# the architects' journal

for November 29th 1961 Vol. 134 No. 22 Building Exhibition Price 18.

**NEWMANS** 

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# **MORE COLD FACTS**



Shops and Flats, The Quadrant, St. Albans. Designed and constructed by the T. F. Nash group of companies

Throughout the winter of 1958-59 repeated cycles of freezing and thawing occurred during the construction of this shopping centre, the lowest recorded temperature being 24 deg. F., falling at night to 18 deg. F.

Despite the freezing weather experienced, the Contractors with the aid of FEBSPEED PLUS CEMENT FROSTPROOFER were able to continue erection work without a break right through the winter months.

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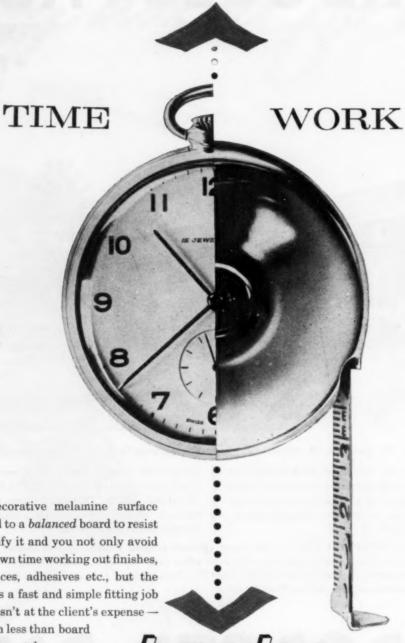


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# NEW FLATS FOR OLD



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T. E. North, Esq., O.B.E., F.R.I.B.A., Dist.T.P.,
Borough Architect for the County Borough of West Ham.

Contractor: Tersons Ltd., London, N.3.

In the East End of London, row upon row of dingy terraced houses are disappearing and being replaced by these attractive modern flats and in their erection, the old fashioned type of lime mortar has been replaced by a mortar plasticised with Februix Admix.

The use on this contract of a 1 - 6 cement sand mortar plasticised with Febmix Admix ensured maximum durability and bond strength with clean brickwork and uniform coloured joints and in construction, the highly plastic mortar helped to speed up erection and by the elimination of lime, material cost was reduced.

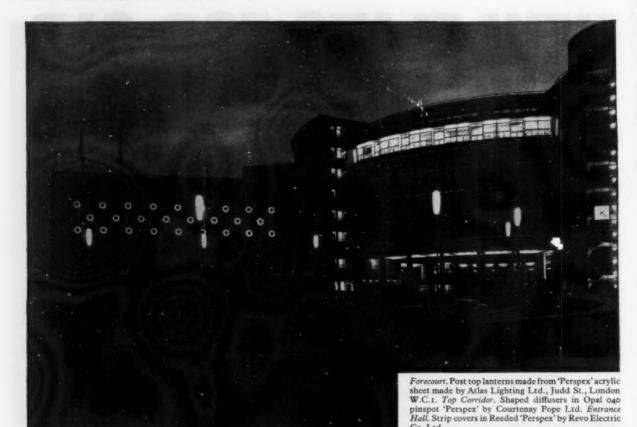




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# Where only the very best is good enough you'll see lighting fittings in 'Perspex'

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'Perspex' is the registered trade mark for the acrylic sheet manufactured by I.C.I.



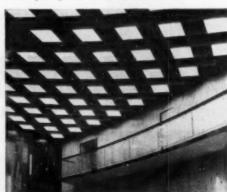
These photographs were taken at the B.B.C. Television Centre, Wood Lane, London W.12. Architects: Graham Dawbarn, Esq., C.B.E., Norman & Dawbarn in association with M. T. Tudsbery, Esq., C.B.E., Consulting Civil Engineer to B.B.C.

**FP77** 

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Corridors. Diffusers of Opal pinspot 'Perspex' acrylic sheet on lighting fittings made by Arrow Plastics Ltd. Studio Doors. 'Perspex' faced internally illuminated signs above 'Darvic' p.v.c. panels on the studio doors.



Main Reception Hall. Diffusers in Opal 040 'Perspex' acrylic sheet on ceiling lighting fittings made by Messrs. Revo Electric Co. Ltd., Tipton, Staffs.

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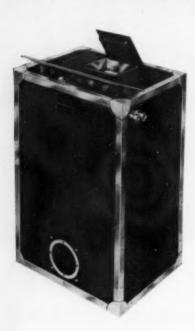
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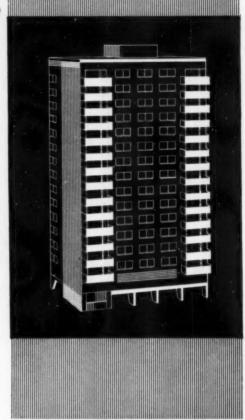


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TGASEE

The Architects' Journal (Supplement) November 29 1961

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The Architects' Journal (Supplement) November 29 1961

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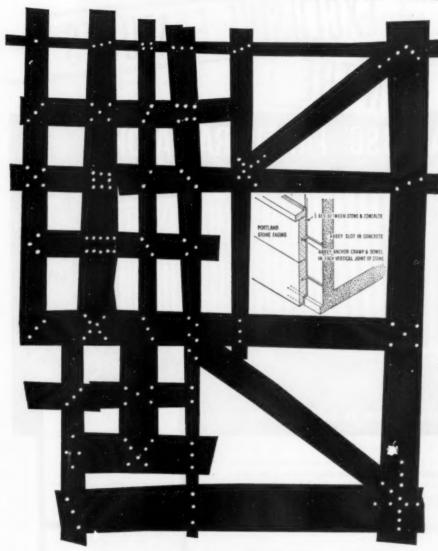
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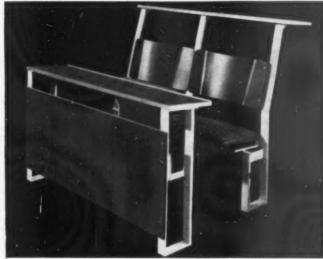
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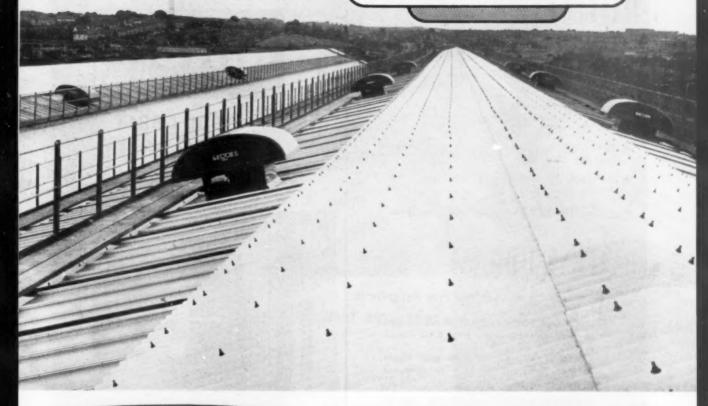
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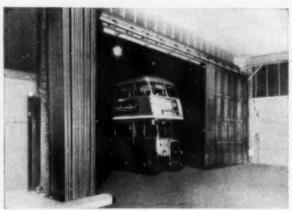
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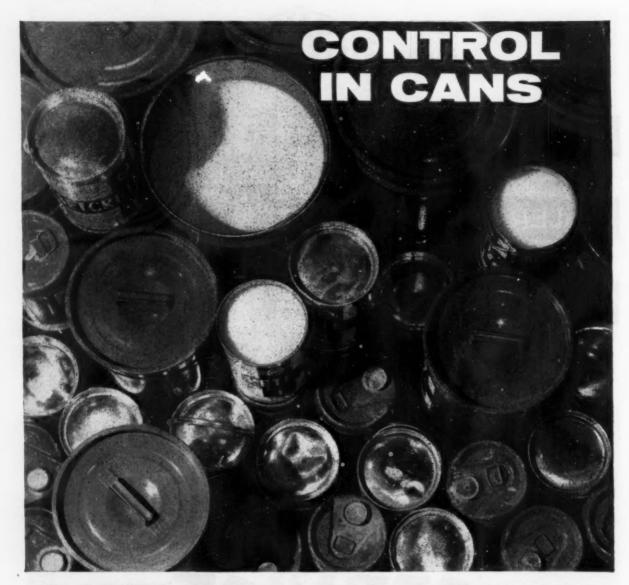
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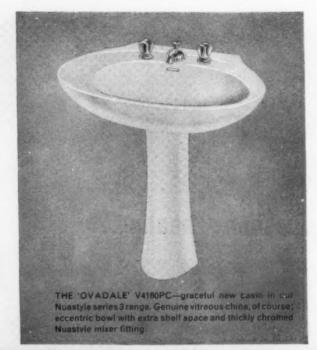
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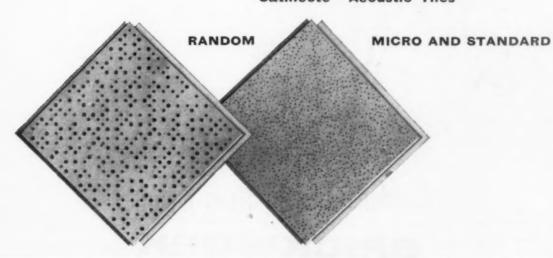


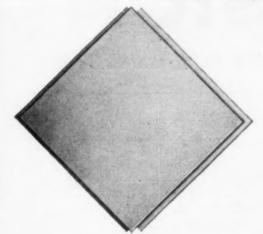
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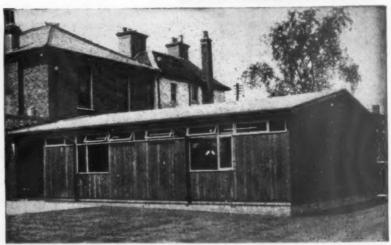
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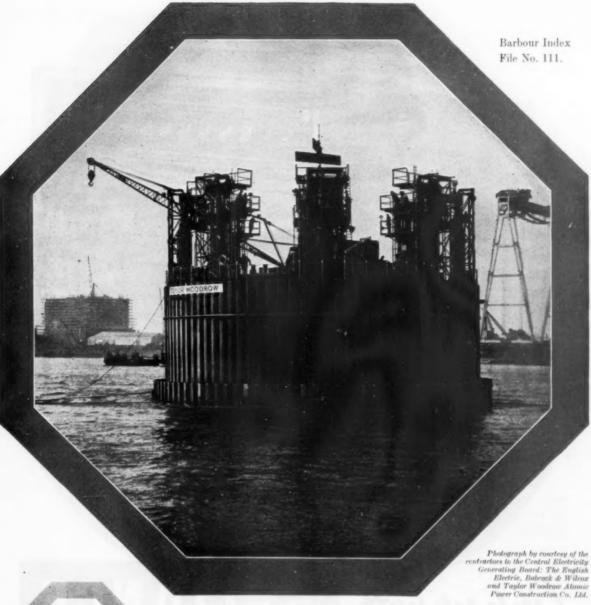
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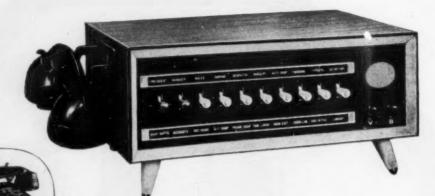
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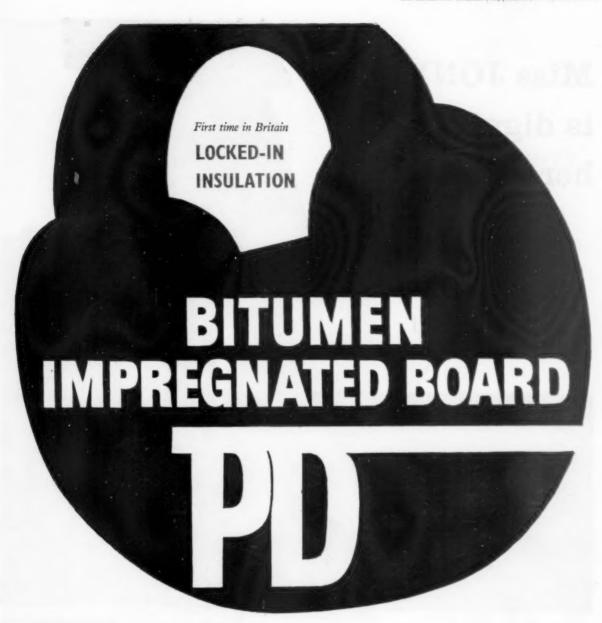
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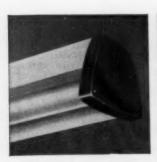
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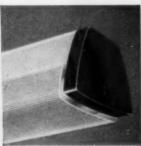




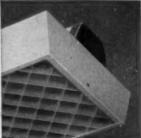
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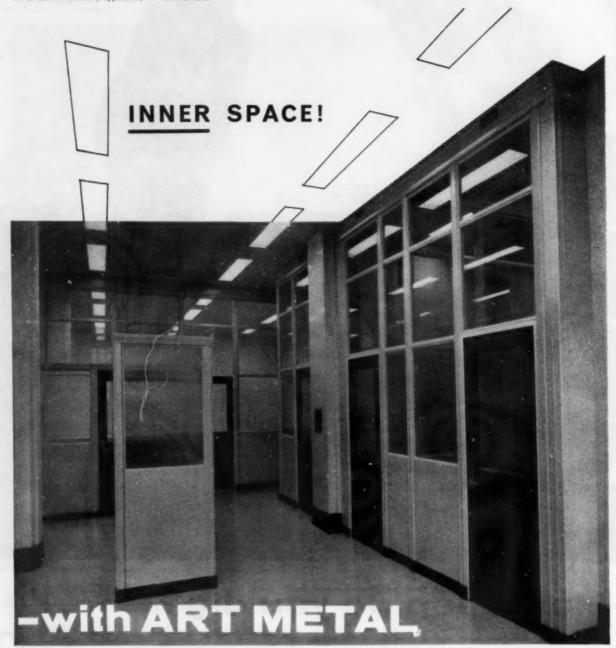
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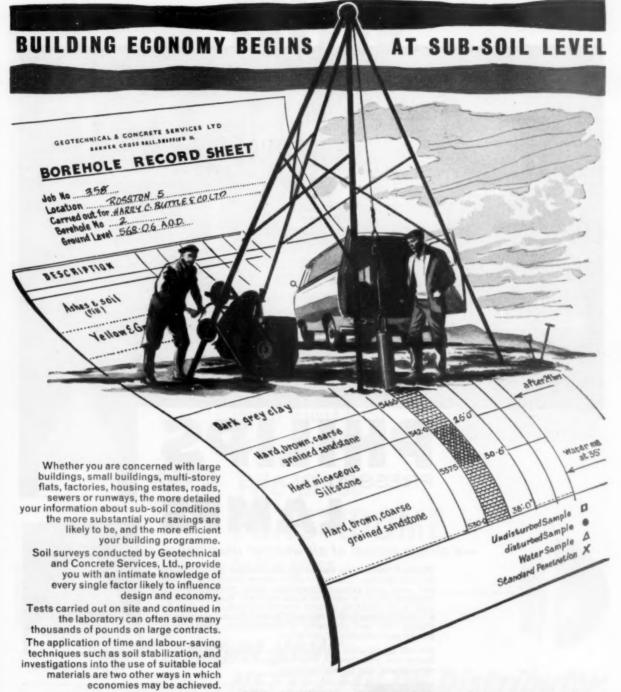
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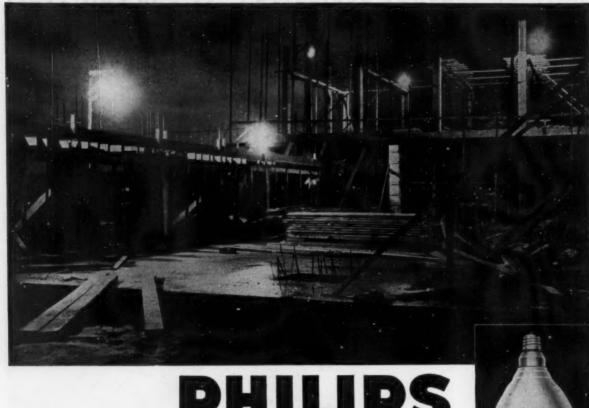
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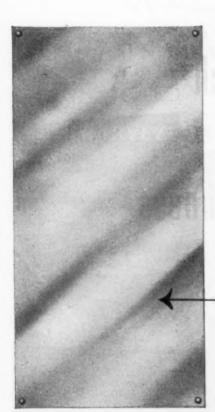


