications should give details of professional training, qualifications, experience and posts held, present salary and any other relevant information, should be accompanied by the names of three architectural referees, and should reach the Secretary to the Board, Benfield Road, not later than 6th July, 1960.

THE UNIVERSITY OF LIVERPOOL
The Liverpool School of Architecture has two
vacancies for Lecturers and Studio Instructors.
The aslary range is £1.650-£1.850 per annum; the
initial salary within the range £1.650-£1.475 per
annum, according to age, qualifications and experience.

Applications from young Architects with re-search interests would be welcomed. There will be opportunities for specialised practical ex-perience.

perience.

Applications, stating age, academic qualifications and experience, together with the names of
three referees, quoting reference CV/AJ should
be received not later than 18th July, 1960 by the
Registrar, from whom further particulars of the
conditions of the appointment may be obtained.

1858

ASSISTANT ARCHITECTS
REQUIRED BY
MINISTRY OF WORKS
For employment in London, Reading, Leeds and Cardiff.

Cardiff.

General. Conditions

Salary range between £330 (at age 25) and £1,300 per annum (London) slightly less elsewhere.

Starting point according to age, qualifications and experience. 5 day week. Annual leave 4 weeks and 2 days initially. Prospects of promotion and opportunities for permanent and pensionable posts.

Candidates must be Registered Architects by examination or Registered Architects who, since registration, have passed a professional examination in Architecture recognised by the Architects Pegistration Council of the United Kingdom. They must also possess good professional experience.

APPLICATIONS

State agree and give full details of training and

State age and give full details of training and experience to Mr. E. Bedford, C.B., C.V.O., A.R.I.B.A., Chief Architect, Ministry of Works (E), Room 427, Abell House, John Islip Street, London, S.W.1.

BOROUGH OF WATFORD
Watford is a pleasant, thriving town in South
West Hertfordshire, in the Green Belt and with
easy access to the open country. Although within
easy reach of London it has a distinct civic
consciousness and cultural, educational, shopping
and transport facilities are excellent.
The Corporation has a large number of projects in hand and envisaged, including Swimming
Bath, Library extensions, multi-storey buildings,
flatted factories and housing, and expansion of
the Borough Engineer, Surveyor and Architect's
Department is contemplated to handle these
schemes.

Department is continued from suitably qualified candidates for:—

(a) ASSISTANT ARCHITECT. Salary within Grade APT IV (£1,065—£1,220 per annum).

(b) ARCHITECTURAL ASSISTANTS. Salary within Grades A.P.T. 11/III (£765—£1,065 per annum).

(6) ARCHITECTURAL ASSISTANT. Salary within Grades A.P.T. 11/111 (£765—£1,065 per annum).

(c) ARCHITECTURAL ASSISTANT. Salary within Grade A.P.T. 1/11 (£610—£380 per annum). The Assistant appointed to post (a) will be a Section Leader and will carry a considerable amount of responsibility.

Commencing salaries will be commensurate with experience and ability and Housing accommodation will be provided for those requiring it.

Applications to be sent to the undersigned not later than 11th July, 1960.

F. C. SAGE, AM.I.C.E., M.I.Mun.E., Regd. Architect.

Borough Engineer, Surveyor and Architect.

Town Hall,

Watford, Herts. 1909

HUNTINGDONSHIRE

COUNTY ARCHITECT'S DEPARTMENT Applications are invited for the following appointments:—

appointments:—
(a) ARCHITECTURAL ASSISTANT (Special Grade £785—£1,070)
(b) ARCHITECTURAL ASSISTANT (Grade APT

2 £765—£880).

The persons appointed will become members of small architectural teams engaged in projects of varying size. It is desired that the persons appointed shall be keenly interested in architecture with an up-to-date approach to both planning and design.

design.

Application forms and further particulars may be obtained from S. M. Holloway, A.R.I.B.A., County Architect, County Buildings, Huntingdon, and completed forms should be returned to the undersigned by Monday, 11th July, 1960.

\*\*C. AYLWARD, Clerk of the County Council.\*\*

County Buildings, Huntingdon.

Huntingdon.

NANTWICH URBAN DISTRICT COUNCIL ENGINEER & SURVEYOR'S DEPARTMENT (a) ENGINEERING ASSISTANT, A.P.T. II. (b) ARCHITECTURAL ASSISTANT, A.P.T. II. Applications are invited for the above appointments on the staff of the Engineer and Surveyor. Applicants for (a) should hold the Intermediate examination of the Institution of Municipal Engineers, and for (b) the Intermediate examination of the Royal Institute of British Architects.

The appointments will be terminable by one month's notice on either side and will be subject to the Local Government Superannuation Act and N.J.C. Conditions of Service.

Housing accommodation will be available if required. Applications to be sent to Mr. E. H. Bailey, Engineer and Surveyor, Brookfield House, Nantwich, Cheshire, stating whether married or single, details of training and experience, past and present appointments together with the names of two referees, not later than July 15th, 1960.

Canvassing will disqualify.

66. Canvassing will disqualify.

Clerk of the Council.

1862 14th June, 1960.

BOROUGH OF ENFIELD

(Non-County Borough in the County of Middlesex: Population 199,700: Area 12.401 acres)
BOROUGH ENGINEER AND SURVEYOR'S
DEPARTMENT
APPOINTMENT OF ARCHITECTURAL
ASSISTANT
Applications are invited for the above permanent appointment at a salary in accordance with the Grading of Special Classes of Officers of the National Scheme of Conditions of Service. i.e. 2785-21.070 per annum with the addition of "London Weightling" as follows:—
Age 16-20 years, £15; 21-25 years, £25; 26 years and over £40.
Commencing salary will be fixed at a point within the Scale commensurate with qualifications and experience.

and experience.

Candidates must be Associates of the Royal Institute of British Architects and have had considerable architectural experience including the design and construction of public buildings and new housing estates.

There is a large varied programme of work including the redevelopment of Clearance Areas and other areas scheduled for comprehensive development.

Saturday marnings are account.

development.

Saturday mornings are normally free of duty. Application forms, obtainable from Mr. H. D. Peake. M.Sc. (Eng.) M.I.C.E., Borough Engineer and Surveyor, "Percy House," 7, Little Park Gardens, Enfield, Middlesex, must be delivered to the undersigned not later than Monday, 11th July, 1960.

CYRIL E. C. R. PLATTEN. Town Clerk.

ADMINISTRATIVE COUNTY OF LEICESTER
ARCHITECTS required to join special group, engaged on the design of New County Offices.
(a) SENIOR ASSISTANT ARCHITECT £1,220—

engaged on the design of New County Offices.

(a) SENIOR ASSISTANT ARCHITECT £1,220—£1,375.

(b) ASSISTANT ARCHITECT £785—£1,070.
Candidates for (a) must be A.R.I.B.A. and have had considerable office experience, preferably on large contracts and for (b) have passed parts one and two of the R.I.B.A. examination and be capable of executing working drawings.
Further particulars and forms of application may be obtained from The County Architect, 123, London Road, Leicester, to whom they should be returned not later than 15th July 1960.
Removal expenses and lodging allowance may be paid to a married man.

1911

be paid to a married man.

BERKSHIRE COUNTY COUNCIL

Applications invited for two appointments of PLANNING ASSISTANT. Salary on A.P.T. Grades I (£610-£765 p.a.) or II (£765-£380 p.a.) according to qualification.

