THE ARCHITECTS' JOURNAL

standard contents

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

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THE ARCHITECTURAL PRESS

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

IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 75, Eaton Place, S.W.1.	Sloane 3158/1601
IIBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1.	Euston 2450
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Museum 1783
I of Arb	Institute of Arbitrators. 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197/5176
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
IWA	Inland Waterways Association. 14, Great James' Street, W.C.2.	Chancery 7718
LIDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
MARS	Modern Architectural Research Group (English Branch of CIAM) Secretary: Gontran Goulden, Building Centre, 26, Store Street, W.C.1.	Museum 5400
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. 23, Saville Row, W.1.	Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service, 8, St. James' Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94-98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 37, Onslow Gardens, S.W.7.	Kensington 8161
NCBMP	National Council of Building Material Producers, 10, Princes Street, S.W.1.	Abbey5111
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives, Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1.	Langham 4341
NPL	National Physical Laboratory. Head Office, Teddington	Molesey 1380
NSA	National Sawmilling Association. 14, New Bridge Street, E.C.4.	City 1476
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1.	Abbey 1359
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Whitehall 9936
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Edinburgh 20396
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George St., S.W.1.	Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8.	Western 1571
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3.	Mansion House 3921
SIA	Structural Insulation Association. 32, Queen Anne Street, W.1.	Langham 7616
SIA	Society of Industrial Artists. 7, Woburn Square, W.C.1.	Langham 1984
SNHTPC	Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen.	
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 21, College Hill, E.C.4.	City 4771
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation. 75, Cannon Street, E.C.4.	City 5051
WDC	War Damage Commission. 6, Carlton House Terrace, S.W.1.	Whitehall 4341
ZDA	Zinc Development Association. Lincoln House, Turl Street, Oxford.	Oxford 47988

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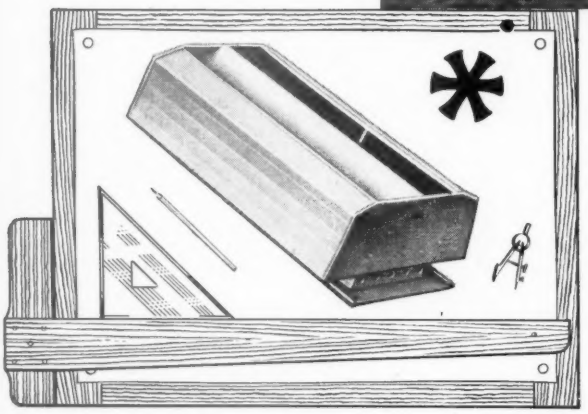

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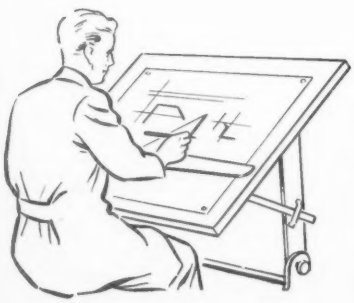

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A.15

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let's relax

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BY JOHN NASH R.A.

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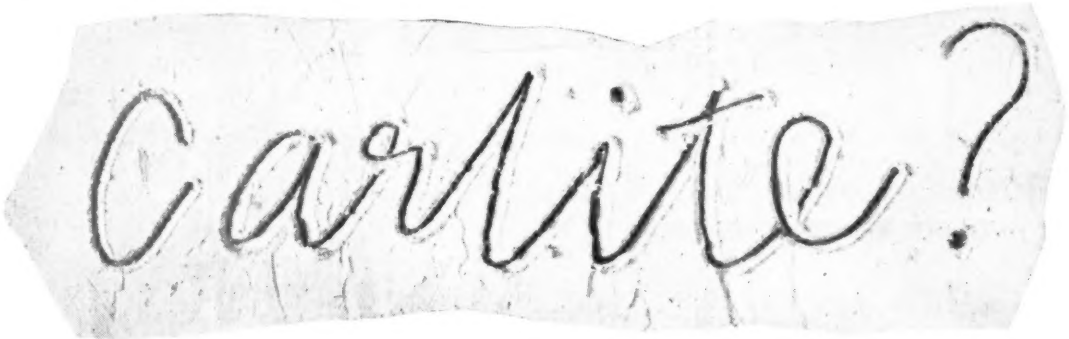

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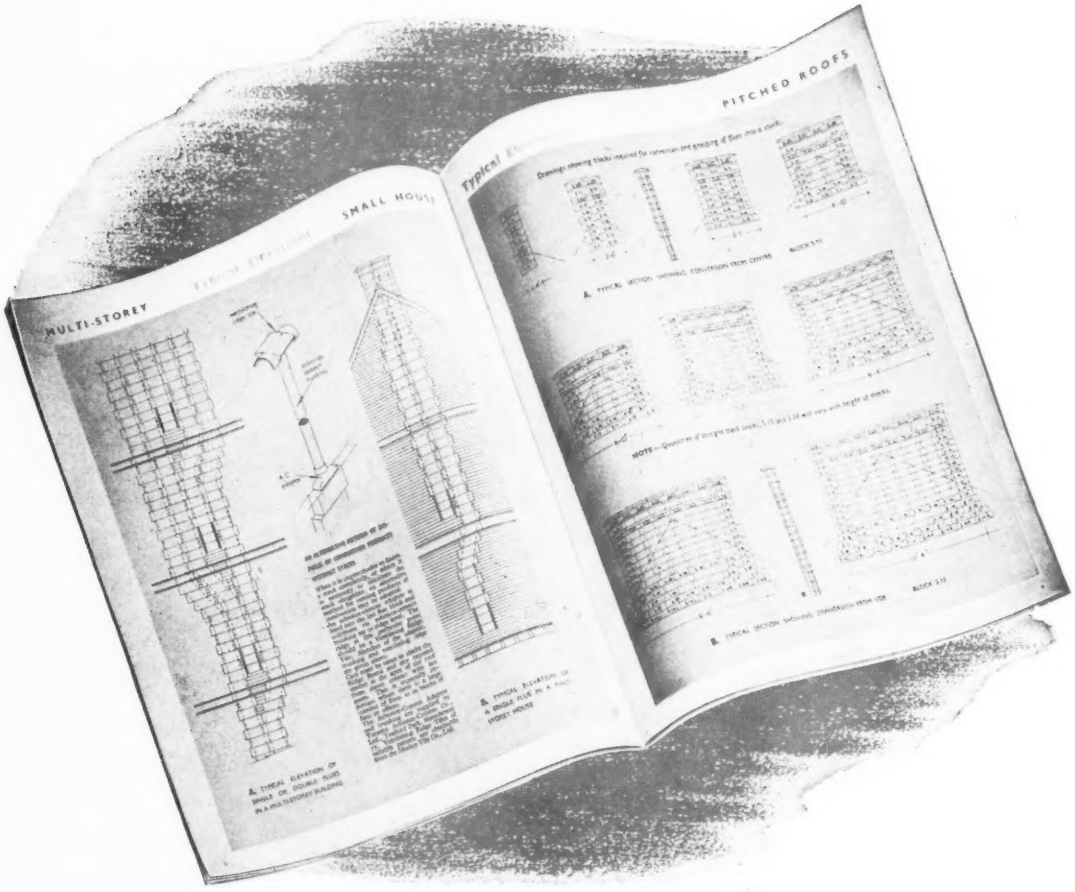

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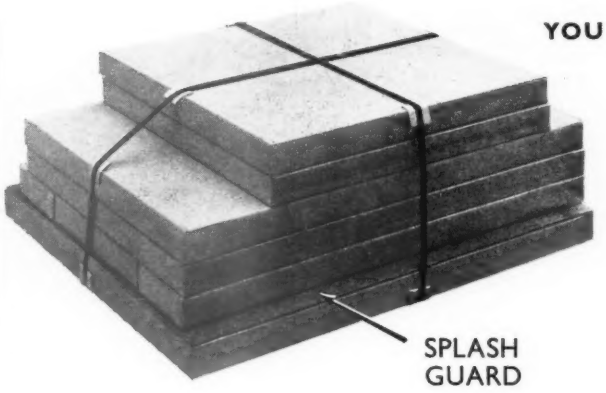
YOU GET IT BOTH WAYS WITH STRAMIT! . . .

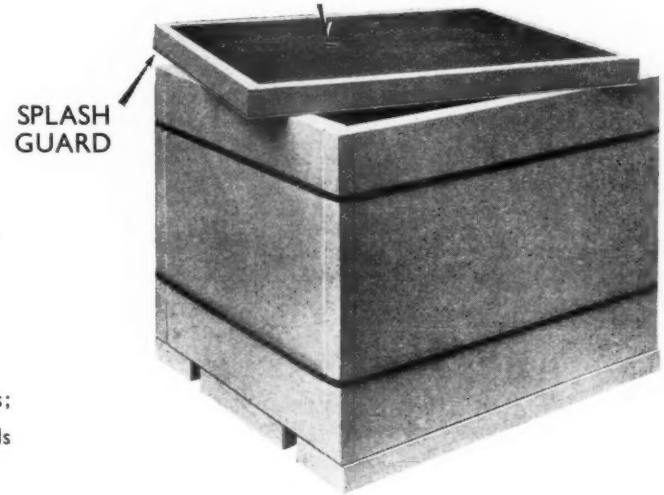


The high thermal insulation value together with rigidity, moderate cost and easy erection makes it the ideal material for lagging COLD water storage cisterns against frost and HOT water tanks against heat losses, etc.

STRAMIT, a 2in. thick paper covered slab of compressed straw is subjected to heat of 300° F. during manufacture. Its conductivity is 0·60 B.T.U. per hour per inch thickness per sq. ft. per degree F. temperature difference which means better insulation than an 11in. cavity brick wall. STRAMIT weighs approx. 3·8 lbs. per foot super. Complete casing for a 40 gallon storage cistern weighs approx. 100 lbs.

The illustrations show a typical Stramit lagging unit for an open top storage cistern. The top illustration is of the Stramit set as sent out to site, and the lower picture is of the same set erected by simply standing the panels round the cistern and tying them in with the hoop iron provided. The splash guard is not required for closed tanks. The three piece bottom, and the double bands of hoop iron on the erected unit are non-standard.

HOLE FOR EXPANSION PIPE



STRAMIT is best suited to lag angular units; cylinders lagged with STRAMIT panels appear hexagonal.

STRAMIT panels for lagging are supplied for large as well as small tanks. When the required sizes cannot be obtained from the standard 4ft. slabs, the required panels are built up at the STRAMIT works from sections having the meeting edges fitted with " F joints " i.e., tongued and grooved coupling pieces of timber.

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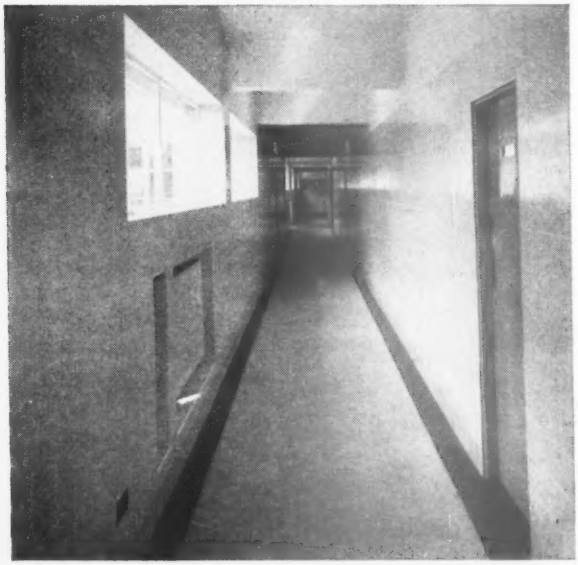

Lavatories and a corridor at Bairns-Wear Ltd. Factory
Architects: Cecil Howitt & Partners
Contractors: W. J. Simms, Son & Cooke Limited.

6″ x 6″ Cream glazed eggshell wall tiling, with 6″ x 6″ Heather Brown quarry tiles in the lavatories by Dennis Ruabon Ltd. supplied and fixed by Carter, London.

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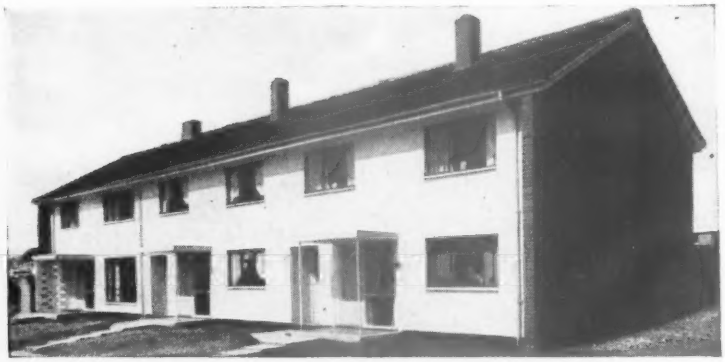
Stevenage Development Corporation (Stony Hall Housing). Former Chief Architect and Planner, Clifford Holliday, M.Arch., F.R.I.B.A., M.T.P.I. Contractors: William Sindall, Cambridge



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SP4

Extract from "The Sunday Times"

'Cut Building Costs' Appeal by Mr. Eccles

MR. DAVID ECCLES, Minister of Works, declaring that the time has come for the building industry to take more active steps to reduce costs and review contracting arrangements, has appealed to the Royal Institute of British Architects to provide a lead in these matters.

In a letter to the Institute he pointed out that, though there had been a marked improvement in the output of building in the past 12 months, there was widespread concern about the level of building costs. There had also been criticism of the contracting methods employed by the industry and apprehension about the existence of restrictive practices.

"These circumstances," said the Minister, "constitute at once a challenge and an opportunity. With the assurance of plenty of work to come, there is every reason for developing contracting arrangements which on the one hand will encourage the proper pre-

"I assure you of the warm encouragement and support of Her Majesty's Government in the steps you are taking. You may also be assured that my own good offices and those of the Ministry under my control will be at your service."

Mr. Howard Robertson, President of the Royal Institute of British Architects, replied: "We shall be very happy to take the lead in this important matter."

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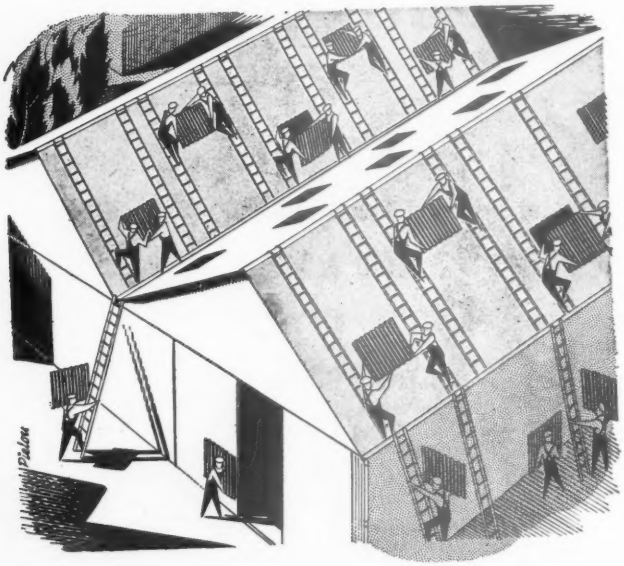
now that there's plenty of **corrugated 'Perspex'**

—and that includes curved **corrugated 'Perspex'**



If you are planning any kind of building with a corrugated roof, see that you make the best of Daylight's services by fitting corrugated 'Perspex' rooflights. They are cheap to fit, they save on artificial lighting, and they last for goodness-knows *how* long — because the first sheets ever installed (in 1944) are still as good as new !

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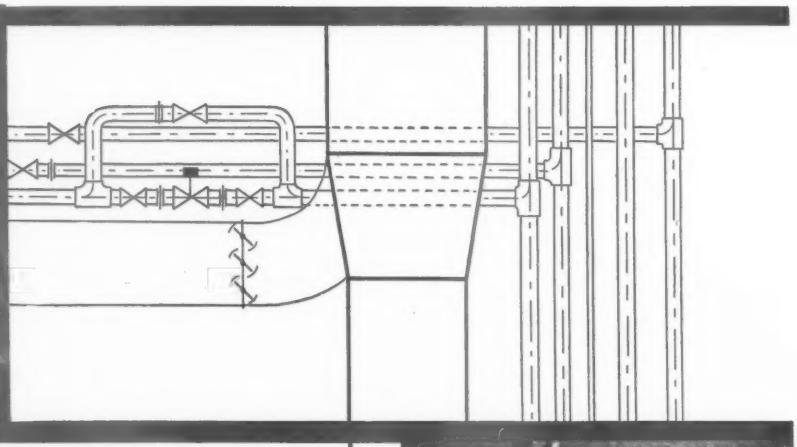

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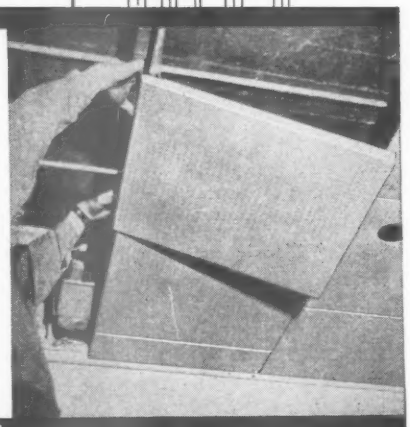
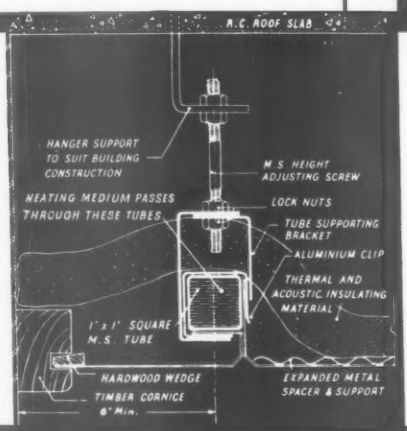
A Frenger ceiling does three jobs. *First:* it is a radiant panel heating unit with a very quick response to changes in room temperature. A Frenger is made up of a series of square, perforated, aluminium panels suspended from a grid of pipes linked with the hot water system, and overlaid with a blanket of insulating material.



it's acoustic

Second: the entire ceiling area is a sound absorbing surface with a high efficiency. The panels can be cut to fit any shape of room and take in pillars, projections and lighting and ventilation systems. So it can be fitted in existing buildings with little trouble and no major structural alterations.



it's concealing

Third: as it is suspended a Frenger can conceal all the piping, wiring, ducts and other unsightly services behind a most attractive exterior—*and yet leave them completely accessible.* The aluminium panels clip into the pipe grid and can be taken out with ease. The whole ceiling, including water in the pipes, only weighs 2.5 lb. per sq. ft.

Full thermal and acoustic data from :—
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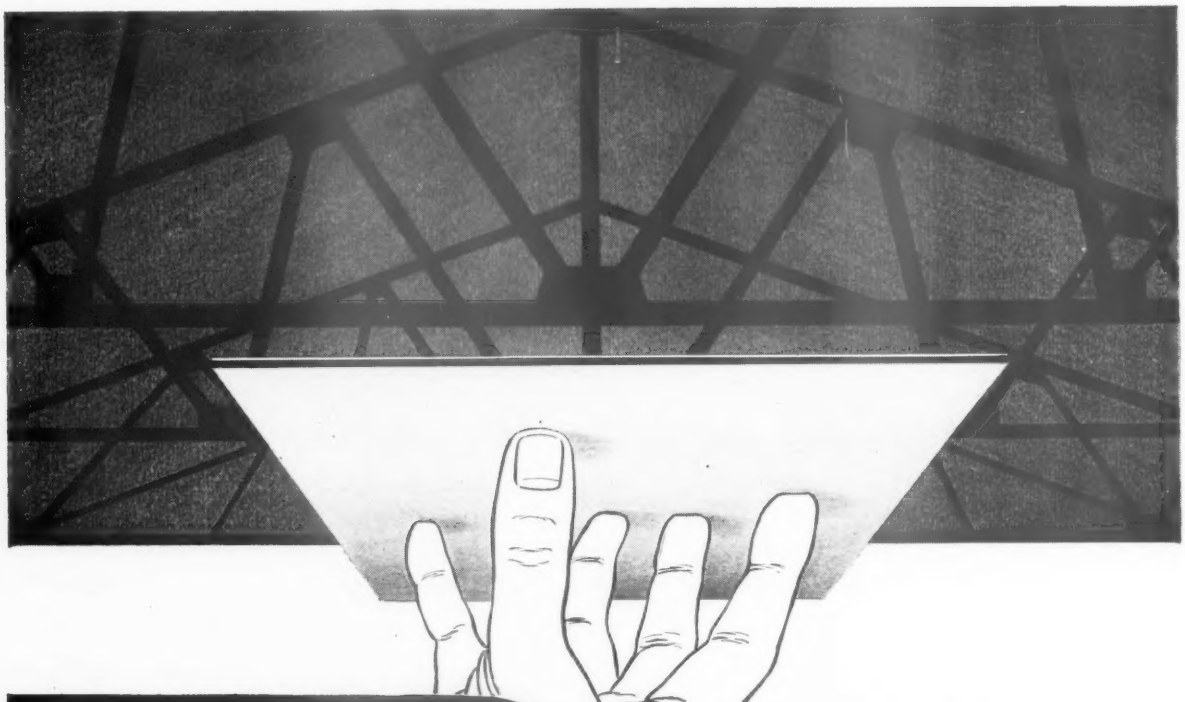
it's ...FRENGER



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GLASGOW—W. Gibson & Co., Ltd., St. James St., Paisley.
LEEDS — Anderson Construction Co. & Gibson, Ltd., 79, Albion St.
MAIDSTONE—Hall & Co., Ltd., Canning Street.
MANCHESTER — Beaumonts (Manchester) Ltd., Victoria Park.
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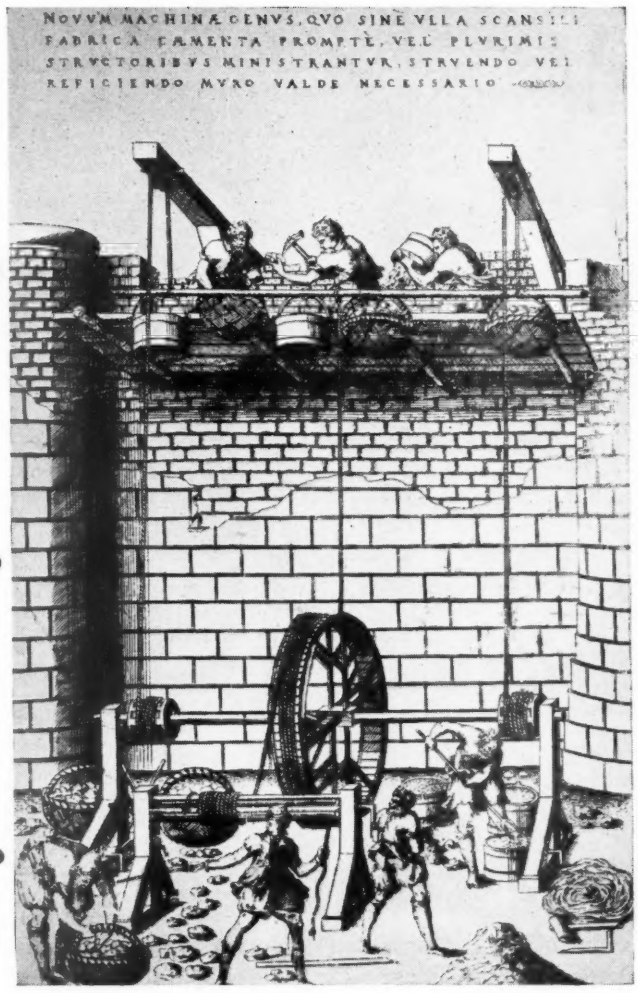
AN WEDGE METHOD

Patent No. 519406



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An invention of Jacques Besson, French mathematician and scientist, 1659.

for the most modern interpretation of vertical transport

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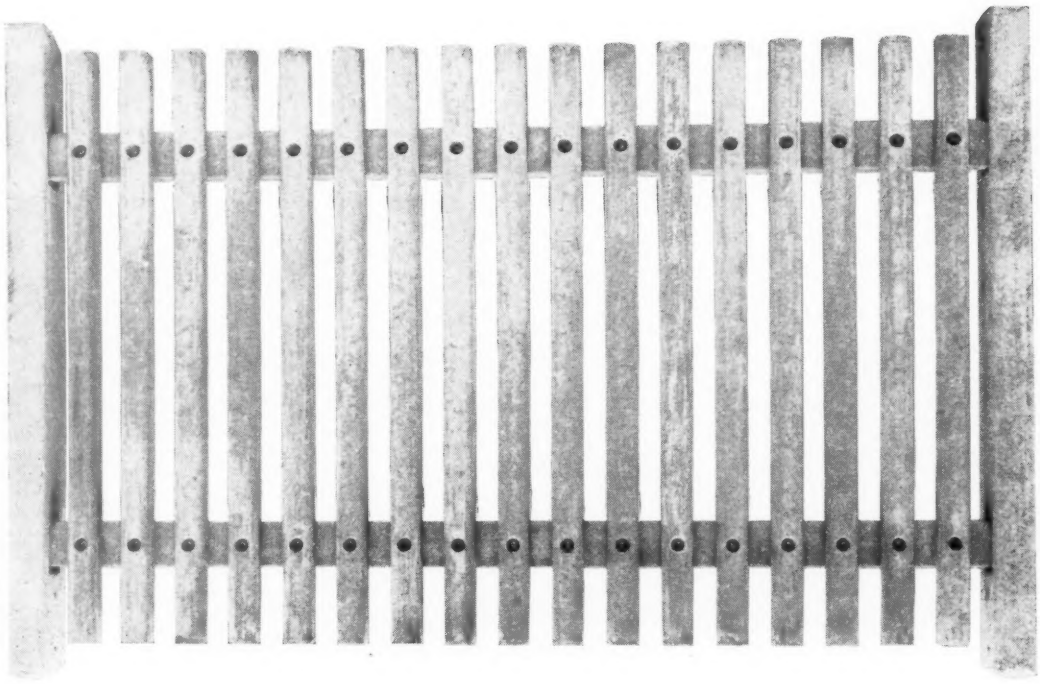

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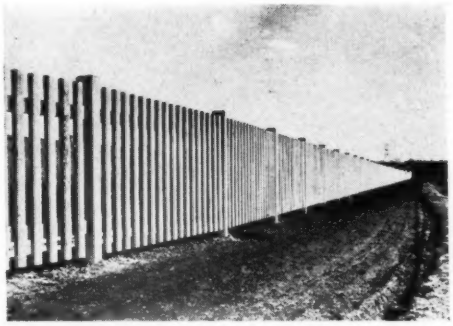