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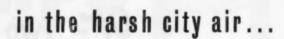


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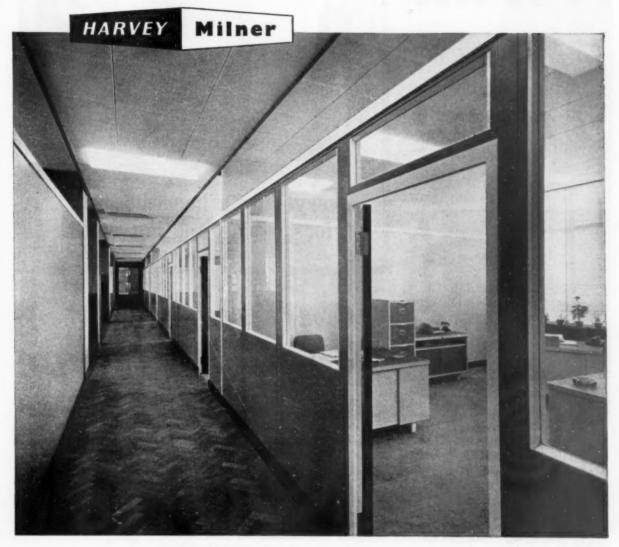
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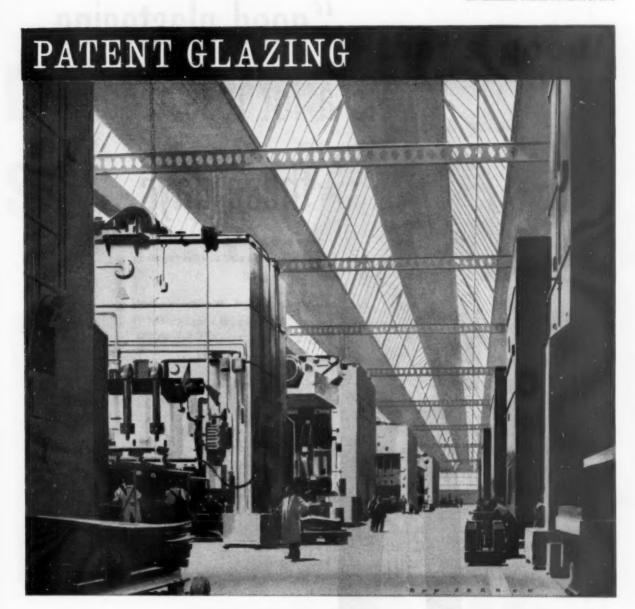
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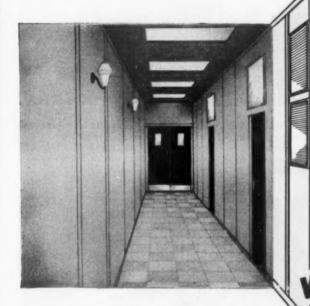
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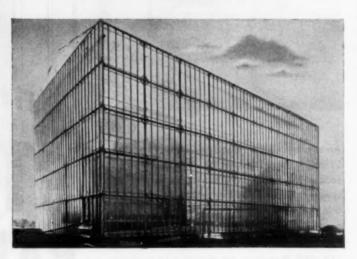
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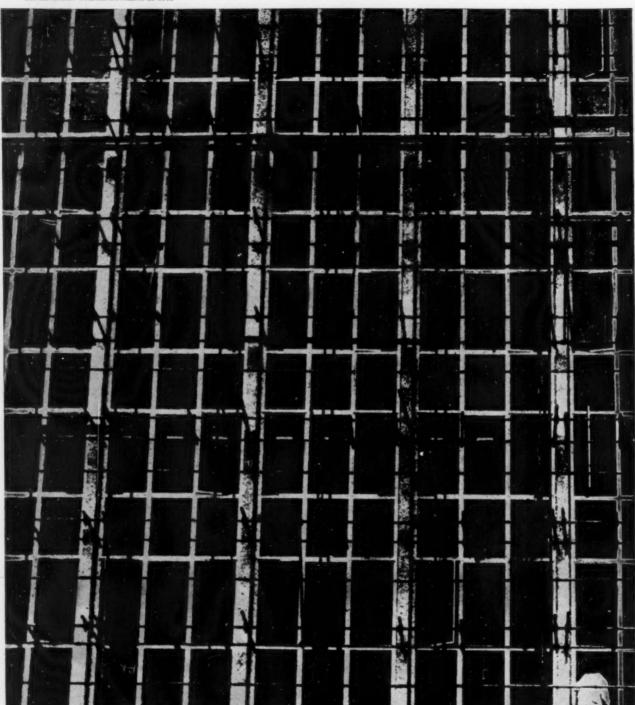
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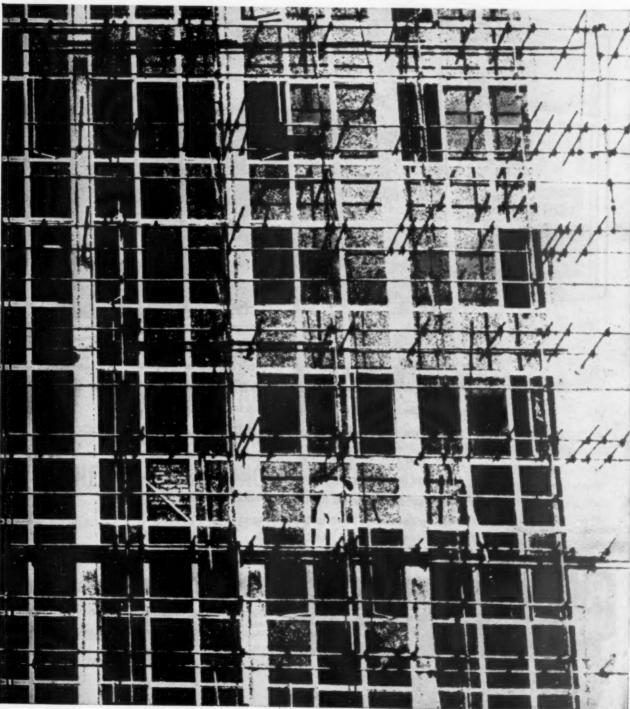
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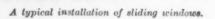
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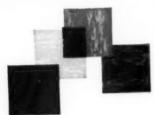
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# AJ

### The Architects' Journal

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NOT QUITE ARCHITECTURE

# Night, Mrs Jagbag

So many of the staples of British cultural life have ded the death this last, deciduous autumn, that it is difficult to know what fragments are left to shore against one's ruin (to quote the old Wastelander). Among the more notable unsung casualties of progress, let me single out a really grand old girl, who has given 10 years' well-upholstered pleasure to the Island race, the Jagbag. The Mark X Jaguar is a great car, as far as one can yet judge, and yours truly might well be leading the rush to covet one were it not for a certain lack of wherewithal and wheretoparkit. All Hail, Tenjag. But let us at least give a decent burial to its predecessor, that passed through marks vII, VIII and IX in some 10 years and remained unmistakably Jagbag through thick and thin-usually thick-because it/she is probably the most socially, culturally and even politically important car that has come out of a British factory since the war. Jagbag, uniquely, had Sex. No other British car has ever achieved this, with the possible exception, now, of the Miniminor, which seems to attract a certain Humbertish devotion from large middleaged men who probably haven't even read Lolita. But Jagbag had oodles of genuine grown-up sex; unmistakably English Sex of a special, affluent, postwar kind. Indeed, one would have been tempted to nominate her for the title of Miss Affluent Economy, were she not a little-er-too mature to have ever been a miss.

Hook, the Hampshire New Town Project, will never be built, but it may greatly influence other New Towns in the future, thanks to the publication of the full data and design by London County Council this week, "The Planning of a New Town" (50s). Designed for universal car ownership, complete segregation of pedestrian from vehicle, and to provide high density living with-

prototype

out sacrificing the needs for privacy, play in the open and variety of outlook, this is a blueprint for the future. Left, a skeich showing gardens and off-ground outdoor "rooms"; right, two typical diagrams, top, demonstrating the needs of hill and valley sites, below, diagram showing initial idea as amended in light of local factors. The book will be fully reviewed in next week's A.

1.

I don't think anyone ever doubted that they were Jagbag keys that were used for drawing lots in those wife-swopping, vodka-swill ng seminars that Reveille wrote up so enthusiastically in the mid-Fifties under the memorable headline Birmingham Sex-key Orgies, (Don't ask me for the rules now, but any even number can play.) Jagbag may not have deserved the title of Adultery-buggy, any more than that of Spiv's Bentley, but there was something about her sleekeddown curves that seemed unmistakably married, and consorted well with appliance-affluence which is an essentially married state (like who needs a washingmachine to live in sin).

But also, Jagbag was English. Sex in cars is so intimately (if you will allow the expression) connected with Detroit, that it comes as a shock to find a wagon like Jagbag that owes nothing to Detroit in its styling, but it is true. She was an English original, remotely descended from those close-coupled sporting coupés with drooping waistlines of the late Thirties, but where they drooped, Jagbag swelled; where they showed good taste, Jagbag burst with a self-confidence that must be unique in English design since 1851. No English bolide ever hit the market with such an exuberance of fleshy tin, and the market in big cars has never been the same since-prestige coachwork on Bentleys, for instance, has never recovered its poise after a phase of visible Jaguar influence in the early Fifties.

Thinking, appreciatively, of some of Jagbag's handles and other external metalwork, it strikes me that she was, in some ways, a very Art-Nouveau jalopy, with some of the exuberance you see in the Art-Nouveau jewellery in the present show at Goldsmiths' Hall, an exuberance and conviction largely missing from the later gauds. The old Nouvers-type jewellery you immediately see being worn on a woman; you even see where she would wear it-and why. The later stuff you only see being worn by a woman who is herself posing as a cool decorative adjunct to some faint, tasteful Scand navian furniture in Design magazine. Whatever it was we lost when ghastly good taste drove our native Nouvers underground came back, not with at bang but a wiggle, when Jagbag made the scene.

For Jagbag you immediately saw being worn by a man, you could even predict where he would wear her—and why. She was the perfect partner to the flat-cap, vodka-and-Guinness, cavalry-twilled, expense-accounted dolce vita of dual-carriage-way exurbia: the sort of car where you could usually find ear-rings between the back seat and the squab. And we shall never see her like again, for Tenjag is male, keen and rather lvy League.

Night, Mrs J. Old Girl (Exit, dabbing ineffectually at incipient tear, and large chromium kiss-print on cheek).

REYNER BANHAM

The Editors

# STBUILDING EXHIBITION NEXT TIME

The organisers of the Building Exhibition deserve hearty congratulations for having shown themselves such sincere and zealous promoters of sfB/UDC classification: this year the first steps have been taken toward achieving that ideal of orderliness for which sfB stands. We have no doubt, however, that the organisers know better than anybody that it is only the first steps that have been taken, and they still have a long and perhaps difficult journey ahead, for the structure of the industry and the motives which draw exhibitors to Olympia both make this order difficult to achieve. For example, there was good progress this year in the concentration of heating stands in one section, and of electrical goods in another. But the overall impression is still fairly chaotic.

It would be unrealistic to pretend that the complete reorganisation of the Building Exhibition into sections would not risk an initial loss in profits, and some who are familiar with the trade even believe it to be impossible. Yet it is only a year or two ago that everyone was saying that the A4 size and the provision of informative literature were so contrary to advertising practice that they would never be taken up; but today both are quickly becoming the rule. If conformity to a common pattern in literature, why not in exhibitions also? It is in any case the experience of modern trading that shops sell more, not less, when they are sited next door to others of the same kind, and the experience of trade fairs on the Continent suggests the same of exhibition stands.

The chief difficulty put forward is that many firms make or market many diverse products. The answer here, surely, is to develop the function of the trade association in exhibitions, so that their products would be shown to visitors by an impartial technician supported by really adequate trade literature? This policy implies the systematic founding of trade associations on sfB lines; but is this not desirable in any case?

# BACK TO THE BOMB-SITE PREFAB

The first reaction of many to last week's display of temporary mobile homes and the LCC's decision to erect something like a thousand of these on cleared sites where building is not to start for two years or more, seems to have been "Why didn't they do this before?" It would be better to ask "Why must they do this now?" It is always dangerous to introduce a new type of sub-standard housing in an emergency, unless you can say when the emergency will end. As things are at

present there seems to be no end to the housing shortage in London, because more people are moving in all the time that new homes are being built.

A crash programme of some kind is, however, required, because of the growing number of homeless families, and since the Government has refused powers to requisition empty property, we are forced back to the policy of prefabs on the bomb-sites by the sheer desperation of the homeless (only this time it is not enemy action but our own inaction that has created the crisis.

We hope that the LCC will adopt this expedient under protest and with safeguards: there must be no reduction, but an increase, in the housing programme, and a large stepping-up of compulsory purchase orders (sanctioned by the Minister), not simply where landlords are proposing to overcharge, but where large families are threatened with eviction and break-up. But until national planning begins to halt the flow of new arrivals in London, the capital's housing problem can never be solved.



SYSTEM FOR BUILDING

Reports from the RIBA indicate that the RIBA's SfB Filing Manual is selling well (presumably you've remembered to buy your copy?) and it is encouraging to see the interest being taken in classification. The endeavours of the Building Exhibition organisers will not have been lost on the building industry and ASTRAGAL also congratulates the JOURNAL'S lively contemporary The Architect and Building News on preclassifying its articles—one more blow to chaos.

In a recent issue the A&BN also uttered a due warning: "the present-day obsession with (filing systems and check lists) has its dangers as well as its advantages." A fair point, but ASTRAGAL reckons that the endeavours of the RIBA, AJ Fellows and others to create a little method is far from reaching the stage of being called an "obsession." Ask any quantity surveyor.

ASTRAGAL asked the question himself when at the annual dinner last week of the quantity surveyor members of the Royal Institution of Chartered Surveyors, and got little impression that the QS fraternity was begging architects to relax and let themselves go. Quite the contrary. His immediate and all too experienced neighbour counted on the fingers of one hand the firms of architects in whom he had absolute confidence.

This annual dinner is notable because the speeches are few, which allows plenty of time for conversation afterwards. Holford asked for the creation of machinery to represent the whole of the multifarious building industry in the form of an economic advisory council. And C. K. N. Bardsley, the Lord Bishop of Coventry, said that architects, with the QS alongside, were doing

the most important work in Great Britain today. Satisfied?

MODULAR FINGER?