Duties primarily to assist in the preparation of the survey and development plan for the County.

Application forms obtainable on receipt of stamped addressed envelope from County Planning Officer, 7 Abbot's Walk, Reading, to whom completed applications must be delivered not later than 10 days from the date of this advertisement.

HERTFORDSHIRE
ARCHITECTS required for further New Posts
1 expanding County Architect's Department.
Assistant Group Architects (team leaders) N.J.C.
cale "B"—Up to £1,485 p.a.
Senior Assistant Architects A.P.T. V—Up to
1,375 p.a.
A few vacancies architects architects

£1,375 p.a.

A few vacancies also exist for ASSISTANT ARCHITECTS at salaries up to £1,070 (recently qualified) and £1,220 p.a. (fully qualified with minimum of 3 years' experience).

Car user allowances available for senior posts. Apply by Monday, 11th July, 1960, to Geoffrey Fardell, M.B.E., A.R.I.B.A., County Architect. County Hall (Ref. Ar. 1) Hertford, Herts, stating experience, qualifications, training and naming two referees.

vo referees. Previous local government experience not essen-1955

THE UNIVERSITY OF SHEFFIELD PLANNING OFFICER: H. R. JOHNSON, B.A. A.R.I.B.A.
ASSISTANT ARCHITECT required for Planning Office which is supervising a new building programme costing about £5 million. The work will be varied and interesting and will provide excellent expression for a young and capable man. A.R.I.B.A. essential and good knowledge of service installations desirable. Salary to scale £900 × £50-£1,250 with family allowance and superannuation henefits. Apply by letter to the Bursar, The University, Sheffield, 10, with names of two persons to whom reference may be made before 9th July. Envelopes should be marked "Assistant Architect—Planning Office."

ALL-GAS HOUSE ARCHITECTURAL
COMPETITION
The Scottish Gas Board invite architects resident in the United Kingdom to submit designs for an All-Gas House which will exploit and demonstrate the possibilities of gas as a means of heating, cooking, water heating, refrigeration and home laundry.
Assessor: Professor Assessor: Professor Frank Fielden, M.A.,

Premiums: £250: £150: £75. Last day for submitting designs: 26th September

Last day for submitting designs: 20th september 1960.
Conditions may be obtained from: The Commercial Manager, The Scottish Gas Board, 1 Rothesay Terrace, Edinburgh, 3.
No deposit.
An applicant for the conditions must state his registration number.

BOROUGH OF TWICKENHAM
Applications are invited for the post of TOWN
PLANNING ASSISTANT Grade A.P.T. III (£880
-£1,055) plus London Weighting, commencing
salary depending on qualifications and experience.
Applications stating age, qualifications, experience,
etc., and giving names of two referees must be
received by the Borough Engineer, Municipal
Offices, Twickenham, by 1th July, 1960. N.J.C.
conditions will apply and superannuation is payable. Canvassing will disquality. Any applicant
who is related to a member of the Corporation
or to a Senior Officer must disclose the fact in
the application.

W. H. JONES. Town Clerk.

Municipal Offices, Twickenham.

Municipal Unixes.
Twickenham.

CHESHIRE
COUNTY ARCHITECT'S DEPARTMENT
DISTRICT ARCHITECT'S OFFICES AT
CHESTER AND WILMSLOW
Applications are invited for posts of ARCHITECTURAL ASSISTANTS in Grade A.P.T.I
(4610×4 at £30 and 1 at £35—£765 per annum) or
A.P.T.II (£765×1 at £25 and 3 at £30—£880 per
annum) in each of the above offices—please state
which is preferred.
EDGAR TABERNER, A.R.I.B.A.,
County Architect.

SOUTH WESTERN REGIONAL HOSPITAL BOARD
Applications are invited for the following posts in the Architect's Department in connection with an expansion of the Board's hospital building programme:

(a) TWO PRINCIPAL ASSISTANT ARCHITECTS (Scale II) £1,665 × £50(1) × £75(2) × £85(2)—£2.035.

(a) TWO PRINCIPAL ASSISTANT ARCHITECTS (Scale II) £1,665×£50(1)×£75(2)×£85(2)-£2,035.

(b) TWO SENIOR ASSISTANT ARCHITECTS £1,300×£60(5)-£1,600.

(c) ONE ASSISTANT ARCHITECT £905×£35(1)×£45(6)×£50(2)-£1,310, who would be required either in the Bristol or Plymouth Office. Applicants must be Registered Architects. Previous hospital experience desirable but not essential. The work offers an opportunity of gaining experience in the field of hospital planning and covers all stages from sketch plans to the supervision of construction.

Applications stating age, qualifications and experience with the names of three referees to reach the Secretary of the Board, 27, Tyndalls Park Road, Bristol, 8, by July 16th.

BRITISH EUROPEAN AIRWAYS

Two ASSISTANT ARCHITECTS required to work under the Chief Staff Architect on an increasing programme of interesting and varied projects involving some travel in the U.K. and overseas. Working conditions are good and a vigorous and practical approach to first class contemporary design is encouraged.

These permanent pensionable posts would suit qualified young men, trained full time at a recognised school of architecture with not less than two years' office experience. Men with experience who are about to qualify will be considered. Sensitive design ability and sound technical competence are essential.

Salary range £940-£1,290 depending on qualifications and experience.

Write for full details and Application Form (to be returned by 22nd July, 1960) to Personnel Officer, Head Office BEA, Bealine House, Ruislip, Middlesex.

BUCKS COUNTY COUNCIL
Applications are invited for the following

Applications are invited for the following opointments in the County Architect's Depart-

Applications are invited for the lollowing appointments in the County Architect's Department:—
ASSISTANT ARCHITECTS, A.P.T. Grade V £1,220—£1,375 p.a.
The appointments are superannuable and subject to medical examination, and applicants should be suitably qualified for architectural appointment. A weekly allowance of 25s. and return fare home once every two months may be paid for six months to newly appointed married officers of the Council unable to find accommodation.
Applications, on forms provided, must be returned by 11th July, 1960.

F. B. POOLEY. County Architect.

F. B. POOLEY. County Architect.

County Offices, Aylesbury, Bucks.

Bucks.

BOROUGH OF MAIDSTONE
SENIOR ASSISTANT ARCHITECT
Applications are invited from appropriately
qualified architects for the above appointment,
within the salary scale £1.030—£1.150.
Consideration will be given to the provision of
HOUSING ACCOMMODATION if required.
The appointment will be subject to the Local
Government Superannuation Acts, and to the
National Joint Council's Scheme of Conditions of
Service.

Service.
Application forms, obtainable from the Borough Engineer, Palace Avenue, Maidstone, are to be returned to him by July 12th, 1960.
T. SCHOLES,
Town Clerk.

BUILDING SURVEYORS

Architect's Department, L.C.C., has vacancies in Building Regulation Division and District Surveyors' Service for work in connection with applications under the London Building Acts and Byelaws. District Surveyors' offices are located in Metropolitam Boroughs and work involves negotiations with developers and supervision of works in progress.

negotiations with developers and works in progress.

Up to £1,250, commencing according to qualifications and experience. Form and particulars from Hubert Bennett, F.R.I.B.A., Architect to Council (EK/AJ/1637/7), County Hall, S.E.I.

Council (EK/AJ/1637/7), County Hall, S.E...