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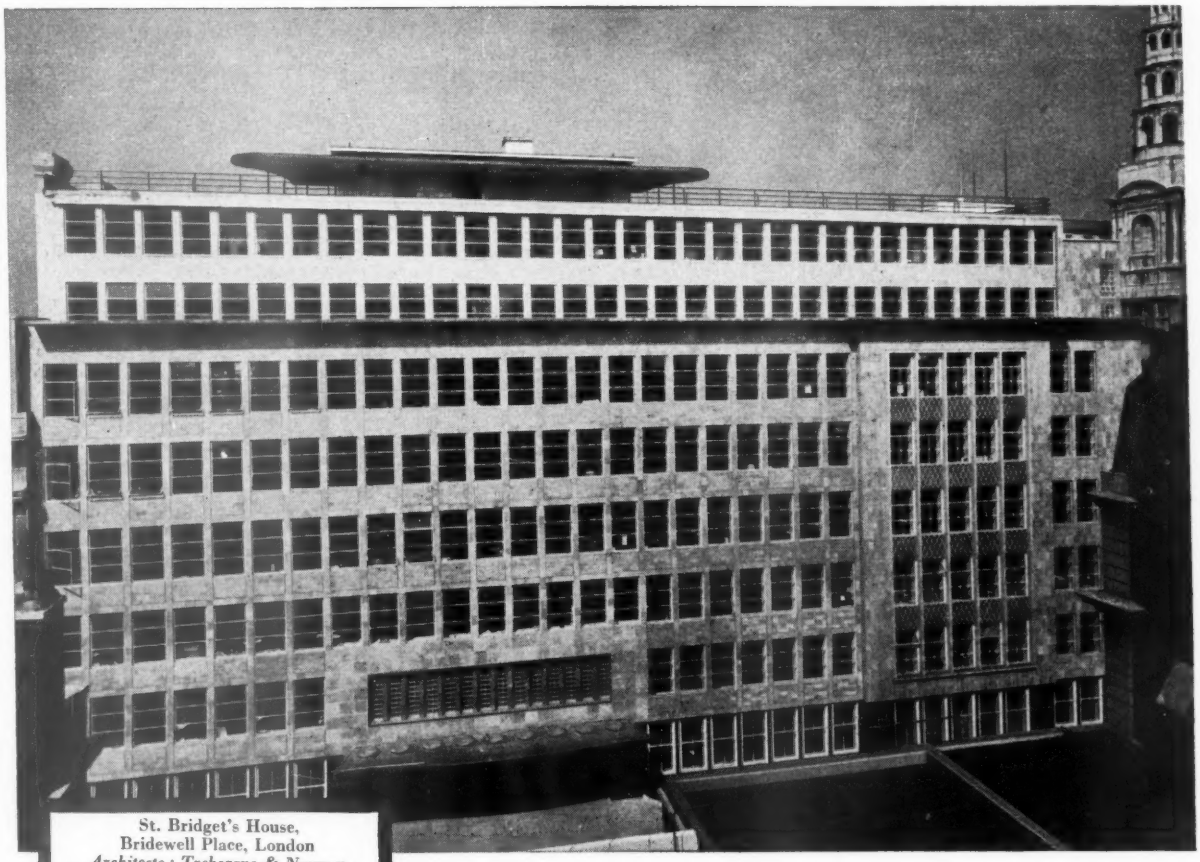

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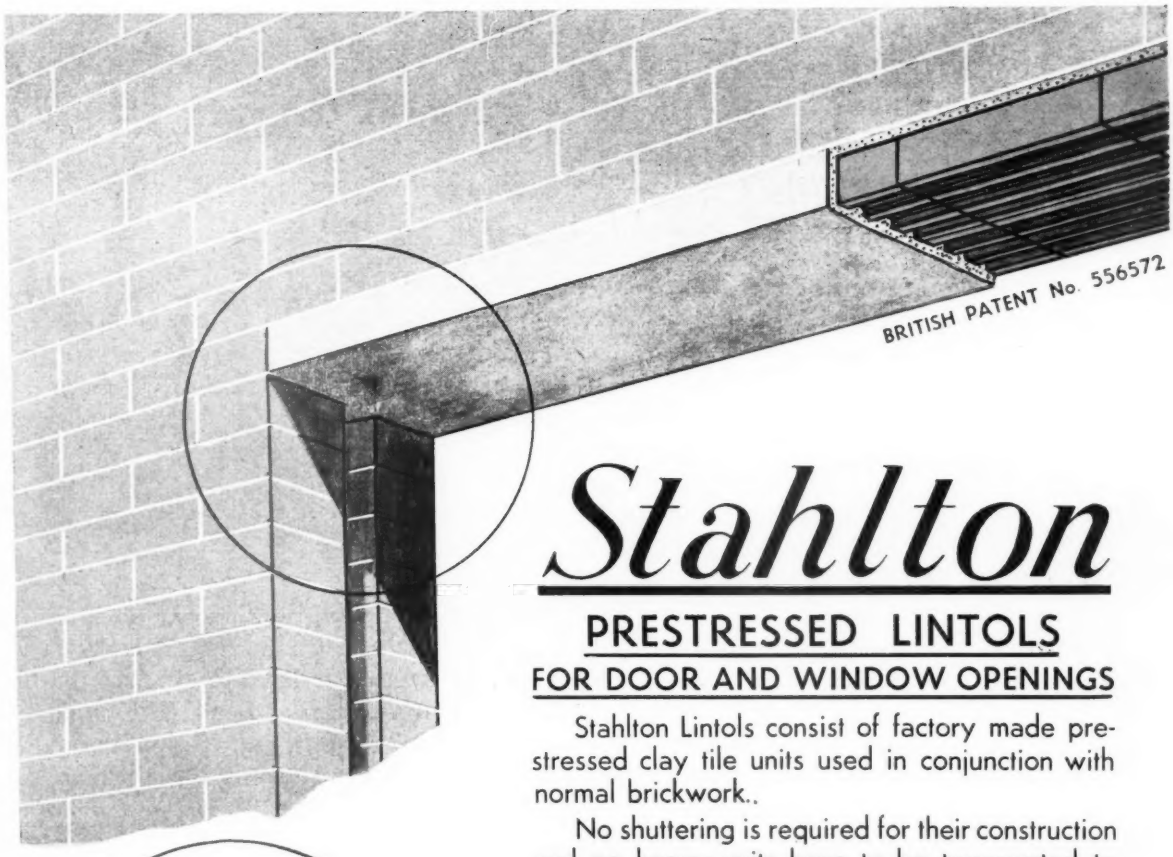

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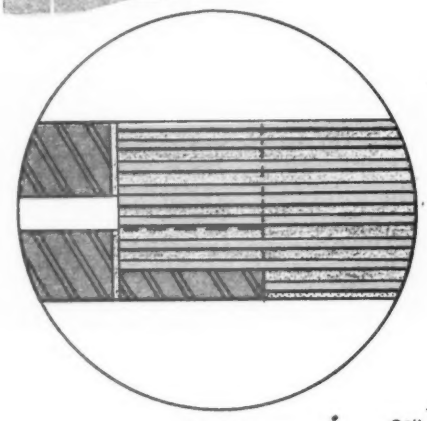
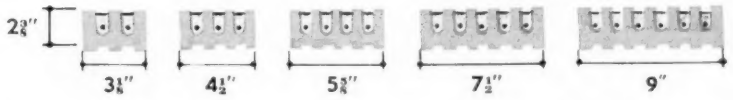


PLAN



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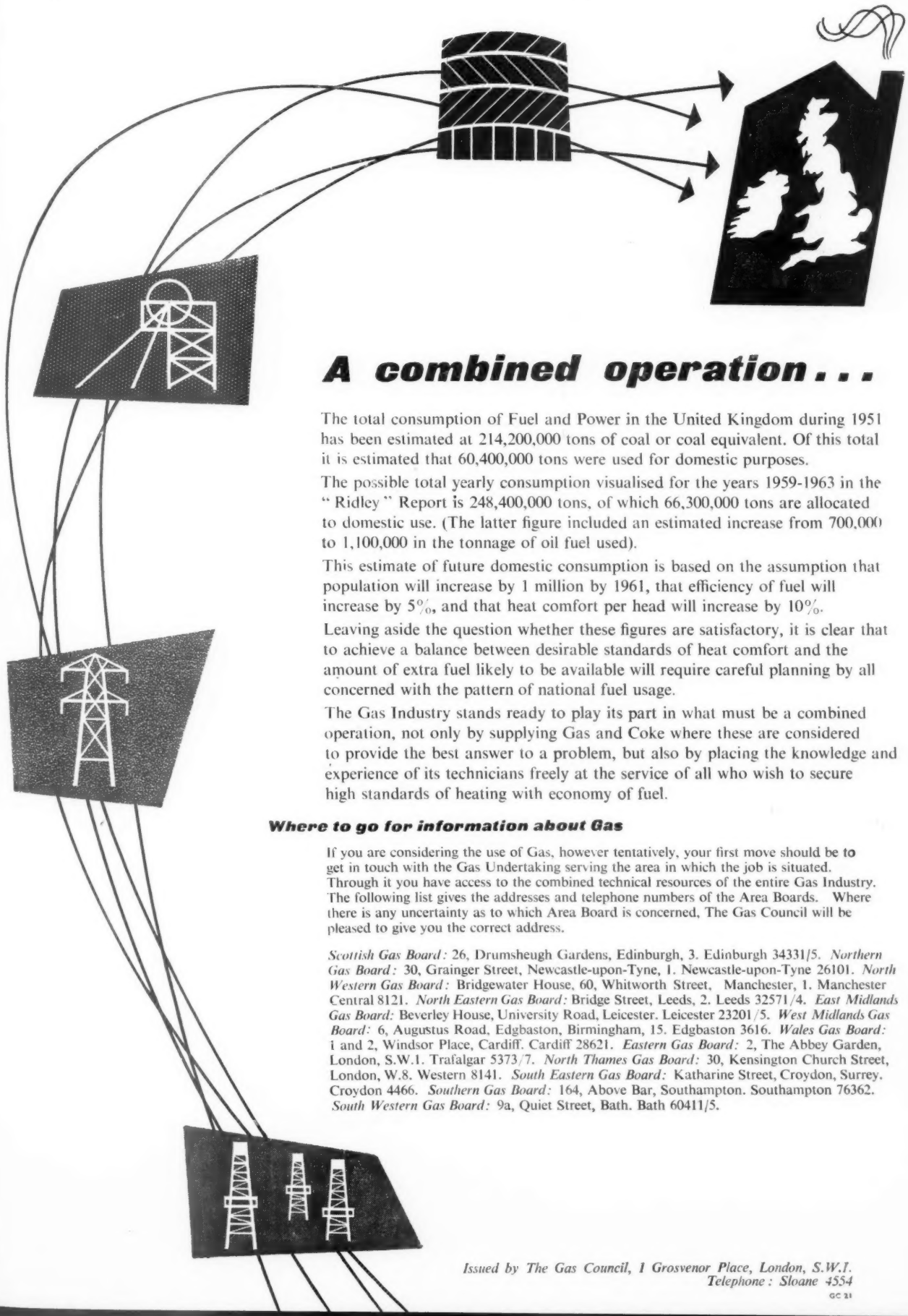

A combined operation . . .

The total consumption of Fuel and Power in the United Kingdom during 1951 has been estimated at 214,200,000 tons of coal or coal equivalent. Of this total it is estimated that 60,400,000 tons were used for domestic purposes.

The possible total yearly consumption visualised for the years 1959-1963 in the "Ridley" Report is 248,400,000 tons, of which 66,300,000 tons are allocated to domestic use. (The latter figure included an estimated increase from 700,000 to 1,100,000 in the tonnage of oil fuel used).

This estimate of future domestic consumption is based on the assumption that population will increase by 1 million by 1961, that efficiency of fuel will increase by 5%, and that heat comfort per head will increase by 10%.

Leaving aside the question whether these figures are satisfactory, it is clear that to achieve a balance between desirable standards of heat comfort and the amount of extra fuel likely to be available will require careful planning by all concerned with the pattern of national fuel usage.

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THE ARCHITECTS' JOURNAL

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No. 3030 March 26, 1953 VOL 117

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SITE WANTED

Few works of art can have been so continuously a matter of interest to the Press and the public as Reg Butler's prize-winning entry for the Unknown Political Prisoner. The body from which a statement has yet to come, in spite of their expertise on imprisonment, are those guardians of the peace who impounded the wreckage as evidence, but in the meantime there have been almost daily statements by various authorities including the sculptor; a fountain of cartoons and columnists' witticisms; and two motions in the House of Commons. Who says the Island Race isn't interested in Art?

*

Had the forty signatories of the panic motion to protect the Cliffs of Dover stopped to think they would have realized that their alarm was needless. Firstly, no one has offered a site there, or anywhere else in the British Isles (which shows just *how* interested the Island Race is in Art). Supposing a site had been offered, a licence for the steel would be required (though there might be some way round this if the prize fund really is in dollars), then a building licence (what order of priority has an abstract monument?) and then—a solemn thought—town planning permission. If one considers the fuss which greeted the proposal to erect a useful, though supersonic, windmill on a Welsh hill, one can imagine the uproar that would be generated by a proposal to erect a merely æsthetic monument anywhere at all conspicuous. And would the Minister uphold the appeal?

*

Come to think of it though, active sponsorship by MOW is probably the only way to get it put up in England; but Mr. Eccles probably has other things on his mind at the moment, so maybe the only way we shall see what it looks like when finished is by taking a trip to Amsterdam or Berlin in a couple of years time.

LONDON'S SQUARES

The argument over the car parks under London squares will presumably go on for months, and then probably peter out when it is decided that there isn't enough money to build them. Nobody, of course, wants the big trees to go, for the few spindly efforts which will grow in two feet or so of earth will completely destroy the character of squares like St. James's or Cavendish, though in Grosvenor, which is practically all open anyway, the change might not be so noticeable.

*

This, perhaps, is the real point: each square should be judged on its merits, and no authority must be allowed to assume that what applies to one square automatically fits all others.

*

And if you want to see just how discouraging a London square can look without its plane trees, just take a look at this week's frontispiece. It shows the most recently completed example of Westminster City Council's well-intentioned, but visually disastrous, municipal garden policy. Off we go again: Cotswoldey walling, rustic shack, boring windswept podium and a patch of cobblestones (which should, of course, be used on borders and at similar places to discourage walking) strung right across the entrance gates so as to give your tired feet that extra tortuous twist as you make for a seat. When the City Council can turn its mind from Trafalgar Square hoardings it might take a look at its own "improvements."

*

I'm not sure about the parking meters. No doubt they will be excellent revenue raisers and a constant source of jokes for *Punch* (as they are for the *New Yorker*), but cars vary so much in size that I wouldn't like to have to fix the appropriate meter spacing: doubtless the usual old men will hang about to invest odd sixpences in expired meters in the hope of 100 per cent. profit when the car owner comes back late.

MOW GETS THE POPULAR TOUCH

MOW and HMSO between them have just demonstrated their remarkable versatility by producing a new booklet which carries them into a market they have hitherto eschewed. *The Crown Jewels* (HMSO, 2s.) is so like, in printing, presentation and mental approach, that weekly which is famous for its stories of the glamorous past (even to printing bits of old engravings on coloured underlays) that it is difficult to imagine anything further from that neat, careful and scholarly presentation which is almost MOW house style. The cover is a brilliant pastiche of a slightly different school of catchpenny publishing—one which MOW itself used to practise with great conviction about the time of Wembley.

*

Seriously though, this is a disturbing piece of " talking down " to the public, which might be excusable if HMSO were actually involved in the War of the Weeklies, but looks like unwarranted cynicism about public taste in an official guide. It will be defended because it will sell like the proverbial cakes in Coronation year, but that, ASTRAGAL surmises, will be due to its subject matter, rather than the feeble-florid cover, or the ghastly air-brushed " satin " backgrounds to the illustrations.

THE STATE OF DENMARK

The illustration this week will irritate the exponents of vertical living, linear living, three-storey terrace houses and also all who, through impotency, jealousy or fashion, sneer at the smug, rosy, cosiness of Danish housing.

*

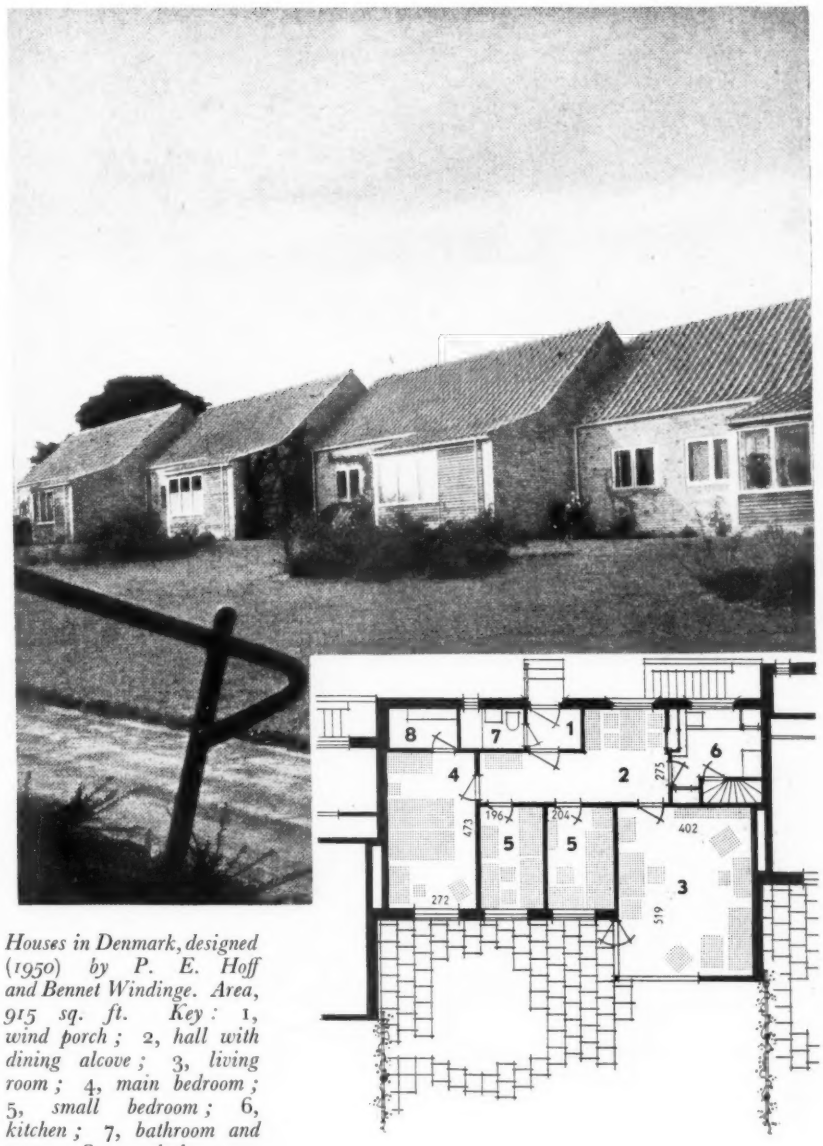
The illustration is one of many in a book on Danish housing* published this month. It is an excellent source for all possible information on the housing which has been designed and built in Denmark since 1930, and is just the book for any architect or housing committee man to read before making a trip to Denmark. [It is also, of course, essential reading for the housing committee man who cannot afford the trip to Denmark but wants to be able to hold his own with the expert returning from abroad.] It describes, briefly and clearly (save for an endearing translator's error or two), all one need know about the Danish housing problem and the policy for solving it, about the economics of it, a little about the building industry, and a great deal about the various house and flat plans which have been used.

*

Which brings me back to the illustration. The houses shown are roughly comparable with our own—an economic rent of about £2 a week (or 16 per cent. and 20 per cent. of the income of skilled and unskilled workers, respectively) and a floor area of about 900 square feet for a three-bedroom house. The houses would, however, probably shock the more conservative members of most housing-committees—the tiny bedrooms opening off the dining-hall, for instance, instead of being put more economically, and privately, upstairs; and the usual Scandinavian extravagance of a basement laundry room and central heating.

*

However, the Danes have arrived at this solution through the dictates of demand rather than economy. To quote Esbjorn Hiort, the " narrow 2-storey dwelling " (which " robbed the gardens of all privacy ") " was given up for the broader 1-storey building which today is the dominating terrace house type. With the help of the (stepped row) or the projecting bay these broader gardens can be laid out with space that is sheltered from wind and curious eyes."

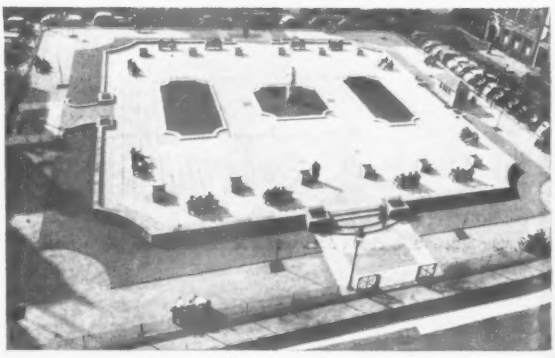


Houses in Denmark, designed (1950) by P. E. Hoff and Bennet Windinge. Area, 915 sq. ft. Key: 1, wind porch; 2, hall with dining alcove; 3, living room; 4, main bedroom; 5, small bedroom; 6, kitchen; 7, bathroom and W.C.*; 8, wardrobe room. See note on left.*

* *Housing in Denmark Since 1930.* By Esbjorn Hiort The Architectural Press, 21s.

Dear Sir; It is Outrageous . . . .

During his RIBA lecture, "Landscape and Architecture," Peter Shepheard said : "People who want to do something useful ought all to write letters at once to the Westminster City Council saying what they think about Golden Square. The trouble is that they like it, and they think we like it, unless we tell them." The trouble is, also, that very few people see Golden Square, for it is hidden at the centre of a maze of one-way streets and is not a short cut *from* anywhere *to* anywhere. So, for those readers who like writing angry letters provided they have something to be angry about, here is Golden Square in all its civic finery. ASTRAGAL comments briefly on page 385.



Just when the MOHLG and town planners are busy advocating two- and three-storey narrow-fronted terrace housing on economic grounds disguised as æsthetics it is salutary to discover a country giving its people the houses they like. But the Danes are an admirable race, especially architecturally, as this excellent book proves.

IMPROVING PUBLIC RELATIONS

Once again the Public Relations Committee of the RIBA have taken a constructive step in improving the general public's knowledge of the function of the architect. At a Press conference last week, chairman Jefferies Mathews produced two booklets designed to tell the ordinary chap the function of the architect.

*

One of them, *Before You Build*, is a two-page leaflet, which is being given away—and is already in great demand—at the RIBA's series of travelling exhibitions now touring under the title of "The Architect and You." It merely states in the simplest terms how the architect can help anyone who wants to build. The larger booklet, called *The Architect and his Work*, is an eighteen page affair, costing sixpence. It describes fairly fully, as far as the average layman is concerned, the responsibilities and the function of the architect. It covers, in turn, the sketch design, consultants, working drawings, specifications and bills of quantities, the contract, site supervision, builders' payments, fees, and it ends with a short note on the competition system. Inevitably, both publications will be criticized for not saying enough (the scale of charges, for instance, is not given) or for saying too much (that is to say, frightening off the smaller clients by the awesome, and possibly expensive-sounding, complexity of the architect's task.

*

But ASTRAGAL is well content with what he's got—which is sure proof that things are stirring at the RIBA. It remains for the presidents of local societies to do their job and ensure that every town clerk, every authority, or private committee man, and anyone else who is a potential client—and when you think, the number is large—has a copy of one, or both, of these excellently designed and written books.

ASTRAGAL.

POINTS FROM THIS ISSUE

Executive Editor : D. A. C. A. Boyne

CLOSING DATE FOR INFORMATION

THERE has been a good response, Professor Bowen tells us, to his two questionnaires published in the last two issues of the JOURNAL. We thank all those who have taken time and trouble in complying with our request. The very wide variety of individual experiences and opinions, however, which have been revealed by a preliminary study of the completed questionnaires makes it all the more necessary that Professor Bowen should receive a large number of returns from the profession. We ask that all those who have not yet completed and returned the second questionnaire (see last week's issue) to Professor Bowen to do so over the next few days, so that he can receive them by March 30. The date given for the return of the first questionnaire, and of the questionnaire sent by post to a true cross-section of the profession is now past, but we understand from Professor Bowen that provided the completed questionnaires are despatched by *next Monday* they will still contribute towards ensuring a really accurate survey of the profession. We submit that architects owe it both to themselves, and to the profession, to thus help Professor Bowen to produce a really accurate survey of architectural prospects.

The Editors

AN INCOMPLETE TEAM

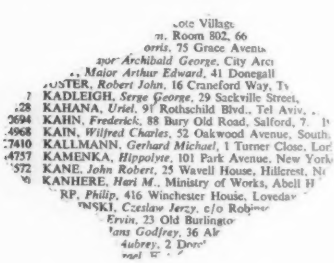
In welcoming the announcement of the composition of the committee convened by the RIBA (in response to the request by the Minister of Works) to study contracting methods and how they can be improved,* we cannot avoid commenting on the absence from the committee of any representatives of the operatives.

The purpose of the enquiry is to find means of reducing building costs, and, since the cost of labour represents a large proportion of building costs, it would seem logical to bring the representatives of labour into the picture. They might not have a great deal to contribute to the discussions, but as a matter of principle (and trade unions leaders are sticklers for principles) it would surely have been worth while. Two speakers at a meeting at the RIBA last week (see report on page 392) stressed the importance of interesting operatives in their work, saying that an increase in the morale of the men on the site could substantially step up output. May this not be true on a national scale, too?

* RIBA—Howard Robertson, A. R. F. Anderson, Harold Conolly, T. Cecil Howitt, Charles Woodward. RICS—R. M. Francis, E. M. Palmer, Cyril Sweet, M. H. Thackray. NFBTE—Wilfred Horsfall, G. W. Grosvenor, Nigel Hannen, W. W. Sapcote, L. A. Walden.

Also notable by their absence are the clerks of works. Many of the forms of contract being put forward as alternatives to the standard RIBA form of contract place increased responsibilities on the clerk of works and put him, in fact, in a key position. Since neither clerks of works nor operatives are represented on the committee, it is hoped that they will be consulted on each point on which their opinions will be of value.

FOCUS ON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YOU

Readers are reminded that Professor Bowen's second questionnaire (published last week) should be completed and posted to him by March 30. The results of this survey will not be ready for some weeks; in the meantime Professor Bowen continues his articles based on existing available data. This week he discusses the problem of the post-war entry to the profession. The title piece above is reproduced from a page chosen at random from the Architects Register, and the names have no direct connection with the article.

Guest Editor :
Professor IAN BOWEN

The Problem of New Entry

IN the last article of this series (the JOURNAL of February 26) it was shown that, despite a gross entry to the profession of 5,300 qualified architects since the war, the net increase has amounted to only 1,800. The conclusion might be drawn that this number can readily be absorbed, so that new entry, as such, presents no problem. But this would be a hasty and incautious judgment for several reasons, some of which are reflected in detailed individual experiences which cannot yet be summarized. The figures of entry themselves suggest two broad points that may represent a difficult situation.