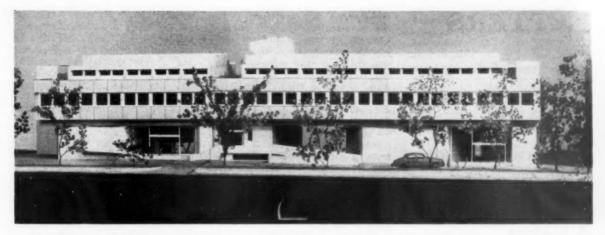
"There is undoubtedly a great need to simplify and speed up building procedures without restraining the freedom of architectural design," telegraphed Prince Philip to the Modular Society last week when it held its eighth annual general meeting. ASTRAGAL is duly impressed that this vigorous little society's message had got so far afield, but at the same time is nonplussed about what to say next because he cannot remember whether four inches or "preferred dimensions" is the OK thing at present. Peter Trench, NFBTE director, speaking at a luncheon before the meeting threw in for good measure the proposal that as we were probably going to join the Common Market we had better stop being insular and consider adopting the metric system. (ie, 10 centimetres. which, unfortunately, is not 4 in.)

One big test for modular design is the proposed army cantonment at Aden. This is not only on a modular planning grid but will consist of modular components throughout, and it is believed to be the largest modular project anywhere. Needless to say Bruce Martin is a consultant. Farmer and Dark (under War Office architect Donald Gibson) are the architects with Barron and Smith doing the housing.

EDITOR'S EDICT

Ian Leslie, editor of The Builder. has the enviable reputation of being a good middle-of-the-road man and much listened to in the building industry. ASTRAGAL, therefore, was glad to hear him say so many useful things at his talk to the junior organisation of the RICS at the RIBA last Thursday. He called for an economic planning council for the building industry to even the flow of work. for the quantity surveyor to play a larger part in cost planning, and for some form of collaborative training between the different sectors in the building industry. Not, readers may think, a very original selection of thoughts, but the fact that they were in the mouth of so influential and perspicacious a speaker suggests that





The Nuffield Institute of Comparative Medicine has hitherto been an Institute without a home: now this has been designed for them by Professor Richard Llewelyn Davies, who has designed a building which will combine the functions of providing offices for the Institute, and a new meeting room for the Zoological Society of London with laboratories where material from the Zoo will be systematically explored for the information it can provide for veterinary and human medicine. The site for the projected building is alongside the Zoological Society's present HQ on the outer circle of Regent's Park, and will bridge the tunnel through which visitors reach the Zoo, and carry a battery of laboratories above, surmounted by animal houses. The first subject of study is to be cardio-vascular disease

they may be nearer realisation than we have dared to hope.

# NEW FIELD FOR OLD SOCIETY

Two orations have been "delivered" -there's no other adequate wordin the past week. One was Sylvia Crowe's lecture at the Royal Society of Arts-the first of the triennial lectures to be known as "Reflection Riding" and sponsored by an American, Robert Chambliss, who has established a sort of national park of the same name in Tennessee. Everyone involved in this affair seemed to enjoy it enormously, including enough peers to make the front row look like a debate in the Lords, with one member-an architect who only looks like a peersnoring loudly from time to time. Miss Crowe herself was obviously overwhelmed by the sense of occasion. This was a pity because the lecture suffered from too many references to "the dawn of western civilisation," our need to avoid perishing by creating "a new ecology" and so on. Landscape architecture is not the live subject Miss Crowe suggested in a few optimistic words, and she knows this very well. Perhaps at the next lecture, in 1964, we shall hear some really encouraging news about her neglected profession.

CLEAN IF IT'S NOT VERY CLEVER

The other orator of the week, Sir Herbert Read, was doing the annual discourse for the Society of Industrial Artists. His subject was "Design and Tradition" and his thesis-if I extracted it successfully from the verbiage-was that unless we can do something about something\*, our belief in "efficiency for efficiency's" sake, both in our specialist educational system and our functional approach to design, will prevent us from preserving "the humanistic tradition." If that doesn't make you feel thoroughly ashamed of yourselves, then consider this: " The 10 cent store and the bargain basement replace the museums and art galleries as repositories of taste. ... Such vulgarism may not be a new phenomenon in the history of art. . . . But never before our time has it been given dignity as a philosophical theory, never before defended by writers clever enough to rationalise the blind instincts of the mob."

If any reader understands this—and it is meant to refer to architecture as well as to industrial design—I shall be glad to send him a packet of nuts in a stamped addressed envelope. But for someone as simpleminded as me a few illustrations

would have been helpful. Who, for instance, has *tried* to make a philosophical theory out of the vulgarism of the bargain basement?

### STEAM-HAMMER HITS TACK

Before she left England, that resourceful and charming Soviet architect, Mrs Anne Opotchinskaya, said that a British buyer had been found for N. J. Kozlov's prefabricating machine. This was the device (shown in model form at the Soviet Trade Fair) for the continuous moving production of thin-ribbed, reinforced concrete panels. It is reputedly a key tool in the enormous Soviet housing programme and can produce large precision panels suitable for factory assembly into whole flats. The British buyer will, of course, be using the machine to make garages.

Less spectacular news is the entry of Concrete Ltd. (Bison) into the garage business. They have developed a garage made of exposed aggregate panels of half wall height, equally suitable for batteries or single applications by do-it-yourself hemen. Both J. C. EastwickField and the coid were consulted about the design at prototype stage. Concrete Ltd. are now designing a modified pattern with wall-high panels 2-ft by 7-ft 6-in.

\* or something.

# LETTERS

"Imprisoned Architects"

M. G. White

A. J. Tyldesely

Peter Jay, MA

F. N. Shimmin, BSC. MICE, FIPHE

W. G. Davies

general manager, Union Fibre Pipes (Great Britain)

L. V. Curley

Architectural Division, Ferro Enamels Ltd

H. G. C. Spencely, BArch, FRIBA

Caspar Brook

director and secretary of Consumers' Association Ltd

# Staff shortage

SIR: Your readers will no doubt be interested to know that the City Architect's Department in Glasgow is refusing to allow staff to leave to take up appointments with private architects in the city. Two members of the staff have had this experience this month: they answered advertisements, were interviewed and accepted by a private firm, but when their resignation was intimated the private firm was approached and informed that unless the appointments were cancelled they would get no further work from the Corporation. The appointments were cancelled forthwith.

We, as members of the staff, would be glad to know if other Local Authorities are employing these unethical tactics in order to maintain the staff position.

" IMPRISONED ARCHITECTS " (Names supplied) Glasgow

# Foundations: Footings

SIR: I am not an architect but read your Journal as I am employing a young and talented Associate of the RIBA to build a house for me. I was interested to see that your Information Sheet 1022 (Foundations: Footings, AJ 8.11.61) dealt with the use of 5in thick concrete floor slabs resting in the inner leaf of the cavity wall; so with my house. I further noticed that the means used to bring the brick courses back to the same level was that used in my architect's drawings, ie to give an extra depth of Iin to the concrete overlapping the inner leaf. Now this seems a neat solution until you come to do the job. You then

find that wet concrete happens to flow and like other liquids finds its own level. Can any of your readers tell me a practical method of shuttering a floor area so that an extra depth of concrete can be poured all the way round the edges? Something that is practical and does not cost a small fortune in labour and materials. Something, for example, that costs less than simply building up the inner leaf on lin thick tiles, which is what my builder resorted to after much scratching of heads over the drawings. My architect, who happened to be away when this particular problem arose, assures me that this design is "common practice"-in drawings anyway. Is there, I wonder, an equally common solution?

M. G. WHITE Aylesbury, Bucks

SIR: In the AJ 8.11.61 issue on Information Sheet No. 1022 sfB (18) you show details of strip and pad footings. I am interested to know why in these details the concrete floor slab is taken into the thickness of the internal skin of brickwork to the cavity wall.

This is contrary to the established practice of laying the concrete up to the inner skin of cavity walls and I would criticise your detail on the following points:

The use of temporary shuttering to the edge of the slab would be necessary.

The cost would be consequently greater. The provision of a nib of concrete to make up the difference in thickness between the slab and brick courses would add to the cost.

I shall be glad to have your comments. A. J. TYLDESLEY

Wells, Somerset

Mr Tyldesley is quite right when he says that normal practice is to lay the concrete slab up to the inner skin of the cavity wall. Such practice, however, presupposes satisfactory and well-compacted fill under the slab. Should this condition not apply it would be advisable to carry the slab over the inner skin of brickwork or on to the footing beam, as the case may be, in order to provide adequate edge support to the slab .- THE EDITORS

# New IES Code

SIR: I should like to comment on some remarks on the new edition of the IES Code that appeared in ASTRAGAL's column in AJ 8.11.61. It is stated that the new code has raised doubts among architects because it suggests an all-round increase in levels of illumination without saying why and seems to advocate permanent art ficial lighting instead of daylight.

The sub-title of the code is "Recommendations for Good Interior Lighting 1961". The preface says that the code ". . . makes recommendations commensurate with present technical knowledge. economic conditions and present standards of welfare and safety "-and later -" The levels of illumination recommended for many occupations are sometimes difficult to obtain by daylight alone and a new approach to daylighting design is proposed." This means that daylight must in some cases be supplemented by artificial lighting, which is not at all the same thing as to advocate artificial lighting instead of daylight.

I do not, therefore, understand why ASTRAGAL should feel "doubts", unless he was under the impression that the levels of illumination recommended in previous editions were based upon some 'absolute" scale which has now been abandoned. In fact, the recommended level of lighting for any purpose has always been a compromise between what was thought to be desirable in theory and possible in practice, and the compromise adopted is bound to alter as standards go up.

I notice that the leading article in the same issue suggests that new housing estates may be considered sub-standard years before they are structurally unsound. No specific reason is given for this suggestion-it is merely taken for granted that standards of amenity are rising continuously with the standard of living so that what is considered just adequate today may be totally inadequate in a few years' time.

To refer again to the sub-title, the code describes "good" lighting, not lighting that is barely adequate by current standards, and the increase in recommended levels hardly calls for further explanation. So much for doubts, but confusion is another matter. The new code contains many revolutionary proposals and it will be hard enough for the average lighting engineer to absorb the full implication of the BZ method of computing coefficients of utilisation and the requirements for limiting glare, so that I can well believe that many architects will find it very daunting.

There is need for a publication giving the necessary information in predigested form, but it can be written only after lighting specialists have themselves had some practical experience of the new methods. When ASTRAGAL suggests that it should be published before or instead of the data now being issued primarily for specialists he seems to have missed the point altogether.

Incidentally, I should have thought the As is in a better position than any other organisation to publish the information in a form suitable for architects, and it will presumably be dealt with in due course under sfB (63).

PETER JAY London Ec2

## EDG: Drainage

SIR: Mr Burberry's references in his letter in AJ 8.11.61 to Sections 22 and 34(3) of the Public Health Act, 1936, as empowering local authorities to exclude foul drainage or surface water drainage as the case may be from a single or an overloaded public sewer are what a chess puzzle solver would call good tries, but I do not think they succeed.

Section 22 gives local authorities powers, which they must clearly possess, to alter their sewe age systems, but I would be surprised to learn that the Section could be used to extinguish an absolute right of communication conferred by another Section 34(1) of the same Act.

Section 34(3) empowers local authorities to refuse communication only on the grounds of unsatisfactory mode of construction or condition, not of function. Mr Burberry's observations on the non-legal aspects of the matter are rather surprising. I did not say that the wishes of a local authority should be ignored. On the contrary, I recommended that they should be carefully examined.

The owner of premises possessing, as I believe he does, an absolute right of communication is not obliged to exercise that right. I quite agree that there may be circumstances in which more might be lost than gained by a bullheaded insistence on this or any other right, but surely the owner's consultant has a duty to his client to negotiate the best financial and technical terms that he can. I think Mr Burberry will find that the officers of many local authorities are well aware of the position and try to avoid the awkward engineering consequences by persuasion or even bluff. This is possibly fair enough, but it is no reason why a consultant should not use his skill a a negotiator, particularly when he can negotiate from strength. A good negotiator will know when to settle and when to dig in his heels.

Mr Burberry suggests that it might well be considered anti-social to insist upon further overloading a sewer with surface water, but may it not be even more antisocial for a local authority to try and prevent owners availing themselves of rights granted by Parliament? Analogies can be dangerous, but would Mr Burberry consider it anti-social to insist upon a piped water supply rather than dig a well, or to demand supplies of electricity or gas rather than generate one's own, because the main services, though adjacent, happen to be overloaded at the time? It may sometimes be financially or operationally advantageous to be self-contained for one or more of these services, but if not, how many owners would forego their right simply for fear of being considered antisocial? Why pick on drainage? F N SHIMMIN

Frodsham, nr Warrington.

# Pitch fibre pipes

SIR: ASTRAGAL'S comment in AJ 8.11.61 implies that adaptors for joining pitch fibre pipes to stoneware are an entirely new idea. In fact they have been produced by all makers ever since pitch fibre pipes were first marketed in this country. The provision of such adaptors was no

more than common sense, as pitch fibre could scarcely have been used without them.

Referring to the other issue raised by ASTRAGAL in the same paragraph, we would remind him that our advertisement in the special issue of the ARCHITECTS' JOURNAL, sfB 12, took the form of a Data Sheet, surely according with the standards he recommends.

This Data Sheet illustrated our whole range of fitments including adaptors.

W. G. DAVIES Watford

# SfB

SIR: Referring to ASTRAGAL'S proposed anglicising of sfB, which appeared in your issue of November 8, I have always interpreted the Swedish abbreviation to mean "Standard filing-system for Buildings." The youngest of juniors in industrial as well as architects' offices will, I am sure, readily accept this explanation.

L. V. CURLEY Wolverhampton

SIR: L. M. Giertz, who piloted the sfB classification through the tricky waters frequented by the UDC classificationists, succeeded in achieving the compromise amalgam of sfB/UDC and suggested at that time and many times since that this should be recorded in England as "Special for Building" Classification with UDC. This would seem to have logic and simplicity.

With congratulations to the AJ for its Al performance!

R. B. HELLARD London SE12

# ABS

SIR: The great festival of Christmas is only a month ahead: during the next four weeks we will all be thinking about presents for friends and relations, and perhaps too for people we have never met.

May all who have had a good year financially spare a thought and a gift for the ABS.

H. G. C. SPENCELY London W1

## Which oven?

SIR: I have just seen ASTRAGAL'S note under this heading in AJ 1.11.61. He has a point, of course. We should very much like to undertake the kind of investigation he suggests. But our resources are fully stretched now to provide the mundane information we publish. This, we know from our huge correspondence from our members, is what they want most.

We hope that eventually we shall have the resources, both in terms of money and testing capacity, to make the kind of design assessments that ASTRAGAL suggests. I am afraid that for the time being our job must remain to test what there is on the market, and not to say what there ought to be.

CASPAR BROOK London WC2

# DIARY

The Architect and the Sociologist, a Problem of Collaboration: Peter Willmott and Edmund Cooney at Institute of Community Studies, Architectural Association, 8pm.

NOVEMBER 29

Design in Timber: H. C. Redwood at the Timber Development Association, Belgrave Square, London sw1, 6.30pm. NOVEMBER 29

The Crisis in British Town Planning: Lewis Keeble in the Anatomy Theatre, University College, London wcl. 1.15pm.

NOVEMBER 30

Post-war Developments: The Location of Major Projects in England and Wales: Dr E. C. Willatts, OBE, BSC, at the RICS, 12 Great George Street, London sw1, 5.45pm.

DECEMBER 4

The Hook Project: John Craig at the Housing Centre, 6pm.

DECEMBER 5

Architects, quantity surveyors and huilders, Tripartite Conference: arranged by the South Western Regional Joint Consultative Committee, the County Hotel, Taunton, 10.30am to 5pm.