METROPOLITAN BOROUGH OF HAMPSTEAD PLANNING ASSISTANT
GRADE A.P.T. III, 2880—£1.065
plus London Weighting
Applications are invited from suitably qualified persons for above permanent appointment in Borough Engineer's Department,
Candidates should have knowledge and experience of Town and Country Planning Acts and Building Regulations and Byelaws. Appointment subject to National Conditions of Service.
Medical examination required. Housing cannot be provided.
Applications with full details and names of two referees to the Town Clerk (S), Town Hall.
Haverstock Hill, N.W.3, by Monday, 11th July.
2024

SURREY COUNTY COUNCIL

Applications invited from persons with necessary qualifications for appointment of ASSISTANT ARCHITECT GRAPE V. (£1.220-£1.375 p.a. plus £45 p.a. London Allowance). Must be A.R.I.B.A. Applications stating fully age, qualifications, experience and present salary, accompanied by copies of three testimonials, to County Architect, County Hall, Kingston, as soon as possible. 1913

BOROUGH OF NUNEATON ARCHITECTURAL ASSISTANT Applications are invited from suitably qualified persons for this position. Salary—Special Grade £785—£1,070.

E785—£1,070.

This post is suitable for a recently qualified person and will provide scope and opportunity for a varied experience as the Borough Council have much architectural work in hand.

Further details and forms of application, which must be returned not later than the 15th July, 1960, may be obtained from me.

A. A. CRABTREE.

Town Clerk.

Council House, Nuneaton.

June, 1960.

Nuneaton.

June, 1960.

SHEFFIELD REGIONAL HOSPITAL BOARD Applications are invited for the following appointments on the Board's Headquarters staff:—

ASSISTANT QUANTITY SURVEYOR. Applicants should hold Corporate Membership of Royal Institution of Chartered Surveyors. Commencing salary within scale ±995—£1,510 according to age and experience.

QUANTITY SURVEYOR'S ASSISTANT. Applicants should have passed Intermediate Examination of Royal Institution of Chartered Surveyors or an examination giving exemption therefrom. Salary within scale ±625—£900 per annum according to age and experience.

Applications, stating age, qualifications, experience and names of two referees, should be forwarded to the Secretary, Sheffield Regional Hospital Board, Old Fulwood Road, Sheffield, 10, not later than 11th July, 1960.

DUMFRIES COUNTY COUNCIL ARCHITECTURAL ASSISTANT
Applications are invited for the post of ARCHITECTURAL ASSISTANT in the County Architect's Department. Requisite qualification, A.R.I.B.A., and applicants should preferably have experience in the design of schools. Salary £900 × £35 to £1,075 per annum. In addition £120 per annum and a mileage allowance in respect of use of car when authorised is payable. The post is superannuated and the successful applicant may, if appropriate, avail himself of the Council's Car Purchase Scheme. Rented Council house may also be made available. Applications, stating age, qualifications and experience, with names and addresses of not more than three referees, to be lodged with the undersigned by 8th July, 1960.

LESLIE T. CARNEGIE.

County Clerk.

County Buildings,
Dumfries.
22nd June, 1960.
COUNTY BOROUGH OF SOUTHAMPTON
Applications are invited for the following

Applications are invited appoistment:
ASSISTANT ARCHITECT within the grading for Special Classes of Officers (£785/£1,070) according to experience and qualifications (a commencing salary of £950 is envisaged). Applicants must have passed Parts I and II of the R.I.B.A. Final Examination and have had experience in housing design and construction and extate layout.

ence in housing design and construction estate layout, the appointment is subject to N.J.C. conditions

of service.

Housing accommodation available in approved cases and approved removal expenses reimbursable up to a maximum of £50.

Apply on application forms obtainable from the Borough Engineer and Surveyor, Civic Centre. Southampton, returnable by Monday, 11th July, 1960.

COUNTY LONDONDERRY EDUCATION
COMMITTEE
ARCHITECT'S DEPARTMENT
Applications are invited for the following

Applications are invited for the following positions:

1. SECTION ARCHITECT.

Applicants must be Associates of the R.I.B.A. or have equivalent qualifications. Salary Scale, 2805—21,250, point of entry according to age, experience and qualifications. Travelling experience and qualifications. Travelling expenses will be paid at County Council Rates.

2. ARCHITECTURAL ASSISTANT.

Applicants should hold the Intermediate R.I.B.A. Certificate or have had a minimum of six years' experience in an Architect's Office. Salary Scale £585—2905, point of entry according to qualifications and experience. Applicants holding the Intermediate R.I.B.A. Certificate will enter the Scale at £730 per annum.

Application forms and conditions of appointment may be obtained from the Education Office. New Row, Coleraine, and completed forms must be returned not later than 12 noon on Friday, 15th July, 1960.

EAST BARNET URBAN DISTRICT COUNCIL

EAST BARNET URBAN DISTRICT COUNCIL Applications are invited from suitably qualified persons for the following permanent appoint-

persons for the following permanent appointments.

SENIOR ASSISTANT ARCHITECT—A.P.T.

(21.085—21.220. plus London weighting).

(31.085—21.220. plus London weighting).

(32.085—21.220. plus London weighting).

(32.085—21.070. plus London weighting).

(32.085—21.070. plus London weighting).

(42.085—21.070. plus London weighting).

(42.085—21.070. plus London weighting).

Application forms, obtainable from the Engineer and Surveyor, Town Hall. Station Road, New Barnet, Hertfordshire, must be returned by not later than Monday, 18th July, 1960.

2015

BENTLEY-WITH-ARKSEY URBAN DISTRICT COUNCIL
APPOINTMENT OF ASSISTANT ARCHITECT Applications are invited for the position of Assistant Architect at a salary in accordance with Grade IV (£1,065—£1,220 per annum).
Applicants must have passed the final examination of an appropriate professional body or be University graduates, and have considerable experience of municipal housing and other municipal work.

cipal work.
Applications,
experience, pa

caperience of municipal nousing and other municipal work.

Applications, stating age, qualifications and experience, particulars of present and previous appointments, together with copies of three recent testimonials and endorsed "Assistant Architect," must be delivered to the undersigned not later than noon on Monday, 18th July, 1960.

The successful candidate will be provided, if necessary, with housing accommodation.

The appointment will be subject to (1) the provisions of the Local Government Superannuation Act, 1953; (2) the National Scheme of Conditions of Service; (3) the satisfactory passing of a medical examination and (4) termination by one month's notice on either side.

W. H. ALEXANDER,

Clerk to the Council.

Council Offices, Cooke Street, Bentley, Nr. Doncaster.

LONDON COUNTY COUNCIL
No. 1720 BRIXTON SCHOOL OF BUILDING. Required

BRIXTON SCHOOL OF BUILDING. Required from September 1960:

(1) TWO LECTURERS to teach:—

(i) Building subjects in National Certificate courses. Should be corporate member of R.I.B.A. or other appropriate professional institution with good experience in professional practice and special interest in constructional technique and technological development.

(ii) Surveying subjects. Should be corporate member of R.I.C.S. in Quantity or Building Surveying with good professional experience. Teaching experience an advantage.