ONE-THIRD OF PROFESSION POST-WAR ENTRANTS

First, we must not forget that 900 or so persons have passed the qualifying examination since 1945 but have failed to register. This must mean a failure somewhere. Either people are not bothering to register, or people of the wrong personality—or lacking the means or ability of making connections—are being educated; or else prospects of entry are for some other reason unrelated to the numbers that can be disgorged by the educational machine; or (but this seems very unlikely to be extensive) students are taking a full architectural education with no intention of practising as architects at all. Secondly, if we assume, as a rough and ready approximation, that few or none of the post-war new entrants has yet resigned from the profession or died, then it is the *gross* entry figure that has to be related to the present total of 17,600 of registered architects; and we realize the rather astonishing fact that something like *one-third* of the present members of the profession must have registered within the past seven years. From this it must follow that the profession is much younger, on average, than before the war, and with fewer years of experience. Lack of practical experience in architecture can be, sometimes, a serious bar to employment. The figures suggest that if there are now difficulties in finding employment this may be due not to any excessive *net* increase in the *numbers* of registered architects, but to the unusually high *proportion* of relatively inexperienced personnel now on the register.

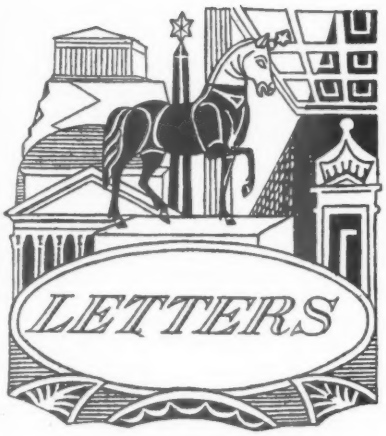
THE "POST-WAR BULGE"

The underlying reason for a "post-war bulge" in entrants to the profession was, of course, that there had been a decline in entries, and in training, during the war years, so that for several years entry had been insufficient to offset losses due to death and retirement. In practice, the actual shape of the post-war entry curve has been very clearly affected by the policies adopted officially to meet the war-time deficiency, and the estimated heavy post-war requirement for architects. For example, the Further Education and Training Scheme was begun in 1943 for the purpose not only of re-instating ex-service men who had had their architectural training postponed or interrupted, but also of ensuring a supply of men and women trained to occupy posts of responsibility in the future. The F.E.T.S. idea was not completely new, since a similar scheme had been in force after the 1914-18 war, but the new scheme was remarkable for the wide interpretation which it allowed of the term "war service," for the emphasis it gave on training for "managerial" posts, whether in commerce, industry or the professions, and for the latitude with which grants were made. This liberality was not only financial. For example, the scheme allowed for persons who wished to change their profession, and so opened the door to architecture (or any other subject) for students who, before the war, had followed some other calling. The refusal rate for applications (for all types, of course) was low, less than one in 25 of those asking for grants being turned down.

ARCHITECTS AND THE FURTHER EDUCATION SCHEME

The total number of awards for all types of full-time study under the F.E.T.S. was 86,000, of which 4,900 were in architecture. Apart from teaching (23,000) and medicine (5,000) the architectural profession attracted the largest number of grants. Less than 1,400 of these were for training in the universities. 3,000 of the awards had been made by the end of 1947; 1,400 were made in 1948, and over 600 in 1950, since which date the number of awards has been negligible.

An important point to realize is that the "post-war bulge" has not yet come to an end. It is true that the last year in which there was a really high entry of F.E.T.S. students to training was 1948, and most of these will have completed (or abandoned) their courses by the end of 1952. The total number of students finishing in 1953 *should* therefore show a sharp decrease on the number finishing in 1952. But there will still be a few remaining post-war students finishing each year until as late as 1955. We emphasize the word *should* because it would appear, from investigations which are not yet complete, that the "post-war bulge" will not deflate nearly as rapidly as many imagine—or rather that its disappearance will be masked by the general increase in the number of students. But that is anticipating events. Next week we will show in more detail the numbers of students, both part-time and full-time, who have been studying architecture since the war.



M. Hartland Thomas, F.R.I.B.A.

Ronald Robson

A. J. Perman, Student

Clifford Lea, Student

George A. Atkinson, A.R.I.B.A.

R. H. Harvey, A.R.I.B.A., of Francis W. B. Yorke and Co.

The Modular Society

SIR,—ASTRAGAL has such a charming way of winkling out further information by pretending to pick up the wrong end of the stick that I, too, must fall for it.

He suspects us of being mostly bee-bonnets. For myself, I am proud of the bee in my bonnet, but to show him that most of the other members of the Modular Society are extremely practical people—architects, engineers, surveyors, builders, manufacturers and suppliers—I am enclosing the list of members.

We do not agree that the only course open to us is to commission a research team. There is another way, which we are pursuing with vigour. The expert opinions of our members (and others like them who are joining the society every day) can tell us what the people who make things and those who design buildings would be prepared themselves to put into operation in their daily work. Add to this a strong and widespread desire to put modular co-ordination on the map and I am confident that our discussions, which may seem at first so discursive, will soon come into focus and find agreement. After that the task will be progressive refinement of the art and meticulous classification of the modular components available.

M. HARTLAND THOMAS.

London.

ASTRAGAL replies: Having studied the list of members Mr. Hartland Thomas enclosed, I confirm that they are mostly extremely practical people—in their own subjects. But whether anything constructive will ever arise through a series of discussions, as Mr. Hartland Thomas, in his last paragraph, seems to hope, is another matter. Such a classic technique is rare today, but deserves success.

Should Students Think?.....

SIR,—Good luck to Kenneth S. Long if he can achieve a Diploma without overworking!

But has he grasped the real purpose of a full-time training in architecture—or for that matter in any branch of higher education? Surely it is to give the student time to think. He is able to interest himself, in the company of people who are equally keen to listen and contribute, in the many facets of our complicated world—even the RIBA!

The day student is able to develop a critical faculty, a disciplined mind, and, above all, an idealism which will help him overcome a serious financial deficiency, apparent, in his first salary cheque.

Does it matter that he doesn't know the cost of a brick? He can soon find out.

Experience is, by definition, an acquisition. Our student has a soul which cannot be acquired.

RONALD ROBSON.

Edgware, Middlesex.

.....Slog?

SIR,—Kenneth Long takes a jaded view of his fellow architectural students.

I'm sure most of us during our courses at schools of architecture found it intensely competitive. To strike a proper balance between the time spent on designing and the time spent on drawing out was almost impossible and most students found themselves "burning the midnight oil" continually and working very hard indeed.

During my "practical period" I got a job as a bricklayer's labourer on the Festival housing site at Lansbury for four months. I now consider that my time could have been much better spent in an architect's office where I would have learned far more about the practical side of architecture.

On the other hand it was quite a rest after three years in a school of architecture!

A. J. PERMAN.

Bristol.

.....or Rebel?

SIR,—Your correspondent, K. S. Long, stated that the architectural student spent part of his time "inciting rebellion against the RIBA." I agree with him; it is the only way that students can obtain any attention from the RIBA for their case, especially for that species known as the provincial student. I give one of my own experiences here of a student RIBA receiving the helping hand of the RIBA.

I completed my school training, after three-and-a-half years' break serving in H.M. Navy, in 1951. I was then informed that I would be required to sit for a Professional Practice Examination after I had completed a further twelve months practical work. Rather hard I thought, but I accepted the ruling and sat the examination at the Liverpool School, in October, 1952. This necessitated travelling from Ireland and lodging in Liverpool for four days at some considerable expense to myself.

Two weeks after the University notified me of my success in the test, the RIBA kindly informed me that it had been decided to allow students who passed the University final examination in June, 1951, to be exempt from the Professional Practice Examination. This decision was taken by the RIBA two weeks before I and my fellow students sat the examination in October. We were, in fact, put to the expense and inconvenience for naught, and no apologies were forthcoming. (Also, incidentally, a year's reduced salary, as we were not Associates RIBA).

I wrote to the noble body and asked for reimbursement of expenses incurred. The reply came back almost by return that "the RIBA could not accept responsibility for expenses incurred for taking their examinations." Nor, it appears, for their mistakes and inconsiderateness. I wrote twice following that reply; in one asking either for an apology or a certificate to say I had passed the examination, which seemed a fair solution. Their reply to that was—"regret nothing further can be added to my last letter."

This is one instance of RIBA Democracy and the Student, so may I submit that it is not the schools or their environment, which arouse this rebellion against the RIBA, but the RIBA themselves, who offer no encouragement to students to state and discuss their case with them on equal terms.

CLIFFORD LEA.

N. Ireland.

Public Architecture

SIR,—A careful review of the history of Public Architectural Offices might well explain why great wealth does not pour into the coffers of their staffs. It seems to me that these offices are generally the children of architectural sections of other departments whose humble lot it was to design very small houses, quite large tram sheds, convenient conveniences, and the like. That these children have grown so big is in no small measure due to the noise they made over a long period, allied with a certain encouragement from the RIBA, which has done some duty as foster parent. But it may well be that to the average ratepayer and especially to the council house tenant, the architect is like the refrigerator—very nice but quite beyond his means and possibly leaving him a little cold into the bargain.

There is virtue rather than vice in any profession making their services readily available at low cost to the poor and needy, and I think as a profession we should recognize this in such fields as housing. But the world being what it is we need to guard against unprincipled undercutting in any form. To this end I suggest the following measures:

(i) That a list of special works of a semi-charitable nature be prepared by the RIBA and formal approval given to special fee scales in these cases.

(ii) That all other works such as town halls, concert halls, schools, shops, etc., be always based on the RIBA scale.

(iii) That "a model form of agreement to be made between salaried staffs and their employers" be devised by the RIBA, this agreement to include financial provisions and clauses as to responsibility which will ensure that item (ii) above is complied with in all works.

(iv) That the RIBA negotiate with the representatives of corporations to endeavour to devise methods of organizing architectural staffs which will ensure that specific architects directly responsible to the authorities hold clear and unambiguous responsibilities for specific works. Means should be found to ensure that skilled and qualified staffs are given sufficient autonomy without which their skills are frustrated and their training wasted.

GEORGE A. ATKINSON.

Bristol.

Architect's Lament

SIR,—A client of ours has recently asked us to design a house for him on a plot of land which is to be leased from the City of Coventry adjacent to a new Housing Estate. We have been issued with a number of restrictions on the design of the house, which are as follows:—

Windows to be timber of EJMA section. Roof to be 30 pitch, covered with Marley Ludlow tiles. Walls to be painted with "Cementone" No. 9 colour. Roof to be gables, not hips.

We feel that these restrictions make a mockery of architecture.

R. H. HARVEY.

Stratford-upon-Avon.

A showroom, designed by Bronek Katz and R. Vaughan for Carter and Co., London, Ltd., at 29, Albert Embankment, S.E.11, was opened last week. Tile samples are concealed in sliding panels, which can be pulled out for viewing. The contractors were the Westminster Joinery Co. Ltd.

ABT

Resolutions

The following resolution was passed at the annual general meeting of the ABT held in London recently:—

"This annual general meeting of the ABT calls attention to the failure of H.M. Government to provide for adequate social facilities alongside the development of housing and industry in new towns and urban areas, and in view of the contribution new towns can make in social welfare, calls for a new policy."

At a meeting of the general council held the next day, a resolution about the production and supply of building materials was passed as follows:—

"This meeting of the general council of the ABT, noting that there is now once more a shortage of bricks, following recent official requests to use more bricks, and that there have been in recent years repeated shortages of steel, cement and other essential building materials, protests at the lack of even the most elementary long-term planning. It points out that as long as we move from one shortage to another and back again, real efficiency in the building industry is impossible and it calls on the Government to plan the production of building materials over a long term so that an increased building programme can be realized with efficiency."

TCPA

Discussion on Service and Filling Stations

A discussion on service and filling stations at the Planning Centre on March 18 opened with talks by D. A. Birchett, architect to Shell-Mex and B.P., and Professor Sir Patrick Abercrombie outlining the growth of service stations and the problems connected with them today. Most points were raised by members of the CPRE who were naturally anxious that service stations should not be too prominent a feature in the countryside, either by virtue of their advertising, colouring or location.

CHICAGO

New Building by Mies van der Rohe

The Illinois Institute of Technology is to build a $275,000 student shopping and recreation centre to the design of Mies van der Rohe, who is director of architecture at the school. The associated architectural engineers are Friedman, Alschuler and Sincere.

The building will be a single storey, welded-steel frame structure with large glass panels.

LCC

Marshal Tito Talks to Robert Matthew

On the second day of his visit to this country Marshal Tito spent fifteen minutes with Robert Matthew, architect to the LCC, in the Royal Festival Hall, where the LCC had prepared a special exhibition of housing and schools. Marshal Tito said that since the break with Russia, Yugoslavia had been concentrating on industrial building, but hoped to resume house building next year. He was most impressed by the Royal Festival Hall and was particularly interested in mixed house and flat development with small gardens.

RIBA

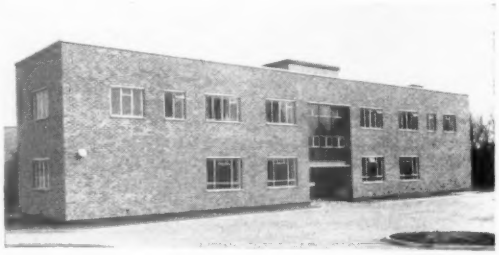
Successes and Failures of New Techniques

"How often one finds on contemporary buildings cracked and stained rendered surfaces and streaks down walls due to inadequate overhangs," said Howard V. Lobb last week at the RIBA. Mr. Lobb was presenting a paper on the Successes and Failures of New Techniques. A great disservice was done to modern architecture, he said, by careless detailing and the choice of wrong materials . . . The origins of the modern movement had been in central

Above is an aerial perspective of the new Central Maintenance Base for the BOAC at London Airport. This building has been designed by Sir Owen Williams and Partners; the design for the interiors of workshops, hangars and administrative area, the design of work benches and other special equipment, colour schemes and other finishes generally is by Misha Black and Kenneth Bayes of Design Research Unit in collaboration with BOAC. The building, which is to cost £3 million, will house practically all the corporation's engineering and technical staff. The two hangars are divided by a central area containing offices, canteens and stores, etc. The building will be 840 ft. by 430 ft. and 100 ft. high. The 75-ft. cantilevers on either side of the hangar entrances support central girders, 150 ft. long by 18 ft. deep. There are to be ten lifts. Heating under floors and behind wall panels is to be by superheated steam. For a picture of the hangar under construction see the JOURNAL *for February 26, page 276.*

BUILDINGS IN THE NEWS

Below, two views of the front of the Territorial Army centre at Cobham, Surrey, designed by Adamson, Gray and Adamson. Offices, stores and canteens are centred round a drill hall. The 7,000 sq. ft. building provides accommodation for two T.A. platoons (thirty-five men each) and a cadet platoon. Cost £16,200. Bottom, the Shan cinema, designed by Bhalla and Thakone, for the Indian population of Nairobi. The theatre contains 850 seats and includes a bar and shops : cost, £75,000.



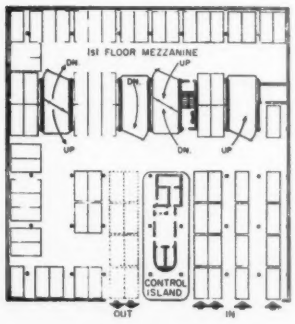
Top, the first block of three-storey flats (252 flats will eventually be completed) at Slatyford Lane, Newcastle, designed by the city architect, George Kenyon and built by Wimpeys. Walls are of no-fines concrete. The shuttering is the full height of the building ; concrete is poured from eaves level.

Above centre, the prototype "Unicorn" house. The design is that of the third prize-winner, H. V. Diplock, in The Builder *low-cost housing competition. The construction is by A. E. Hadley Ltd. Cavity breeze-block walls are erected on a concrete raft. Light-weight timber framed panels with interlocking floor joists and roof rafters are next erected. The roof and first floor are then tiled and ground floor brickwork added last. The cost per house, if in blocks of four (with 48 erected) is £1,195.*

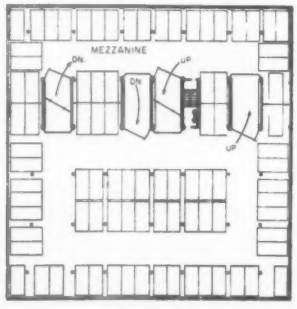
Above, a prototype block of flats at Dumbarton designed by A. D. Holmes and, except for painting, tiles and rough cast, constructed by Blackburn (Dumbarton) Ltd. Internal partitions, plumbing and electrical services were assembled at the factory. The three-storey block contains twelve flats of 707 and 810 sq. ft. each.

GARAGE IN MINNEAPOLIS, USA

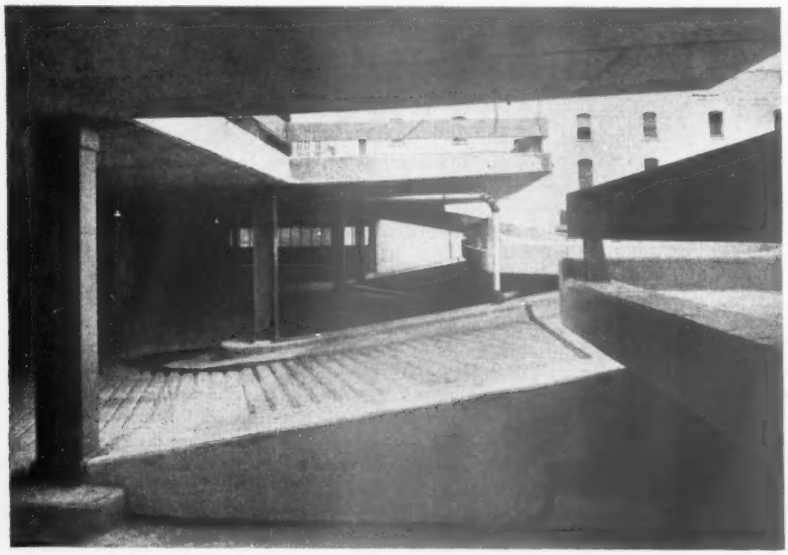
The MOT, in its report "Car Parking in the Inner Area of London" (see JOURNAL *for March 19, page 364) states that it has prepared outline designs for a 500 car multi-storey garage. We illustrate a 535 car garage in Minneapolis, designed by Larson and McLaren, of which the site area is 24,492 sq. ft. and the cost £369 per place. (The MOT plan envisages a 31,170 sq. ft. site and a cost (structure only) of £944 per place). Allowing for all differences, the American garage appears to be more economical in every way. Construction is R.C., with floor slabs of air entrained concrete.*



Ground floor plan [Scale : $\frac{1}{32}$" = 1 0"]



Typical floor plan



Europe, but many details that were satisfactory in the climate of central Europe were inadequate in our dirty, humid atmosphere.

Mr. Lobb spoke of the "successes" and "failures" of new techniques used at the South Bank Exhibition. Among the "successes" he mentioned the transplanting of large trees (up to 40 ft. high), which, he said, could greatly help the landscaping of the New Towns; the use of asbestos cement sheeting on the temporary end of the Festival Hall; the use of exposed aggregate concrete blocks on the Power and Production building, and the use of light lattice steel construction.

Among the "failures" were the diamond-shape paving blocks (even light wheeled traffic had caused cracks across the acute angles); the holes caused in asphalt paving by the point loads from chairs and tables with very thin legs and the use of large sheets of glass carried right down to the floor, particularly when adjacent to glass doors. There had been, he said, 12 serious accidents when people had tried to walk through the glass.

Mr. Lobb dealt next with the use of large concrete facing slabs, as at the Herts. C.C. schools and the MOE experimental school at Wokingham. Some trouble had been experienced, he said, with the joints, which had caused streaking down the face of the slabs. In America, similar slabs, made storey-height, were used. There were, therefore, only vertical joints, and these were deeply recessed to avoid this trouble.

Mr. Lobb emphasized the importance of expansion joints, particularly when sand-lime or other un-fired bricks were used. Unsightly cracks often occurred if the bricks were not used dry and kept dry, and if adequate expansion joints were not provided. In a steel-framed building, the joints could be at every stanchion, to emphasize the non-structural nature of the in-filling panels.

Mortar mixes also were most important. Great harm could be done, said Mr. Lobb, by using too much cement. The quality of British cement had been improved very much, but mixes often remained the same.

Mr. Lobb made a plea for a greater understanding of tests for concrete work among architects, and described the use of the cathode ray tube for testing the density and strength of concrete slabs.

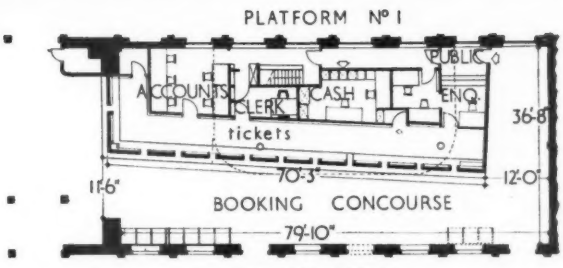
Glass, said Mr. Lobb, was one of the few building materials that had not greatly increased in price since the war. According to the MOE Building Bulletin on costs, glass in metal frames was cheaper than solid walling. The saving in the first costs of heating plant could, he said, almost balance the extra cost of double glazing—quite apart from savings in running costs.

On the South Bank there had been 5 strikes and 50 disputes that had been taken to arbitration. It was important, when using new techniques, to settle in advance which tradesmen should fix the new materials. An important increase in productivity could be achieved by interesting the men in their job, by means of talks and discussions, and displays of models and drawings. Without the tremendous increase in morale which had resulted from a visit to the South Bank arranged for the families of the men working there, the exhibition might never have been ready in time.

In the discussion, Edward D. Mills, who is to visit the USA on his RIBA Bossom Research Fellowship to study the weathering of modern buildings, said that he had noted that on the Continent greater care was taken in detailing window sills, copings, etc., and that a good deal of money was spent on these points. We should, he said, persuade our clients to spend a little more at the initial stages in order to save themselves a great deal in maintenance costs. He spoke of the misuse of new techniques—particularly shell and prestressed concrete—and re-

NEW BOOKING HALL FOR PADDINGTON STATION

Paddington is the second of London's railway termini to have its ticket office re-designed. The new booking hall (right), which is behind Platform No. 1, was designed in the architect's office, British Railways (Western Region) under the direction of the civil engineer; assistants responsible, W. R. Headley, T. P. Wurr, Margaret Aitken. The eleven windows will serve about 2¾ million travellers every year. The office covers 1,600 sq. ft. and provides all accommodation necessary for booking and clerical work. Materials: counter front, 4¼-in. cellular clinker blocks faced with granite green faience tiles; counter, polished Honduras mahogany; panels above counter, cellular plastic sheets with sapele mahogany veneer, framed in abura; large windows, fluted glass framed in anodised aluminium; floor, asphalt and marble chip, polished; fascia, mahogany, 9 ft. from floor. Contractors: Marshall Andrews and Co., Ltd.



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

minded the meeting that painting costs were high with light lattice steelwork (or "steel knitting," as he called it).

A member of the audience made a plea for the frequent washing down of buildings, and asked whether the use of hoses for this purpose was practicable. He was answered by another speaker who said that the Goldsmiths' Hall was hosed down regularly by the Fire Brigade. This was, he added, far better than rare and over-rigorous "cleaning" or scrubbing.

Another speaker pointed out that the value of double-glazing units would be lost if more attention was not paid to rebating details. A single rebate allowed a great deal of warm air to escape, and byelaw requirements for air-bricks should be reconsidered.

The chairman, C. H. Aslin, reiterated Mr. Lobb's point concerning the importance of interesting the operatives in their work. "If labour knows what it is doing and what the results will be (he said) you get a tremendous response."

OBITUARY

Lionel Godfrey Pearson

Lionel Godfrey Pearson, a partner of the firm of Adams, Holden and Pearson, died at his home in Roehampton on March 16 at the age of 73. He was articled to Messrs. Woodhouse and Willoughby of Manchester and studied for two years at the Liverpool University School of Architecture. In 1903 he joined the firm of Adams and Holden, and in 1921 he became a fellow of the RIBA.

COMPETITION

Hospital on Persian Gulf

The competitions for a state hospital at Doha and an office building at Kampala have previously been announced in the JOURNAL. Below are full details of climatic conditions, the sites, and available and recommended building materials. Photographs of the sites and examples of the assessors' work appear overleaf.

The Government of Qatar on the Persian Gulf is promoting a competition for the design of a state hospital at Doha, on a site adjacent to the town of Doha, capital of the sheikdom of Qatar. The competition is to be assessed by Alexander S. Gray of W. H. Watkins, Gray & Partners. The design placed first will receive a prize of £1,250; the second prize is £1,000; the third, £750. The work will probably be carried out by the State Works Department, and for the purposes of computing the architect's fee the total cost is estimated at £350,000. A set of conditions can be obtained from Captain J. E. Stone, C.B.E., M.C., F.S.A.A., Hon. Secretary and Treasurer, International Hospitals Federation, 10, Old Jewry, London, E.C.2. The closing date is August 15. The site is rectangular, 1,300 ft. by 900 ft., gently sloping northwards and looking over intervening houses to the coast of the Persian Gulf about ¼-mile distant. The ground is broken stone grit entirely devoid of vegetation. The subsoil is "shattered rock" and will easily sustain a load of 2 tons a sq. ft. Average daily maximum temperature is 112° F. in July, 71° F. in January; average daily minimum is 78° F. in July and 45° F. in January. General average rainfall is between ½ in. and 2 in. a year. Humidity is an average of 42·8 per cent. in July, 44·8 per cent. in January, but can be up to 100 per cent. and is very variable from day to day. Materials for construction to be found locally are:—For *external walls*, limestone random masonry in walls or in piers filled in with "faroush" panelling rendered over. For *partitions*, "faroush" panelling, *i.e.*, thin coral panels 2 in. to 3 in. thick, cut into rough rectangles of about 4 to 6 sq. ft. and built on edge for partitions. *Gypsum*, known locally as gutch, is used for hard plastering. *Sand* (very salt) unsuitable for high-grade concrete work but suitable for plastering. For *aggregate* crushed stone, both coarse and fine. All timber and other materials have to be imported. Concrete blocks can also be manufactured out of local materials and imported cement. The hospital is to be designed in harmony with the existing buildings of the town and to afford protection against the great heat and humidity of the summer months, also against flies and dust. All buildings are to have accessible flat roofs with parapets ventilated according to local practice, an essential of the climate. Part of the roofs are to have pergolas or loggias to provide partial shade.