DECEMBER 5

Colour: Co-ordination Ranges for Building: H. L. Gloag (BRS), W. E. Holly (Richards Tiles), Gontran Goulden in the chair, Building Forum, London Building Centre, 6pm.

DECEMBER 6

Planning in Britain, Some Next Steps: Sir Colin Thornton-Kemsley, TPI meeting, Livingstone Hall, Carteret Street. London sw1, 6pm.

DECEMBER 6

Informal Dinner and Discussion: at the AA, follow-up to RIBA papers, "Modern architecture and the historian," by Prof Pevsner, and "The history of the immediate future," by Reyner Banham.

DECEMBER 7

Sculpture and Picture Fair: Institute of Contemporary Arts, ICA Gallery, 17-18 Dover Street, London w1.

UNTIL DECEMBER 13

# **NEWS**

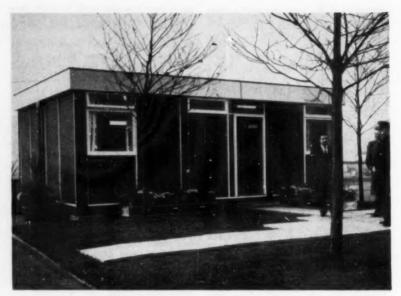
# LCC

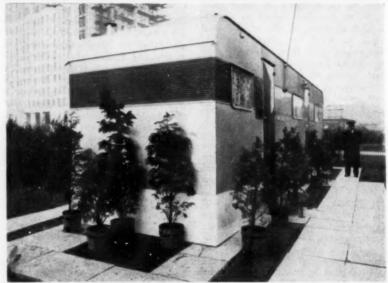
# Emergency housing for temporary sites

Three types of mobile homes were put on show on the South Bank by the London County Council last week and inspected by London and metropolitan borough councillors. They are meant to provide temporary homes for people on the LCC's 52,000-long housing list, and can be erected, in about 24 hours per house, on sites the Council has cleared but where building cannot begin for three or more years. There are about 300 of these, amounting to about a hundred acres. The three types have all been developed as extensions or alternatives to the caravan, and their ingenious use of space and excellent equipment and fittings, reflect the competition between manufacturers looking to a public which must have value for money, and the stimulating effect of the various Acts controlling standards of caravans and sites. All three are designed to be readily connected to local water, sewers, gas and electricity.

Of the three, unquestionably the best value-best looking and most spacious, with the lowest cost per square foot of floor area-is the Terrapin, a packaged timber bungalow which can be erected on prepared foundations in about an hour, and extended to provide an internal store and another double bedroom by adding a section. This is the only model, therefore, that allows for more than two children. Unextended, it provides 405 sq ft of floor area for about £1,400, of which nearly two-thirds is given to a spacious sitting-room, with retractable double bed at one end and a kitchen opening off the other. It is unfurnished. In contrast, both the other models are equipped with basic fittings, fixtures and furniture. The Sun Cottage is almost square (20 ft by 18 ft) with a pitched roof, is delivered to the site as two units. which are then joined by a patent seal, and is supported by steel jacks on concrete pads. The demonstrator claimed enthusiastically that one could store things underneath. This offers alternatives of electricity or a solid fuel stove and back boiler, and a gas cooker in the wellfitted kitchen. Circulation is ingenious and cupboard space surprisingly capa-

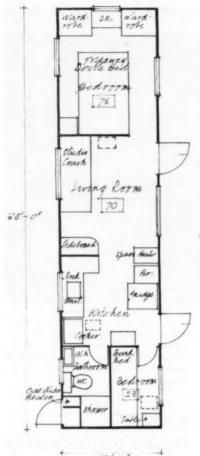
Cheapest to buy, but least attractive and smallest, is the Atlanta, which is called a bungalow, but is in fact an over-length caravan with the wheels off, already in use at American army camps. With 264 sq ft of space, every inch is used twice over, bedroom wall with a retracting bed attached folding back at a touch to double the size of the long "railway carriage"-like living room. A minute bathroom holds a shower bath, basin and







Top, Terrapin: middle, Atlanta; bottom, The Sun Cottage





Top left, the Atlanta caravan; top right, the Terrapin; bottom, the Sun Cottage

lavatory. Here a centrally-placed gas heating unit circulates hot air through underfloor ducts, thermostatically controlled, and can be switched to aircooling in summer. This, and a magnificent floor-to-ceiling refrigerator, are included in the price, appealing trans-Atlantic features of an otherwise depressing solution.

It was worrying, however, to hear the ecstatic cries with which some local councillors inspected these substitute houses, as if they provided a solution of London's housing problem at last: as though covering unused sites with bungalows or caravans were indeed anything but an expensive, unsightly and short-term method of advertising the failure of housing to keep pace with employment in London.

# RIBA

# Children's Christmas lectures

Although the RIBA's Christmas lectures for children are by now an institution they will certainly not be in the least institutional this year. The lecturer, Bobby Carter, is known not merely as the director of the AA but-to a more privileged circle-as a companionable father and grandfather. This year's subject is London-now and as it might be, and will be illustrated with slides, photographs and models. The date is December 28 and 29. Both are at 3pm, in the Henry Jarvis Hall: tickets are free on application (in an envelope marked "Christmas Holiday Lectures"), to the Secretary, RIBA.

# BUILDING EXHIBITION

# Technical information conference

Ingrar Karlen, the first speaker at the conference on "technical information; its design and dissemination," at the Building Exhibition, emphasised the problem "too much information for the architect" and gave the background to the Scandinavian use of SfB and its later international acceptance, with polite praise for the work done in this country by BRS, the Ministry of Works, and Research Fellowships. Contrasting the problems involved in introducing such a system in a small industry with those likely to be met in the United Kingdom, he spoke of the importance of a central independent body to check information, ensure equality of treatment between suppliers, and answer questions related to classification. In Scandinavia, apparently, the Post Office acts as the central authority, a point which, at a later stage, raised doubts from the floor about the validity of the method for this country. The audience was then diverted by a series of slides and trade literature commented upon by John Brunton, who gave a great deal of attention to cover design (not sufficiently critical), an unexplained kick, in passing, to Information Sheets (which he failed to support when questioned later) and appeared to favour tabular presentation of information. Good points brought out were: the need for prepunching, grouping of text, the bias of the industry towards graphical presentation and the careful control of artwork. John Brunton's claim that he could reduce manufacturers' literature to eight pages produced no challenges from the floor.

R. Baden Hellard, John Brunton's partner in practice and consultant to Specifile. then proceeded to blind the conference with figures and projected diagrams to demonstrate the architect's problem-12,000 manufacturers and suppliers, 5,000 specialists, 40 journals-requiring, again, a central clearing organisation. This time it was suggested that area libraries should be established to give a comprehensive reference service to the architect, to be administered by regional building centres. In the short discussion period before lunch, John Brunton answered questions about the design of trade literature (team work), prepunching (desirable) and multilingual literature (not a problem as drawings and dimensions can be understood in all languages-an answer which drew at least one gasp from the audience). On reassembly a sausage-roll-stuffed conference was presented with rhubarb in the form of a series of apparently prepared statements of faith by Neill Newsum (a manufacturer's reaction), E. C. D. Cayley (a sub-contractor's problems), W. S. Jones (the builder's reaction), K. J. Fisher, President of the National Federation of Builders' and Plumbers' Merchants (the builders merchant's viewpoint), D. O.



Bailey and D. H. Underhill (giving the advertising agent's and printer's reactions respectively). Post parandial torpor and distance reduced this part of the day to: professional group vital, general agreement, Common Market internationally accepted, builder welcomes, going over to A4, Common Market, very few adverse replies (very few replies?), cooperation of architects' firms, long run reduce costs, Common Market.

The danger of fire as sparks flew from the axes ground on behalf of Barber Index, Specifile, Architects' Standard Catalogues etc. was avoided by the skilful chairmanship of Leslie Wilson. Excellent points were made on the use of A4 size trade journals for the dessimation of information (Mr Fisher) more work to be done by Trade and Development Associations in providing one-sheet digests of their members' activities, the need for a guaranteed reference system for manufacturers committed to large publishing programmes (Cape Asbestos). Eygard Evans drew the attention of the conference to the service offered by the Ministry of Works library in regional centres which, though not using SfB, gives hundred-word digests of all trade literature. A very sensible suggestion by the librarian to Laings, that copies of all trade literature should be deposited with a central body in the same way that all books are placed in the British Museum, was well received. In fact, if any thread was discernible in the conference, it was this need, expressed by many differing interests, for a central body to control and classify information for the building industry. Indeed during the afternoon the chairman called for suggestions from Anthony Williams, the official representative of the RIBA, but to an expectant audience answer came there none. . .

# Trade literature for the building industry

On November 8 the Building Centre held the second forum of the season, this time on Trade Literature. Eric Bird was in the chair and the two main speakers were R. B. Caws, of the RICS, and Andrew Derbyshire. Mr Caws, who spoke first, introduced the new Guide to the preparation of Trade Literature for the Building Industry\* prepared jointly by the RIBA, the RICS and the NFBTE and published by the Building Centre on that day. This is an A4 size brochure (rather extravagantly lajd out, as someone remarked) which sets out clearly current doctrine on this matter.

The main controversies of the forum were initiated by Andrew Derbyshire, who concerned himself with how information is distributed. Unsolicited literature through the post, he said, was maddening and the unqualified trade representative a waste of time. He considered the subscription service a rather uncertain bet from the architect's point of view and

chided them for competing instead of combining.

Mr Derbyshire attacked the pretence at technical information contained in the Architects' Standard Catalogue and the loaded technical information published by sectional interests as supplements in technical journals-he must have been meaning the Gas Supplements published some years ago in the AJ. He made two suggestions. The first was that the building industry should follow the precedent set by pharmacy and insist that all the ingredients of building materials must be declared. The second was that information centres should be set up in every district, perhaps under the Building Centres, for answering trade enquiries. Gontran Goulden, said of this second point that the staff of the Building Centre in London were agreed in principle, though not yet the Building Centre's Council. It would mean dividing the exhibition function from the enquiry answering function and it was not yet clear how it would be paid for.

Roger Walters spoke about the SfB/UDC Building Filing Manual† which also came out on the same day and acknowledged the pioneer work of Dargan Bullivant and of the AJ Research Board. He said the RIBA was reverting to an idea put forward some years ago that an institute of building documentation should be formed for research into the industry's building documentation needs.

A number of the representatives of the building and advertising industries spoke in the course of the evening but, though they had a badgered air, none offered serious resistance to the high-minded thoughts put to them by the professions.

\*Available free from any of the four organisations †Available from the RIBA, 36s.

# STUDENT GRANTS

# Extension to cover science postgraduates

The committee set up last May to advise the Minister of Education on questions concerning student grants has been broadened and its terms of reference extended to include consideration of Department of Scientific and Industrial Research postgraduate awards in science. Three members of the DSIR Postgraduate Training Awards Committee have been nominated to serve on the advisory committee.

The committee is reviewing standard rates of grants for university students, students following courses of comparable standard at further education institutions, and those at training colleges.

# AWARDS

# Designing for the disabled

The Royal Institute of British Architects, in association with the Polio Research

Fund and supported by the Building Exhibition, has awarded to Selwyn Goldsmith, MA, ARIBA, a research fellowship for studying the design of buildings, fittings and equipment for the disabled. The fellowship is tenable at the Architectural Association, and Mr Goldsmith has already started work there under the guidance of the principal. It is hoped that the RIBA Technical Information Service will publish a handbook on the subject for architects.

# Sacred art and architecture

The Royal Institute of Architecture of Ireland has invited Irish architects, and architects living in Ireland, to submit entries for an exhibition of sacred art and architecture, to be held in Dublin early next year. Awards of £150 will be made for works of exceptional merit, and a number of exhibits will be chosen to form the Irish section of the 1962 Salzburg Biennale, the recognised international exhibition of sacred art.

Members of the selection jury will be Michael Scott, FRIAI, Wilfred Cantwell, FRIAI, James White and the Rev Fr Donal O'Sullivan.

## REVIEW

# Pioneer market survey

Great Britain: A Geographia Marketing and Media Survey, £8 10s., and West Midlands Conurbation Marketing Map, £2 10s paper, £5 5s on cloth with laminated transparent drafting surface. Both published by Geographia Ltd.

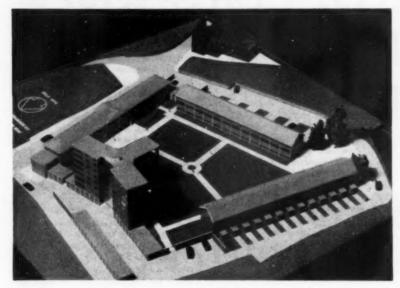
The first of a projected series of marketing maps of the major conurbations has just been issued, along with a comprehensive marketing media survey of the whole country, which combine to provide a unique picture of Britain's commercial and industrial development. Designed to convey graphically commercial information on a geographical basis, these publications are intended firstly to be useful to business, but they will be equally so to town planning.

The first of the seven conurbation maps planned covers the West Midlands and conveys with great clarity the location and sizes of the main retail, industrial and residential areas. There is, however, no special reference to office employment. The map measures 40 in by 50 in, is printed in eight colours and is accompanied by explanatory booklets containing statistics on population, employment and retail trade. Three main categories of commercial importance are defined on the map and shown by different symbols, so that a tall block of flats, a factory or shopping area stands out clearly.

1 Shopping centres, classified into three grades according to importance.

2 Residential areas, classified into three categories of densities.

# Another scheme for Abingdon



Schemes for the redevelopment of a decaying area of Abingdon, between West St. Helen's Street and the Thames, have been invited by the local council, and this is John MacAlpine's scheme, which is interesting to compare with Townmaker's proposals, published in the A, 13.9.61. Here the architect proposes an enclosed square with traffic road round the periphery, and tall Y-shaped block of flats overlooking the Thames Valley

3 Industrial areas, showing the location of factories employing more than approximately 75-100 workers. Five categories of industries are identified by symbols.

The price of a paper sheet map is £2 10s (£5 5s mounted on cloth with laminated transparent drafting surface). The next two maps will cover Liverpool/Merseyside and Glasgow/Clydeside.

The marketing and media survey is based on the radius from which people are drawn to the shopping, commercial and entertainment facilities of the town. Towns are accordingly classified and defined irrespective of all arbitrary traditional boundaries. Britain has been divided into 65 marketing regions, each with its major shopping and entertainment centre. The boundaries of the regions are closely related to the existing transport services and every centre possesses at least one evening newspaper. The survey contains 11 fold-out maps (10 miles to 1 inch), and each map shows a group of regions, roughly corresponding to the areas covered by ITV stations; supplied with the maps are summaries of statistical information about population. retail outlets and media facilities for the region as a whole as well as for each individual region within the group. In addition there are three well-written introductory articles explaining the way in which the survey was prepared, what the geographical backg-ound is and the ways in which it can be used.

This survey will be of great value not only for sales promotion but for town planning authorities whom it will provide with vital information as to eg the potential catchment areas of proposed new or expanded towns. This survey is published as a hard-covered book with spiral binding and costs £8 10s.

At long last a commercial survey is being undertaken for the whole country by one organisation in a competent manner and is being presented in an attractive and well-documented way. This will be a boon to those planning authorities who are anxious to get on with some positive planning but whose staff has had, hitherto, to waste much of its time collecting these essential data.