(2) TWO ASSISTANTS GRADE B to teach Architecture and Surveying. Should be corporate members of R.I.B.A. or R.I.C.S. Candidates with one of following special interests preferred:—

(i) Construction, (ii) Services, (iii) Law and Economics.

nomics. Burnham (F.E.) Salary scales:— Lecturer—£1,370—£1,550, plus London allow-

Lecturer—£1,370—£1,550, plus London allowance.

Grade B—£700—£1,150, plus London allowance and additions for qualifications and training. Increments within scale for experience.

Application forms (foolscap s.a.e.) from Secretary at School, Ferndale Road, S.W.4, returnable within two weeks.

CHISLEHURST AND SIDCUP URBAN DISTRICT COUNCIL ASSISTANT

Assistant required in Architectural Section of Engineer and Surveyor's Denartment. Salary A.P.T. II (£765 to £80) plus London weighting (£15 to £40 according to age). Preference to candidates with Intermediate Examination of R.J.B.A.

J.B.A.
Housing accommodation available.
Applications, giving age, training, qualificaons and experience and names of two referees,
O Clerk, Council Offices, Sideup Place, Sideup,
ent, by 11th July, 1960.

PULHAM BOROUGH COUNCIL
BOROUGH ARCHITECT'S DEPARTMENT
ARCHITECTURAL ASSISTANTS or ASSISTANTA ARCHITECTS with the minimum of two
years' continuous Drawing Office experience.
Salary range 2635/e1,115 commencing according
to qualifications and experience. Assisted training and promotion schemes. Five-day week,
Details from Town Clerk, Town Hall, Fulham,
S.W.6. Closing date 11th July. 2017

NATIONAL COAL BOARD—NORTH EASTERN DIVISION QUANTITY SURVEYING ASSISTANT required. Practical experience of preparation of Bills of quantities for varied industrial projects, re-measurement of work on site, and agreement of interim and final accounts with contractors desirable. Salary £715×£25-£850 p.a.

Apply to Area Staff Manager, No. 1 (Worksop) Area, Todwick Grange, Nr. Sheffield, by 8th July.

1996

BOROUGH OF EPSOM AND EWELL BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT APPOINTMENT OF ASSISTANT ARCHITECT—A.P.T. III
Applications are invited for the appointment of an ASSISTANT ARCHITECT on Grade A.P.T. III
(1880 to 61.065 plus London weighting).
Applicants should have had experience in the preparation of plans, specifications, etc., connected with the development of housing estates and maintenance of buildings and preference will be given to candidates holding the Intermediate Examination of the R.I.B.A.
Applications, stating age, qualifications and experience, with the names of three referees should be sent to Mr. C. G. Cobbett, A.M.I.C.E., M.I.Mun.E., Borough Engineer and Surveyor, Town Hall, The Parade, Epsom, so as to reach him not later than the 18th July, 1960.

EDWARD MOORE,

Town Clerk.
2004

AN OPPORTUNTY TO TEACH TECHNICAL SUBJECTS IN SECONDARY SCHOOLS
The London County Council will be pleased to consider applications for salaried appointments in its teaching service from men wishing to teach woodwork, metalwork, technical drawing or engineering subjects. To meet in particular the needs of men in industry with little or no teaching experience a full-time residential course (two weeks commencing on 29th August, 1960, and a further week in December), has been arranged at Shoreditch Training College, Coopers Hill, Englefield Green, Egham, Surrey. Accepted candidates for appointment will be paid from the beginning of the course. Burnham Scale (£558-£1,051 including London allowance)—commencing salary will depend on qualifications and experience or Higher National Diploma with at least two years' industrial experience or Higher National Certificate or an appropriate Full Technological Certificate or City and Guids of London Institute with at least five years' experience. The fee for the course is £22 [68s., £10 of which will be refunded together with reasonable travelling expenses, on satisfactory completion of the course. For further particulars and application form send a stamped addressed foolscap envelope to Education Officer (TS1/AJ/1695/7), County Hall, Westminster Bridge, S.E.1, immediately.

LONDON COUNTY COUNCIL ARCHITECT'S DEPARTMENT ARCH

artment:— ARCHITECTURAL ASSISTANT, Post 204 Special Grade (£785—£1,070) according to

(a) ARCHITECTURAL ASSISTANT, Post 204
Special Grade (£785-£1,070) according to
qualifications.
(b) TOWN PLANNING ASSISTANT, Post 30
A.P.T. I/Special (£610-£1,070) according to
qualifications.
(c) ARCHITECTURAL ASSISTANT, Post 122
A.P.T. II/Special (£765-£1,070) according to
qualifications.

A.P.T. II/Special (£765—£1,070) according to qualifications.

(d) ARCHITECTURAL ASSISTANT, Post 123 A.P.T. I (£610—£765). Applicants for (a) and (c) should have had experience in the design of houses, flats and shops and the layout of housing estates, have sound design ability and be experienced in the preparation of working and detail drawings. Candidates for (b) will be required in connection with the layout of large Corporation Housing Estates and schemes of development as the result of slum clearance. Applicants for (d) should have had experience in architectural design, and should have passed the intermediate examination of the appropriate professional body.

Applicants for (a), (b) and (c) should be either A.R.I.B.A. or A.M.T.P.I. No housing accommodation can be provided.

Application forms obtainable from the City Engineer and Surveyor, Town Hall, Bradford, 1. with three testimonials, must be received by the undersigned by 15th July, 1960.

HENRY PATTEN, Town Hall,

Bradford, 1.

THURROCK URBAN DISTRICT COUNCIL (Population 107,000) having claimed delegation of the Part 3 functions of the Town and Country Planning Act, 1947, invite applications for the following additional appointments in the Planning Section of the Engineer and Surveyor's Department:—

ASSISTANT Grade A.P.T. 11 with experience in Development PLANNING

Control
JUNIOR PLANNING ASSISTANT Grade
A.P.T. I (£610—£765) capable of surveying and
levelling and a neat draughtsman.
FURTHER INFORMATION can be obtained
from the Engineer and Surveyor at the address
given below. Appointments pensionable. Applications stating age, qualifications and experience
and quoting two referees to Clerk of the Council,
Council Offices, Grays, Essex, by 5th July, 1960.
Canvassing disqualifies. Relationship with members or senior officers of the Council must be
disclosed. 2005

disclosed.

BOROUGH OF EALING
CONSTRUCTION OF 8 FLATS,
WINDSOR ROAD, W.5.
Forms of Tender obtainable from Borough Surveyor, Town Hall, W.5. upon payment of deposit of £5, returnable on receipt of bona fide tender, addressed to Town Clerk, Town Hall, Ealing, W.5.
Closing date 9 a.m., 21st July, 1960.

STEPNEY M.B.C. require TOWN PLANNING ASSISTANT, salary £920—£1,110. Permanent appointment and pension rights: person required for town planning and building act matters and other co-related work and should therefore possess suitable qualifications and have had appropriate experience. Further particulars and form of application from Town Clerk, 227, Commercial Road, E.1. Closing date 14th July, 1960. 2013

FULHAM BOROUGH COUNCIL
PRINCIPAL ASSISTANT ARCHITECT
BOROUGH ARCHITECT'S DEPARTMENT
A.P.T. IV—21,110/21,265 p.a. commencing
according to qualifications and experience. Candidates must be R.I.B.A. or Registered Architects. Schemes include Housing, Libraries,
Baths, etc. Five-day week, Details from Town
Clerk, Town Hall, Fulham, S.W.6. Closing date
11th July.