Office Building in Uganda

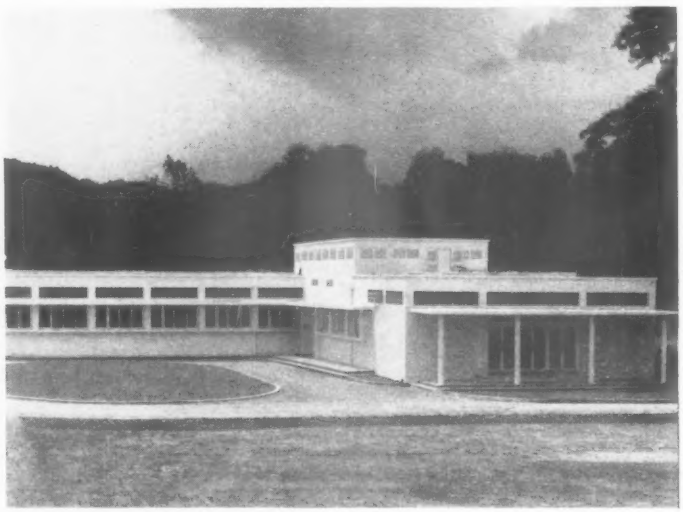
The Uganda Electricity Board is promoting a competition for the design of a new head office building at Kampala, Uganda. The competition is to be assessed by N. L. Hanson of Johannesburg, South Africa; act-

ing in an advisory capacity to him are S. W. Didsbury, superintending civil engineer, Uganda Electricity Board and G. T. Bragg, town engineer, Kampala. The design placed first will receive £1,000; second, £750; third, £500; fourth £250. It is proposed to spend £350,000 on the building. Conditions can be obtained from the Secretary, Uganda Electricity Board, P.O. Box 559, Kampala, Uganda. Closing date for entries is July 25. Deposit for conditions is £3 3s.

The site for the new building is centrally situated in the business area of Kampala and faces Kampala Road on the south side, which is a main thoroughfare running through the centre of the town with a residential area to the north and a dense commercial area to the south-west of the site. (For a photograph of the site see below.) The development of the site, which is in the commercial zone, is subject to the following:—Maximum percentage of plot which may be built on, 70 per cent.; permissible area of lower ground floor, 100 per cent. of area of ground floor; maximum height of building, not exceeding five storeys.

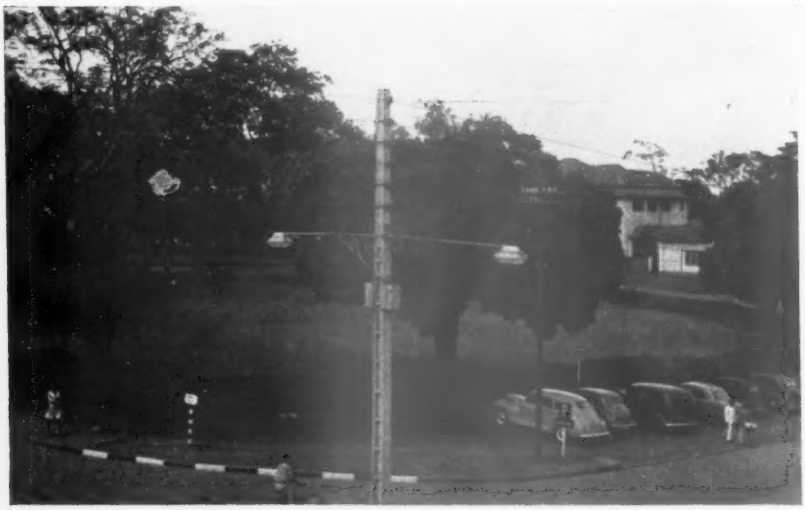
The method of construction recommended for this building is a reinforced concrete frame with solid reinforced concrete floor slabs. Roofs in Kampala generally are either concrete flats covered with asphaltic or bitumastic materials or pitched and covered with Mangalore (Marseilles) type clay tiles. Walls both internally and externally are built either of brick or precast concrete blocks; as the former, however,

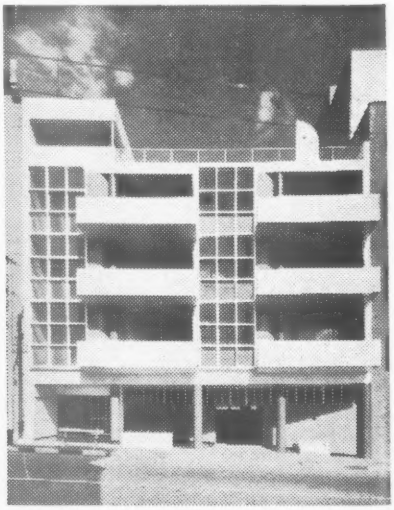
COMPETITIONS IN UGANDA AND THE PERSIAN GULF



Above, an aerial view of the site for the proposed State hospital at Doha, which is the subject of a competition promoted by the government of Qatar, Persian Gulf. Premium for the design placed first by the assessor, Alexander S. Gray, of Watkins, Gray and Partners, is £1,250. Above right, an example of Mr. Gray's work in a tropical climate with heavy rainfall, the Colonial Research Council's laboratory in Trinidad. Mr. Gray is also the designer of hospitals and sanatoria in Trinidad, Windward and Leeward Islands, Ibadan and Oxford, and the town centre, Georgetown, British Guiana.

Below, left, a view of the site, facing Kampala Road, for the proposed head office building at Kampala, which is the subject of a competition by the Uganda Electricity Board. The assessor is N. L. Hanson of Johannesburg. Below, a block of bachelor flats designed by Mr. Hanson, in Johannesburg, in 1944. Acting in an advisory capacity to the assessor are S. W. Didsbury, superintending civil engineer to the Uganda Electricity Board, and G. T. Bragg, town engineer, Kampala. The author of the design placed first by the assessors will receive £1,000. The closing date for entries is July 25.





are of poor quality, concrete blocks 4½ in. and 9 in. thick are favoured. For the purpose of the competition, conventional internal and external wall thicknesses may be assumed. The customary finish applied to wall surfaces whether internal of external is colour washed cement plaster. This finish is not considered satisfactory for the exterior of the proposed new building—especially with reference to the street frontages. For this purpose, competitors are asked to use precast concrete, terrazzo or reconstructed stone in a form appropriate to the selected material. Building granite or quartzite is found in the territory, but the cost of quarrying and transporting the material prohibits its use except in limited quantities or for such purposes as random walling. Interior wall surfaces which merit special treatment may be panelled in mvule. Windows are either of steel or of hardwoods, many varieties of which are found in the territory. Mvule and mahogany are customarily used for joinery and when properly seasoned are excellent in quality. Floors are generally covered with hardwood (mvule or mushuragi) blocks; terrazzo in tile form or laid *in situ* is often used while the use of marble (which must be imported) may be considered for special purposes.

Kampala lies at an altitude of 3,890 ft. The mean yearly temperature is 69·3° and the mean daily range is 16·4°. In January, the mean maximum temperature is 80·7° and the mean minimum 64·5°; in August, the mean maximum is 78·2° and the mean minimum 61·4°. The absolute maximum recorded is 92° and the absolute minimum is 52·2°. Rains are heavy and generally vertical. The average yearly rainfall is 4 ·25 inches. April is the wettest month (average 6·80 in.) and July the driest (average 1·80 in.). The mean humidity range is 85 per cent. at 8.30 a.m. to 64 per cent. at 2.30 p.m. As Kampala is situated about 20 miles north of the equator, the sun rises rapidly and sets as fast. Climatic conditions have directly influenced the planning and the appearance of buildings in Kampala. Thus far, however, the influence has been limited and no very positively successful architectural expression has been achieved. Deep eaves, protective window heads and other elementary precautions against sun penetration are the most marked means externally.

Under the climatic conditions prevailing in Kampala, no provision is to be made for the space heating of the building. Water heating will be exclusively by electricity. High level water storage tanks to ensure a 24-hr. supply are to be incorporated in the building.

DIARY

Physical Planning as an Aspect of Economic Policy. M. P. Tester, M.A., at the Student Planning Group, 28, King Street, W.C.2. 6.30 p.m. MARCH 26

Mock Arbitration. At RIBA, 66, Portland Place, W.1. Tickets can be obtained from the Secretary, RIBA. MARCH 27

Building in the Netherlands. At RIBA, 66, Portland Place, W.1. Weekdays: 10 a.m.-7 p.m.; Saturdays: 10 a.m.-5 p.m.

UNTIL MARCH 28

Britain Builds for Education. Exhibition at Building Centre, Store Street, Tottenham Court Road, W.C.1. Weekdays: 9.30 a.m.-5 p.m.; Saturdays: to 1 p.m.

UNTIL MARCH 28

The Unknown Political Prisoner. Exhibition of prize-winning entries and runners-up. At the Tate Gallery, Millbank, S.W.1. 10 a.m.-6 p.m. Sundays: 2 p.m.-6 p.m.

UNTIL APRIL 30

F. Skinner is one of the few British architects to have visited post-war China. In the talk he gave shortly after his return, reported below, he described the problems facing China's architects and planners, their town planning proposals for China's principal cities and some of the building that has taken place since the war, or is now under construction.

AN ARCHITECT IN CHINA

Mr. Skinner mentioned first the river conservancy schemes being carried out by the Chinese Government which he described as "most important social phenomena." There were, he said, four aims: firstly, to prevent floods; secondly, to irrigate the land; thirdly, navigation; fourthly, electrification. There was a special ministry for the work which was treated as a military operation; the man in charge being a former Kuomintang general.

The Huai river project, started in 1950, would prevent flooding over an area of 85,000 sq. miles and would irrigate an area in which 16 million people live. At one time, nearly 2½ million workers had been engaged on this project, most of them peasants from the area, but including also army units and groups of specialist workers from the cities. One of the results of the scheme, said Mr. Skinner, would be "to get over the natural suspicion which has existed for centuries between the city workers and the peasants." This scheme was unique in that none of the equipment had had to be imported; the sluice gates, for example, having been manufactured in Shanghai.

The Chin river scheme consisted of the creation, 500 miles inland, of a water retention basin which would hold 75 million cu. yd. of water. This had involved the resettlement of 250,000 peasants in new villages on high ground around the basin. During the dry season it would be possible to use part of the basin for agriculture.

PEKING

Mr. Skinner next described some of the cities he visited and the government's town planning proposals for them. Peking, the present capital, was a typical Chinese walled city with rectilinear axial planning laid out by Kub'lai Khan in the 13th century; it was now five-miles square and entirely surrounded by walls. The two main parts—the Chinese and Tartar cities—were separated by a wall, as was the Imperial City, which had within it the Forbidden City, again surrounded by high walls and a moat. It was the walls and the monumental gatehouses which, said Mr. Skinner, gave the city its character and its unity.

Peking, he continued, contained many large parks and lakes, these had been badly neglected and were now being re-established, and more parks were to be formed. The population was to be limited to 6 million; the main industrial area was to be outside the city walls, to the south-east, and new university and government centres were to be built also outside the walls. The main grid of streets was to be maintained, but some diagonal roads were to be formed. At the crossing of the main north-south and east-west axes (the latter had been widened) a large area had been cleared for demonstrations and processions on national days. The parks, including the mile-square park around the Temple of Heaven and those in the Forbidden City, were now open to the public; the lakes were used for boating and some of the palaces and other buildings were being used as workers' clubs and holiday hostels.

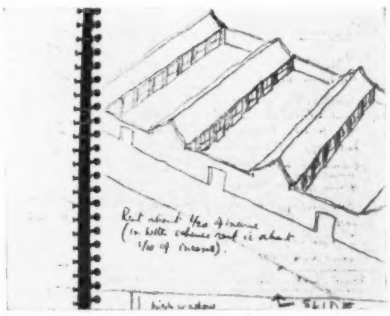
HOUSING

Of the 2½ million people in Peking, many lived in primitive single-storey buildings built around courtyards without proper sanitation or water supply; the government, said Mr. Skinner, had already built over 50 miles of sewer and had vastly extended the water supply. The worst slum areas of mud shacks were being replaced with single-storey buildings, with adobé walls and reeded roofs, in rows facing courtyards (Fig. 1). The allowance of floor area per family was 120 sq. ft. These dwellings were for the poorest workers; two-storey buildings with kitchens and toilets were being constructed for industrial workers—these Mr. Skinner described later. Over 100,000 dwellings had been built in Peking during the last three years.

SHANGHAI

Shanghai as a city was in complete contrast to Peking. It looked more like Liverpool than a Chinese city. There were large numbers of exceedingly ugly multi-storey buildings (few Chinese buildings exceed two storeys), some 15 or 20 storeys high and some—the British-owned ones—in the Tudor style! In the main populated area there were no parks; the main open space in the city was the racecourse, now being converted into a public park; the Jockey Club building having become a library.

The 1949 Revolution, explained Mr. Skinner, was largely a nationalist one, and the Chinese wanted their cities "to look Chinese." Shanghai was their despair. A Chinese architect had asked him, "How



The photo top left shows the Tien An Men gatehouse at Peking, which forms part of the national emblem. It is situated at the crossing of main east-west and north-south axes of the city. Above, Fig. 1, a sketch of emergency housing in Peking; a page from Mr. Skinner's notebook.

can we change it in less than a hundred years?"

The Chinese government had not nationalized the land and this, of course, restricted the amount of reconstruction possible in central areas. The Shanghai municipality had been faced with two principal problems: firstly, the sewerage system—the British and the French had had completely different systems; secondly, the traffic problem—there had, for example, been no through road between the two main stations; they had now built one.

Twenty-one thousand houses for industrial workers were under construction. They consisted of two-storey buildings (brickwalls, casement windows, pantile roofs), each containing six rooms. Each family had two or three rooms, its own toilet and shared the kitchen. The layout, said Mr. Skinner, was "derived from the English garden city *via* Frankfurt-on-Main." The trade unions also built homes for their members. The population of 5 millions was not to be increased and no new industries were planned.

WU-HAN

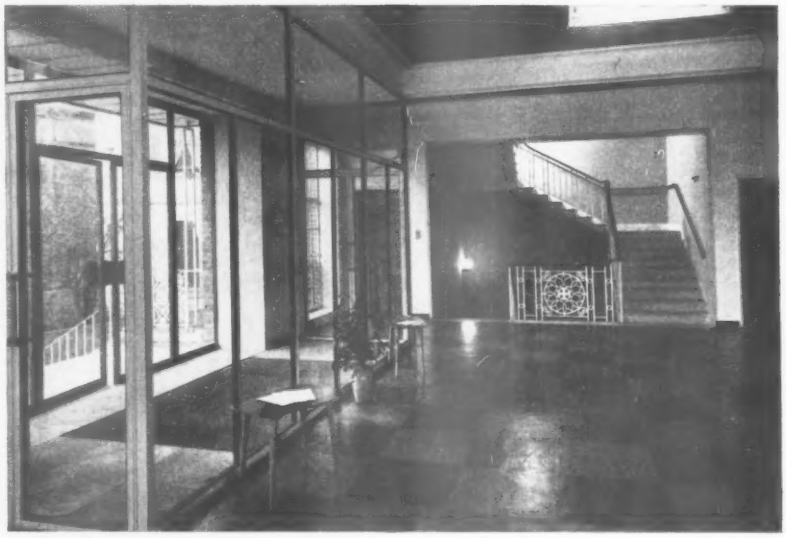
The joint city of Hankow and Wuchang, on opposite banks of the Yangste river, was largely the result of Western trading development. The present population was 1¼ million and this was to be allowed to rise to 2½ millions. Incredible as it might seem, there was no bridge across the river! A cantilever bridge was to be built; two hills would be used as buttresses. New housing was in progress and Mr. Skinner saw a number of new schools under construction.

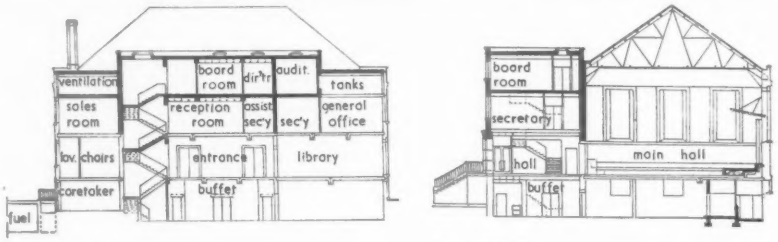
CANTON

This was to be one of China's main centres for heavy industry, although at present it was a centre for the manufacture only of consumer goods. The architecture of the city, but not its plan, had been influenced by Europeans. The population of 1½ millions would be allowed to reach 3 millions; several new roads parallel to the river and 150-200-ft. wide were to be built and several new parks laid out.

Above, Fig. 2, housing for artisans in Canton; part of a railway workers' settlement. Below, Fig. 3, a school on the same settlement.

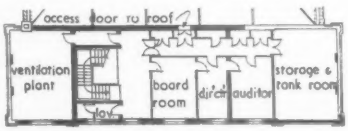
HEADQUARTERS OF THE ENGLISH



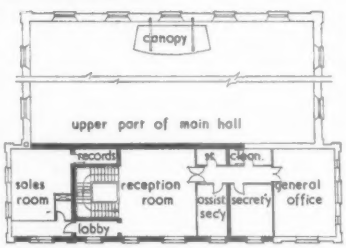


Section A-A Section B-B

Cecil Sharp House, which was founded and built between 1928 and 1930 for a learned society with facilities for dancing and research into folk dance and song, was badly damaged by bombs during the war.

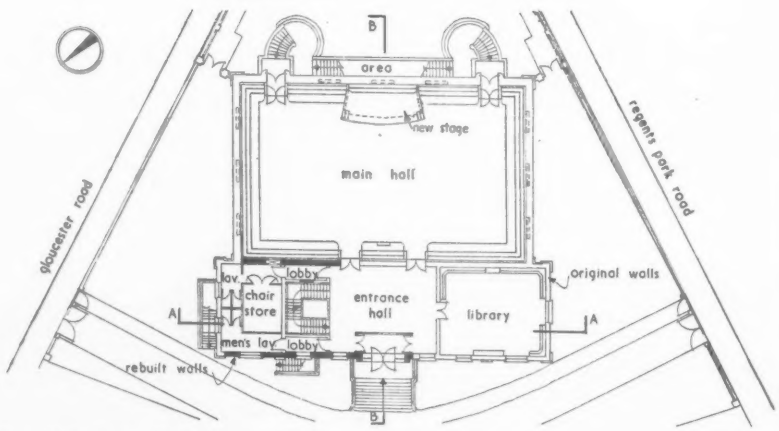


Second floor plan



First floor plan

The recent reconstruction and extension has been designed by John Eastwick-Field in association with Hugh Pite; their aim has been to preserve as much of the character of the old building as possible (the original



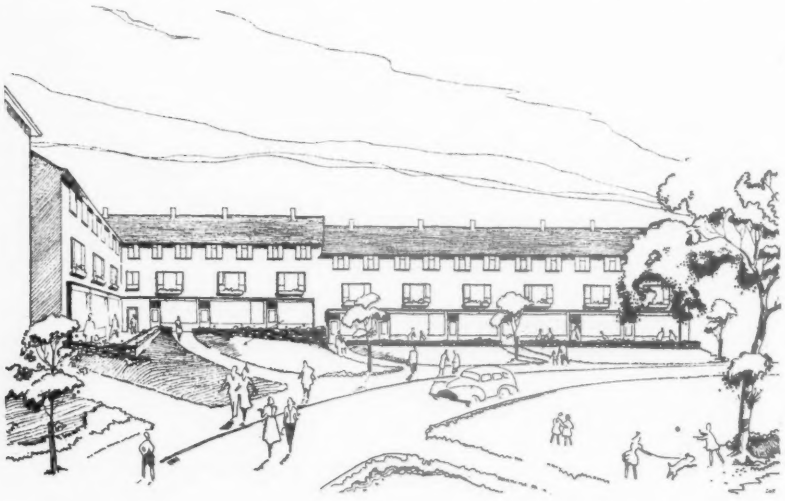
Ground floor plan [Scale : 1/16" = 1'0"]

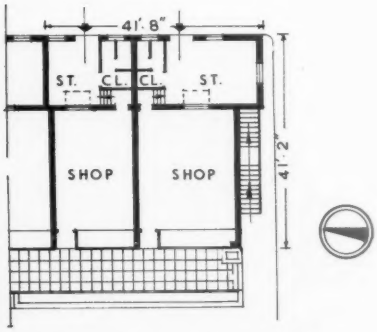
FOLK DANCE AND SONG SOCIETY, REGENT'S PARK ROAD, LONDON N.W.1.

architects were H. M. Fletcher and G. Pinkerton), but at the same time to produce a less sombre atmosphere by increasing the amount of light entering the building, and by the colours and finishes of the internal decorations. Increased office accommodation on a new floor and modifications to the original plan to provide improved members' rooms, buffet and lavatory accommodation have been made necessary because the society now serves many more people. The photograph opposite shows the main entrance hall and lobby formed by a glazed screen; above, right, reception room on the first floor; centre, the buffet in the basement; bottom left, corridor on the second floor; bottom right, the new entrance and rebuilt portion of the building from the west; below, Ivon Hitchens, the artist, with part of his wall painting for the main hall. The new top floor includes tank and heating plant rooms. The present installation is a plenum system, with fans, heater battery, etc., situated in a former tank room. In the library there are radiant ceiling panels, in the entrance lobby there is a floor panel and in the main hall warmed air is taken in at ceiling level and extracted at floor level. Elsewhere there are radiators or convector heaters. The entrance has been redesigned; the

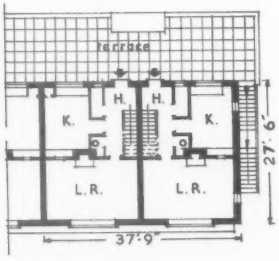
fascia contains cast lead figures by Anthony Caro. Heating consultant, John Porges; acoustic consultant, P. H. Parkin. The general contractors were the Anglo-Scottish Construction Co. Ltd. *For sub-contractors see page* 414.

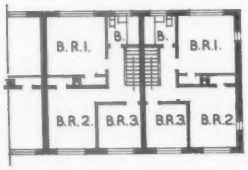
SHOPS AND MAISONETTES FOR PLYMOUTH





Ground floor plan [Scale : $\frac{1}{16}$" = 1' 0"]





First and second floor plans

A block of shops and maisonettes has been designed by the city architect of Plymouth, H. J. W. Stirling, for the Whitleigh Green neighbourhood unit (for other development in this area, see the JOURNAL, *June* 12, 1952 *page* 738). *The view, above, shows the block from the west. There are to be twelve lock-up shops of various floor areas to suit different retail trades, with thirteen maisonettes over; access to the maisonettes being obtained by means of three open staircases and a communal terrace on which fuel stores are provided. All the maisonettes are identical, each containing an entrance hall, living–dining room, three bedrooms, kitchen, bathroom, two* W.C.s *and a pram store on the ground floor. The complete scheme will occupy an area of approximately one acre. Construction : reinforced concrete framework up to first floor level and brick cavity wall panels, the structure above being traditional with load-bearing cavity brick walls, wood joist floors and modified* TDA *truss roofs covered with interlocking roof tiles. Walls are to be rendered externally ; the shop front surrounds lined with terrazzo mosaic. Standard sized metal windows will be fitted. The floors in the shops are to be either brown composition tiles or* in-situ *terrazzo mosaic ; stores, granolithic ; kitchen, hall, living–dining rooms, brown composition tiles ; bedrooms and bathrooms, boarded. The tender price is £47,574 ; estimated completion date, March,* 1954. *The contractors are J. W. Spencer, Ltd.*

Sixty thousand people still lived on wretched boats on the river; they had now been given hospitals and schools on the river bank. Housing estates under construction provided each family with two rooms, kitchen and W.C. (floor area between 250-280 sq. ft.), and the estates included schools and clubhouses (Figs. 2 and 3).

ARCHITECTURAL STYLE

There was a lively controversy over style. There were strong supporters for the retention of traditional building forms, but others who questioned whether these were capable of serving modern functions and expressing modern conceptions. The former were giving expression to the prevalent strong nationalist feelings, the latter to an urge to break with the mediæval past and project Chinese culture into the scientific future. There was in Nanking an archæological museum built of R.C. in which were reproduced all the essential features of Chinese architecture which already existed 2,000 years ago in the Han dynasty. But some of the buildings erected in a simple contemporary style had more in common with the essential character of Chinese tradition than the rather ponderous attempts to maintain continuity of historical forms; for instance, the placing of traditional roofs on masonry walls (Figs. 4 and 5).

A great deal of restoration work was being carried out, particularly in Peking, and many of the neglected Buddhist monasteries were being repaired under Government grants.