# HISTORIC BUILDINGS Private member's bill next year

A Local Authorities (Historic Buildings) Bill, to enable local authorities to contribute to the maintenance and repair of buildings of historic or architectural interest, heads the list of private members' bills chosen to be discussed in Parliament on February 9. It is being proposed by Paul Channon, Member of Parliament for Southend West.

# ICE TRAFFIC GROUP

# Raised footways for London?

A proposal for a system of raised footways through Oxford Street and continuing as far as Aldgate, a distance of 4½ miles, was put forward by J. W. Dark, of the improvements division of the LCC chief engineer's department, at a meeting of the traffic engineering group of the Institution of Civil Engineers last week.

In his recent Rees Jeffreys lecture Colin Buchanan described Oxford Street as "the most uncivilised street in Europe." (He also said that it was "no longer viable," though that is scarcely true if the term is understood in its normal economic sense.)

One way to civilise it, by lifting the pedestrians above the traffic, was proposed a year or so ago by D. Rigby Childs. He advocated a raised footway for pedestrians at first-floor level, supported on columns running down the centre of the street, with escalators down to street level and also up to a second-storey "travolator," though the latter was not an essential feature of the scheme.

The same basic treatment was suggested last week by J. W. Dark in his paper on "Raised footways in urban central areas." He proposed that raised footways might be provided along Oxford Street and its continuation all the way from Marble Arch to Aldgate.

Along this "dangerous, congested route," the width between buildings varies from 40 to 85 ft; but "the footways are too narrow for pedestrians, who have little chance to escape from vehicles plunging along the footways, as occasionally happens."

"Any amelioration of this pedestrian/ vehicle conflict within the one-tier system would seem," Mr Dark said, "to require the provision of numerous subways, bus lay-bys and widening to provide dual carriageways and footways. Two extra 10-ft vehicle lanes per mile require land costing £10½ million at £100 per sq ft (as revealed in the Piccad'lly enquiry). Adding the normal cost of filling and paving at £10 per sq yd, with at least six subways at £50,000, the total cost reaches the order of £11 million per mile.

"Consider now the cost of converting the highway to a four-lane dual carriageway with raised footways, 18 crossbridges and 10 bus stops per mile.

"Demolition of buildings is unnecessary. Operating cost of the bus stops could be recouped from the rentals of the stores therein. Capital outlay is confined to the actual fixed installations and works.

"A total cost of £3 million per mile would allow a margin of profit provided highly-paid skilled labour was employed in continuous shifts, along consecutive sections of suitable length. This figure relates to the actual highways and bus stops. It is presumed that conversion works clear of the highway would be completed by freeholders or the suggested Redevelopment Corporation prior to the highway works."

The suggested Redevelopment Corporation would, Mr Dark suggested, "have powers and duties to lease all floor space to an upper limit of 30 ft in any affected block for 30 years.

"As compensation would not be directly chargeable to public funds and would probably be more than offset by betterment profits, adequate (even generous)

sums could be paid to facilitate speedy conversion.

"Some method of enabling the free-holder to buy the remainder of the lease for redevelopment purposes may well be devised. Releved of the fear of losing land for road widening, owners of small sites may opt for earlier redevelopment. Although distinct from the corporation, such redevelopment must tend to enhance the value of its shares, which in turn would attract the huge capital reserves always seeking investment in such property shares. Once started, this chain reaction would ensure rapid conversion to the two-tier system."

In the two-tier system proposed by Mr Dark, pedestrian circulation would be on footways 10 ft wide, 17 ft above street level running down either side of the street, connected by crossbridges about 100 yd apart. They would consist probably of steel decking on prestressed precast supports 20 to 30 ft apart, bearing on concrete slab or steel-plate foundations in the present footways.

Every 400 yd there would be a bus-stop, with an "up" escalator and a "down" staircase, installed in a suitable building (the Corporation would lease space for

the purpose).

At bus stops an overall roadway width of 70 ft would be needed. Elsewhere a 4-lane dual road to LCC standards would require a width of 53 ft between the footway supports, even with a 4-ft clearance between these and the edge of the roadway. Mr Dark suggests that in many cases a 4-lane dual road would be "more than sufficient given the faster flows made possible by the 2-tier system."

Mr Dark suggested that "spine" foot-ways should be built first along the main streets, and from these "ribs" would be extended and joined to embrace street blocks on either side. Block by block a network of raised footways would thus be extended to allow existing roadways to be widened without the demolition of buildings. However, the 2-tier system would seem, he says, to be limited to "those parts of the central area in which a high concentration of pedestrians, and vehicles is desired."

At first glance, Mr Dark admitted, access from the fixed-level footway to adjoining floors would appear to be a formidable problem; "but," he added, "the necessary engagement of the architect may well be a blessing in disguise in that many novel entrances may result.

"Essentially the new access need only be 6 ft wide for a distance into the building of some 10 ft at the 17 ft level. Stairs, either up or down, would then reach existing floors at the 14 ft/20 ft levels. Where the nearest floor is outside this tolerance, the entrance may be extended at an intermediate level."

There would be a continuous canopy above the footway at the 25 ft level. Since shoppers on the footway would be at most 8 ft from the windows, a more intimate form of display window might result.

Mr Dark admitted that the 2-tier system

"contradicts architectural ideals based on the classic buildings of former centuries." Whether architects and others who are concerned with our townscape would take kindly to the prospect of footways and overbridges in, for instance, Piccadilly Circus is a question he did in his paper.

During the discussion, Mr Dark's general approach was supported by Colin Buchanan, who deplored that opportunity for radical two-tier treatment had already been lost on the north side of Oxford Street. He did not think, however, that two-tier treatment would greatly increase its traffic capacity. Derek Rigby Childs naturally preferred his own "High Oxford Street" plan to Mr Dark's alternative, but hoped that the latter might take us a step nearer to getting a working party set up to study the two-tier principle.

Michael Dower, of the Civic Trust, thought that the upheaval in values would prevent acceptance of the two-tier system: basements especially would decline in value. He favoured horizontal segregation, ie turning Oxford Street into a shopping precinct. No vehicles should be allowed in Oxford Street at all, he said, except perhaps buses, and even they might be replaced by travolators.

A spokesman for the London Transport Executive was unenthusiastic about the scheme because it would discourage people from "hopping on a bus" for short journeys. A traffic engineer, Brian Parker, stressed that there was a definite limit to the amount of traffic we could hope to cater for in central areas of large cities. Mr Buchanan mentioned that another opportunity for two-tier development was about to be lost in the forthcoming widening of Euston Road. Here, I understand, that the London County Council architect's and engineer's departments, thinking quite independently, had both proposed two-tier treatment at the Euston Road/Tottenham Court Road junction, but the Ministry of Transport had refused to sanction the proposed overbridges on grounds of cost. NIGEL SEYMER

# URBAN HOUSING COURSE

# Problems of high flats

Urban Housing was the subject of a short course organised by the Welsh School of Architecture and the Department of Building earlier this month at the Welsh College of Advanced Technology to study the problems of flats of three or more storeys, with an audience of architects, quantity surveyors, engineers and builders.

It soon became apparent that we have now reached a stage when significant further advances in multi-storey flats will

not be made until the design and construction sides of building become much more closely linked. Peter Dunican of Ove Arup & Partners, demonstrated clearly that structural design cannot be divorced from constructional technique, and that the system of competitive tendering prevented rational development. It prohibits the contractor from collaborating at the design stage and is responsible for our lag in the promising field of large precast concrete units.

C. N. Craig, of the Building Research Station, reinforced the point with slides showing that design which ignores constructional technique leads to wasteful and complicated building. Workers are asked to work under most hazardous conditions, sometimes exposed to strong gales more than 100ft off the ground. The architect must take the lead in advancing building technique and contractors must be prepared to make fuller use of machines. The latter are often only concerned to install the minimum plant which can be fully used all the time, ignoring wasteful use of manpower.

Jack Whittle, assistant housing architect, London County Counc'l, thought that industry must respond to the architects' demands and endeavour to develop the sort of material or components he requires. There is need, for example, for a light cladding material which can be used in large areas, is incombustible and does not deteriorate.

J. R. Illingworth, of Wimpeys, said that for the contractor the problems of building high commenced at six storeys and remained identical for taller buildings. Builders are beginning to appreciate the use of combined passenger/materials lifts, and subcontractors to quote lower prices if lifts are used.

Speaking of the social aspects of living in flats. Miss M. Empson, adviser on housing management to the Ministry of Housing and Local Government, said that the public image of flats could be altered. A high standard of sound insulation and privacy from overlooking are needed, and entrance halls and common areas must be attractive and well maintained. David Gregory-Jones, of the LCC, showed some fascinating slides of the LCC's latest attempt to use the ground level and the top floor of six-storey blocks for outdoor living space to make them suitable for families with children. Ivor Smith, of Morton & Lupton, considered housing within the concept of a town which provides for both an active and a contemplative life.

In the discussion which followed there was considerable criticism of the lack of continuity in development of tall flats. Even the most successful types are not repeated more than a dozen times by the same authority and seem never to be used by another authority. The audience thought that there was much scope for the Ministry of Housing to encourage the attitude of collaboration and exchange of ideas which the Ministry of Education has pioneered so successfully.

# REPORT REPORT REPORT REPORT REPORT REPORT

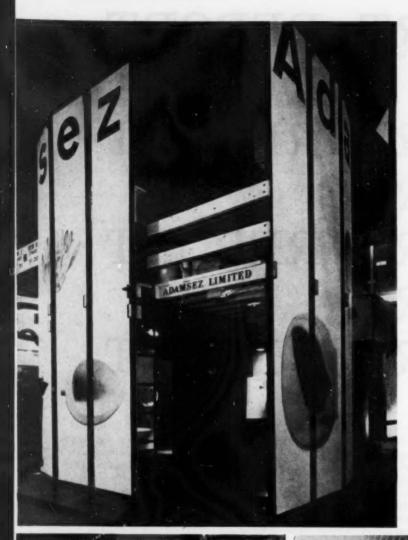
# REPORT REPORT REPORT REPORT REPORT

A fortnight ago we published our preview of the Building Exhibition. This week we publish our report. The report differs from the preview in two respects. First, the rather obvious respect that the things have been seen and are not merely reported from hearsay. Second, because as we are released from our guidebook function we can abandon the disorderly patterns of trade usage and impose an order of our own. Two years ago the pattern for our reporting was provided by our own former Information Sheet classification, this year the pattern chosen is sfs. Our choice of sfs has, in turn, changed our method of covering the exhibition. In past years we have covered it by commissioning a very small team of architects to visit all stands. The members of this team could, of course, claim no particular expertise, but at the close of their tour they could say that they had covered all that was in the exhibition with the eyes of the ordinary architect in practice. This year our approach has been rather different and reflects our new method of handling information. Instead of covering the exhibition as a single whole, we have covered it only in terms of the functional elements of the sfb classification. Instead of asking the simple question "What is here that is new?" we have asked the question "What is there here which advances the design of the functional elements?" In order to find the answer to this query we have invoked the aid of a great many more helpers and each of these has been asked to cover the interests of one or more of the functional elements. Most of these helpers are, of course, the section authors, but since some functional elements have very little to expect from the exhibition we have not felt justified in asking all section authors to help us in this matter. Also, of course, some of the latter have not yet been appointed. A section author is no longer "an ordinary architect", but is well on the way to becoming an "expert" in the design of his element. The reports of these elements which are covered by section authors ought, therefore, to be more authoritative and thus more useful to architects than the kind of report which we have made hitherto. There is one defect in this approach which we must point out now. It is not possible for any one man to visit more than a fraction of the exhibition in the time available. Therefore, in briefing our reporters we have had to give them a list of stands on which items likely to be of interest to their element may be found and have told them merely to keep a weather-eye open as they went round for items on other stands. It will be appreciated that in theory something interesting to any element might be on any stand in the exhibition and that, in practice, the chances of missing items using this system are very much greater. We have judged, however, that an authoritative, if imperfect, coverage was worth more to readers than a less authoritative and more complete one.

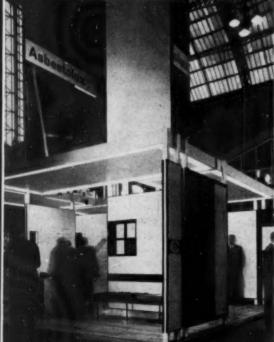
Another shortcoming of this new approach is that some items of real interest are liable to be missed simply because they do not directly concern any one functional element, or because the bearing on the elements is too general to be mentioned in respect of any of them. Readers may wonder why, in this report, there is no mention of the DSIR stand. The reason is that the building science subjects treated (the processing of home grown timber for the market, the importance of providing for smoke extraction in factory fires and the noise survey of London) and still more, the way in which they were treated, does not concern any element sufficiently closely to justify inclusion. We have broken our pattern of coverage in one or two respects in order either to avoid duplication, or to bring in items of real interest which would otherwise be missed out altogether. Thus there are a few items presented under constructional and materials headings which the authors felt they could not conscientiously treat under the elements. Lastly, we have extended our coverage to the building types (9)-(99) in order to bring in the Ministry of Housing and Local

Government's work on homes for the aged and the stand "Design for the disabled".





Stands at the exhibition

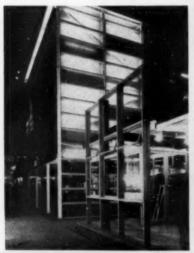


Finland stand

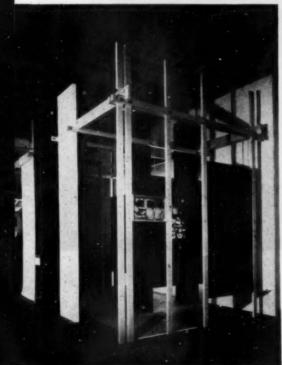
Asbestolux

## National Coal Board









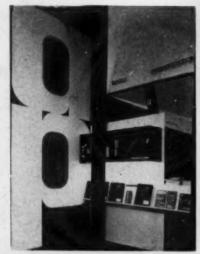


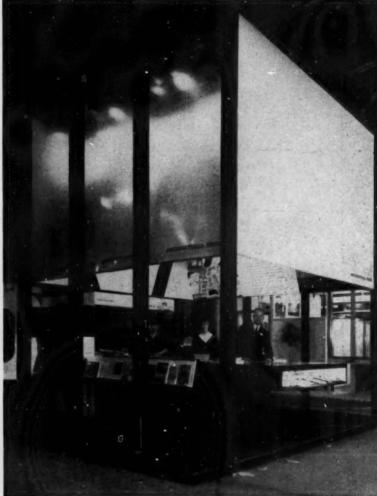
Stairway on Brockhouse stand

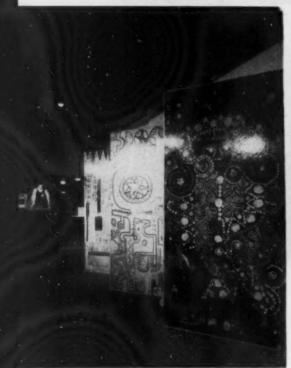
Roy Lewis' stand, exhibiting stained glass.