Clerk, Town Rein,
11th July.

CITY OF OXFORD

CITY ARCHITECT AND PLANNING

OFFICER'S DEPARTMENT

CLERK OF WORKS required to supervise
erection of new building works, including houses
and schools. Salary £845 per annum. National
Conditions of Service
Practical knowledge of all branches of building
trade essential, with experience of setting out,
taking levels, measuring up, keeping records and
making reports.

HOUSING ACCOMMODATION PROVIDED
Application forms to be obtained from the City
Architect and Planning Officer, Town Hall,
Oxford. Closing date 16th July, 1960.

HARRY PLOWMAN,
Town Clerk,

AIR MINISTRY Works Design Branch requires in LONDON and PROVINCES ARCHITECTURAL ASSISTANTS with adequate training and drawing office experience. O.N.C. (Building) an advantage. Work includes site layouts, sketch plans, working drawings and details for variety of technical and domestic buildings in permanent and semi-permanent construction. Financial assistance and time off given for recognised courses of study. Promotion and pension prospects. Five day week with 18 days paid leave per year initially. Overseas tours for which special allowances granted. Salary: in LONDON ranges from £630 (age 25) to £900 p.a. for men; from £673 to £868 p.a. for women; somewhat lower in PROVINCES. Commencing salary dependent on age, quals, and exp. Applicants, who must be natural born British subjects, should write to AIR MINISTRY. W. G.d., Lacon House, Theobalds Road, London, W.C.i. or apply to any Employment Exchange quoting Kings Cross 891 giving age, details of training, quals., full particulars of former posts held and copies of any testimonials. Candidates selected will normally be interviewed in London and certain expenses reimbursed. 1988

CITY OF NOTTINGHAM
Applications are invited for the appointment of two ASSISTANT ARCHITECTS in the Chief The commencing and architect's Section.

Architect's Section.

The commencing salary will be within the Special Grade (£785—£1.070).

The appointment will be subject to the National Joint Council's Scheme of Conditions of Service.

Applications stating age, qualifications, experience, present appointment and salary, and naming two referees, should be sent to the Estates Surveyor & Valuer, The Guildhall, Nottingham, by 15th July, 1960.

T. J. OWEN, Town Clerk.

JUNIOR TOWN PLANNING ASSISTANT
Applications are invited for the superannuable
appointment of a JUNIOR TOWN PLANNING
ASSISTANT, Post 57, in the City Engineer and
Surveyor's Department on Grade A.P.T. I

ASSISTANT. Post 51.

Surveyor's Department on Grade A.F...
(t610—765).

Candidates should have had general experience of technical work in a planning office and have passed an appropriate intermediate examination.

Applications on forms to be obtained from the City Engineer and Surveyor. Town Hall, Bradford, 1, together with three testimonials, must be received by the undersigned by 15th July, 1960.

HENRY PATTEN.

Town Clerk.

BOROUGH OF BEXLEY Applications are invited for the following

Applications are invited for the following appointments:—

(a) SENIOR BUILDING AND PLANNING ASSISTANT—Grade A.P.T. IV (£1,065—£1,220 per annum) plus London weighting. Applicants must have passed the final examination of an appropriate professional body and have had considerable experience in dealing with all aspects of planning and building Bye Law matters.

(b) ASSISTANT ARCHITECT — Grade A.P.T. III (£880—£1,065 per annum) plus London Weighting. Applicants should have suitable professional qualifications and experience in school and housing projects.

(c) ARCHITECTURAL DRAUGHTSMAN—

ressional qualifications and experience in school and housing projects.

(c) ARCHITECTURAL DRAUGHTSMAN—
Grade A.P.T. I (£610-£765 per annum) plus London weighting. Applicants should be good draughtsmen and have a general knowledge of building construction and specification work.

Form of application and conditions of appointment are obtainable from Borough Engineer, West Lodge, Broadway, Bexleyheath, to whom completed applications must be returned by MONDAY, 25th July, 1960. Canvassing will disqualify.

ARTHUR GOLDFINCH.

Town Clerk.

METROPOLITAN BOROUGH OF
BERMONDSEY
BOROUGH ENGINEER AND SURVEYOR'S
DEPARTMENT
ASSISTANT ARCHITECT
Applications are invited for the permanent appointment of ASSISTANT ARCHITECT, Grade APT III-IV (salary range from #880-£1,220 p.a.) plus London Weighting, commencing salary according to experience and qualifications. Applicants must have passed Final R.I.B.A. Examination. Applications on forms from the undersigned to be returned by not later than 16th July, 1960.

J. S. LAMBERT,
Municipal Offices,

Municipal Offices, Spa Road, London, S.E.16.

Tenders Invited

Tenders Invited

36s. per inch; each additional line, 3s. including forwarding replies 2s. extra

STEVENAGE URBAN DISTRICT COUNCIL PROPOSED SWIMMING POOL AT ST. GEORGES WAY, STEVENAGE

THE Council will shortly be inviting TENDERS for the erection of a covered swimming pool constructed in accordance with A.S.A. standards and including a smaller training pool at St. George's Way, Stevenage, near to the Town Centre. It is the intention of the Council to invite firm priced tenders on a selected basis and contractors who wish to be considered should forward their names and addresses, to the undersigned, before 1th July, 1960. Contractors will be selected and the Council may add others.

Tender documents will be issued during September, 1960 and work is likely to commence during October or November, 1960.

E. J. BOWERS,

E. J. BOWERS, Clerk of the Council.

Council Offices, Orchard Road, Stevenage. 14th June, 1960.

Architectural Appointments Vacant per line; minimum 12s. Box Number, including forwarding replies, 2s. extra

TAPANDING practice with varied work in different parts of the country, require keen and capable Intermediate standard ASSISTANTS. Good salary and prospects for the right men. Holiday commitments honoured. Dailing and Partners, 14, Bloomsbury Square, W.C.1. CHAncery 4725.

ARCHITECTURAL ASSISTANTS required in busy Bloomsbury office with varied practice. Good salary and prospects for suitable applicants. Five-day week. Write giving particulars of age, qualifications, experience, etc., to Box 910, c/o 7, Coptic Street. W.C.1.

8815

ASSISTANT ARCHITECTS required by firm with offices in Middlesbrough and Billingham-on-fees. The work is interesting and of considerable variety. Salary according to experience and ability. Elder and Lester, A/A.R.I.B.A., Grosvenor Buildings, 65, Albert Boad, Middlesbrough.

RONALD WARD & PARTNERS have immediate vacancy for ASSISTANT ARCHITECTS with initiative and some experience, for interesting, commercial, industrial and civic projects. Salaries commensurate with ability. Apply, 29, Chesham Place, S.W.1. BELgravia 3361.

Lewis Solomon, Kaye & Partners, rapidly expanding practice require ArcHiTECTS and ASSISTANTS with initiative and competence to work on major design projects in the London area. These projects include Comprehensive Development Schemes, Hotels, Schools, Offices, and Luxury Flats. Good salaries according to ability and experience, luncheon vouchers, five-day week, and excellent working conditions. Write 5, Holborn Circus Thavies Inn House, E.C.I., or telephone CITy 8811, quoting SLB in both instances.