Above, Fig. 4 *and, below, Fig.* 5, " *the placing of traditional roofs on masonry walls* " ; *dormitory block at Wuchang University. Here the architect has attempted to separate the roof from the masonry by introducing large areas of glazing in the top storey.*

WORKING DETAIL

FURNITURE AND FITTINGS: 32

BOOK SHELVES AND CUPBOARD: OFFICES IN LONDON, W.1

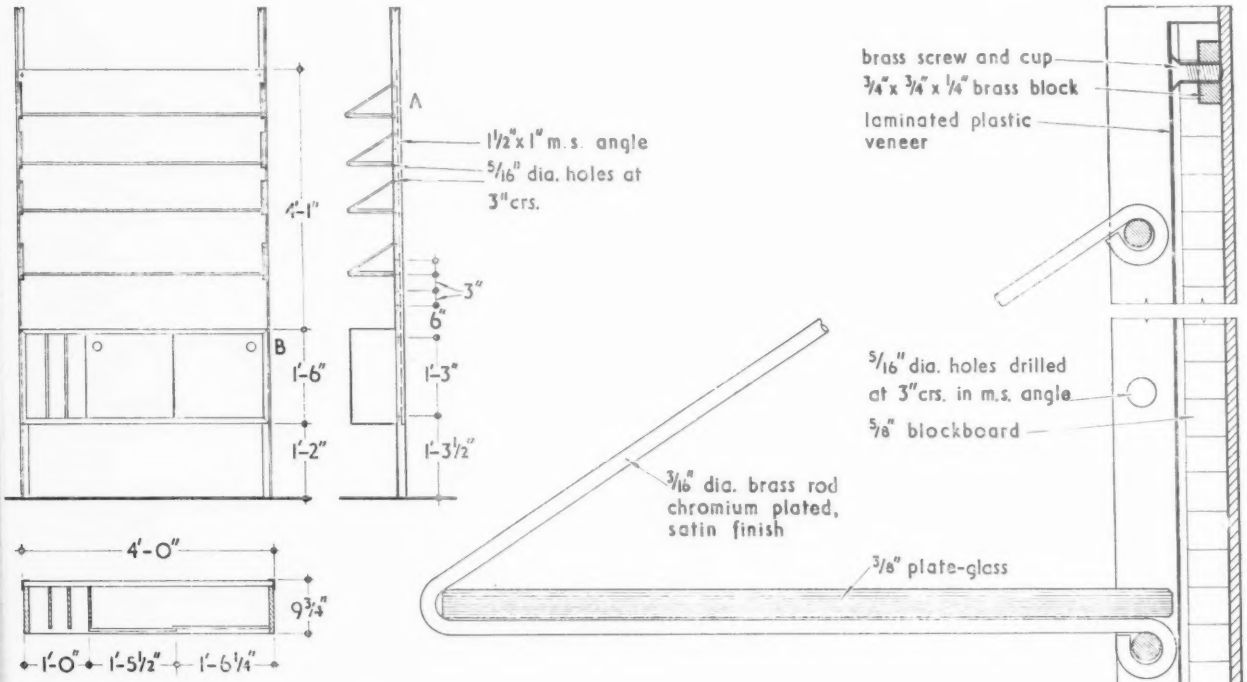
Robin Day, designer: Michael Rosenauer, architect to the building; Sir Hugh Casson (in association with Misha Black of Design Research Unit), interior designer

The glass shelves are held by slender brackets to the steel angles which extend from floor to ceiling, supporting the fitting

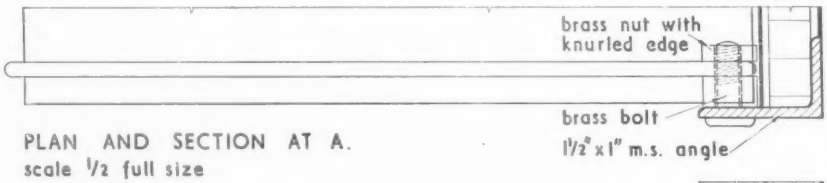
WORKING DETAIL **FURNITURE AND FITTINGS : 32**

BOOK SHELVES AND CUPBOARD: OFFICES IN LONDON W.1

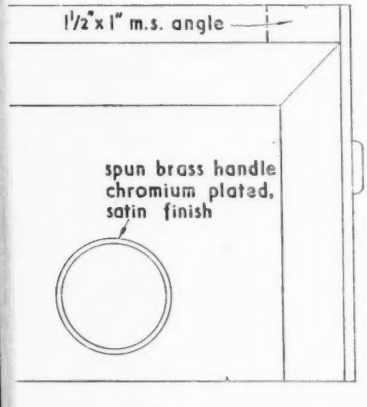
Robin Day, designer; Michael Rosenauer, architect to the building; Sir Hugh Casson (in association with Misha Black of Design Research Unit), interior designer



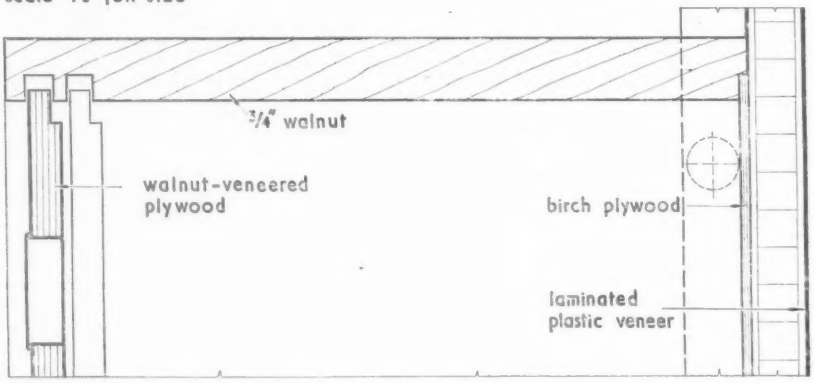
PLAN, ELEVATION AND SECTION OF BOOK SHELVES AND CUPBOARD.
scale ⅜"=1'-0"

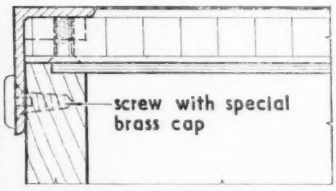


PLAN AND SECTION AT A.
scale ½ full size

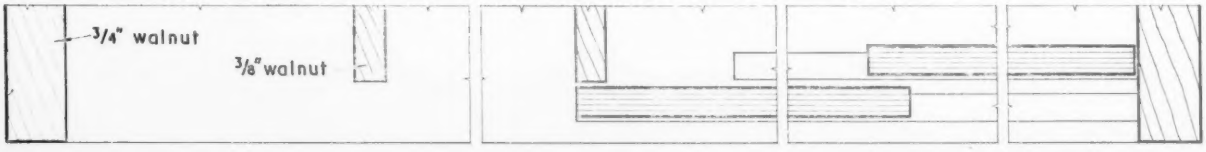


ELEVATION AT B.





SECTION THROUGH CUPBOARD scale ½ full size

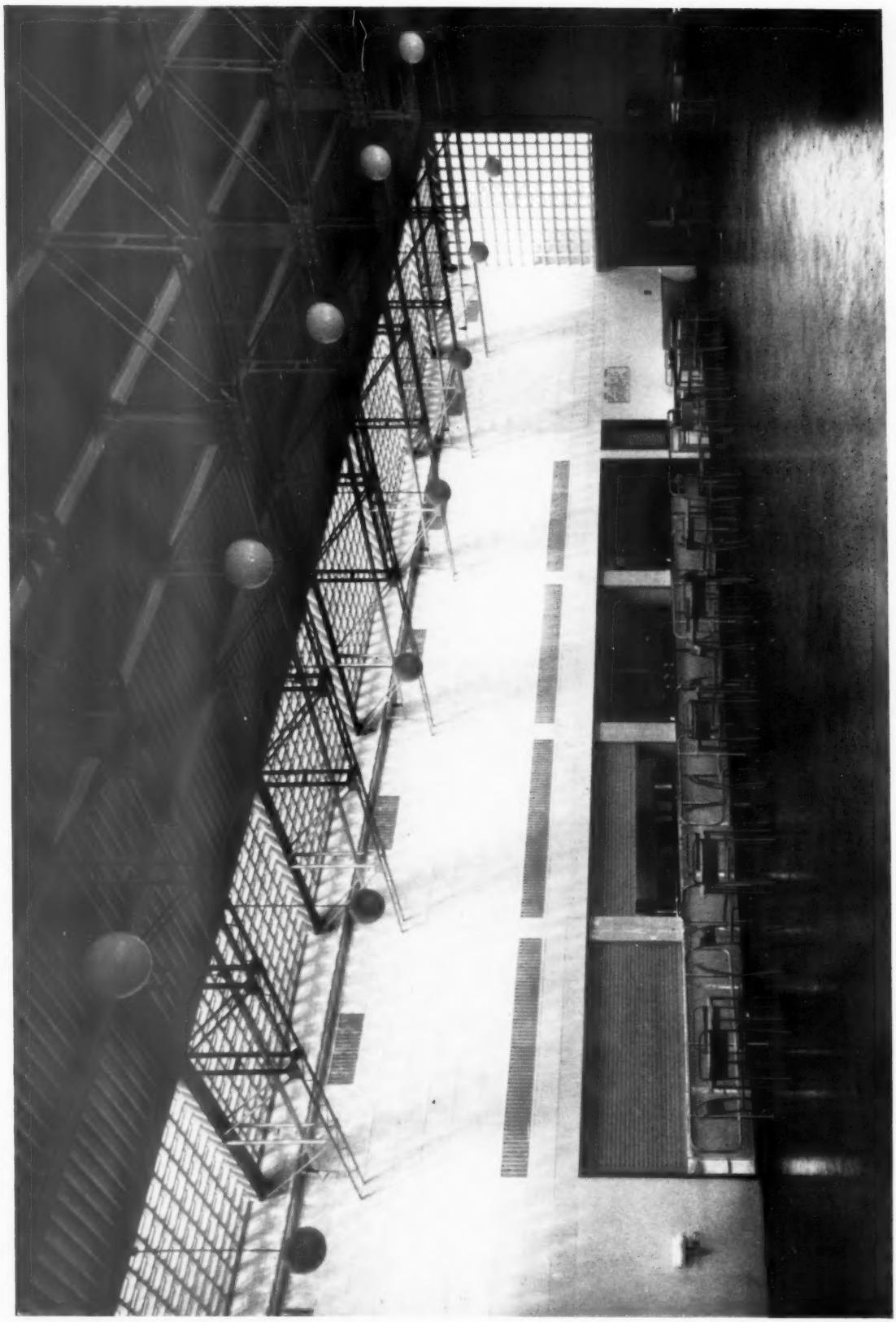


PLAN THROUGH CUPBOARD scale ½ full size

WORKING DETAIL **ROOFS AND CEILINGS: 7**

ROOF: CANTEEN AND RECREATION CENTRE IN LONDON, E.3

Elie Mayorcas, architect

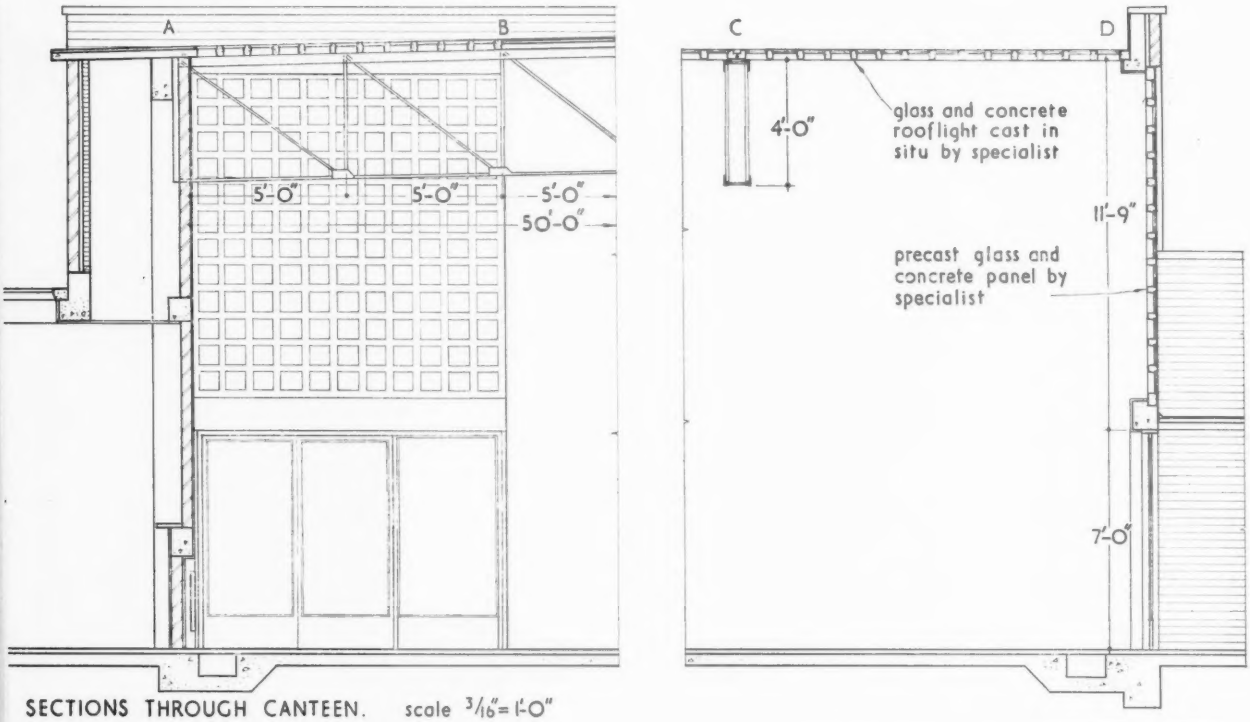


The aluminium roof deck has a wide panel of glass-and-concrete lights down the side where the canteen servery is situated

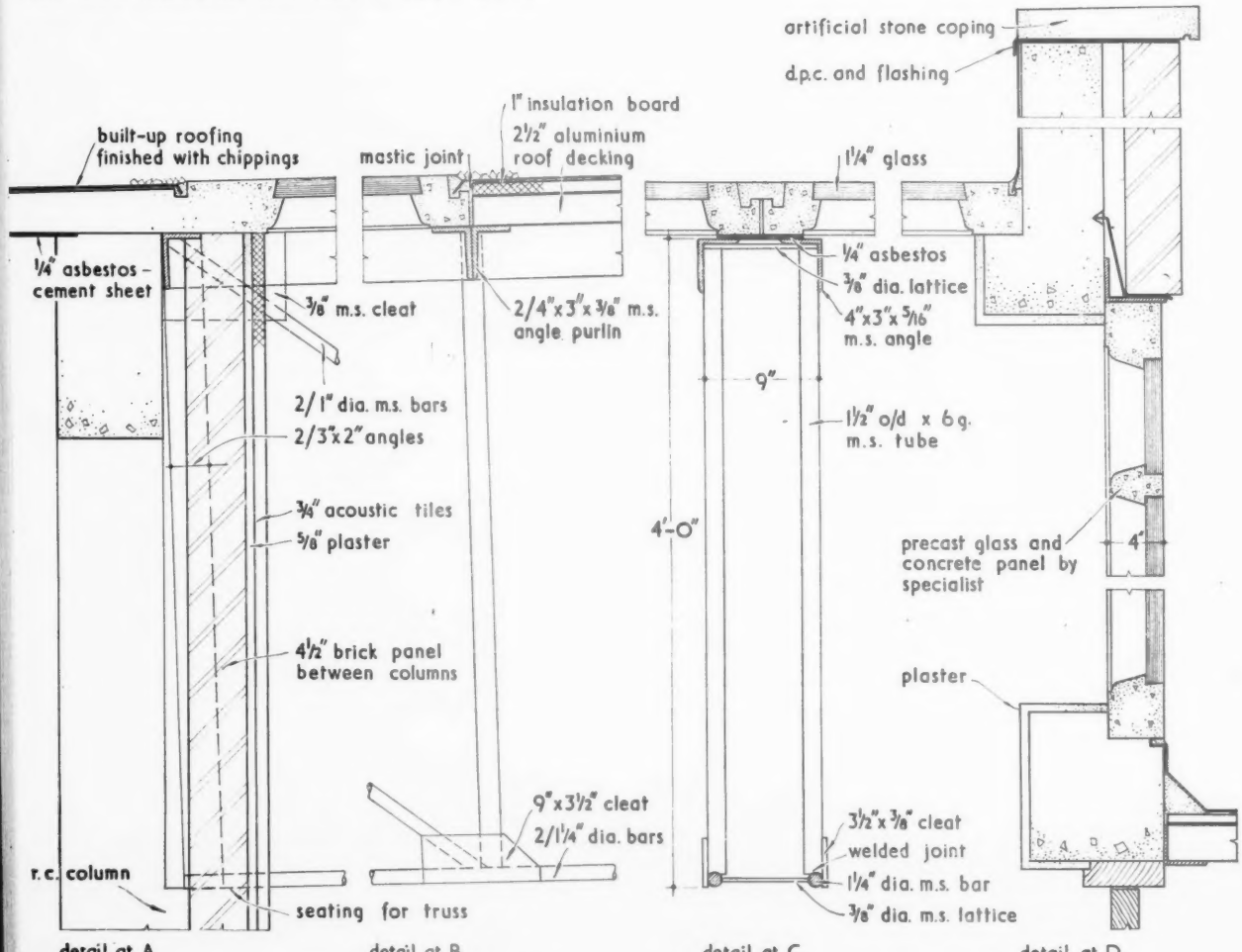
WORKING DETAIL **ROOFS AND CEILINGS: 7**

ROOF: CANTEEN AND RECREATION CENTRE IN LONDON, E.3

Elie Mayorcas, architect



SECTIONS THROUGH CANTEEN. scale 3/16"= 1'-0"



DETAILS OF ROOF AND TRUSS. scale 1"= 1'-0"

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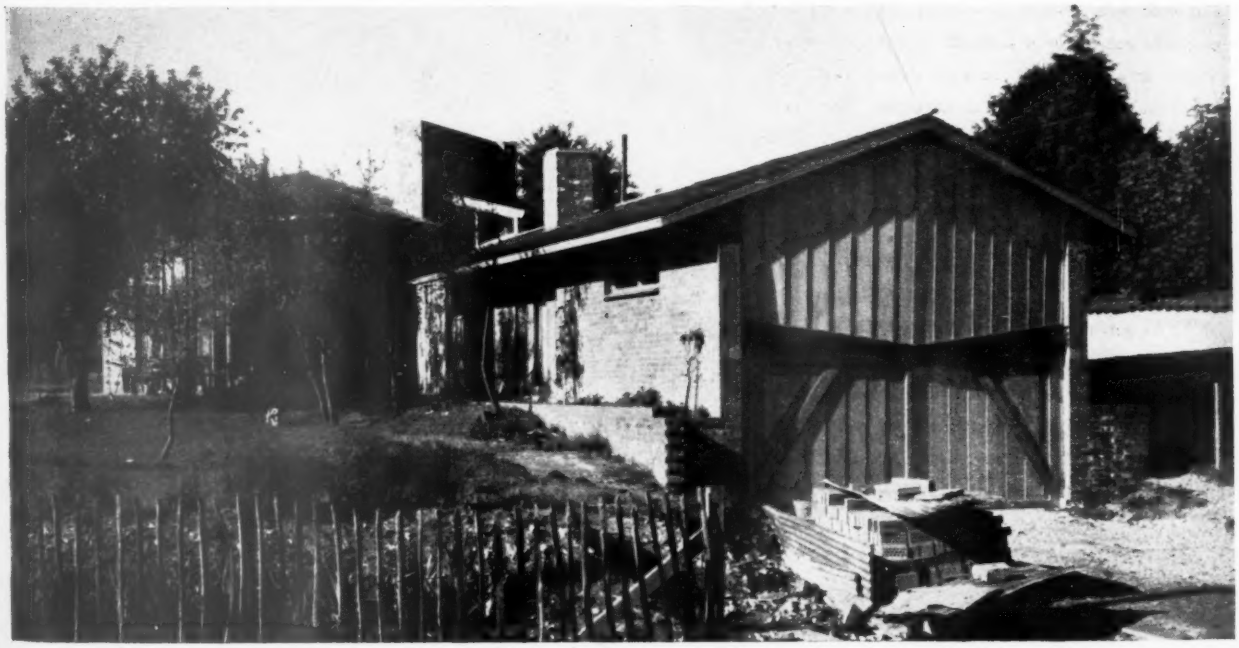
HOUSE

at DURRINGTON, WILTSHIRE

designed by ROBERT TOWNSEND

This country house near Salisbury, with an area of 2,300 sq. ft. within exterior walls, has been built as a combined residence and doctor's surgery. One of the main factors affecting the plan was the need to ensure that living and medical quarters were self-contained. There are no distant views from any windows and it is intended, at a later date, to enclose the whole site within a 6-ft. high wall. The house is floor heated by welded iron pipes.

View from the north-west; in the foreground is the garage, with children's playroom above.



Left, the main living-dining area. Above, the kitchen, looking towards the service entrance.

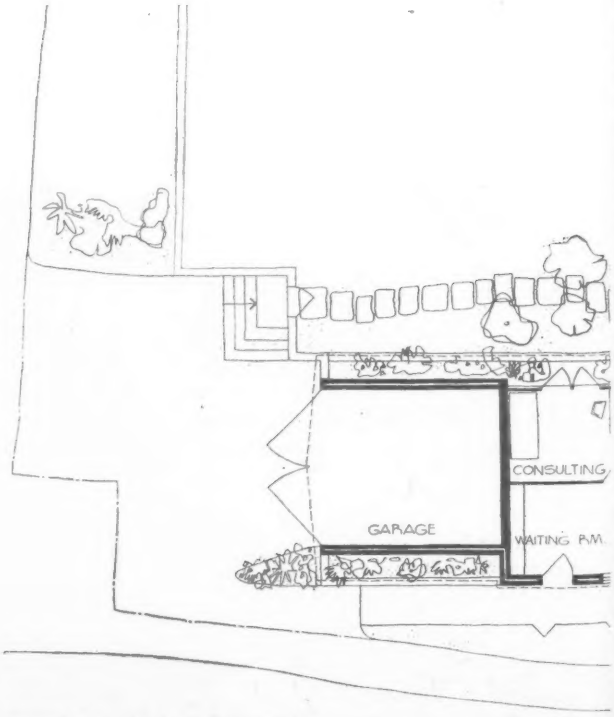
HOUSE

at DURRINGTON, WILTSHIRE
designed by ROBERT TOWNSEND

SITE.—The site was chosen mainly because it was not liable to development charge, payable at the time of purchase. The shape is rectangular on an east-west axis. There is a main road along the east side and a public footpath on the north edge. There are service and surgery entrances to the house on the north, from this footpath. There is a drop of 4 ft. 6 in. in the site from west to east. The house is placed on the north edge of the site to give the majority of rooms a south aspect over the garden.

PLAN.—The living room is turned at a 45-deg. angle to get a long view down the site and also to get the maximum amount of sunshine. It has been possible to build a 6-ft. high loft, used as a children's playroom, over the garage and yet to preserve the roof ridge line, because of the fall of ground towards the east.

CONSTRUCTION.—The north exterior wall is of 11-in. cavity brickwork and the south wall of 2-in. sq. studs. The house is laid out on a 3-ft. sq. grid. There is a concrete floor slab, and a



Ground floor plan

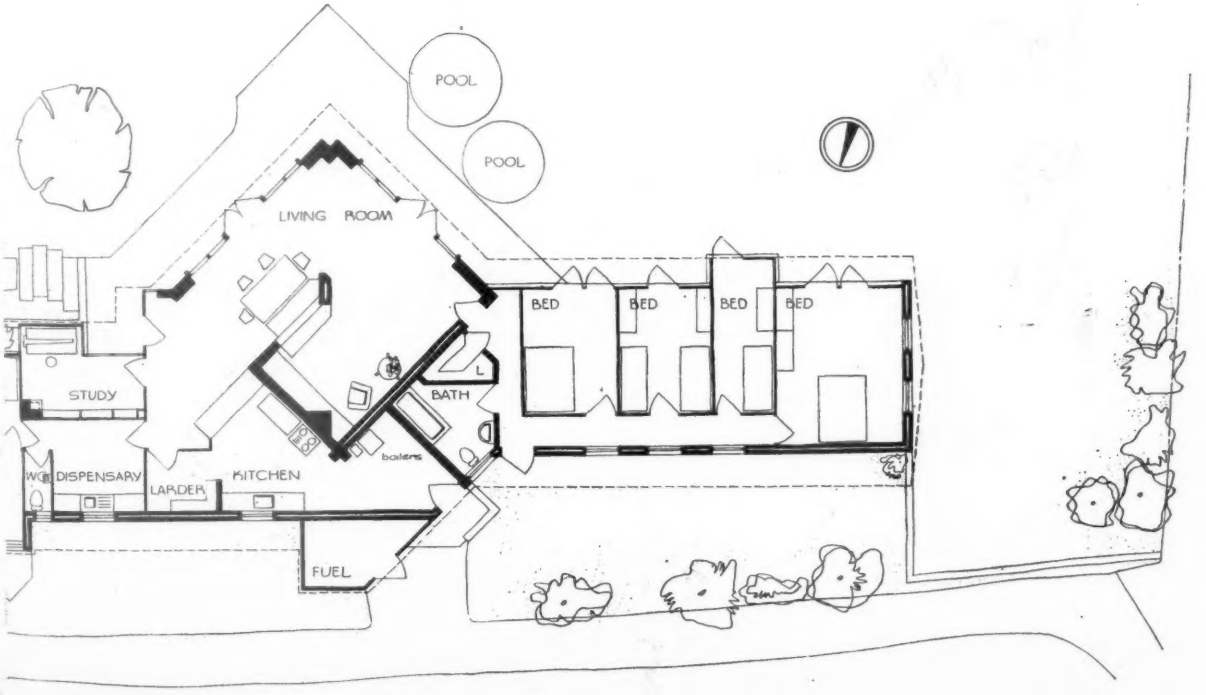
timber roof with 3-in. by 1½-in. rafters and ceiling joists. Partitions, of 2-in. sq. studs, are lined both sides with plywood.

FINISHES.—The north wall is fair-faced brick on both sides, and the south wall has 2-in. wood wool in the panels of the framing, lined internally with plywood and externally with building paper, and ½-in. obsula vertical weatherboarding treated with preservative and linseed oil. The partition walls are also packed with wood wool insulation, and lined with plywood both sides. Floors are finished with 9-in. sq. quarry tiles throughout. The roof is insulated with 1-in. wood wool and glass silk quilt over the ceiling joists. Walls, except for the north wall, and ceilings are lined with wax polished plywood; windows are of timber, and on the south all rooms have full-length glazed doors instead of windows.

SERVICES.—The heating is by floor coils of ½-in. bore welded iron pipes. The heating and hot water is from a solid fuel boiler, and the heating system has an accelerator pump. The cost of the house was £3,690.

The general contractors were Messrs. A. G. Smith & Son. For sub-contractors, see page 414

Right, the dining space in the main living room. Below left, the main living room, which is turned at an angle of 45°, seen from the south. Below, view from the south-west, with the bedroom wing on the left.



Ground floor plan (continued) [Scale : ⅛" = 1' 0"]

SECONDARY SCHOOL

at LANSBURY, POPLAR, LONDON, E.14

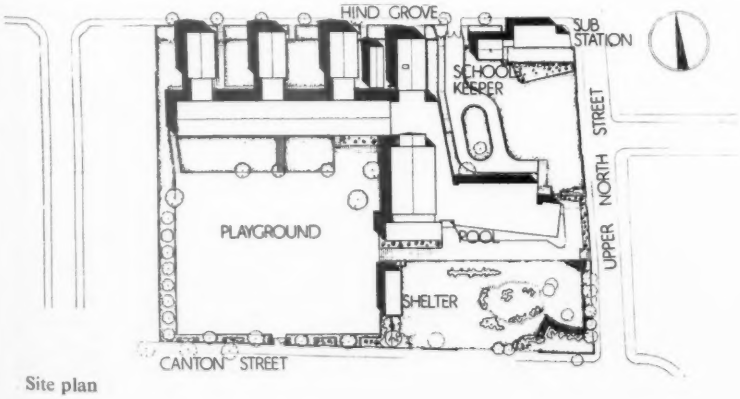
designed by DAVID STOKES; assistant architect, ANTHONY COOPER

consultants: (concrete), CONSIDERE CONSTRUCTIONS; (acoustics), JOHN PARR; (electrical), Chief Electrical Engineer, LCC; quantity surveyors, DAVIS, BELFIELD and EVEREST

The Cardinal Griffin School in the Lansbury neighbourhood, Poplar, has been built for the Archdiocese of Westminster and for the LCC. It is a secondary modern school to accommodate 450 boys and girls. All internal corridors are on the first floor—with staircase access; circulation on the ground floor is mainly external. The assembly hall is on the first floor, above the gymnasium.

The dining-room block from the south-west.