# Architectura Press

Architectural Press







LCC stand : Artists a: d Architecture

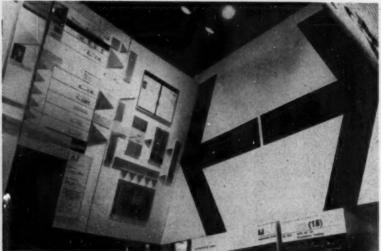


Diagram showing handling of technical information in the AJ on the Architectural Press stand



In this field improvements were chiefly in economy, performance or scope of existing materials. At the last exhibition pitch fibre was relatively new. At this one the most noticeable feature was the wealth of new jointing methods for glazed vitrified clay (gvc)-this term is more usual now in place of stoneware or salt-glazed. The development has been hastened to some extent by the spur of competition from pitch fibre, but it is mainly the outcome of the demand in BS Digests 124 and 125 for more flexible telescopic joints in place of rigid cement and sand. In response to this demand there were represented on the stand of the National Salt Glazed Pipe Manufacturers Association no fewer than five different brand names. These brands and their respective makers' names and addresses are as follows:

Flexadrain. Flexadrain Ltd, Hanover Court, Hanover Square, London w1. Mayfair 0364. Hepseal. Hepworth Iron Co Ltd,

Hazelhead, near Sheffield, Yorkshire. Penistone 3231.

PS R. Naylor Bros (Clayware) Ltd, Denbydale, near Huddersfield, Yorkshire. Skelmanthorpe 2101.

Oanco. James Oakes & Co (Riddings) Ltd, Clayworks Offices, Jacksdale, Nottingham. Leabrooks 28. Drawflex. Doulton Vitrified Pipes Ltd, Doulton House, Albert Embankment, London sel. Reliance 1241.

What architects want to know, of course, is whether one type of drain is in the end cheaper than another. Unfortunately, as cost of installation is not directly related to cost of pipes, the

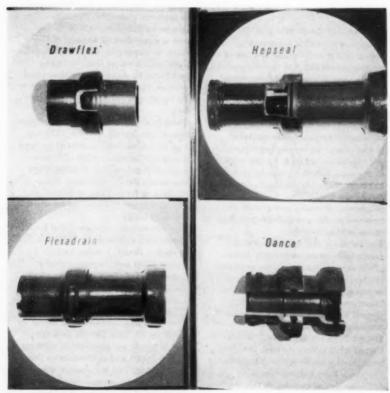
most economical drainage will vary according to requirements of each job. For this reason quotation of materials prices in this field is generally illusory and in this section we do not attempt it. In the past, drains over 6in in diameter could not be carried out with pitch fibre pipes. At the exhibition Key Engineering Co Ltd (Larkfield, near Maidstone, Kent. Maidstone 7-7777) and Temple Tubes Ltd (Temple Mill, Passfield, near Liphook, Hampshire. Passfield 281) showed 8in diameter pipes and Union Fibre Pipes (Great Britain) Ltd (Tolpits, Watford, Hertfordshire. Watford 34551) showed a 9in diameter pipe. At present production is very limited, but it seems likely to expand.

Although asbestos cement pressure pipes can be used for drains, they are not usually considered suitable or economical for this purpose. Turners Asbestos Cement Co Ltd (Trafford Park, Manchester. Manchester Trafford Park 2181) has developed a pipe specially for drainage. This firm showed an asbestos. cement sewage and drainage pipe in its full length (13ft 11in) with its rubber ring and asbestos cement sleeved flexible

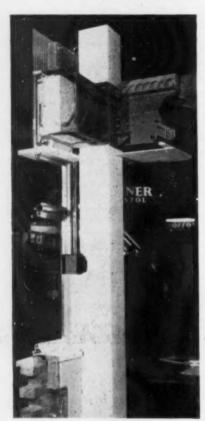
telescopic joint.



UAM pitch fibre pipes



Flexible joints for glazed vitrified clay pipes



Part of the Gardiner Mark IV Thermagard building



British Xylonite experimental plastic structure

### (2) Primary Elements: General

Complete structural systems are not frequently exhibited at the Building Exhibition. This is surprising in view of the demountable nature of prefabricated construction usually used in these systems. Of the new types shown, two are the developments of established systems and the third is an experimental building of considerable interest. Gardiner, Sons & Co Ltd (GPO Box 140, Broad Plain, Bristol 2. Bristol 20011) showed a cut-away section of its Mark IV Thermagard building. Whereas the Mark III was designed for school buildings, the Mark IV, with a 32in planning grid, has a fire grading of two hours and is suitable for hospital and commercial buildings.

The system has a composite construction of castellated floor beams, in-situ concrete floor, in-situ edge beams with permanent shuttering, precast concrete columns and precast fascia beams. It is claimed that construction speed is faster than it is with a steel frame. although the site techniques are similar. Brockhouse Steel Structures Ltd (Victoria Works, Hill Top, West Bromwich, Staffordshire. Wednesbury 0243) has developed the CLASP system for school construction up to four storeys, although only three were displayed at the Exhibition. Minor refinements have been made to simplify assembly and to widen flexibility in design.

Following its success last year with the prize-winning school at the Milan Triennale, Brockhouse has formed subsidiary companies in Italy and Germany.

The British Xylonite Group of companies is making important contributions to the structural use of plastics in building and to industrialised building techniques. Its experimental structure, planned as a dwelling for the exhibition, was developed to as the potential value of the Group's materials to the building industry. The building is completely demountable. It was assembled on another site before the exhibition, taken down and rebuilt at Olympia. Limited planning permission has been obtained for it to be erected for the third time after the exhibition. Single wall or ceiling panels may be removed or changed without affecting the adjacent structure.

The 2in thick wall and roof/ceiling panels have an expanded polystyrene (Polyzote) core bonded to sheets of pvc (Velbex) coated hardboard, aluminium, asbestos, glass fibre or steel (Stelvetite). These are secured by a double clip of pressed Stelvetite section with neoprene weather sealing strips.

The windows are, at present, timber-framed with Velbex coating, the glass being fixed with Neoprene glazing beads. The doors have Polyzote cores. Although not as exciting as the Monsanto house, this experiment represents a practical step towards the

introduction of a new range of components for building with considerable design significance. L. W. Glover & Partners are the consultant architects for the present structure.

### (21) Walls, external, non-loadbearing: General

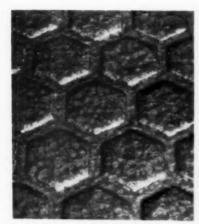
The range of new components and techniques for the exterior non-loadbearing walls was very small indeed. If any trend could be detected it was a preoccupation with decorative panels and panel facings, but a search for new technical advances revealed very little of interest.

United Steel Structural Co Ltd (Frodingham Works, Scunthorpe, Lincolnshire. Scunthorpe 5383) exhibited a process developed by Boulton Paul Aircraft Ltd (Kinnaird House, Pall Mall East, London sw1. Whitehall 9261) which produces three-dimensional patterns on metal sheets by a rubber press technique. This reduces the high cost of metal dies and thus enables comparatively small quantities of special designs to be economically produced. Panels up to 66in by 42in can be formed in any metal suitable for pressing, including plain and pvc-coated steel and aluminium.

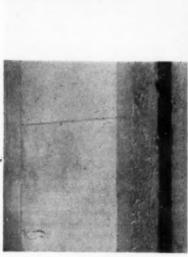
Another panel facing with wide decorative possibilities is the Decorlite glass fibre reinforced polyester resin manufactured by Hartington Conway & Co Ltd (The Old Mill, Brigstock, Northamptonshire. Brigstock 314). The process enables patterned fabric or paper to be incorporated in flat, corrugated or textured glass fibre sheets resulting in opaque or translucent panel facings. The cost is equivalent to the cost of the fabric or paper plus the cost of the clear sheet, which varies from 3s 11d to 4s 5d a sq ft, depending on shape and texture. Flat sheets are available up to 8ft by 3ft and corrugated up to 10ft long.

Formica sheets, Formica Ltd (84 Regent Street, London w1. Regent 8020) are now recommended for exterior use and a new architectural range of 26 new large-scale patterns in 33 colourways was shown for the first time. Price (4s 3d a sq ft) and size of sheets (8ft by 4ft) are the same as for the standard range.

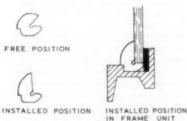
New low density asbestos-cored complete panels were exhibited by Holoplast Ltd (2 Caxton Street, London swl. Abbey 4866) and Turners Asbestos Cement Co Ltd (Trafford Park, Manchester 17. Manchester Trafford Park 2181). Holoplast's panel has a core of lin Asbestolux faced both sides with Decorplast and is available in sheets up to 8ft by 4ft. The Turnall asbestos L D R panels are available in sizes up to 10ft by 4ft and in thicknesses from in to 1 in. The low density asbestos core may be veneered with timber, plastic, steel, aluminium or asbestos cement with baked paint finish. Panels



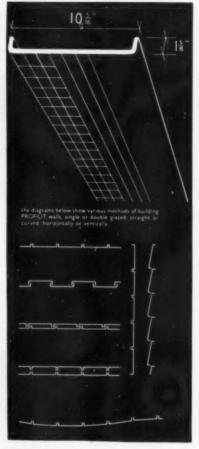
Turnall Hammerglaze finish



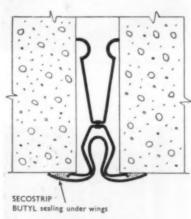
Close-up of Stone Firms storey-height unit, showing bonding of stone slabs to backing



Farmiloe Farofoam butyl rubber gasket



Profilit constructional glass



Secomastic Clipstrip joint cover



Hope Polyclad glazing

can be supplied cut to size and edged with pvc tape. The same firm also exhibited a new metallic finish Hammerglaze which can be supplied on plain or textured fully compressed asbestos cement sheets in a range of seven colours. The cost of the finish is 7s 6d a sq yd exclusive of cost of basic sheet.

Kenitex (Kenitex Textured Coating Ltd, Spirella House, Oxford Circus, London w1. Regent 3605) is a one-coat sprayed matt-textured finish which can, it is claimed, be applied to any surface. It is available in 12 colours including white and is waterproof, flexible and guaranteed for ten years. Although Kenitex is new to this country it has been used for many years in America and its qualities suggest a wide range of applications on both curtain walling panels and on new and existing walls. It has a base of mica, perlite and asbestos. Cost varies from 10s to 12s a sq yd.

and existing walls. It has a base of mica, perlite and asbestos. Cost varies from 10s to 12s a sq yd. Another new textured wall finish, the Noxallac Facade Process, was exhibited by BB Chemical Co Ltd (Ulverscroft Road, Leicester. Leicester 50015). This is a two-coat polyurethane sprayed finish consisting of a base of aggregate paste with a waterproof sprayed lacquer finish. It is available in 20 colours with both glazed and matt finishes. Two new developments in jointing were exhibited by Farmiloe Sealants Ltd. (Nine Elms Lane, London sw8. Macaulay 7121). Farostrip and Farofoam are synthetic rubber soft compression laminates with adhesive seal; they combine the advantages of a compression seal with the adhesive qualities of gun-applied sealants. The seals consist of dense or open sponge synthetic rubber strips with pressure sensitive adhesive on both faces and are suitable for use on inside and outside surfaces of glass. The glass is positively attached to the bead and rebate, yet is free to accept some degree of movement. The exposed face of the strip is finally pointed with synthetic rubber sealant. The most promising feature of this joint is that the functions of compression, adhesion and weatherproofing are each carried out by the most appropriate materials. Another new jointing method from Farmiloe is the Farofoam BR1650 compression seal. This uses the adhesive-faced sealing strip on the internal surface with a butyl rubber gasket based on the Beclatite system used for some years on transport and marine glazing. The principal advantage of this gasket is that compression is achieved by a projecting leg on the frame without the use of beads or filler strips. Longitudinal compression ensures a close mitre joint at angles and the

shape employed allows for easy removal

and replacement of glass.

Secomastic Ltd (Western Road,
Bracknell, Berkshire. Bracknell 910)

showed a novel metal cover strip
(Clipstrip) for concealing and protecting

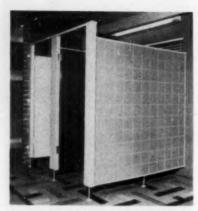


Stainless steel curtain wall by United Steel

open joints in walls and floors. It consists of a shaped cover strip clipped over stainless steel spring clips inserted into the joint at about 4ft centres with a special tool. The cover strip is available in aluminium, steel and brass in widths from 1½in to 2¾in and costs between 4s 3d and 11s 8d a linear foot, including clips.

Henry Hope & Sons Ltd (Smethwick, Birmingham. Smethwick 2191) exhibited two new framing systems. The first, an aluminium-faced curtain wall of extremely neat appearance, consists of a galvanised steel double channel core with clipped-on aluminium cover facings and incorporates a synthetic rubber compression joint for both glazing and panels. Cost is up to £2 a sq ft, erected. The other new Hope product is Polyclad patent glazing. This is composed of a rolled steel T section core enclosed in a pvc sheath. Glazing is held against greased asbestos cord gaskets by a separate extruded pvc snap-on cap. The system incorporates condensation channels and costs about 5s a sq ft,

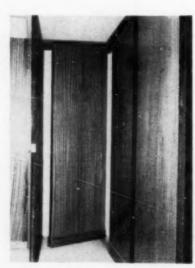
Finally, two new glass products made their first appearance at the exhibition. Pilkington Bros Ltd (St Helens, Lancashire. St Helens 4001) showed Armourclad metallised glass which consists of a sprayed copper or aluminium metallic coating applied to the reverse face of roughcast or plate glass. Prices vary from 8s 6d a sq ft for lin rougheast to 17s a sq ft for in polished plate, maximum size being 74in by 48in. One of the most interesting exhibits was Profilit constructional glass exhibited by B T B Ltd (10 Upper Thames Street, London Ec4. City 4321). The basic units consist of extruded 10 is in by 15 in glass channels lin thick which are combined horizontally or vertically in a variety of arrangements to produce a single- or double-glazed wall. Continuous lengths of glass of up to 16ft long are available and jointing is by synthetic rubber sealing strip. Price varies from 12s 6d a sq ft for single glazing to 23s a sq ft for double glazing, both prices including erection.



Richards Tiles Unifab glazed ceramic tile partitions



Expanded Metal partitioning



Fairhurst Unitfold wall

### (22) Walls, internal: Partitions

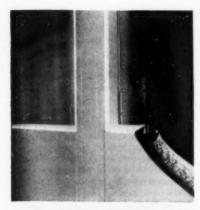
Although many of the more traditional forms of partition wall construction, employing bricks or blocks, were exhibited in their usual numbers, the latest techniques employing lightweight storey height slabs were also represented. Thermalite Ytong Ltd (Hams Hall, Lea Marston, Sutton Coldfield, Warwickshire, Coleshill 2081) and Costain Concrete Co Ltd (Dolphin Square sw1. Victoria 3172) both exhibited examples of this new type of wall. Erection, it is claimed, is rapid and simple as the units are normally located by providing a groove in the under side of an in-situ floor to which they are jacked up and wedged. An adhesive is used to stick the slabs together and a rigid skirting is required to mask the gap of approximately lin at the base of the wall where the wedges are inserted.

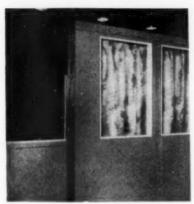
Although sq ft prices of units are higher than for equivalent blocks, erection is cheaper, bringing the overall cost only a little above comparable block work. This trend towards larger units is also evident in the new prefabricated tile toilet partitions exhibited by Carter Tiles Ltd (Poole, Dorset. Poole 125), H. and R. Johnson Ltd (Tunstall, Stoke-on-Trent. Stoke-on-Trent 8851) and Richards Tiles Ltd (Tunstall, Stoke-on-Trent. Stoke-on-Trent 87215). The latter provides an instructive brochure illustrating the method of erection which, apart from grouting of joints, is a completely dry process. Overall costs are less than for an in-situ tiled wall and the result is a much slimmer and neater partition than normal.