2750 - £1.000 - KEEN YOUNG ARCHITECTS WANTED URGENTLY. Senior and Junior Assistants required to work on a variety of interesting contracts. including flats, hospitals, offices, hotels, shops and interiors, etc. Opportunities for modern design and control of contracts. Salaries as above or according to experience. R. Mountford Pigott & Partners, South Kensington. Tel. KENsington 1242.

MONRO AND PARTNERS require. A DOWN.

MENSINGTON 1242.

MONRO AND PARTNERS require ARCHITECTURAL ASSISTANTS of Intermediate/
Final R.I.B.A. standard in their London. Watford,
and Glasgow Offices for work on interesting industrial and commercial projects. Salary range £800
-21,000 p.a. Non-contributory Pension Scheme.
Five-day week. Apply in writing to 32, Clarendon Road, Watford.

don Road, Watford.

SELY & PAGET have immediate vacancy in their City office. Standard near Final R.I.B.A. with office experience. Holiday arrangements respected. Salary range 2842 × £52 (4)—£1.650 nlus luncheon vouchers. Write 41, Cloth Fair. E.C.1, or telephone MET 3511.

E.U.I. or telephone MET 8511. 9155

TREHERARNE & NORMAN, PRESTON & PARTNERS have vacancies for ARCHITECTS and ASSISTANTS with imagination and designing ability to assist with important new developments in the London area. Apply in confidence to 83, Kingsway, London, W.C.2. (HOL. 4671.)

A RCHITECTURAL A RCHITECTURAL ASSISTANT, about Intermediate standard, required for general practice in North Devon Office. Pension scheme. Box 9744.

A RCHITECTURAL ASSISTANT required, with at least two years office experience. Apply in writing to Thomas Mitchell & Partners, 20, Bedford Square, London, W.C.1. 7282

1,000 (£2,000 p.a. will be paid to experience competent ARCHITECTS by a private practice in the City of London. The work will be primarily on the drawing board on new and interesting projects of magnitude. A high standard of design and detailing ability is required. Please apply in writing to Box 3360.

writing to Box 9360.

A RCHITECTURAL STAFF, all grades, required for interesting work. Good salary, bonus, superannuation scheme. House Purchase Assistance Scheme. Excellent working conditions, five-day week. Please apply, giving details of qualifications, experience and salary required to: George Brown & Partners, A./A.R.I.B.A., F.I.A.S., and Eric Rose, F.R.I.B.A., Equity & Law Building, Baldwin Street, Bristol, 1.

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and Eric Ross, F.R.I.B.A., Equity & Law Buildings, Baldwin Street, Bristol, 1. 9458

A RCHITECTS and ASSISTANT ARCHITECTS and Civic projects. Responsibility and initiative encouraged. Five-day week, good salary commensurate with ability and experience. Ronald Ward & Partners, 29, Chesham Place, S.W.I. BELgravia 3561.

PUSY City Firm engaged in industrial and commercial work requires ASSISTANT of Final standard with several years' office experience. Five-day week. Luncheon vouchers. Salary by arrangement. Box 9227.

C + TANTS for work on theatres, laberatories, shops, stores and town centre redevelopment, etc. Apply 10, Lower Grosvenor Place, S.W.I. VIC. 4304.

NTERMEDIATE to Final ASSISTANTS re-

S.W.i. VIC. 4304.

INTERMEDIATE to Final ASSISTANTS required immediately. Salary according to ability and experience. Theo. H. Birks, 38, Portland Place, London, W.I. LAN. 7236. 9739

BASIL SPENCE & PARTNERS require qualified and experienced ARCHITECTS to fill positions of responsibility on a major building programme. Write to 48, Queen Anne Street, W.I., stating experience and salary required.

BRYAN & NORMAN WESTWOOD & PART-NERS require JUNIOR ASSISTANTS. Please apply at 21, Suffolk Street, S.W.1. Trafalgar 411.

EXPERIENCED SENIOR ASSISTANT required in Architect's Department of commercial firm in the West Riding of Yorkshire. Must be prepared to work on projects of varying size, also willing to travel throughout the country. Five-day week, Pension Scheme, canteen facilities, Salary by arrangement according to age and experience. Apply Box 1077.

A RCHITECTURAL ASSISTANT, with practi-cal experience required by private Architect (Canterbury). Apply by letter stating age, ex-perience and salary required to John C. Clague, Chartered Architect, 27, St. George's Place, Canter-bury, Kent.

DONALD ROWSWELL urgently requires for Croydon office. Salary by agreement. Holician arrangements honoured. Apply with full details to 54. Friends Road, Croydon, or telephone CROydon 4880.

SENIOR ASSISTANTS required immediately.
Salary by arrangement. Theo. H. Birks, 38,
Portland Place, London, W.1. LAN 7236, 1486

A SSISTANT required by busy City office engaged mainly in industrial and commercial work. Five-day week; luncheon vouchers; salary by arrangement. Holiday arrangements will be honoured. Plesse apply: Eric Firmin & Partners. Thavies Inn House, 5, Holborn Circus, E.C.I. Tel.: CITY 8811.

APPLICATIONS are invited to fill posts as Five-day week. Compulsory Superannuation Scheme. Salary range £730—£1,080 per annum to age and experience. Apply: R. C. Steel. A.R.I.B.A., Chief Architect, C.W.S. Ltd., 99, Leman Street, London, E.I.

Leman Street, London, E.I.

TAVELL, BELLIS & ASSOCIATES have vacancies in Reading, Wrexham and Ruthin for Junior, Intermediate and Final standard ARCHITECTURAL ASSISTANTS. Apply, with full particulars, to 23, Well Street, Ruthin, North Wales.

SOUTHAMPTON.—Senior and Junior ARCHIIN Writing, stating experience and salary required, to E. M. Galloway & Partners, F./A.R.I.B.A., 10, Portland Street, Southampton.

A BCHITECT required to take charge of old established West Riding practice, to be controlled by architects closely connected but some few miles away. Modern approach essential but need not be uncompromisingly brutalistic. Hope not, but may be necessary to nod at tradition occasionally. Salary and arrangements according to demonstrable ability. In confidence to Box 1626.

A RCHITECTURAL ASSISTANTS required in busy West End office. Varied work, excellent salary and prospects. Apply to Maurice Sanders, F.R.I.E.A., 24, Harley Street, W.1.

WATKINS, GRAY & PARTNERS, 57, Catherine Place, S.W.1, require SENIOE and JUNIOE ASSISTANTS for work on large hospital projects. Excellent opportunities for those seeking first hand experience in this most interesting and rapidly developing field. Luncheon Vouchers and pension scheme in operation. Write giving full particulars. pension sch particulars.

JUNIOR and SENIOR ASSISTANTS required. Five-day week. Excellent prospects. Bernard Gold & Partners, 4/6, Savile Row, W.1. Phone BEGent 7551.

Gold & Partners, 4/6, Savile Row, W.1. Bernard Phone BEGent 7551.

A RCHITECTS, qualified, required to work in small design groups on interesting development schemes in Birmingham and other cities throughout the United Kingdom. Good opportunities in an expanding practice with offices in Birmingham and London. Progressive salary scales, incentive bonus scheme, luncheon vouchers, five-day week and three weeks holiday. Flat accommodation available in Birmingham. Holiday strangements honoured. J. Seymour Harris & Partners, 3/4, Greenfield Crescent, Birmingham, 15. Tel. Edgbaston 4571.