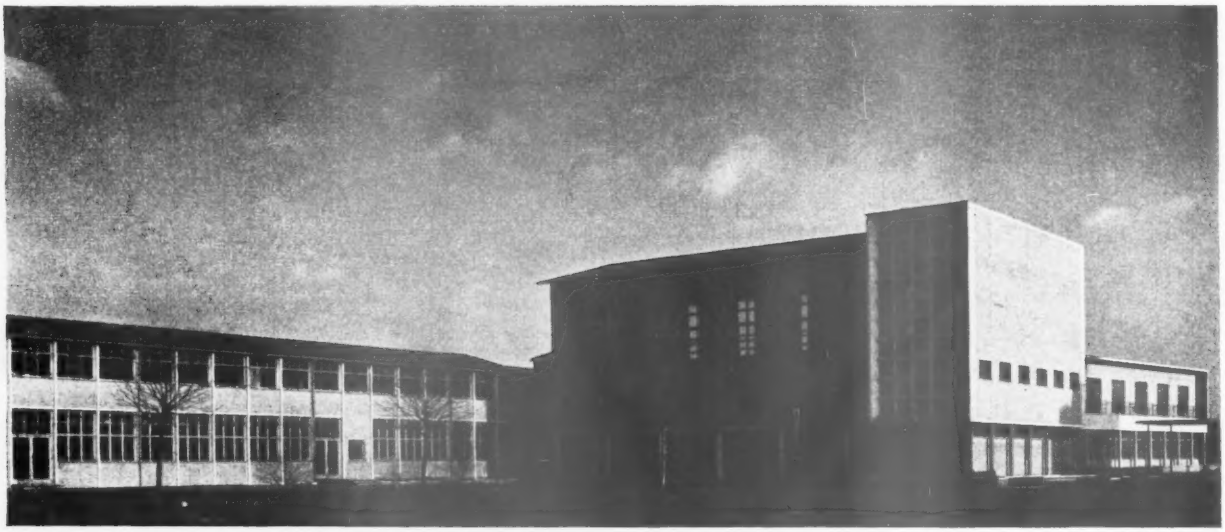
From the east : on the right are dining-room windows and balcony to the music room and staff common room. The columns stand in a pool used for biology teaching. On the left is the tower containing changing space for the gymnasium, assembly hall stage and tanks.



Site plan

PLAN.—Woodwork and metalwork rooms are planned in wings to the north of the classroom block to avoid noise disturbance—and for easy access. The lighting of first floor classrooms is augmented by continuous concrete roof lights; adjustable roof ventilators give cross ventilation.

CONSTRUCTION.—There is a reinforced concrete frame with brick infilling which, in some places, is load bearing. The internal space on both floors of the classroom wing has been kept free of structural supports to give flexibility for future requirements. The first floor is of *in situ* concrete beams at 2-ft. 6-in. centres, with flush uninterrupted ceilings on patent lathing attached to the underside of the beams. The dining hall block has a flat roof of similar construction. The assembly hall roof is carried on steel trusses.



SECONDARY SCHOOL

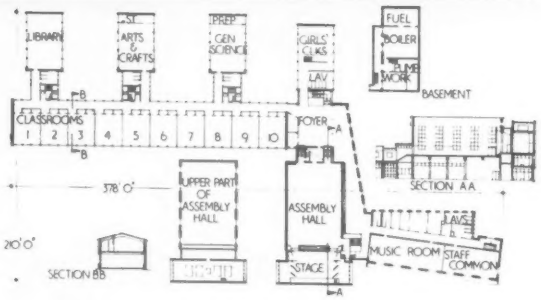
at LANSBURY, LONDON E.14

designed by DAVID STOKES

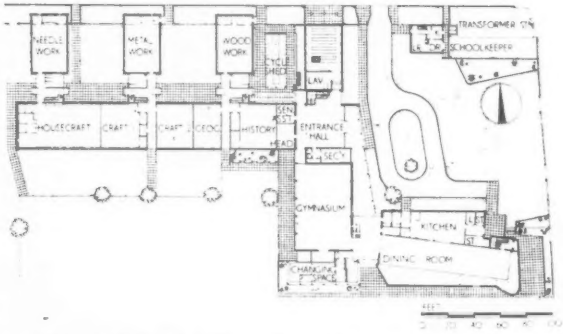
Above, view from south-west, with the gymnasium and assembly hall in the centre and the classroom block on the left.

FINISHES.—Brickwork is in London stocks or buff flint bricks to conform with the rest of the Lansbury neighbourhood. Concrete surfaces are finished in white stone paint with dark coloured, panels, except for the precast circular columns to the stage tower and entrance colonnade, which have a dark green terrazzo-type finish and the columns along the south side of the dining hall, which are left in natural concrete. The 15-deg. pitched roofs have roofing felt and vermiculite insulation on precast slabs. The dining room walls are finished with asbestos spray, left in its natural colour, for sound deadening. Floors are wood block in classrooms, handicraft and staff rooms and assembly hall; wood strip on the stage and in the gymnasium, and cork tiles in the library. The contract price was £254 per place. The MOE ceiling price at the time of tender was £290 per place.

The general contractors were C. Miskin & Sons, Ltd. For sub-contractors, see page 414.



First floor and basement plans



Ground floor plan [Scale: $\frac{1}{16}$" = 1' 0"]

Below, the entrance hall and main staircase. Below right, the assembly hall stage.

TECHNICAL SECTION

"It would greatly facilitate design and cost if builders and architects could consider work at the design stage. This is not possible with the present recognized system of competitive tendering. Bills of Quantities are not able to give expression to any simplification or ingenuity in planning by the architect ; economies become hidden, e.g., joists all the same length, no cutting, walls over walls, etc., all show the same measurement. . . ."*

Thus the RIBA shows that it recognizes the shortcomings of the normal method of competitive tendering, the failings of which the JOURNAL has frequently had cause to point out.

Speaking at the recent annual dinner of the IOB, the RIBA's president, Howard Robertson, went even further : ". . . a builder with good ideals and standards sometimes finds himself somewhat handicapped by being controlled by a competitive price, and I sometimes ponder whether there may not, in some cases, be something to be advanced in favour of appointing the builder at the same time as the architect, and whether co-operation between them at that stage might not have advantages for all concerned."

Well said, Mr. President, we could not agree more !

* The RIBA's memorandum to the Bailey Committee. Appendix E to the Committee's report. (HMSO, 1953, 3s. 6d.)

This week's special article

23 HEATING AND VENTILATION
school heating research

The welcome extension of the BRS research work on heating from housing to schools was the subject of a recent meeting at the IHVE. In the following article on school heating, Specialist Editor No. 16 *(Heating and Ventilation) refers to the results to date of this research work as presented by Dr. J. C. Weston in his paper to the meeting and to the lively discussion which followed. On page* 411 *are a number of Information Centre items on heating.*

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

It is perhaps surprising that primary school buildings are today cheaper*, in terms of cost per place, than they were before the war, particularly as they are generally so successful from the educational point of view, and often, though not always, attractive in appearance too. There have certainly been great changes in their design and construction, and the general trend towards buildings lighter in weight has presented heating engineers with an opportunity and a challenge which has not always been successfully taken up. The realization that a school is, except for occasional evening use, occupied

* In terms of the real value of the £1.

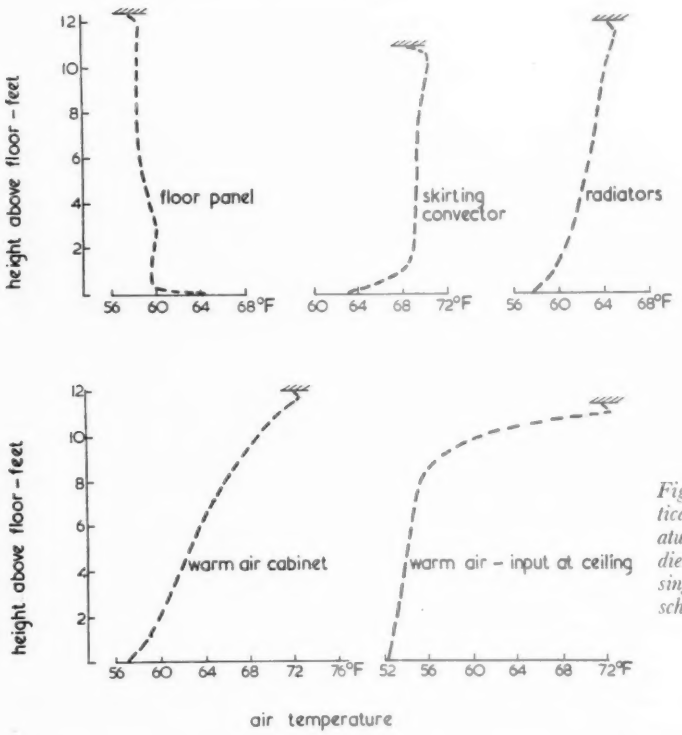


Fig. 1. Vertical temperature gradients for single-storey schools.

only for about one-quarter of the 24 hours has not yet been sufficiently appreciated and heating designs more appropriate to heavier buildings in more or less continuous occupation are still current. At the same time it must be admitted that the architect has not always realized the consequences, so far as heating costs are concerned, of some pet feature of his design. In the discussion on Dr. J. C. Weston's paper, the suggestion was made that rather than setting limits on U values, storey height and so on, in an effort to reduce excessive heat loss, a limit should be set to the design heat loss either per sq. ft. of floor area or per place—a figure of not more than 35 BThU/sq. ft. of floor area was suggested. While a broadly based standard of this type has the advantage of leaving the architect freedom in design, since he can compensate for one feature which may increase heat loss (*e.g.* large windows) by heat economy in some other (*e.g.* improved roof insulation), it does mean that heating engineer and architect must collaborate closely from the early stages of design.

HEAT LOSS

For a single-storey school with 11-ft. high classrooms and a fairly compact plan, the heat loss seems to come within the suggested limit; a plan with a long "coastline" can easily increase the design heat loss by 20 or 25 per cent. On the other hand, reducing room height to 8½ ft. has been shown to reduce the heat requirements by as much as 15 per cent., and having two storeys would produce a further 15 per cent. reduction. A compact two-storey school with 8½-ft. classrooms would, in fact, have a heat loss only a little over half that of a spread-out single-storey school with 11-ft. classrooms. It is not, of course, suggested that all primary schools ought to be compact two-storey buildings—this would be to give heat economy an undue importance in design—but clearly more attention can and should be paid to the consequences of some design features from this point of view. It is debatable whether a reduction of design heat load brings a proportional reduction in first cost, but there is clearly some reduction. Incidentally, extensive duct work designed to hide the heating pipe work was generally condemned at the meeting as an unwarranted extravagance.

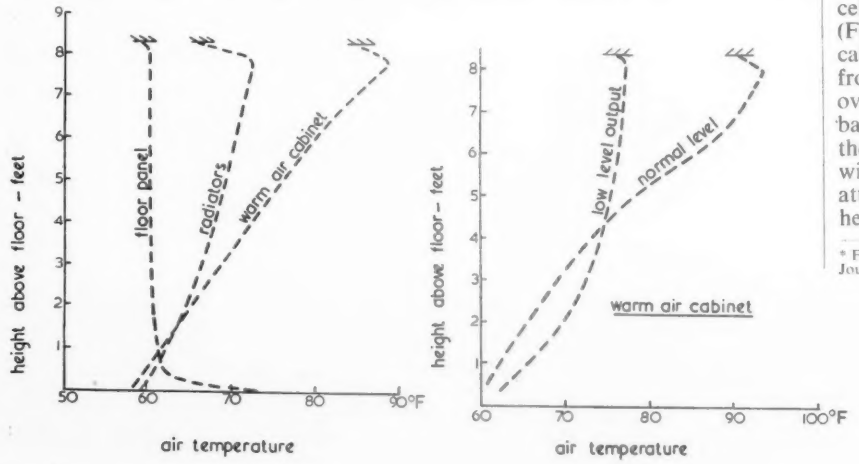
WINDOW AREAS

The question of "excessive" window areas could hardly fail to be raised. The recent work at BRS has shown that, when the effect of reflected light is taken into account, the area of windows need only be about one-third the floor area for adequate daylighting, so long as the glazed area is suitably disposed to reduce glare. Doubling the glazed area, while it increases the amount of light received, does not improve visual conditions; in fact, they deteriorate. For low classrooms (8-9 ft.) a glass area of one-third the floor area means that one wall or its equivalent must be glass for adequate daylight, but there is no justification for a greater area of glass.

TEMPERATURE GRADIENTS

The variation in temperature, both vertically and horizontally, in a classroom may affect the comfort of the room and, where a heating system has large variations in the vertical direction—with the air just below the ceiling much hotter than at floor level, there can be a substantial increase in heat loss. Typical gradients for various heating methods (Fig. 1)* show how large the differences are between heating systems and how having a low ceiling increases these gradients (Figs. 1 and 2). With the warm air cabinet system, in which air is drawn from the classroom at low level, passes over a heater battery and is discharged back into the classroom at high level, the gradients are generally higher than with other systems, but the otherwise attractive features of this method of heating have prompted investigations

* Figs. 1-5 are reproduced, by kind permission, from the Journal of IHVE (March, 1953).



Figs. 2 and 3. Vertical temperature gradients at the Abbots Langley school; left, with outside temperature of 40° F; right, 37° F.

Although the otter remains in the water for hours his skin never gets damp. The pelt of the otter has an under-layer of soft hairs interspersed with long coarse hairs; these two furs are closely matted and act as a natural protection against damp.

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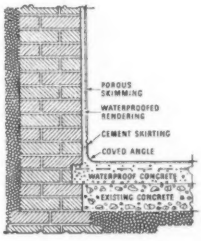

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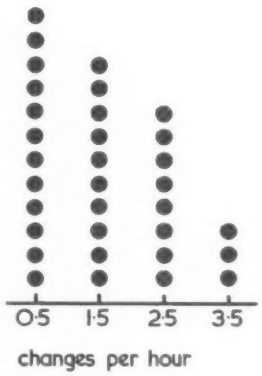


Fig. 4, ventilation rates observed in classrooms; each dot represents one classroom.

designed to reduce these high gradients. Success has been achieved by taking the air from the classroom and delivering the warmed air to the classroom at low level (Fig. 3). With this arrangement the gradients are comparable to those obtained with radiators. The significance of the temperature variation with different heating methods, in terms of the children's comfort, causes much argument which seems unlikely to be resolved until the present experimental work is completed—even supposing rigid conclusion can ever be drawn on so personal a topic.

VENTILATION

The latest regulations of the MOE distinguish between requirements for ventilation (which are about 6 changes per hr. in classrooms) and the amount of heating power which the heating engineer must provide for this purpose (equivalent to two changes per hr. in a classroom). It is assumed that the body heat of the children and solar heat gains suffice to heat the remainder of the ventilation air if, in fact, six changes per hr. ever occur. To obtain this figure under fairly still conditions needs inlets and outlets in a classroom of 10 to 15 sq. ft., but direct measurements (Fig. 4) have shown that such rates are never obtained. Perhaps the whole basis of heating design should be investigated further, for heating plant can cope satisfactorily with two air changes and, in fact, even in cold weather this rate is rarely exceeded. The solar heat gains and occupancy gains, both of which are apparently substantial, are, in effect, unaccounted for and presumably merely cause over-heating. However, it is not clear from the work so far completed whether ventilation rates might not increase if more air could be brought in without draughts being caused. Do the occupants want low ventilation rates or are they forced on them by poor heating and ventilating arrangements ?

FUEL CONSUMPTION

The comparative data on fuel consumption presented by Dr. Weston provoked a lively discussion, particularly from the interested parties. It is quite clear that whatever system is used its performance depended on the adequacy of thermostatic control. Systems which do not lend themselves to such control and are unable to take advantage of the very intermittent nature of school heating fare badly by comparison with more controllable system. Off-peak electricity used for floor heating seems to be a "non-starter" so far as school heating is concerned.

Most of the discussion centred around the data obtained in the experimental school at Abbots Langley (Fig. 5). In this school, floor heating using hot water pipes at 6-in. centres is used in two classrooms, radiators in two and warm-air heating in two. The heat supplied to each classroom is metered and temperatures throughout the school are recorded continuously. The construction of the school is typical of the recent Herts. C.C. schools—steel framing, with an outer cladding of concrete slabs and a lining of clinker concrete blocks. The roof is of coffered concrete blocks, covered with a 1½-in. vermiculite screed and roofing felt, and the ceiling is formed of ½-in. insulation board carried on battens. The school is now occupied, but only preliminary results obtained at the end of last winter are available. They certainly show some surprising features; for example, the extent to which the fuel consumption of the classrooms with warm-air heating was reduced, firstly, by arranging that the thermostats should cut off the heat supply over-night and, secondly, by converting the heater cabinets so that the warm air was delivered at low level instead of at about 5 ft. above the floor. It seems a fair conclusion that, certainly in classrooms with low ceilings, warm air should be delivered at low level, if discomfort due to high gradients is to be avoided and maximum fuel economy effected. With the low level arrangements of warm-air heating, the heat consumption for the classroom was a good deal less than with either radiators or hot water floor heating. The latter fared so badly that its protagonists cast doubt on the validity of the comparisons and, in particular, stressed that in this school there was no insulation under the heated floor, as would now be recommended. How far this would affect the comparisons was not clear, but these preliminary results seem to show that, whatever the relative performance of floor heating and radiators, the warm-air system is capable of heating a school more economically than either; whether the school with this system is as "comfortable" seems to remain an open question. (It may not have been sufficiently emphasized that the warm-air system which gave the superior performance was not the one which has so far been generally used; the usual arrangement, in which the cabinet heater delivers its hot air at high level, did not appear much better on performance than radiators.) The cause of the difference resulting from the relatively minor change from high-level to low-level delivery of the heated air appears to be that, with the former arrangement, even when the fan is not blowing, there is a considerable unwanted output of heat due to convection; while, with the low-level system, this is practically eliminated.

It would be unwise to draw final conclusions from this phase of research, which is still in progress, and many of the contributors to the discussion firmly—perhaps too firmly—stressed this point, but the work done so far certainly goes a long way to explain the enthusiasm which certain local authorities have for the warm-air system of school heating.

Fig. 5, the experimental school at Abbots Langley.

The role of gas, and the by-product of its manufacture—coke, in domestic space heating and hot-water heating was the subject of a recent conference organized by the Gas Council. Speakers emphasized the advantages of coke, compared with coal, for space heating, and of gas for summer water heating.

GAS AND COKE FOR DOMESTIC HEATING

In his opening address to the Gas Sales and Service Conference, Sir Harold Smith, chairman of the Gas Council, mentioned the improvement in the efficiency of gas-works that had taken place since nationalization. From March, 1951, to March, 1952, the average yield of gas per ton of coal had gone up from 71·62 therms to 72·77 therms. "This may not sound a very formidable increase (said Sir Harold), but it represents the saving during the year of some 440,000 tons of coal . . . . a net financial saving of some £600,000." This had been achieved partly by the closing down of 106 of the smaller (and less efficient) works. Meanwhile, the consumption of gas had gone up by 15 per cent. since nationalization.

George Ewart (sales director of a firm of gas appliance manufacturers) complained of the various restrictions which, he said, limited the purchase and installation of new gas water-heating appliances to less than half the available manufacturing capacity; for example, the high rate of purchase tax (66⅔ per cent.), limitations on hire-purchase terms, and the "inability of local authorities, within the permitted expenditure on new properties, to provide alternative hot-water supply for use during the period April to October."

He claimed that "from the national point of view, gas is the most economical means of obtaining a constant hot water supply," and that "manufacturers' attention will be directed in the immediate future to reducing the first cost of the appliance and subsequent maintenance costs." They would be greatly assisted in this "if the gas industry could supply gas of a lower sulphur content and with less gum." It might, he suggested, be worthwhile if the gas boards offered free maintenance, as appliances in need of attention wasted gas.

Some considerable saving would, he thought, be effected if "a degree of standardization in production were carried out between the various manufacturers concerned, not only in the position of connections for supplies (etc.) . . . . but also in the production of component parts." He thought also that there might be a large market for a "low-cost type of appliance" without the high quality of finish and special fitments which substantially increased the price of appliances.

E. T. Pickering, area chief chemist, West Midlands Gas Board, presented a paper on "The Function of Coke." He pointed out that the efficiency of modern solid-fuel appliances was increased by 30 or 40 per cent. when coke was used instead of coal, to say nothing of the advantages of cleanliness—both within the home and outside. It was, moreover, cheaper to use than coal. Mr. Pickering quoted figures from the Ridley Report showing that the substitution of coke for coal for room heating and winter water heating effected a 9 per cent. saving in fuel costs. He advocated the use of gas for summer water heating and reminded the conference that, as stated in the Gas Council's memoranda to the Ridley Committee, "an adequate service can be given in a well constructed house of about 1,000 sq. ft. floor area by the use of 35-50 cwt. of coke per annum and 250-270 therms of gas. If this was the typical pattern of domestic fuel usage in Great Britain, it would represent a saving of 14-15 million tons of coal per annum." The question was how were we to ensure the use of coke in a substantial proportion of the immense new number of modern multi-fuel appliances that were being installed? He suggested (*i*) improvements in the quality of coke, particularly in its uniformity, and (*ii*) vigorous educative publicity.

INFORMATION CENTRE

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

10.102 design: building types
REFERENCE BACK

Item 10.102 (26.2.53). *Higher Industrial Productivity with Electricity*. The price of this book is 8s. 6d., not £1 19s. as stated.

13.103 materials: timber
PRESERVATION

Record of the 1952 *Annual Convention.* (British Wood Preserving Association. 1952.)

Full report of twelve papers and discussion. Several of considerable interest to architects, including one arguing the case that a much wider use of preservative treatments in new buildings is justified because of changes in modern building conditions. A paper on fire retardants is also interesting. Another paper lays considerable stress on the need for expert advice for architects engaged in the survey of churches where damage to timber is so commonly found.

14.58 materials: concrete
REACTIONS

Reactions Between Aggregates and Cement. Part III. Alkali-Aggregate Interaction: The Expansion Bar Test. National Building Studies Research Paper No. 17. (HMSO. 1952. 3s.)

Results of research show that none of the aggregates examined shows expansion reactivity when used as whole aggregate with medium alkali cement. Paper suggests tests should be made before any large new deposits are used. 29 pp., highly technical.

18.11 construction: theory
WIND TUNNELS

The Industrial Application of Aerodynamic Techniques. DSIR. (HMSO. 1952. 3s. 6d.)

Application of wind tunnel research to industrial problems, as carried out at the National Physical Laboratory.

The main value to structural work provided by wind tunnel research has been its contribution to the new Chapter V (Loading) and work on various long-span bridges; the most well known being the Tacoma Narrows Suspension Bridge, which was destroyed by wind action in 1940, and the proposed suspension bridge over the River Severn.

Other results of experiments have successfully solved problems of raising smoke plumes from power stations and factories to keep the surrounding areas clear. The pamphlet explains in detail the design of wind tunnels and the techniques of measurement used in them and covers branches of industry other than building.

19.161 construction: details
PARTITIONS

Walls and Partitions of Blocks and of Slabs. BS C of P: 122 (1952). (British Standards Institution. 9s.)

Lengthy Code—over 100 pp. Better arranged than draft version, but still contains good deal of comparatively uninteresting material sandwiched between important sections.

The general considerations affecting the choice of materials and their fundamental characteristics are given in some detail, covering such factors as sound-absorption co-efficients, fire resistance gradings and thermal transmittance values. Information is provided on the mixing proportions for mortar, limitations to inter-mixing, treatment of damp-proof courses, finishing of joints, formation of vent ducts and other constructional details.

A useful document for reference purposes and very useful to students and junior assistants for general information. There appears to be an error in Table 11 regarding the weight of 4½-in. and 6-in. thick solid concrete blocks.

19.162 construction: details
METAL WINDOWS

Amendment No. 6 to BS 990: 1945. (British Standards Institution. Nov., 1952.)

Amendment making numerous alterations to the BS for metal doors and windows. One or two extra types are added—notably a narrow-width larder window.

A considerable number of types have been withdrawn from the standard range and this might seem a retrograde step, but, in fact, the types withdrawn are ones for which experience had shown there was only a small demand. Since a good deal of the object of standardization is to reduce the number of types to give maximum advantages in mass production, this seems reasonable.

Other alterations have been made with a view to meeting contemporary ideas on design. One type resulting from this gives a glass pane size which is rather large and most manufacturers supply an alternative design to overcome this objection.

There is also an alternative in the section for outside frame and bar ventilators. The new section uses more steel and opinions apparently differ as to whether the new section has, in fact, any advantages.

It is necessary to study carefully the amendment, together with the original standard, to understand exactly what changes have taken place.

22.58 acoustics and sound insulation
TEXT BOOK

Acoustics in Modern Building Practice. Fritz Ingerslev. (Architectural Press. 1952. 35s.)

Properties of sound; room acoustics; sound absorbing materials; noise and its

abatement; sound transmission. A textbook primarily intended for architects and building technicians. 290 pp. 220 illustrations.

This book, which follows one or two other recent books on the subject, is, in many respects, the best. Although it comes from a foreign source, much more care has been taken with the translation than is usual, and all relevant details are consistently given in both metric and English units. This, in itself, makes it more comfortable to follow and, although the author has intentionally limited his scope so as to be intelligible to his chosen readers, he has always given them just that right amount of extra detail which, while not easily assimilated, repays extra study.

The first section, on the properties of sound, is both comprehensive and comprehensible. Perhaps a little more might have been said on the geometry of propagation, but more is given on this in the next section—room acoustics. In this section a well-balanced review is given of the problems of room design and useful methods of tackling them. It is obviously based on a wide practical experience of the subject. Sound-absorbing materials are treated with great thoroughness and hints are included which will help designers to ascribe absorption coefficient values to finishes for which no published data are available. These are frequently needed in acoustic design. The absorption coefficient tables give a useful selection of values including some for fabricated types of treatment. These last are described only in words, and a small sketch, however diagrammatic, would have been a great help to architects in understanding the constructions.

In the chapter on noise and noise abatement both theoretical and practical aspects are dealt with, even down to such details as reducing noise from typewriters and teleprinters by modifications to the machines, as well as more architectural solutions to similar problems.

What makes the section on air-borne sound transmission so useful is that it is written to conform to the tentative international standards of sound insulation measurement and specification used in this country by the BRS. Altogether, a useful chapter, although some of the diagrammatic details of floor construction obviously come from a land where timber is neither scarce nor costly. Praiseworthy efforts are made to clear up the difficulties of dealing with the disconnection of the leaves of double walls, but it is doubtful whether the last has been heard on this subject.

The technique of the floating floor is ably dealt with in the section on the transmission of solid-borne sound and vibration, and useful practical tips are given on such important but diffuse problems as reduction of noise from taps, water pipes and machinery.

The final section is on noise control in ventilating systems; although this is brief, all that is needed by anyone not specializing in this branch of engineering is given. Only two small errors have been noted (p. 99, Fig. 14.9, graph plots reverberation time against volume, not frequency; p. 122, Fig. 8.6 should be 18.6); the layout and illustrations are good and the glimpses of Scandinavian architecture refreshing.

This book is recommended for all architects' shelves.

23.166 heating: ventilation
MECHANICAL STOKERS

Firing Equipment and their Fuels. Section 1. Shell Boilers Fired by Solid Fuel. (The Combustion Engineering Ass. 1952. 10s.)