Among the demountable partitions exhibited, Unilock (Rutherford Way, Crawley, Sussex. Crawley 25444) was showing its Type H partition for the first time. This consists basically of a framework built up from a single extruded aluminium rectangular tube section to which are clipped either aluminium or rigid pve U-section glazing beads. These hold either panels or glass in position and a very shallow flexible pvc skirting clips on to bridge the gap at the base. The whole assembly is neat in appearance, but variations in the assembly and additional components are required for junctions with cross walls. The basic assembly is cheaper than the firm's Tenpoint system which was also exhibited.

Among the other demountable partitions exhibited, Ayrshire Metal Products Ltd (Irvine, Ayrshire, Scotland. Irvine 2271), Norwood Steel Equipment Ltd (Howard Way, Harlow, Essex. Harlow 25651) and Roneo Ltd (Southampton Row wcl. Holborn 7622), were showing their latest types, all of which are more refined versions of systems already in existence.

Sliding-folding partitions or doors were much in evidence, *Bolton Gate Co Ltd* (Turton Street, Bolton, Lancashire.





Harvey metal partitioning. Upper, detail showing insulation and glazing; lower, general view

Bolton 25241) showing a new version of its Super Fold door known as Wonder-Fold. This has been designed for domestic use and is much cheaper and easier to install as no floor track is required. Four standard widths, from 2ft 6in to 4ft 6in increments are available in red, blue, grey, light and dark buff. Prices average about 15s per sq ft. Marley Tile Co Ltd (London Road, Riverhead, Sevenoaks, Kent. Sevenoaks 55255) exhibited for the first time a luxury version of the type of partition known as Marleyfold. This incorporates nylon-tyred rollers and an elaborate pantograph mechanism. Extra heavy duty vinyl-coated fabric, available in 30 different colours and textures, is used as a covering material. Glass fibre blankets can also be provided as an interior lining to increase sound resistance. Price averages 20s a sq ft plus 50 per cent for sound insulation. British Werno Ltd (79 Portland Place W1. Langham 7702/4) showed for the first time two ingenious new American folding walls by Fairhurst, Unitfold and Unitslide. Both consist basically of panels, sliding independently on a track. When not required the panels can be parked at one end of the main track either by being shunted off on to parallel short branch lines, or by being pivoted at right angles to the main track. Any number of units can be used, positioned anywhere along the track, to provide openings of any desired width. Because these units slide on the same track, a completely flush wall can be provided with interlocking butt-joints. The problem of reducing noise transmission through lightweight partitions is being tackled by the Lead Development Association (34 Berkeley Square w1. Grosvenor 8422) in a way that has not received very much attention in this country. The properties of lead appear to be particularly suited to the formation of an effective sound barrier. The Association exhibited four examples of thin sheets of lead laminated to backing panels of plywood, hardwood, asbestos board and aluminium sheet. In each case graphs showed the results of sound reduction tests on the four different laminates and in every instance the improvement on the calculated sound reduction was remarkable. Full details can be obtained from the Lead Development Association together with a list of suppliers.

### (23) Floors, structural: General

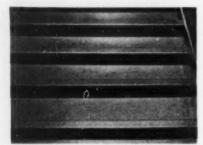
There were no radical changes in the structural floor systems exhibited this year. The general tendency was for manufacturers to concentrate on their standard products which basically remain the same. There are some interesting developments in the various component parts of a structural floor and most notable among these is the increasing use of lightweight concrete both in block and slab form, as part of floor systems. The following manufacturers are now, or will shortly be, producing blocks or slabs for floor construction:

Durox Building Units Ltd
Chantrey House, Eccleston Street,
London sw1 (Sloane 7122)
Hemel Hempstead Lightweight Concrete Ltd
Redbourn Road, Hernel Hempstead,
Hertfordshire (Boxmoor 5510)
Leca (Great Britain) Ltd
Buckhurst Hill, Essex (Buckhurst Hill
4444)
Lignacite (North London) Ltd

Meadgate Works, Nazeing, Waltham Abbey, Essex (Hoddesdon 4441/2) Thermalite Ytong Ltd Hans Hall, Lea Marston, Sutton Coldfield, Warwickshire (Coleshill 2081) Lytag Ltd 58 Edgware Way, Edgware, Middlesex (Stonegrove 8236) Celcon Ltd Universal House, 60 Buckingham Palace

Road, London swl (Sloane 0324/7) Butterley Co Ltd Aglite Division, Butterley Hall, Ripley, Derbyshire (Ripley 411) For in-situ construction, Metal Sections Ltd (Broadwell Road, Oldbury, Birmingham. Broadwell 1541) has developed a new form of permanent shuttering. Metsec Troughform, as this is called, is a galvanised sheet of trough section, the depths being lin and 11 in. It is available in 16 to 18 gauge sheets which permits up to 4ft centres of supports. The sheet widths are 16in and lengths of up to 30ft are available. The sheet is cold rolled and consequently economical. Prices are available on request to the manufacturer. Lattice girder means of reinforcement is

being increasingly used in composite



Briggs Colourclad pvc plastic faced steel decking



Timber Development Association joist floor supported on ground seal slab

structural floor systems and Head Wrightson Teesdale Ltd (Teesdale Ironworks, Thornaby-on-Tees, Yorkshire. Stockton 62241) is now manufacturing a welded girder of lattice construction of a type which has been used very successfully in Germany for the last seven years. The Filigree Reinforcement Girder consists of a diagonally braced web, a top flange formed into a channel shape and welded to the web, and a bottom flange consisting of two strainhardened rods welded to the web. The bottom flange is completed by precasting a plank of concrete about 41in wide by 2in deep round the two strain-hardened rods. The Filigree beams are available in three standard depths of 4ft 6in, 6ft 3in, and 8ft 5in measured from the top of the channel to the underside of the horizontal loop of the web rod. The beams are suitable for use with hollow concrete blocks or tiles with in-situ concrete filling between the blocks and forming a beam round the Filigree girder.

New developments in timber suspended floors are infrequent, but the Timber Development Association (21 College Hill EC4. City 4771) suggests an interesting method of supporting a timber joist floor from the concrete ground seal slab by means of modified metal wall ties. This system reduces the height of suspended ground floors and avoids the necessity for honeycomb sleeper walls. The wall ties are prefixed to timber joists and then set into the concrete site slab on temporary supports which are removed when the concrete has set. The flooring may be laid when the concrete has thoroughly dried out. Since the metal supports have little lateral load resistance, it is important that the floor is rigid. Lateral rigidity is normally provided by the flooring and its connection to the wall. The TDA has detailed information sheets showing this form of construction.

The Airscrew Co & Jicwood Ltd (Weybridge, Surrey. Weybridge 2242/7) is now producing Weyroc GP which is a general purpose building board recently approved by the Building Research Station for suspended flooring on joists at 16in centres. The standard boards are 8ft 0in by 4ft 0in by \(\frac{3}{4}\)in nominal thickness. Weyroc GP cuts cleanly, is easily worked and is of medium weight. The price is 1s 6d per sq ft.

# (25) Ceilings: Suspended: General

This is not a vintage year for new ceilings. Existing products show variations in profile, pattern, texture and colour. The choice is immense within a comparatively narrow range of expressions—slots, holes, fissures, striations etc, but there are few signs of any real attempt to break away from two-dimensional treatment of the ceiling plane. The problems of pattern staining, fire resistance and incombustibility are receiving attention and more mineral

fibre tiles, metal trays and sheets are available in a greater number of sizes, some imported from the USA, Scandinavia

and Italy. The Armstrong Cork Co Ltd (Carlisle Road, Colindale, Nw9. Colindale 9744) has introduced more materials from America. Tacetone, for example, is a directionally fissured mineral-wood tile, like Travertone, made from an inorganic rock in tiles 12in by 12in by 3in with a two-hour fire resistance and good sound absorption and thermal insulation properties (K factor 0.34). Minatone, also of mineral fibre, is made in tiles 12in by 12in by §in, 24in by 12in by §in and 24in by 24in by §in with two scales of perforation, Random and Classic; it is an efficient sound absorbent and is better than most tiles in maintaining a high resistance to the transmission of sound passing over the top of a ceilingheight partition. The material is incombustible and inert. Minaboard is a similar material for use in exposed suspension systems and, as it can be obtained in any size or module, it will commend itself to those with modular difficulties. All these new mineral fibre tiles are cheaper than Travertone. Centennial Cushiontone tiles, 12in by 12in by 1in with T and G edge, are decorative wood fibre tiles with neutral tone printed designs overlaying a white background. Golden Cushiontone has similar characteristics but is inlaid with golden metallic chips in the fissures. All tiles can be stuck or mechanically suspended. The brand-new pvc faced glass fibre ceiling board by Fibreglass (St Helens, Lancashire. St Helens 4022) is 4ft by 2ft by 1in with Class 1 flame spread and noise reduction coefficient of 0.70. It will fit any type of exposed Tee system which gives support on all four edges and weighs only 31 oz per sq ft. The probable price will be 22s 6d to 25s yd erected when it is available in two or three months' time. This is a really low cost ceiling material especially suitable for commercial applications. The smooth surface discourages dust accumulation and requires no decoration. The acoustic tiles 12in by 12in, 12in by 24in and 24in by 24in by }in have been available for 18 months. They are of rigid bonded fibrous glass faced with a decorative plastic film designed to transmit sound to the absorbent board behind. The tile is kerfed for concealed fixing. Cost is approximately 50s per yd erected. From the Common Market come Pirelli Saga Acoustic Panels. Originally designed bythe Pirelli physicists for their own world-famous building, they are now being manufactured in the United Kingdom and are available from Super Silent Ltd (8 Great Titchfield Street w1. Museum 1191). The panels are made of perforated aluminium sheet and filled with glass wool reinforced by aluminium resonators. Size 24in by 24in by 11in

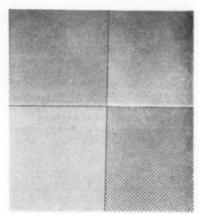
they weigh only alb per sq ft. Suspension



Permanent shutter system by Metal Sections



Kenyon semi-demountable acoustic ceiling



Fibreglass acoustic tiles



Fibreglass cavity ceiling with heating

consists of parallel channels suspended by drop rods with simple clips holding the panels in position, and the perforated face has an off-white stove enamel finish. Cost erected is about 50s sq yd. These panels are unusual as they give good absorption in all frequency bands. The low and medium frequency resonators are of prismatic shape so that their exposed surfaces are small and resonators for high-frequency sounds are housed between them. This is of special interest to those concerned with a high building where weight is a problem.

Frenger Ceilings Ltd (7 Tavistock Square wcl. Euston 6084), continuing with its well-known heated ceilings, introduced two months ago an embossed tile 2ft by 2ft in stove enamelled perforated aluminium. Price range is 9s to 9s 6d sq ft for a heated ceiling and 6s 6d to 7s sq ft unheated. This is one of the attempts to depart from the flat sheet and should encourage others to be more adventurous.

The Bowater Versa-tile, displayed by Expanded Metal Co (16 Caxton Street, sw1. Abbey 7766), and introduced six months ago, uses pressed steel trays faced with flattened expanded steel filled with 1in mineral wool padding. Other facings to the tray may be used. The standard module is 20in by 20in or 24in by 24in and, with a recessed flash gap of §in, the joint is pronounced. Sound absorption is good, each tile can be removed and there is a fire resistance of two hours. The suspension uses a lot of steel but provides a rigid support for partition fixing. Cost is 54s to 58s sq yd fixed for areas of 500 sq yd. This type of perforated metal tile absorbs sound without over-emphasising the perforations and the overall Zippatone effect, which is sharply defined by recessed joints, is pleasing. In the last year Celotex Ltd (North Circular Road, Stonebridge Park, NW10. Elgar 5717) has considerably widened its range of acoustical products. The new H & T metal suspension system is a lowcost concealed fixing system specially designed for all acoustic tiles which have kerfed edges. Sections of an H shape are attached to primary channels with cross T sections, the bottom flanges of both sections fitting into the kerfs in the tiles. The three new mineral fibre tiles are Acousti-Celotex Celotone fissured texture at approximately 55s sq yd, Striatone with striated texture 57s 6d, and the perforated Mineral tile which is 12in by 24in (the others are 12in square) at 55s sq yd. The glass filament acoustical tile is 2ft by 4ft and has a white lace-like appearance giving an over-all effect of softly textured quality. The compact interlacing of the clean fibres, which are bonded with thermo-setting resins, prevents the fall-out of dust particles. Cost is about 40s sq yd erected. Altogether these new tiles provide a useful range of incombustible alternatives to the cane fibre type. Three months ago the Tentest Co Ltd.

(Fiboard House, Oakleigh Gardens, London x20, Hillside 8801) introduced the range of Tentone and Tentile acoustic ceiling tiles. Made from cane fibre insulating board, they have t and g joints on all four edges providing four methods of fixing-nailing, hand-stapling, adhesion and metal suspension. Prices vary with the fixing method. The Panther Ceiling marketed by a subsidiary of Ayrshire Metal Products Ltd (Irvine, Ayrshire, Scotland, Irvine 2271) is now 18 months old and has been used considerably. The panels are 12in wide in any suitable length made from 22 swg stove enamelled galvanised steel. Each width has three longitudinal ribs forming four 3in strips and perforations are in two hole sizes. Approximate cost is 47s 6d per 50 yd supplied and fixed. This longitudinal expression of the ribs offers an attractive alternative to square tile

The Marley Tile Co Ltd (London Road, Riverhead, Sevenoaks, Kent. Sevenoaks, 55255) now has four types of ceiling tiles, Marleytone a 12in by 12in by ½in mineral fibre tile, Marley Finestone wood fibre tiles, Marley Decortone 16in by 16in perforated vinyl tile with mineral wool infill, and the already familiar Marley vinyl acoustic pyramids.

William Kenyon & Sons (Metamica) Lth (Dukinfield, Cheshire. Ashton-under-Lyne 1614/7) has added a striated tile to its Kilnoise tile range. Current costs are 40s to 45s sq yd fixed to a metal suspension system. A lin layer of Rocksil is 2s 6d sq yd extra.

Burgess Products Co Ltd (Hinckley, Leicestershire. Hinckley 3701) has added a 4ft. by 2ft. plain and perforated tile to its already extensive range. Price is in the region of 40s sq yd fixed.

The old Morrison Quiltile has now been taken over by Smith & Wellstood Ltd (63 Conduit Street w1. Regent 7791).

An added Trayeal plastic film is successful in preventing pattern staining. Cost is about 45s sq yd.

For those architects who find none of the

For those architects who find none of the standard systems suitable, Auland Ltd (39 Church Road, Acton. Acorn 5454) is prepared to co-operate in the design of any ceiling system. This company manufactures suspension systems and steel trays to special order.

A.B. Alcometaller from Sweden is introducing through its United Kingdom agent, Holcon Ltd (21 Mackenzie Street, Slough, Bucks. Slough 25431/2) the ALCO Randa panel ceiling. Plain or perforated metal interlocking strips can be arranged in a number of ways to give a tailored acoustic effect over the whole range of frequencies. The finish is smooth and matt in a special durable pastel finish. Prices are not yet available. The original Isora ceiling now named Spaceliner, and a new type called Thermalucent made by Isora Illuminating Ceilings Ltd (Bedford Avenue, Slough, Bucks. Slough 26851) have undergonechanges and development. The singlemembrane was originally fitted with a



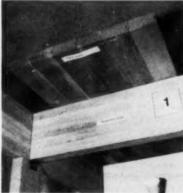
Celotex glass fibre acoustic material on exposed metal fixing



Kenyon Kilnoise striated tile



Frenger embossed tile ceiling



TDA plank and beam roof construction



Tecton flat roof system

force-fit sash cord which left the edges unprotected. All edges are now fully protected with a pvc strip welded to the pve film. The new Thermalucent is a great advance and virtually solves the problem of 'dust on the top'. The panels consist of a light galvanised ms frame over which is stretched two separate membranes of pvc film with an air space of 1 % in. Objects or dust resting on top cannot be seen. Each panel can be taken down for easy cleaning and if repair is necessary a new skin can be sent by post for fitting on site. Heat losses are also considerably reduced. The Thermalucent ceiling has a new V-shaped grid on the 3ft 4in module. Price for a single skin is 5s 6d sq ft, and two skins 7s 6d, both erected.