A RCHITECTURAL ASSISTANTS with some expending practice with offices in Birmingham and other cities throughout the United Kingdom. Good opportunities in an expanding practice with offices in Birmingham and London. Progressive salary scales, bonus scheme and holiday in accordance with service, luncheon vouchers, five-day week. Flat accommodation available in Birmingham. Holiday arrangements honoured. J. Seymour Harris & Partners, 3/4, Greenfield Crescent, Birmingham, 15. Tel. Edgbaston 4571.

CHIPPINDALE & EDMONDSON CHARTERED ARCHITECTS

CHIPTINALE & EDMONDSON
CHARTERED ARCHITECTS
BRADFORD
INVITE applications for the following vacancies:—

NVITE applications for the following vacancies:—
(1) Fully qualified ARCHITECTS with several years' experience to take charge of interesting work of all types.
Salary 2900—£1,200.
(2) ASSISTANTS of Intermediate standard capable of preparing working drawings under supervision and taking responsibility for smaller contracts.
Salary £700—£950
Five-day week; Pension Scheme; Luncheon Vouchers (or equivalent); salary renewed annually; travelling expenses paid to applicants who are interviewed.
Replies, endorsed "Staff—Private and Confiden-

Replies, endorsed "Staff—Private and Confiden-al," to Empire House, Piccadilly, Bradford.

Yorkshire.

1788

RXCELLENT OPPORTUNITIES exist in busy, medium size firm of Chartered Architects in West End. Vacancies are available in the drawing office and for Assixants who wish to acquire experience in contract supervision and survey work. Qualifications an advantage but not essential. Salary and promotion according to experience and ability to accept responsibility. Please apply to Box 1773.

SENIOR ASSISTANT ARCHITECT aged 27/34 required in new Architects' Dept. of large Building and Civil Engineering organisation (West End Office). Good salary and responsibility in return for ability and initiative. Excellent prospects for right man. Write giving full details to Chief Architect, Box 1777.

Chief Architect. Box 1777.

RCHITECTURAL ASSISTANTS with keen interest in good design and new forms of construction required in architects' dept being set up by expanding Building and Civil Engineering group of companies. London office, five-day week, and Luncheon Vouchers. Write stating age, experience and salary required to Box 1778.

PARKER & ROBERTS, A./A.R.I.B.A., Lincoln and Sleaford, require ASSISTANTS, Final and Intermediate standards, at both offices. Progressive firm with large projects in all fields, including Industrial, Hospital, Motels. 1969 holidays honoured. Car owners preferred. Salaries by arrangement. Write giving details of experience to 47, Silver Street, Lincoln.

BIRMINGHAM. We need a young ARCHITECT either qualified or in training, with a good sense for clean and straightforward design. There is plenty of scope for the right man. Salary up to £1,000 according to experience. Apply Alfred Harper & Son, 63, Temple Row, Birmingham.

J. Affred Harper & Son, 63, Temple Row, Birmingham.

1727

EXCELLENT opportunity for Senior and Intermediate ASSISTANTS in a permanent and progressive appointment with Midland firm of Architects who are working on large projects of an advanced type of design, including comprehensive development schemes, multi-storey office buildings, multi-storey flats, shopping centres, schools, banks, public houses and industrial projects. Accommedation provided in Georgian house. Apply Box 1588.

REQUIRED for work on interesting Industrial Project affording first class design and technical experience.

Apply in writing to:

Sir William Halcrow & Partners, (B.A. Architects' Section),

47, Park Lane, London, W.1.

LEWELLYN SMITH & WATERS urgently require ASSISTANTS for their expanding programme of work, which includes Industrial, Commercial, Housing, Schools, Churches, etc. DESIGNERS wanted, to prepare and develop sketch designs for every type of work. Imaginative outlook and good sense of detail essential. 2500—21,250.

JOB ORGANISERS required to take charge of jobs; able to control drawing office and site work and deal with Consultants and Specialists. £1,000—£1,250.

ASSISTANTS wanted, interested in working on a wide range of projects. Good opportunities for young men of ability. £700-£1,000.

JUNIORS required. Salary according to aptitude and experience.

L.V's; Pension Scheme; holiday commitments for 1960 will be honoured.

Kensington and Worcester. Write 103, Old Brompton Road, S.W.7, or telephone KEN 4477. 1677

OUIS DE SOISSONS, PEACOCK, HODGES, ROBERTSON & FRASER require competent ASSISTANTS in their Exeter Office. Applicants may be recently qualified, or unqualified with some years good experience. Applications giving details of ago training and experience should be submitted to 12, Baring Orescent, Exeter, as soon as possible.

be submitted to 12, Baring Crescent, Exeter, as soon as possible.

1709

INTERESTING and varied small practice urgently requires SENIOR and JUNIOR ASSISTANTS for high quaitty work—not industrial. Telephone or write Bird & Tyler, 13, Wellecks Street, London, W.L. Wel. 0882. 1765

ARCHITECTURAL ASSISTANTS. Well-known London and Provincial firm of Architects urgently require a number of Assistant Architects, chiefly for commercial and flat development schemes. Salary up to £1,100 according to ability and experience. Reply Box 1798.

WEST END ARCHITECTS require qualified experienced ASSISTANT for interesting commercial developments in London and Provinces. Genuine prospects for advancement to applicant with ability and initiative. Telephone Langham 251, or write giving particulars of experience to Newman, Levinson & Partners, 9, Mansfield Street, London, W.I.

Unidon, W.1.

QUALIFIED AND UNQUALIFIED ASSISto work on large buildings and groups of buildings. Keppie, Henderson & Partners, 21, Woodside
Place, Glasgow, C.3.

Place, Glasgow, C.3.

A RCHITECTURAL ASSISTANTS required
Probationer up to Intermediate R.I.B.A
level, or Students R.I.B.A. Facilities given for
study of design at London Schools. Hare 4 Pert
A./A.R.I.B.A., 29, Elm Street, Ipswich. 175

ACSIGNATION

A LAN W. PIPE & SONS, 8, Queen Street,
E.C.4. require qualified or experienced
ASSISTANT ARCHITECT also JUNIOR ARCHITECTURAL ASSISTANT. A permanent job in a
busy and progressive office, mainly industrial and
office buildings. Telephone City 7611 for appointmant.

SENIOR ASSISTANT ARCHITECT required by Devereux and Davies. Good salary to applicant with the requisite ability and experience.
3, Gower Street, Bedford Square, London, W.C.I.

FOLKESTONE practice has vacancies for aRCHITECTURAL ASSISTANTS. Interesting and varied work. Apply stating age, experience and salary required: Kenneth Waite, A.R.I.B.A., 127, Sandgate Road, Folkestone, Kent. Tel.: Folkestone 2134.

ERNÖ GOLDFINGER requires ASSISTANTS With sound knowledge of construction. Ex-bright sounding programme of work includes office build-ings, schools, shope, factories, local authority and private housing. Local Authority Rates. Tele-phone: HYDe Park 5657.

IF YOU WANT

CONSTANT and interesting works programme.

Five-day week.
A starting salary of £850 per annum.
Annual Bonus.
Non-contributory Pension Scheme.
A base in Ealing.
A secure job with Resident Architect to a Multiple

Principal who values experience above qualifica-tions.

THESE ARE OFFERED TO

First Class Senior Assistants.

Apply for appointment. Box 1767.

Box 1767.