Highly specialized. Describes types of stokers and types of fuel suitable for them. 24 pp.

23.167 heating: ventilation
PANEL HEATING

Floors and Floor Finishes in Relation to Embedded Panels. (FP1. Invisible Panel Warming Association, London. 1952.)

Excellent summary of floor constructions and finishes for use with floor panels. The use of insulation over whole floor is recommended where heating is very intermittent, *e.g.*, in churches, concert halls, etc. For other buildings, the application of insulation to the edge only is advocated—either as a vertical strip 18 in. deep or as a horizontal piece 2-3 in. wide. Suitable details are illustrated. Various finishes are discussed and precautions to ensure satisfactory behaviour given, together with suggested thickness and operating temperatures.

23.168 heating and ventilation
DOMESTIC HEATING

Comparative Performance of a Warm-Air Ceiling Panel System and a Convection System. Bulletin Series 401. (University of Illinois, USA.)

Research paper on warm-air and panel heating of bungalow.

A warm-air system with high-level delivery was compared with a ceiling panel installation heated from air passed through an 8-in. deep closed space in loft. The same furnace was used for both systems; the tests being carried out alternately. The performance of the systems was very similar, with no real difference in comfort conditions as judged from physical tests. Consumption of the panel system was 20 per cent. greater than the warm-air system, due mainly to heat losses to the loft.

23.169 heating and ventilation
INSULATION

Design of Insulated Buildings for Various Climates. Tyler Stewart Rogers. (Architectural Record Book. 1952. $5.50.)

This is one of the best written and most well-presented technical books that has appeared in recent years. It deals with the subject of insulation from the architect's point of view and avoids any confusion with difficult formulæ or abstruse language. It is divided into short subject sections and in each of these gives its information, first, in a simple text and, then, very largely repeated in graphic form, by well-captioned diagrams and photographs. Printing and presentation are admirable.

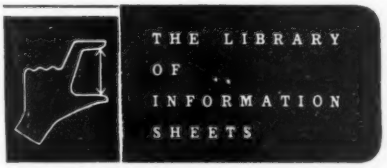
The first part of the book explains the principles of heating for comfort, the effect of climate, heat control, vapour control and the effect of ventilation. In the second part is explained the practice of insulation and vapour control. This part is divided into sections on roofs and ceilings, walls, floors and design calculations.

Although some of the climate conditions covered are different from those in this country, and some of the construction methods are uncommon here, the clarity of the explanation of principles makes this a book which at least all technical and school libraries should have. The USA is divided into three "zones," according to climate, and most of the tabulated information, of which there is a great deal, is presented for each of these zones. To some extent, therefore, it can be related to British conditions.

A large part of the book is devoted to a discussion on the importance of vapour control as a necessary part of thermal insulation. It would be valuable to have an authoritative opinion on the importance of vapour control in various parts of the British Isles, both in buildings of traditional construction and in buildings of the lighter forms of construction which are now being more widely used.

The reviewer is aware of at least one recent building where moisture, at first blamed on to faulty roof covering, was subsequently found to be caused by condensation which would have been avoided by a correctly placed vapour barrier.

An admirable book, both for its contents and as an example of how a technical subject can be presented in a way that all can easily understand.



15.B1, 15.C1, 15.C2, 15.C4, 22.D1, 22.D2, 22.D3, 27.F1, 28.D1 *and* 28.E10 *REFERENCE BACK*

Readers are asked to note the following revision and to amend their copies of the Information Sheets in question: The address of Bowaters Building Boards Limited is now Bowater House, Stratton Street, London, W.1. Telephone: Grosvenor 4161.

24.C2 *and* 24.C3 *REFERENCE BACK*

Readers are asked to note that the recently published Amendment No. 6 *to B.S.* 990:1945 Metal Casement Windows and Casement Doors *now alters the range of windows given on Sheets* 24.C2 *and* 24.C3. *As many types have been withdrawn and others added, reference should be made to the new Amendment for the present range.*

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THE INDUSTRY

From the industry this week, Brian Grant reports on equipment on show at the Ideal Home Exhibition; a new range of P.V.C. *flooring tiles; and a floodlighting fitting for use with ordinary lamps.*

IDEAL HOME EXHIBITION

Among the new devices on show at the Ideal Home Exhibition is the new Radiation "type 84" cooker (see photograph). Readers will remember that in many of the earlier types of gas cooker, which one still often finds in use, the dimensions of the hotplate are larger than those of the oven; the hotplate, in fact, has an overhang at each side and at the front. With the post-war slab-sided designs the area of the hotplate is limited by the oven dimensions, and can thus become rather crowded. The new Radiation job is in the current design idiom, but has returned to the wider and deeper hotplate which is carried on separate supporting arms so that it becomes extremely easy to clean the top of the oven if anything should boil over. The front burners are wider apart than those at the back, to make room for larger saucepans.

Other details of the new cooker include self-locking taps, which also have a simmering position. Once the first adjustment has been made the simmering position can, thereafter, be found automatically. The oven flue outlet is in the centre of the splash back and opens forwards so that the cooker can be set close up against the wall. Price, from gas undertakings, is about £39 10s. There is a similar but smaller model which sells at £28 10s. (*Radiation Ltd., 7, Stratford Place, London, W.*1.)

There are several other new pieces of equipment in the gas section. Electrolux are showing a modified version of their well-known 1½-cu. ft. refrigerator; this is the "L.H.150," a free-standing type with a vitreous-enamelled top and a drawer for cutlery and other kitchen oddments. Since the drawer becomes slightly warm when the refrigerator is in use it should not be used for food storage. One is more used to seeing this model in its built-in form; it is probably better so, as with standard kitchen cupboards it can be set at chest level, where it is more convenient than on the floor. Those who merely want equipment for an existing kitchen, however, cannot get the cupboards, at least, not the EJMA timber ones, and for them the extra table space of the "L.H.150" may be useful. (*Electrolux Ltd., 153, Regent Street, London, W.*1.)

Gas fires show little change, but Bratt Colbran have a new type designed to provide convected warm air as well as the usual radiant heat. This model is curved on plan so that the heat is radiated through a wider arc than usual, while the warm air emerges through the louvres at the top. Roughly 33 per cent. greater overall efficiency is claimed over the ordinary radiant fire; certainly the convected heat would normally be wasted up the flue or serve only to warm the wall.

On the same stand is shown a new version of the "Heaped" fire, which this firm has been making for many years. The latest type has been designed especially to burn coke and the other fuels now used domestically and to remain alight for 10 or 12 hours without attention. A ventilator slide, foot operated, gives precise control of air to the fire, and the fuel consumption can be reduced to as little as ¾ lb. per hour. There is an extension plate to give extra fuel capacity and a gas burner is available for lighting. Three sizes are made, 16, 18 and 21 in., for standard "Heaped" fire openings. Prices vary from £5 17s. 6d. to £7 15s., extension plates and gas burners being extra. (*Bratt Colbran Ltd., 10, Mortimer Street, London, W.*1.)

On the Walpamur stand is their new "Glossy Finish"—a paint designed for interior use only. It is thinned with water, but it dries with a high-gloss finish which will withstand repeated washing, so that it is very suitable for factories and canteens, as well as ordinary domestic interiors. From the point of view of the Factory Act, this "Glossy Finish" is classified as an oil paint, and thus it need only be renewed every seven years.

Covering capacity is 100 to 120 sq. yd. per gall. on smooth plaster with normal thinning of 1 to 1½ pints of water per gall. A slightly thicker consistency is recommended for doors, windows and other woodwork. Application is by brush or spray and under normal conditions the paint dries overnight. For dry and very porous surfaces there is a high opacity primer and, if this is used, only one coat of the "Glossy Finish" is needed.

At present 12 colours are being made, but others are to be introduced later. Modified shades must be obtained by intermixing; stainers in oil or water colour stainers must not be used. One further point worth noting is that the makers do not recommend storage for more than three months. (*Walpamur Ltd., Darwen, Lancs.*)

FLOODLIGHTING FITTINGS

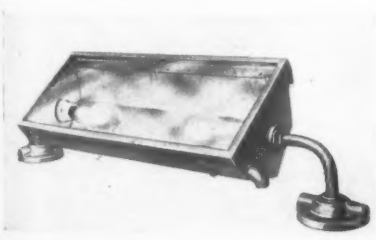
A floodlighting fitting that uses ordinary domestic electric light lamps has been brought on to the market by Crompton Parkinson Ltd. It is a trough-shaped fitting, see photo, made of "Bonderized" sheet steel, stove-enamelled grey, and will hold two 60-W. or 100-W. ordinary tungsten lamps. The reflectors are of mirrored glass; the front of heat-resisting glass; the price, 168s. The fitting gives a wide-angle beam and is for use, therefore, in situations where space is limited.

Crompton Parkinson also market a wide range of floodlighting fittings for more powerful lamps, from their general purpose fittings, the cheapest of which is only 36s., to heavy-duty projectors for 1,000-W. lamps, giving beams as narrow as 24°, at 255s. (*Crompton Parkinson Ltd., Crompton House, Aldwych, London, W.C.*2.)

P.V.C. TILES

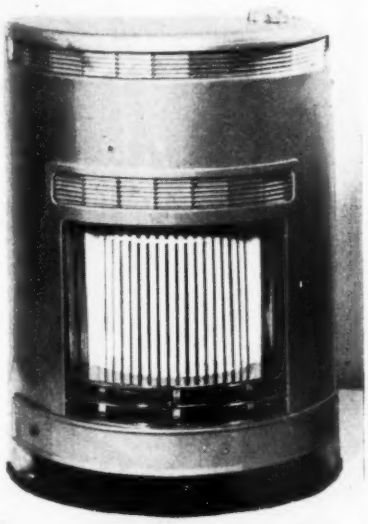
Ever since the end of the war one has been hearing of shoes and floor coverings made of p.v.c.—purposes for which this material should be very suitable, as its resistance to abrasion is exceptionally high. A new range of p.v.c. tiles has just been put on the market under the name of "Soleway." They are supplied in 12-in. squares, ⅛ in. thick, and are made with a shock-absorbing base of cork and p.v.c. and a top surface of hardened p.v.c., which is resistant to oils, grease and most acids. Plain and marbled colours are produced.

The tiles are fixed with an adhesive, preferably "Evo-Stick SH 25," the essential conditions being a dry and level floor. Any of the usual cleaners can be used, but a damp mop is said to be enough, and any excess of water should be avoided, as it may break down the adhesive if it seeps into the joints between the tiles. (*Hornflowa Ltd., Maryport, Cumberland.*)



Crompton-Parkinson floodlighting fitting for two 60-or 100-Watt lamps. Price £8 8s.

Radiation "type 84" gas cooker, with cantilevered top. Price £39 10s.



Bratt Colbran gas fire giving both convected and radiant heat; claimed to be 33 per cent. more efficient than ordinary gas fires.

Buildings Illustrated

Cecil Sharp House, 8, Regents Park Road, London, N.W.1. (Pages 395-399.) Architects: John Eastwick-Field, B.A., A.R.I.B.A., in association with Hugh Pite, A.R.I.B.A. Quantity surveyor: Frederick Saunders, F.R.I.C.S. Chief assistant: T. A. Skeat. Heating consultant: John Porges, M.I.MECH.E., M.INST.F. Acoustic consultant: P. H. Parkin, B.SC. Mural paintings: Ivon Hitchens. Stone carved figures and commemoration stone: Gordon Herickx. Sculptured lead motifs: Anthony Caro. General foreman: S. F. Jones. General contractors: The Anglo-Scottish Construction Co. Ltd. Sub-contractors: Joinery, John Sadd & Sons Ltd., D. Burkle & Son Ltd., and F. Jones; structural steelwork, Matthew T. Shaw & Co. Ltd.; asphalt roofing and tanking, The Limmer & Trinidad Lake Asphalt Co. Ltd.; slate roofing, Stirling & Johnson; heating and ventilation, The Hobdell Engineering Co. Ltd.; lighting, G. W. Franklin & Son Ltd.; plumbing, J. H. Shouksmith & Sons Ltd.; fireproof floors, The Kleine Company Ltd.; gas, William Edgar & Son Ltd.; fibrous plaster, G. Jackson & Sons Ltd.; plastering, W. A. Telling Ltd.; acoustic treatment, Horace W. Cullum & Co. Ltd., and J. W. Roberts Ltd.; suspended ceilings, The Anderson Construction Co. Ltd.; wrought ironwork, Comyn Ching & Co. (London) Ltd.; entrance doors, Hurst Franklin & Co. Ltd.; terrazzo, Art Pavements & Decorations Ltd.; timber floors, The Wachal Flooring Co. Ltd.; cork tile flooring, The Armstrong Cork Co. Ltd.; painting, W. J. Freeman Ltd.; lead canopy, Stoner & Saunders Ltd.; lettering, The Lettering Centre; catering equipment, Sumerling & Co. Ltd.; internal telephones, Telephone Rentals Ltd.; metal windows, The Crittall Manufacturing Co. Ltd.; metal door frames, Henry Hope & Sons Ltd.; door furniture, Yannedis & Co. Ltd.; natural stone, The South Western Stone Co. Ltd.; artificial stone, The Liverpool Artificial Stone Co. Ltd.; paint, Murray & Jones Ltd., Imperial Chemical Industries Ltd.; sanitary ware, John Bolding & Sons Ltd., Adamsez Ltd., and Tylors Ltd.; facing bricks, Stoneware Ltd.; sliding door gear, P. C. Henderson Ltd.; domed roof lights, Pilkington Bros. Ltd.; roadways, Wilson Surfacing Ltd.; light fittings, Varilectric Ltd., Allom Bros. Ltd., Hume Atkins & Co. Ltd., Best & Lloyd Limited, Heal's Contracts Ltd., Thorn Electrical Industries Ltd., The Merchant Adventurers Ltd., Hailwood & Ackroyd Ltd., and Ediswan Ltd.; clocks, Baume & Co. Ltd.; amplifying equipment, Philips Electrical Ltd.; curtains, Warner & Sons Ltd.; furniture, Bowman Bros. Ltd. (tables and chairs by Morris of Glasgow; chairs by H.K. Furniture Ltd.), Heal's Contracts Ltd. (occasional tables), Pel Ltd. (stacking chairs).

House at Durrington, near Salisbury, Wilts. (Pages 401-403.) Architect: Robert Townsend. General Contractor: Messrs. A. G. Smith & Son. Sub-contractors: glass, James Clark & Eaton Ltd.; roof and walls insulation, Gyproc Products Ltd.; ceiling insulation, Fibreglass Ltd.; central heating coils, Carey & Sons Ltd.; central heating pump, Stewart Turner; boilers, Earlymil Ltd.; sanitary fittings, Shanks & Co. Ltd., Twyfords Ltd., and Adamsez Ltd.; door furniture, Jas. Gibbons & Co. Ltd.; window furniture, Dryad Metalworks Ltd.; locks, Ingersoll Locks Ltd., Chubb & Sons, and Lock & Safe Co. Ltd.; plywood wall panelling, external weatherboarding, Sydney Hawkins Ltd., and Bath Cabinet Makers & Artworks Ltd.; varnish, Goodlass, Wall & Co. Ltd.; wax polishing, S. C. Johnson & Son Ltd.

The Cardinal Griffin School, Lansbury, Poplar, London, E.14. (Pages 404-406.) Architect: David Stokes, F.R.I.B.A.; Assistant Architect: Anthony Cooper, A.R.I.B.A. Sculptor: Peter Watts. Mosaic: Philip R. Suffolk. Reinforced concrete consultants: Considere Constructions Ltd. Electrical consultants: Chief Engineer (Electrical), LCC. Acoustic consultant: John Parr. Quantity surveyors: Davis, Belfield & Everest. General Contractors: C. Miskin & Sons Ltd. Sub-contractors: bricks, Cement Marketing Co. Ltd., Uxbridge Flint Brick Co. Ltd., and Woodside Semi-Engineering Brick Co.; felt roofing, Kent Asphalte Co.; flush doors, Drytone Joinery Ltd.; electricity, Troughton & Young Ltd.; heating, hot water and ventilation, Troughton & Young (Heating) Ltd.; precast columns, copings and treads, Girling's Ferro-Concrete Co. Ltd.; flooring, John Aubanel & Partners (cork), Limmer & Trinidad Lake Asphalte Co. Ltd. ("Colourphalt" and "Trinascolin") W. B. Simpson & Sons Ltd. (quarry tile paving), Horsley, Smith & Co. (Hayes) Ltd. (hardwood); non-slip surfacing, Adamite Ltd., laid by Furnishing Services Ltd., Standard Pavements Co. Ltd. (terrazzo), Armstrong Cork Co. Ltd. ("Accotile"); slate cills, Bow, Slate & Enamel Co. Ltd.; steel roof trusses, Boulton & Paul Ltd.; metal windows and doors, Williams & Williams Ltd.; roof lights, Lenscrete Ltd.; class-room ventilators, Colt Ventilation Ltd.; "Colterro" lathing, W. H. Colt (London) Ltd.; metal lathing, Expanded Metal Co. Ltd.; asphalt paving and roads, Limmer & Trinidad Lake Asphalte Co.; W.I. cycle shed and racks, Stelcon Industrial Floors Ltd.; "Tyloglaze," Quickset Water Sealers Ltd.; asbestos spray, Turners Asbestos Cement Co. Ltd.; roller shutters, Haskins (Rolling Shutters) Ltd.; proscenium frame, Light Steelwork (1925) Ltd.

The illustration of houses used in the advertisement for Messrs. Sharp Bros. & Knight Ltd., in the JOURNAL for March 5, is the copyright of MOHLG, and was used without their knowledge and permission.

Painting of CONCRETE BALCONIES

A very pleasing and colourful effect is provided on this new block of flats by the use of Tretolin Paint on concrete surfaces to balcony recesses.
In this instance, the Tretolin was pigmented to match special colours submitted by the Architects, and we are now in a position to provide this service on suitable schemes. Tretolin Paint is widely used also for painting of asbestos cement claddings and roofs and has unexcelled durability on such surfaces.

Flats at Stong Hall for Stevenage Development Corporation.
Contractors: Gilbert-Ash Ltd. *Architects:* Yorke, Rosenburg & Mardall, F.F./A.R.I.B.A.

TRETOLIN PAINT

APPLIED DIRECT TO NEW ASBESTOS CEMENT · CONCRETE Etc.

TRETOL LTD., 12-14 North End Road, London, N.W.11. Phone: Speedwell 4621 (5 lines).
Works: Slough, Bucks.

Cardinal Griffin School, Canton Street, Poplar, E.14

Architect: David Stokes, F.R.I.B.A.

Contractors: C. Miskin & Sons

WINCILATE SLATE CILLS

OUR SPECIALITY - *a combined cill and window board which has qualities which make it extremely attractive for the modern designer. A natural material, it has excellent wearing qualities, cannot harbour germs, saves labour in fixing, always looks neat and clean cut.*

Slate is an ideal material for cills in modern buildings and has been used extensively in the Cardinal Griffin School at Poplar as well as in Offices, Hospitals and Schools throughout the Country.

Manufacturers: **THE BOW SLATE & ENAMEL CO., LTD.**

Office and Works: BRITISH RAILWAYS DEPOT, OLD FORD ROAD, BOW, LONDON, E.3. *Phone: ADVance* 2203/4/5

CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

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

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

COUNTY BOROUGH OF SWANSEA.
BOROUGH ARCHITECT'S DEPARTMENT.

Applications are invited for the post of DEPUTY BOROUGH ARCHITECT. The salary will be £1,166 13s. 4d. per annum, rising by two annual increments of £66 13s. 4d. and one of £33 6s. 8d. to £1,333 6s. 8d. per annum. Applicants must be Fellows or Associates of the Royal Institute of British Architects, and possess wide and thorough experience in the service of a Local Authority. They should also be under 45 years of age, unless in Local Government service.

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

The appointment may be terminated by three months' notice by either party.

Terms and conditions of the appointment and forms of application may be obtained from the Borough Architect (Mr. H. T. Wykes, F.R.I.B.A.), Guildhall, Swansea.

Applications, accompanied by copies of three recent testimonials, must be delivered to the undersigned not later than Tuesday, 31st March, 1953.

Canvassing, directly or indirectly, will disqualify.

T. B. BOWEN,
Town Clerk.

Guildhall, Swansea.
12th March, 1953. 8384

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.

PLANNING OFFICERS, Grade III (up to £837 10s.) and TECHNICAL ASSISTANTS (up to £696). Professional qualifications (A.R.I.B.A., A.R.I.C.S. and/or A.M.T.P.I.) required. Application forms for return by 14th April, and particulars from Architect, AR/EK/P/4, County Hall, S.E.1. (273) 8390

NDOLA MUNICIPAL COUNCIL.
APPOINTMENT OF ARCHITECT.

Applications are invited for the above appointment in the Town Engineer's Department, at a salary of £1,020×£48—£1,230 per annum, the commencing salary to be fixed according to qualifications and experience, plus a temporary cost-of-living allowance, at present £7 for a single person, rising to £14 10s. for a married person with three children.

The appointment would be subject to a six months' probationary period of service and to Council's Service Conditions, as may be amended from time to time; particulars of which may be had on application to the Overseas Technical Service, 5, Welldon Crescent, Harrow, Middlesex.

Applications, stating name, age, marital status, qualifications, past and present appointments, with full details of experience and time within which duties could be commenced, and accompanied by copies of three recent testimonials and a medical certificate of fitness, should reach me not later than Tuesday, the 21st April 1953.

EDWARD C. BARLOW,
Town Clerk.

P.O. Box 197, Ndola, Northern Rhodesia. 8370

LANCASHIRE COUNTY COUNCIL.

LANDSCAPE ARCHITECTS, A.P.T., VII (£710-£785), and A.P.T., VI (£670-£735), required at Preston in Planning Department.

Duties include preparing landscape proposals for Town Maps, land reclamation schemes, mineral workings, tips and new development.

Applicants should possess A.I.L.A., or equivalent. Experience of planning an advantage. Salary according to qualifications and experience.

Applications (stating post applied for), giving two referees, to the County Planning Officer, East Cliff County Offices, Preston, by 8th April, 1953. 8406

IMPERIAL WAR GRAVES COMMISSION require QUANTITY SURVEYORS for France (Arras) and Belgium (Brussels). Salary £628, rising to £970, entry up to £875 according to age, plus foreign local allowance, at present £385 for married man or £200 for single man. Candidates should be A.R.I.C.S. or equivalent. Thorough knowledge of French required.

Duration of appointments two to three years. Duties consist mainly of site measurement and settlement of final accounts on term contracts on major maintenance works.

Apply: Appointments Officer, Imperial War Graves Commission, Wooburn House, Wooburn Green, High Wycombe, Bucks. 8354

CITY OF LEEDS.
CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments:—

CHIEF QUANTITY SURVEYOR, Grade C. Salary scale: £1,050 to £1,250 p.a.

Candidates must be Professional Members of the Royal Institution of Chartered Surveyors, and must have had considerable experience in large scale contracts. The successful candidate will be in charge of the Quantity Surveyor's Section, and only those who have had wide experience in the profession and are accustomed to supervising a large staff need apply.

ASSISTANT QUANTITY SURVEYOR, A.P.T., V. £595 to £645 p.a.

Candidates should be experienced in all branches of Quantity Surveying.

ASSISTANT ARCHITECT, A.P.T., VIII. £760 to £835 p.a.

Candidates must be Registered Architects and should have had a wide experience in schemes of Multi-Storey Flats.

The payment of salary increments will be subject to satisfactory service, and will be granted normally with effect from the 1st April following the completion of 6 months' service.

The appointments are subject to the Local Government Superannuation Act, 1937, and the successful applicants will be required to pass a medical examination.

Application forms may be obtained from the City Architect, Priestley House, Quarry Hill, Leeds, 9, to whom they should be returned, together with copies of three recent testimonials, not later than 10 a.m. on Thursday, 2nd April, 1953.

Canvassing in any form, either directly or indirectly, will be a disqualification.

R. A. N. LIVETT, A.R.I.B.A.,
City Architect.

Priestley House, Quarry Hill, Leeds, 9.
11th March, 1953. 8395

DEVON COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the undermentioned appointments on the permanent staff. Conditions of service and salaries are in accordance with the National Joint Council Scheme for Local Authorities:—

ONE ASSISTANT ARCHITECT, Grade A.P.T., IX (£815-£935 per annum).

ONE ASSISTANT ARCHITECT, Grade A.P.T., VI (£670-£735 per annum).

ONE ARCHITECTURAL ASSISTANT, Grade A.P.T., III (£525-£570 per annum).

ONE JUNIOR SURVEYING ASSISTANT, Grade A.P.T., I (£465-£510 per annum).

Application forms, with full particulars of qualifications and experience required for the various posts, are obtainable from the County Architect, 97, Heavitree Road, Exeter, and must be returned to him by Friday the 10th April, 1953.

Other things being equal, preference will be given to disabled persons.

Canvassing, directly or indirectly, will disqualify.

H. G. GODSALL,
Clerk of the County Council.

The Castle, Exeter.
12th March, 1953. 8398

MIDLANDS ELECTRICITY BOARD.

Birmingham and District Sub-Area require an ASSISTANT BUILDING SUPERINTENDENT. An extensive experience is required in the supervision of all building, maintenance and constructional work principally associated with Offices, Showrooms, Depots, Sub-stations and Steel Transformer Kiosks. A full apprenticeship should have been served in the Building trade and a knowledge of labour conditions and prices of materials is essential. Salary: £692/£716. N.J.B. Grade N.13 (Superannuable).

Apply, within 14 days, stating age, experience, salary and present position, to: Emil Braathen, Manager, Midlands Electricity Board, Birmingham and District Sub-Area, 14, Dale End, Birmingham, 4.

A. STEPHENS,
Secretary.
8397

SOUTH-WEST ESSEX TECHNICAL COLLEGE, FOREST ROAD, WALTHAMSTOW.

Required, as soon as possible, a Full-time LECTURER in the Legal Aspects of Surveying. Ability to take classes in Town and Country Planning Law advantageous. The work will consist of instruction in the Department of Architecture and Building of the College largely to Full-time and Part-time Students preparing for the examination of the Royal Institution of Chartered Surveyors and other professional bodies.

Salary according to the Burnham Technical Report, 1951, Lecturer Grade, £940×£25 to £1,040, plus London allowance.

Applications (no forms), giving full particulars of training and experience, should be submitted immediately to the Clerk to Governors at the College. 8403

CAERNARVONSHIRE COUNTY COUNCIL.

Applications invited for appointment as QUANTITY SURVEYOR in the County Architect's Department. Salary within Grade A.P.T., VI (£670-£735).

Applicants must be Members of Royal Institute of Chartered Surveyors (Quantities Sub-Division) or equivalent, experienced in preparing Bills of Quantities and estimates, valuation of works in progress, and settlement of final accounts.

Further particulars and forms of application, returnable by 8th April, from the Clerk of the County Council, County Offices, Caernarvon. 8404

MONMOUTHSHIRE COUNTY COUNCIL.
APPOINTMENT OF ARCHITECTURAL ASSISTANTS.

Applications are invited for the following posts in the County Architect's Department under N.J.C. Conditions:—

ONE SENIOR ARCHITECTURAL ASSISTANT. Salary: £760-£835 (A.P.T., VIII).

ONE ARCHITECTURAL ASSISTANT. Salary: £710-£785 (A.P.T., VII).

Forms of application, particulars of posts and Conditions of Service, can be obtained from the undersigned. Applications, together with copies of three testimonials, must be forwarded to the County Architect, Queen's Hill, Newport, Mon., not later than 11th April, 1953.

VERNON LAWRENCE,
Clerk of the Council.

County Hall, Newport, Mon. 8400

MIDDLESBROUGH EDUCATION COMMITTEE.
ASSISTANT ARCHITECT.

Assistant Architect, Grade A.P.T., VI, required in the Education Offices (Education Architect: P. R. Middleton, Dipl.Arch., A.R.I.B.A.). The Building Programme in hand offers excellent opportunities in the design and construction of modern school buildings.

Forms of application and conditions of service obtainable from the Director of Education, Education Offices, Woodlands Road, Middlesbrough, to whom completed forms should be returned not later than 8th April, 1953. 8402

BOROUGH OF ILFORD.
STAFF APPOINTMENTS.
BOROUGH ENGINEER'S DEPARTMENT.
TEMPORARY ARCHITECTURAL DRAUGHTSMAN, GRADE A.P.T., I.

Applicants must be capable draughtsmen and have had sound drawing office experience in general architectural works, particularly in regard to working drawings.

The salary will be in accordance with A.P.T., Grade I, £465×£15—£510 per annum, plus London weighting.

The appointment will be whole-time, superannuable, subject to one month's notice on either side, to the National Scheme of Conditions of Service, and to medical examination.

Applications on forms obtainable from the Town Clerk, Town Hall, Ilford, Essex, should be submitted not later than the 7th April, 1953.

N.B.—London weighting is £10 per annum at ages 16 to 20 years, £20 per annum ages 21 to 25 years, and £30 per annum ages 26 years and over. 8406

DERBY CORPORATION BOROUGH
ARCHITECT'S DEPARTMENT.

JUNIOR QUANTITY SURVEYOR, Grade III/IV/V. Salary: £525 to £645 per annum, commencing at £525, and national conditions of service. Permanent staff appointment, subject to one month's notice, and pensionable subject to medical examination. Qualifications: R.I.C.S. Intermediate Examination standard. Experienced in abstracting and billing, measuring on site, preparation of final accounts, and taking off quantities for small building works. Forms of application obtainable from, and to be returned to, the Borough Architect, The Council House, by 8th April, 1953. Canvassing disqualifies.

E. H. NICHOLS,
Town Clerk.
8407

COUNTY BOROUGH OF EAST HAM.

SENIOR ARCHITECTURAL ASSISTANT—Salary £670—£735 (Grade A.P.T. VI).

ARCHITECTURAL ASSISTANT—Salary £595—£645 (Grade A.P.T. V).

ENGINEERING ASSISTANTS (2)—Salary £595—£645 (Grade A.P.T. V).

ENGINEERING ASSISTANT—Salary £525—£570 (Grade A.P.T. III).

QUANTITY SURVEYOR—Salary £555—£600 (Grade A.P.T. IV).

London Weighting is paid in addition. Salaries in excess of the minima may be paid according to the qualifications and experience of successful candidates.

Subsistence allowances may be paid to persons appointed if unable to obtain suitable housing accommodation.

Further details and form of application (returnable by Monday, 13th April, 1953) obtainable from the Town Clerk, Town Hall, East Ham, E.6. 8346

AIR MINISTRY: WORKS DEPARTMENT.

ARCHITECTURAL DESIGNER/DRAUGHTSMEN required in London and Provinces in Designs Branch by Air Ministry Works Department. Applicants should have several years experience in preparation of working drawings, details and layouts for permanent and semi-permanent buildings. Opportunities for overseas service for which allowances are payable. Salaries up to £733 p.a., starting pay dependent upon age, qualifications and experience. Overtime and extra duty allowance payable.

Apply, quoting Order No. Borough 3673/KB, stating age, qualifications and previous appointments (with dates) to any Employment Exchange. 8435

COUNTY BOROUGH OF SOUTHAMPTON requires under N.J.C. service conditions: ARCHITECTURAL ASSISTANT, salary £495—£540 (A.P.T. II). Should have had experience in Local Authority Housing and preference will be given to student members of the R.I.B.A. Apply, with copies of two testimonials, to the Borough Engineer, Civic Centre, Southampton, by Monday, 13th April, 1953. 8343

SOMERSET COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments:—

(*a*) TWO ARCHITECTURAL ASSISTANTS—Salary £670—£735 (A.P.T. Grade VI).

(*b*) ONE ARCHITECTURAL ASSISTANT—Salary £595—£645 (A.P.T. Grade V).

(*c*) ONE ARCHITECTURAL ASSISTANT—Salary £465—£510 (A.P.T. Grade I).

(*d*) ONE ASSISTANT QUANTITY SURVEYOR—Salary £670—£735 (A.P.T. Grade VI).

(*e*) ONE ASSISTANT ENGINEER (Heating and Lighting)—Salary £595—£645 (A.P.T. Grade V).

Candidates for:—

(*a*) and (*b*) must be Associate Members of the Royal Institute of British Architects and/or Registered Architects with general experience in the office of a Local Authority.

(*c*) must have had a good architectural training.

(*d*) must have passed the Final Examination of the R.I.B.A. (Quantities Division) and should preferably have had experience in Local Authority work.

(*e*) must have experience in Hot Water Heating, Ventilating, H & C water and cooking installations. Preference will be given to candidates with knowledge of Electric Lighting and power installations, also to those holding A.M.I.H.V.E. and/or I.E.E. qualification.

Applications, giving age, qualifications, past and present appointments, and the names and addresses of two technical referees, should be forwarded to reach me not later than Monday, 13th day of April, 1953.

The appointments are superannuable and subject to N.J.C. Conditions of Service. Canvassing disqualifies.

R. O. HARRIS, F.R.I.B.A.,
County Architect.

Park Street, Taunton. 8443

CITY OF BRADFORD.

Applications are invited for the appointment of a SENIOR TOWN PLANNING ASSISTANT (Post No. 15) at a salary in accordance with Grade A.P.T., VI (£670-£735 per annum).

Candidates must be A.R.I.B.A. Experience in the design of houses, flats, and shops, and the layout of housing estates is essential, and general planning experience, particularly as regards redevelopment of Central Areas, will be an advantage.

The appointment is superannuable. Applications on the prescribed form to be obtained from the City Engineer and Surveyor, Town Hall, Bradford, together with three testimonials, must be received by the undersigned not later than 8th April, 1953. No housing accommodation will be provided by the Corporation.

W. H. LEATHEM,
Town Clerk.

Town Hall, Bradford. 8426

HEMEL HEMPSTEAD DEVELOPMENT CORPORATION.

Applications invited for following posts in Chief Architect's Department:—

CLERK OF WORKS. Salary scale: £545-£685. Practical experience of housing contracts and commercial development essential. Applications to be endorsed "Vacancy No. 34."

JUNIOR CLERK OF WORKS. Salary scale: £320-£445. Practical experience of building construction, particularly housing. Applications to be endorsed "Vacancy No. 35."

Conditions of service similar to Local Government Charter. Opportunity of entering or continuing in Local Government Superannuation Fund. Applications, together with names and addresses of two referees, to be received by undersigned by Friday, 10th April.

W. O. HART,
General Manager.

Westbrook Hay, Hemel Hempstead, Herts. 8425

GOLD COAST LOCAL CIVIL SERVICE.
TOWN PLANNING OFFICER, Gold Coast.

Vacancies for Town Planning Officers exist in the Local Civil Service of the Gold Coast. Appointments are on contract in the salary scale £1,130 to £2,020 per annum gross, point of entry determined by qualifications and approved experience. A gratuity of £37 10s., for each completed 3 months' satisfactory service, also payable.

Free first-class passages are provided for the officer, his wife and children up to 3 in number under the age of 13. Government quarters if available are provided at a rental of £75 to £90 per annum. Leave is granted at the rate of 7 days for each month of resident service after a tour of 18 to 24 months.

Candidates, who should be under 45, must hold the qualifications of A.M.T.P.I., and either A.R.I.B.A., A.M.I.C.E., or A.M.I.Mun.E., and have had at least 3 years' experience in the Planning Office of a Public Body or Planning Consultants.

Apply in writing to the Director of Recruitment, Colonial Office, Great Smith Street, London, S.W.1, giving briefly age, qualifications and experience. Mention the reference number (CDE 62/13/01). 8427

URBAN DISTRICT COUNCIL OF COULSDON AND PURLEY.
ENGINEER AND SURVEYOR'S DEPARTMENT.
RE-ADVERTISEMENT.

Applications are invited from suitably qualified persons for the undermentioned appointment:—

SENIOR ARCHITECTURAL ASSISTANT, Grade A.P.T., V/Va (£595×£15/£20—£685).

Applicants must be Chartered or Registered Architects, experienced in the preparation and execution of Municipal Housing Schemes by Contract, the maintenance of Public Buildings, etc. Preference will be given to candidates who have passed the Final Examination of the Royal Institute of British Architects.

The appointment will be subject to the Scheme of Conditions of Service; the Local Government Superannuation Acts; medical examination, and to termination by one month's written notice on either side; and will be to the permanent staff. London area weighting will be payable in addition to the salary stated above.

Applications on forms to be obtained from the Engineer and Surveyor to the Council, giving age, details of experience, qualifications, etc., accompanied by copies of three recent testimonials, must be received by him not later than first post on Tuesday, 7th April, 1953.

Canvassing in any form will be a disqualification.

ERIC F. J. FELIX.
Clerk of the Council.

Council Offices, Purley, Surrey.
March, 1953. 8424

TEMPORARY STRUCTURAL ENGINEER FOR THE GOVERNMENT OF CEYLON.

Applications are invited for a post of TEMPORARY STRUCTURAL ENGINEER, Public Works Department, Ceylon.

Qualifications and experience required:—Candidates should be Corporate Members of the Institution of Civil Engineers or of the Institution of Structural Engineers, or should hold a University degree in Engineering exempting from Sections A and B of the Examinations of the Institution of Civil Engineers, and must have had at least 15 years' professional experience in Structural designs for building, during which time they must have been for some years in a high responsible position. They should be capable of taking full charge of a Structural designs office and being fully responsible for all the designs produced in the office.

Age:—

Candidates should not be more than 45 years of age on 19th September, 1952.

Emoluments:—

Non-Ceylonese (other than Indians and Pakistanis), £1,000×5 of £40—£1,200 per annum.

Ceylonese, Indians and Pakistanis, Rs.13,200×3 of Rs.600—Rs.15,000 per annum.

Terms of appointment:—

Appointment will be on agreement for a period of 4 years, with possible extension of 4 years, but terminable by the Government at any time on giving 3 months' notice or 3 months' salary, and terminable by the officer appointed under conditions more fully set out in the form of agreement and schedule attached thereto.

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

Applications for the above post should reach the High Commissioner for Ceylon in the United Kingdom on or before 6th May, 1953. 8408

STATES OF GUERNSEY.
PUBLIC WORKS DEPARTMENT.

Applications are invited for the following permanent pensionable appointments in the Public Works Department:—

(1) ARCHITECTURAL ASSISTANT. Salary: £685 per annum, rising by three annual increments of £20 and one of £15 to £760.

Applicants must be Registered Architects, preferably Corporate Members of the Royal Institute of British Architects, and must have a thorough knowledge of architectural work with practical experience in design and the preparation of working drawings and specifications.

Candidates must not be over 45 years of age, and the successful applicant will be required to pass a medical examination.

Appointments will be terminable by one month's notice on either side.

Applications, appropriately endorsed according to the position applied for, together with copies of two recent testimonials, should reach the States Supervisor, States Office, Guernsey, C.I., not later than Monday, 13th April, 1953. Canvassing in any form will disqualify. 8396

CITY OF BIRMINGHAM EDUCATION COMMITTEE
APPOINTMENT OF STAFF TO ARCHITECT'S BRANCH.

Applications are invited for the following appointments in the Architect's Branch of the Birmingham Education Department (Architect to the Committee: Mr. J. R. Sheridan-Shedden, A.R.I.B.A.).

(i) ASSISTANT ARCHITECT
Salary: A.P.T., V (£595-£645)

Applicants must be Registered or Chartered Architects, and should possess a good knowledge of construction and design and of the preparation of working drawings for large building contracts.

(ii) TECHNICAL ASSISTANTS.
Salary: General Division (£160-£450, according to age).

Applicants should be good draughtsmen, with some experience in the preparation of drawings in an architect's office.

(iii) CLERK OF WORKS.
Salary: Miscellaneous, Grade VI (£525×£15—£585).

Applicants should have a thorough technical training in building construction and materials and experience of large building contracts.

(iv) ASSISTANT CLERK OF WORKS (Temporary).
Salary: Miscellaneous, Grade IV (£440-£495).

Applicants should have had a thorough technical training and experience in building construction materials.

Application forms, which may be obtained from the undersigned on receipt of a stamped addressed envelope, must be returned not later than three weeks after the appearance of this advertisement.

E. L. RUSSELL,
Chief Education Officer.

Education Office, Margaret Street,
Birmingham, 3. 8401

GOLD COAST GOVERNMENT.
VACANCIES FOR ARCHITECTS, PUBLIC WORKS DEPARTMENT.

Applications are invited for vacancies in the post of ARCHITECTS in the Public Works Department.

Duties: The Architects will be required to carry out investigation for plan, design and supervise the construction of new Government buildings arising in connection with the Government's development programme, such as quarters, offices, hospitals, schools, halls, reading rooms, etc. They will also be responsible for the preparation of working drawings and specifications, and the administration of contracts.

Qualifications: Candidates must be Associates of the Royal Institute of British Architects. Previous experience of Government or Local Authority work is desirable.

Terms of Service: These posts are "Development Posts" for implementation of specific projects under the Gold Coast Development Plan. The appointments will be on contract/gratuity terms for one tour of 18 to 24 months, with a possible extension to two tours. Salary will be in the range £1,250-£2,020 per annum (consolidated), according to age, qualifications and experience. A gratuity at the rate of £37 10s. for each completed three months of satisfactory service will be payable on final termination of the contract.

Free passages on first appointment and on leave will be provided for the officer and his wife once each way during each tour of service. Officers will normally be required to travel by air. Free air passages will also be provided for a maximum of three children under 13 years of age.

Vacation leave with pay: seven days for each month of service. Free medical and dental attention provided for officer and family. Furnished quarters available at low rental. Income tax at local rates. Kit allowance on first appointment £30-£60, according to salary.

Intending candidates should apply in writing to the Commissioner for the Gold Coast, Melbourne House, Aldwych, London, W.C.2, for a form of application. 8444

PORTLAND URBAN DISTRICT COUNCIL.
TECHNICAL ASSISTANT.

Applications are invited for the above appointment in the Engineer & Surveyor's Department on A.P.T. Grade II (£495—£540).

Candidates should have experience including design and construction of housing schemes and estate works, quantities, measurement, checking Contractors' accounts, etc., and preference will be given to those holding the Intermediate Certificate of a recognised professional body.

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

Applications giving full details of age, education, experience, etc., and the names and addresses of two Referees should be addressed to the Engineer & Surveyor, Council Offices, Portland, Dorset, to reach him by 8th April, 1953.

C. H. MEYER,
Clerk of the Council.

19th March, 1953. 8438

Tenders for Contracts

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

BRISTOL SCHOOL BUILDING PROGRAMME.

The Authority's School Building Programme for 1953-54 includes several primary and secondary school projects with starting dates at intervals throughout the year. Each project is a complete unit, but forms part of a scheme to be completed in subsequent years. The projects in the present programme range in size from 12,800 sq. feet to 31,000 sq. feet.

Contractors who can provide evidence of having had experience in the erection of steel and reinforced concrete framed buildings of this type and who are desirous of being invited to tender are invited to submit their names to the undersigned from whom further particulars of the projects can be obtained.

J. NELSON MEREDITH, F.R.I.B.A.,
City Architect.

The Council House,
College Green, Bristol, 1.
18th March, 1953. 8347

Architectural Appointments Vacant

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

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

THE CO-OPERATIVE WHOLESALE SOCIETY, LTD., invite applications for appointments as ASSISTANT ARCHITECTS on the staff of the Manchester Architect's Department at a commencing salary of £550 to £625 per annum, according to experience and ability.
Applicants must have had good practical office experience, possess a sound knowledge of building construction, and be able to prepare working drawings and details from sketch plans.
The appointment is permanent with prospects of promotion. The successful candidate will be required to undergo a medical examination for entry into a compulsory superannuation scheme.
Applications, stating age, experience, and qualifications, to be addressed to Mr. G. S. Hay, A.R.I.B.A., Chief Architect, Co-operative Wholesale Society, Ltd., 1, Balloon Street, Manchester. 8352

SENIOR ASSISTANT wanted in Chelmsford Architect's office. Good draughtsmanship and office experience essential. Reply stating age, experience and salary required to Box 8439.

MAJOR Building and Civil Engineering Company require the services of an Assistant Architect for their Associated Company in West Africa. Must have had at least two years' experience with Practising Architect or Local Authority. Contracts of 18 months' duration with probable opportunity of renewal. Successful candidate to proceed overseas unaccompanied by wife and/or family. Age preferably 24-30. Applications in writing stating age and full details of experience to Box 8442.

ARCHITECTURAL ASSISTANT. Intermediate standard. 3 to 4 years' office experience required for detailing contemporary work in West End office. Neat and quick draughtsman essential. Salary according to ability. Box 8441

CANADA. Qualified Architectural Draughtsmen required by Winnipeg Architects, capable of carrying through complete working drawings and details from preliminary design studies stage. Candidates under 30 years with design training would be preferred and written applications giving full personal details, training and experience should be addressed Box 8440.

CHIEF ARCHITECTURAL ASSISTANT wanted in private practice. Experience in General and Commercial Work essential. Write, stating age, experience, and salary required. Peirce & Son, Architects and Surveyors, 30, St. Petersgate, Stockport. 8429

WANTED, urgently, JUNIOR ASSISTANT for busy private practice in North-West Kent. Reply stating age, experience, and salary required, to Box 8431.

1 SENIOR ASSISTANT, R.I.B.A. Final standard, required in Central London Architect's office. Able to prepare all scale working drawings and supervise works on site. Ability in design and construction necessary. JUNIOR ASSISTANT also required. Write, giving full particulars and salary required, to Box 8430.

QUALIFIED R.I.B.A. and Registered ASSISTANT ARCHITECT required by British Railways for service in Architect's office, Euston. Applicant must be competent to carry out work from the scheme to contract stage with minimum of supervision. Commencing salary £714 15s. Certain residential and free travelling facilities given. Apply Civil Engineer, British Railways, London Midland Region, Euston Grove, London, N.W.1. 8419

ARCHITECTURAL ASSISTANT required. Must be qualified, have good experience in design and working drawings, and be able and willing to accept responsibility. Salary about £600, but according to experience. T. H. Thorpe & Partners, 23, St. James's Street, Derby. 8414

ARCHITECTURAL ASSISTANT required. Rural practice, North Wales. Not less than Intermediate standard. Box 8422.

ARCHITECTURAL DRAUGHTSMAN required, with at least 5 years' office experience. Apply in writing to R. J. Beswick & Son, Architects, 10, Victoria Road, Swindon, Wilts., stating experience and salary required. 8420

CHELTENHAM COLLEGE OF ART, St. Margaret's Road. Listed School of Architecture. Wanted, immediately, Full-time TEACHER OF ARCHITECTURE. Temporary post. Further particulars apply Principal. 8415

EXPERIENCED ARCHITECTURAL ASSISTANT required in private office in Guildford for Working, Detail and Design drawings. Apply, stating age, experience, salary required, date available. Box 8409.

ARCHITECTURAL ASSISTANT, with own car, required by Architects, with considerable hospital, ecclesiastical and general practice, in North Wales office. Initiative and willingness to accept responsibility primary considerations. Apply immediately with particulars, and state starting salary required, to Box 8410.

Architectural Appointments Wanted

TEMPORARY or part-time employment required by ASSISTANT, with sound knowledge of building construction, structural design, and surveying and levelling for building works. Box 8322.

A. R.I.B.A., Dip. Arch. (Glasgow), thorough training and wide experience, desires post as SENIOR ASSISTANT in private practice. Box 678.

ASSOCIATE (Dipl. Arch. Dist.) (30) requires position in small or medium size office. 4½ years' experience in housing, flats construction and school work. Box 680.

EXPERIENCED ARCHITECTURAL ASSISTANT (32), private practice, seeks position country practice, W./S.W. Accustomed full responsibility site and office. John Hook, Rosebank, Gt. Stukeley, Huntingdon. 679

Other Appointments Vacant

4 lines or under, 10s. 6d.; each additional line, 2s.

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

QUANTITY SURVEYING.—Simon-Carves, Ltd., have vacancies in their Quantities Office for a Senior and a Junior Worker-up. Applicants for the senior post must have professional office experience, strictly S.M.M. Excellent scope and working conditions; a pension scheme is in operation. Initial salary will depend on experience and qualifications. Brief relevant details should be sent to Staff and Training Division (Ref. VB7), Simon-Carves, Ltd., Cheadle Heath, Stockport. 8399

SENIOR BUILDING SURVEYOR required by Chartered Surveyors, with West End and City offices. Able to work on own initiative and deal with Schedules of Dilapidations, Estate repairs and alterations, structural surveys and general correspondence. Reply, giving particulars of past experience and salary required. Box 8417.

DRAUGHTSMAN (male or female) required by Chartered Surveyors (West End offices). Knowledge of building construction, able to measure up on site and plot. Salary according to experience. Apply, giving particulars of past experience. Box 8418.

QUANTITY SURVEYOR, qualified and with experience, required immediately, to take charge of department. Also WORKER-UP (Intermediate standard) required in same department. Staff pension scheme in operation. Full details and salary required to Jennings, Homer & Lynch, Chartered Architects and Corporate Surveyors, 3 and 5, Church Street, Brierley Hill, Staffs. Telephone B.H. 7545/6. 8412

CLERK OF WORKS required by a firm of Architects with extensive practice. Varied and interesting work. Willingness to accept responsibility and act upon own initiative essential. Salary according to experience, and car allowance. Apply immediately, stating particulars of present employment and salary, Box 8411.

ESTATE MANAGER, educated, take charge, building work, repairs, etc. Write, giving history, experience. Box 8433.

SHOPFITTING DESIGNER, experienced store layout, perspectives, estimating, able to work on own initiative. Executive position—prospects of advancement. Salary according to ability, £700 to £800 per annum. Send details to Box 8428.

DRAUGHTSMAN required to assist Designer engaged in design and production of church, schools and domestic furniture and interiors. Apply, stating age, experience and salary, etc., to Walter-Symondson, Ltd., Braintree Road, Ruislip. 8346

Services Offered

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

SENIOR EXECUTIVE seeks responsible sales and administrative position in progressive company. Extensive personal connections with architects, Government departments, and local authorities. Excellent references. Box 7880.

SURVEYING and Levelling of Sites, Bills of Quantities, Variation Accounts, Survey of Buildings and Reports. Qualified Surveyor. LIV. 1839. Box 8195.

SURVEYING and Levelling of Building Sites and Measured Drawings undertaken by experienced Surveyor at moderate charges. Box 6583.

CONVERSIONS, ALTERATIONS, EXTENSIONS, and all small Building Contracts efficiently carried out at keen prices by enthusiastic South London builder. Parsons, 18, Maplestead Road, S.W.2. TUL. 3052 for immediate attention. 8423

ARCHITECT, honours graduate, offers part-time assistance. Designs, Working Drawings, Perspectives, etc. Terms arranged. Box 8413.

For Sale or Wanted

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

RECONDITIONED EX-ARMY HUTS, and manufactured buildings. Timber, Asbestos, Nissen type, Hall type, etc. All sizes and prices. Write, call, or telephone, Universal Supplies (Belvedere), Ltd., Dept. 25, Crabtree Manorway, Belvedere, Kent. Tel.: Erith 2948. 6803

ARCHITECT'S wooden Plan Chest of drawers, in three units. Imperial size. £15. Mersham 2601. 8421

Miscellaneous

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

A. J. BINNS, LTD., Specialists in the supply and fixing of all types of Fencing, Gates and Cloakroom Equipment. Harvest Works, 96/107, St. Paul's Road, N.1. Canonbury 2061.

PICTURE FRAMING.—Drawings, Maps, Photographs, etc., framed at short notice. Over 200 mouldings in stock. Samples and prices on request. Blackman, Harvey, Ltd., 11, Bateman's Buildings, Soho Square, London, W.1. GER. 3463. 8416

FLAT.—Hampstead gentleman wishes find other gentleman share. South aspect; reasonable rent. Waterloo 5000, extn. 6057. 8432

Educational Announcements

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

R.I.C.S., I.A.A.S., and I.Q.S. Exams.—Postal Courses conducted by the Ellis School (Principal: A. B. Waters, M.B.E., G.M., F.R.I.B.A.), 103B, Old Brompton Road, S.W.7. KEN. 4477/8/9. Descriptive Booklet on request. 7020

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

THE GLASGOW SCHOOL OF ARCHITECTURE,
DEPARTMENT OF TOWN PLANNING,
ROYAL TECHNICAL COLLEGE.
POST-GRADUATE COURSE FOR DIPLOMA IN TOWN PLANNING.

The Diploma may be taken either as a Full-time Day Course of one session (5 terms) or as a Part-time Course of two sessions. The Part-time Course involves a minimum attendance of two afternoons and three evenings per week. Both courses are recognised for exemption from the Final Examination of the Town Planning Institute.

Only candidates who have qualified for the Degree or Diploma in Architecture, or who have passed the Final Examination of the recognised professional body in (*a*) Architecture, (*b*) Engineering, or (*c*) Surveying, are eligible for admission.

A limited number of candidates, qualified as above or who have passed the Intermediate Examination of the Town Planning Institute, may be admitted to lectures only in preparation for the external Final Examination of the Town Planning Institute.

Fees:—Full-time Day Course: £42; payable, £10 10s. for summer term, £31 10s. for remainder of course.

Part-time course: £21 per session.

Lectures only: East subject, £1 10s. per term.

The courses will commence in the College on Monday, 13th April, 1953, at 5.30 p.m., when prospective candidates should present themselves for enrolment. Candidates will also be accepted for enrolment on Monday, 5th October, 1953, at 5.30 p.m. Prospectus, giving full particulars, may be obtained from the Registrar, Royal Technical College, Glasgow. 8391

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