BENIOR AND INTERMEDIATE STANDARD
ARCHITECTURAL ASSISTANTS required
for London and Weston super Mare. Write full
particulars including salary required: R. H. Galannaugh, L.R.I.B.A., 54, Queen Anne Street, Lon402, W.1.

A ECHITECTS AND ASSISTANTS of all grades required urgently in connection with an extensive and varied programme of interesting work including schools, laboratories, general industrial and War Department contracts in various parts of the country. Vacancies exist at both the Derby and London offices. Apply in writing to Morrison and Partners, 103 Belper Road, Derby. Tel. Derby 49287, 8, 9, or London Hunter 1628.

VE ARUP & PARTNERS. ARCHITECTS. A vonue and expanding group of Architects

young and expanding group of Architects working in close association with Engineers on a variety of projects including University, Industrial and Housing work want further ARCHITECTS and ASSISTANTS. Salary according to experience and ability. Please write to 13, Fitzroy Street, W.I.

W.I.

CRAHAM CRUMP & DENIS CRUMP,

F./A.R.I.B.A., require ARCHITECTURAL
ASSISTANTS in Croydon office Intermediate
standard with several years office experience.
Interesting and varied work. Five-day week.
Write giving full particulars, 43, George Street.

A DDITIONAL staff required for Architectural ASISTANT ESTIMATOR.
ASSISTANT ESTIMATOR.
ASSISTANT WAREHOUSEMAN COUNTER HAND REPRESENTATIVE Please apply: A. J. Binns Limited 29 Store Street W.C.I.
Telephone MUSEUM 5802. 1927

ARCHITECTURAL ASSISTANTS INTERMEDIATE OR FINALS STANDARD

ARCHITECTURAL ASSISTANTS
INTERMEDIATE OR FINALS STANDARD
required in
Chief Architect's Office
INTERESTING and varied work. Five-day
and superannuable.
Write (in confidence) stating age, experience and
salary required to Personnel Manager.
Write (in confidence) stating age, experience and
salary required to Personnel Manager.
London Road, Norbury, S.W.16. 9657
ARCHITECTS AND ARCHITECTS' ASSISARCHITECTS AND ARCHITECTS' ASSISSalaries 2900—£1,200 REGent 2291. 1682
SIR ROBERT TASKER & PARTNERS require
further SENIOR ASSISTANTS with minimum three years' experience and Final standard.
Salary up to £1,000 per annum will be paid to
opportunity to see work in progress. Phone
CHANCEY 5957 for appointment. 1295

PRIVATE Architects require an experienced
varied work on factories, shops, offices, housing,
ctc. In close personal contact with the Partners
and the jobs and not regimented by the rules
and regulations of a large organisation. A
substantial salary will be paid in keeping with
present conditions and holidays honoured. Apply
in strict confidence to The Senior Partners.
Percy V. Burnett & Partners, 12, Bloomsbury
Square, W.C.I. HOLborn 6177.

ARCHITECT'S ASSISTANT, Intermediate and
Architects. The work is varied with experience
in very pleasant surroundings, Salary by
arrangement. Apply in writing, giving age,
experience to Box No. 1970.

ARCHITECTURAL ASSISTANTS of Intermediate standard required for busy varied
practice. Write in first instance to Locke, Son
& Newcombe, 2, St. Paul's Road, Newton Abbot,
S. Devon.

S. Devon.

CHELTENHAM Architects require experienced
ASSISTANT able and willing to take
responsibility. Commencing salary about £800.
according to capabilities. Box 1976.

responsibility. Commencing salary about £800, according to capabilities. Box 1976.

CRINLING—Exceptional qualified ASSISCRINLING—Exceptional qualified ASSISoffice—salary £900—£1,100 per annum. Summer holiday by arrangement. Telephone for appointment: BELgravia 6595.

CO-OPERATIVE WHOLESALE SOCIETY LTD. ARCHITECT'S DEPARTMENT, MANCHESTER have vacancies for SENIOR AND JUNIOR AND JUNIOR ARCHITECT'S ASSISTANTS

TO work on a variety of interesting commercial and industrial projects. Five-day week. Three weeks' holiday. (Existing holiday arrangements honoured.) Pension scheme. Commencing salary up to £1,300 according to experience and qualifications. Apply in writing with details of age, qualifications and experience to:

G. S. Hay, F.R.I.B.A., Chief Architect.
Co-operative Wholesale Society Ltd., I. Balloon Street, 2023

W. H. SAUNDERS, SON & WATERS have vacancies for interesting work on conincluding site administration. Write or telephone for interiew. Salary according to experience. LANgham 9908.

REQUIRED immediately, ARCHITECTURAL ASSISTANT, Intermediate to Final stan-

Perience. LANgham 9908.

REQUIRED immediately, ARCHITECTURAL ASSISTANT, Intermediate to Final standard, with at least three years' experience to work on large contract in Exeter. Five-day week and salary up to £800 according to experience. Reply with full particulars to Box 2029.

A BUSY general practice, within easy reach of London, the West Country and the coast, wisnes to increase the stan in their unusually attractive office as follows:—

(a) ASSISTANT ARCHITECT, preferably qualified, for work on all stages of medium sized contracts under direct supervision of partner.

(b) ARCHITECTURAL ASSISTANT wishing to specialise on conservation of old buildings.

(c) EXPERIENCED TRACER.

Apply to Robert Potter & Richard Hare, F/R.1.B.A., De Vaux House, Sailsbury, Wilts.

A SSISTANT required by firm of Architects and Surveyors in Beds. and Herts. General practice. Apply, stating experience, salary, etc., to Box 2022.

S. HATTRELL & PARTNERS

invite applications to fill the following vacancies in COVENTRY and MANCHESTER.

(a) Fully qualified ARCHITECTS with some years' office experience to work on a wide range of contracts, including a large central redevelopment scheme; Teievision studios; Schools, Church; Licensed premises; Factories, Shops, etc.

Applicants must have good design sense and first-class knowledge of construction and administration and be capable of controlling junior staff.

junior staff. Salary within the range £1,000-£1,500 depend-

Salaty within the large tribes where the fing on ability.

ASSISTANTS of Intermediate to Final standard, capable of preparing full working drawings, specifications, etc., under supervision and of taking responsibility for smaller

vision and of taking responsibility for smaller contracts.

Salary within the range £750-£1,000 depending on experience and ability. Alaries reviewed annually. Pension Scheme, ive-day week. Travelling expenses paid to

Salaries reviewed annually. Pension Scheme-Five-day week. Travelling expenses paid to interviewed applicants. Replies to: 1, Queens Road, Coventry: 15, Piccadilly, Manchester, 1.

ARCHITECTURAL ASSISTANT of Intermediate standard required by rapidly expanding Building and Development Company in South London, engaged on first class housing development, including landscaping, flats, maisonettes, etc. Commencing salary £700—£900, permanent and pensionable position, with excellent opportunities. Please reply, giving age, full details to Chief Architect, Box 2025.

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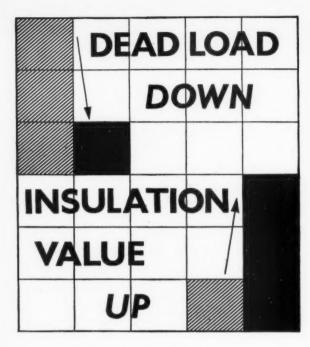
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