A similar ceiling is the Hall-Thermotank (1 Queen Street Ec4. City 9561) Hallmark ceiling. A special heavy suspension system for industrial areas is designed to carry catwalks etc. The double skin panelled type costs 6s 6d sq ft.

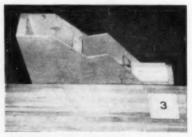
### (26) Roofs, structural, flat: General

There have been few major advances in the field of structural flat roofing systems since the 1959 exhibition; however, existing forms have been undergoing development and improvement. In timber perhaps more progress has been made than in any other single material. The Timber Development Association (21 College Hill, London Ec4. City 4771), continuing its policy of producing economical forms of construction for house building, publicised for the first time a roof form using thick tongued and

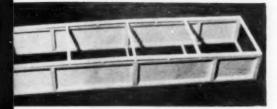
grooved planks, exposed as the ceiling finish and spanning between supporting beams (either glue-laminated, built-up or solid timber). With a 3in thickness of plank a clear span of 10ft between beams can be obtained. The TDA is also publicising a lightweight stress skin roof panel spanning 20ft. The Tecton Division of Dexion Limited (Maylands Avenue, Hemel Hempstead, Herts. Boxmoor 5684), has a new flat roof system in timber, which produces lightweight shallow depth roof over clear spans up to 20ft. The 2ft wide units which incorporate a 1in insulating layer of "Slagbestos," are set 2ft apart, the space between being covered with a separate insulated plywood sheet. The standard flat Tecton Beam has been further developed. It can now be supplied fitted with firring pieces to give a single or double fall of 2in in 10ft, and in order to overcome deflection a cambered beam is now manufactured. This becomes perfectly horizontal when loaded, giving a completely flat ceiling.

A number of lightweight reinforced concrete roofing units in plank form are being developed. These reduce dead loads on supports while combining good insulating properties with a full four-hour fire rating. The planks are nailable and soffits may be plastered or painted. Both Siporex (Costain Concrete Co Ltd. Duncan House, Dolphin Square, London sw1. Victoria 3172) and Thermalite Ytong Ltd (Hams Hall, Lea Marston, Sutton Coldfield, Warwickshire. Coleshill 2081) produce units in varying thickness allowing clear spans up to 19ft 6in. As an example of price the Thermalite units, delivered and erected within 100 miles radius of the factory at Hams Hall, Warwickshire, range from 29s 9d a square yard (7ft 6in span 4in thick) to 59s 11d a square yard (19ft 6in span 9½ in thick).

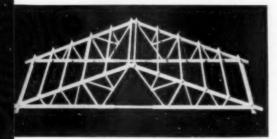
The fire rating of Pyrodek, the poured-inplace gypsum concrete roof system manufactured by D. Anderson & Son Ltd (Stretford, Manchester. Longford 4444), has now been increased to four hours. This in-situ form of construction, as with the plank units, now combines light weight, good heat insulating qualities and high fire resistance within a thin deck section which will span up to 12ft. Decking systems in steel, aluminium and asbestos cement show individual advances in performance, the current vogue being for the application of colour finish to the



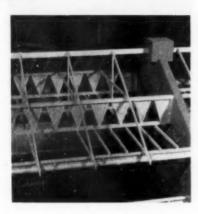
TDA stressed skin vault roof



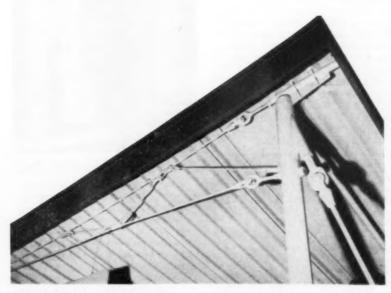
Tecton firred roof



Tecton widespan truss



Tecton open web system



Jawerth rigid cable roof truss

surface of the material. This is mainly in the form of a pvc coating.

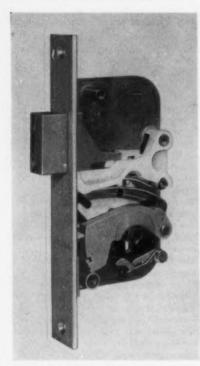
The Ruberoid Co Ltd (Commonwealth House, 1/19 New Oxford Street, London wc1. Holborn 8797), has produced Decordeck with a plastic-coated soffit on steel as is Colourclad, William Briggs & Son Ltd, Po (Box 19, East Camperdown Street, Dundee, Angus), the price of the latter, including a two-layer weatherproof finish, ranges from 65s to 70s a sq yd for areas of 1,000 sq yd or more.

In aluminium, Alcan Industries Ltd (Bush House, Aldwych, London wc2. Temple Bar 8430), will have available. by mid-1962 Noral Coloured Snaprib on to which the stoved vinyl paint is applied before the sheet is profiled. This gives a surface as well as a soffit treatment. An interesting development designed to eliminate considerable site work has been introduced by the United Roofing Companies Ltd (Uralite House, Whitehall Place, Gravesend, Kent. Gravesend 4911). Named Weatherdeck, it is a factoryprepared, preweathered galvanised steel trough deck unit. When the units arrive on site the weathering membrane of Nuraphalte is already fixed to the deck over an insulation board topped with hardboard. After the units have been placed in position the sandwich joints of the Nuraphalte are heat-sealed. The weathering properties of Weatherdeck are guaranteed for 25 years. Units span up to 18ft and prices range from 55s to 60s a sq yd laid.

# (27) Roofs, structural, pitched: General

Progress has been made in the prefabrication of timber trusses and purlins. Beves & Co (Structures) Ltd (Kingston Wharf, Shoreham-by-Sea, Sussex. Southwick 2285), has introduced the Roto roof truss. To simplify transport, the truss is delivered as two identical folded half-units, each compact enough to be carried by one man. The Roto truss compares favourably in efficiency and cost with the standard TDA truss design. Clear spans of 30ft are obtainable, with pitch varying from 40 deg down to 221 deg. In addition to the truss, Beves can supply complete factory precut roofing of the remaining timbers. The firm has also developed Roto plywood panel purlins for use in crosswall construction and spanning 20ft. The Tecton Division of Dexion Ltd. has developed a truss for largespan buildings. This Widespan truss arrives on site in halves which are bolted to span up to 44ft at 15ft centres and 22½-deg pitch. The Division now manufactures an open web beam for use in crosswall house construction, the triangular openings in the web allowing access to the eaves, which was not possible using the standard Tecton Beam as a purlin.

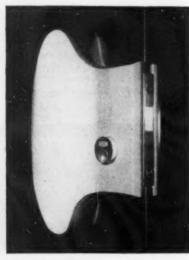
The Jawerth rigid cable roof truss, introduced from Sweden by Cablespan Ltd is a contribution to the expression of a new structural form in architecture. The system consists of two cables, an upper and a lower, of predetermined lengths which are prestressed by inserting diagonal stays bracing the two together. Only small vertical forces applied to the cables are necessary during erection for the fitting of the stays, but these nevertheless impart relatively large pretensioning forces into the cables. This pretensioning ensures that a condition of permanent tension is maintained in both top and bottom cables under all conditions of loading, including uplift due to wind pressures. For a factory building, with galvanised locked coil ropes, extruded aluminium alloy fittings, metal-coated steel trough deck roofing, insulation and waterproof finish, and including supporting structure and foundations, the costs related to a 1,000ft length of building of 75ft clear span is 14s 6d a sq ft; for 100ft span 16s 9d a sq ft, and for 150ft span 23s a sq ft.



Chubb Castle mortice lock



Yale and Towne lock No G618



Steele mortice lock on glass door

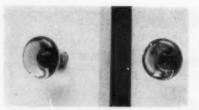
# (30) Accessories, ironmongery, door and window furniture

The situation in this field, even more than in previous years, is that most new products of any quality are imported from Europe or developed abroad and made here under licence. English manufacturers of door and window furniture and related gear seem unable or unwilling to develop interrelated ranges of products in similar finishes. The Finnish Foreign Trade Association stand included a few ironmongery firms, each with interesting products new to this country. The Solifer hinges, by Bensow OY, are a robust wellfinished series of lift-off ball-bearing hinges in a variety of metals and finishes.

The English agent for Solifer hinges is *Industrial Devices Ltd* (171 Wool Exchange Ec2).

Also shown (though no literature was available, nor have English agents yet been appointed) was a well-designed range of general ironmongery including window gear by Excelsior Oy AB, a display which, although small, was of high quality and put most comparable British manufacturers' products completely in the shade. There was a refreshingly simple and unsophisticated range of oak and satin-chrome steel pull and push door handles by Ovila Oy. On the joint Swedish stand, a contrast to the Ovila handles, were a number of handle and knob fittings using handblown tinted glasses to rich and elegant effect. The first range, Spectra, was of black or gold anodised aluminium with chunky glass inserts in a pull handle (No 161) and a push plate (No 162) by Aktiebolaget Alcometaller.

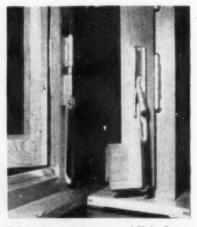
The second range of interior door handles and knobs, by Paulssonbolagen AB, used Lindshammer's wonderful range of tinted glasses. Shown here, a pair of glass knobs in a brass mount operating a locking latch, and a pair of cupboard knobs in satin-chrome mounts. No prices are available as yet for these products, although Alfred G. Roberts Ltd has taken the English agency for Paulssonbolagen an glass door knobs. Alfred G. Roberts Ltd (River House, 182 Upper Thames Street, Ec4. Central 8702/5) was showing the Huba-Lux lifting door gear for single or paired doors, intended for balconies. french windows and comparable situations. When closed, doors fitted with this gear are draught and weatherproof, and are unusually secure in that the door cannot be opened from outside when the gear is in the closed position. Operation is by means of a hinged lever mounted on the frame which, when depressed, lifts the door \$in off the saddle rail, at sill level, and in doing so releases the side locking pins, after which the door can be opened by a simple knob. (This gear is fitted to the Gerrard - Unitas lifting door.) Roberts also showed a number of new additions to its expanding range of



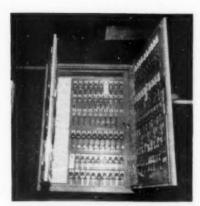
Paulssonbolagen glass knobs in satinchrome mounts



Jayanbee Pierson sashless window lock



Roberts door opening goar and Huba-Lux



Yale and Towne key storage cabinet

well-designed window fittings, some of which incorporate nylon bearings, rollers or sleeves where silence in operation is essential.

Yale & Towne (Willenhall, Staffordshire. Willenhall 66911) showed an extensive range of medium-priced door furniture marketed for E. Holden & Co Ltd, Birmingham. The ranges, named Estate, Cathedral, County and River, are all available in anodised aluminium, brass, bronze, and nickel bronze and as far as design is concerned, are a welcome improvement on previous Yale & Towne furniture.

Silent Gliss Ltd (29 Windmill Street w1. Museum 9484/6) showed a length of cubicle curtain rail in operation. This consists of stainless steel hooks on nylon gliders enclosed in an aluminium box rail, the open top of which is closed by a white plastic extrusion. The whole set of equipment, including a variety of fixing brackets and a suspension rod, is meticulously designed to be unobtrusive and is easy to operate and clean. The Tomo Trading Co Ltd (Packet Boat Dock, Cowley Peachey, Uxbridge, Middlesex. West Drayton 3751) was showing a wide range of Fixylon nylonwith-metal window and door fittings including a variety of stays, a spring catch, a door holder, a flush bolt, and a hinge. These fittings, which are imported from Sweden, make extensive use of nylon where its silent

"self-lubricating" action is an asset. Westland Engineers Ltd (Yeovil, Somerset. Yeovil 2231) had in action on its stand a new heavy duty overhead door gear for doors up to 600 lb in weight—the Welrise No 2, the price of which is £22 10s per set plus a charge for the counterweights. This operates by two nylon top rollers running on horizontal tracks with counterbalance weights on both sides of the door.

In the case of locks, there are some new English products to report, and by contrast with window and door furniture the quality of manufacture is extremely high—a revealing comment on the weakness and strength of English

hardware manufacturers.

A new range of ten locks, introduced during the last two years, is the Chubb Security Range by Chubb & Son's Lock and Safe Co Ltd (14 Tottenham Street, Tottenham Court Road, w1. Museum 5822). All are superbly made locks designed to satisfy insurance inspectors' requirements for a safe lock, and the range covers most locking conditions, including that of the sliding door.

Shown here is the most simple lock in the range, the Castle 2\subsection in mortice deadlock (No 3G 110) which, when supplied with three keys, costs £2 7s 6d. Notice the saddle spring retainer in solid nylon which replaces a difficult-to-make metal retainer.

The locks have a number of common features which include a unique (to Chubb) security mechanism providing many thousands of key variations, three security devices giving protection against picking, and a steel bolt reinforced with hardened steel rollers to resist the hacksaw. Also seen for the first time on Chubb's stand was a most ingenious and very solid Hobbs Revobar padlock bar. In the locked position the padlock staple and centre revolve together so that a thief cannot get purchase for a wrenching attack. A feature of this padlock bar, priced at £4 14s 6d, is that the long bar may be removed when unlocked by sliding off two concealed keyhole fixings. The size of this bar is 11½ in by 3 in and it weighs

Another new hardened steel locking bar for garage and warehouse doors was the Impregnable by Ingersoll Locks Ltd (9 Harp Lane, London Ec3. Mansion House 4882). When fitted, and with a padlock in place, all fixing screws are concealed inside the door or inside the leading edges of the door stiles. A pair of locking bars in rust resistant stove enamel finish costs £1 198 6d.

There were a number of interesting new items on the stand of the Yale & Towne Manufacturing Co Ltd (Willenhall, Staffordshire. Willenhall 6691). The first two of a new range of deadlocks, the Etas "Guardian," were exhibited. The G 618 and G 402 have as their principal anti-picking device a small diameter cylindrical key around which are arranged concentrically a number of pin-tumbler cylinders. The long singlethrow bolt is also protected by toughened steel rollers. No prices were available for these locks. Also manufactured by Yale & Towne for Inter-Continental Office Equipment Ltd, was a comprehensive range of stove enamelled steel duplicate key storage boards and cabinets called Colorcap. This is an ingenious and extremely well-made set of equipment for the storage and easy identification of the keys of any size of lock installation -from 10 to 300. There is a built-in index and coloured plastic cap hooks

for all keys. For lockable cabinets prices

range from £16 10s for an A50 cabinet

(50 keys) to £70 for an A300 cabinet

(300 keys).

(31) Windows

The general tendency in development appears to have continued towards provision of windows requiring little or no external maintenance and with facilities for cleaning both single and double glazing from the inside. These units, although applicable generally, are more specifically intended for high buildings.

By far the most notable exhibits were several wood windows which are new to this country and which, in fact, are Continental patents being produced under licence in this country for the first time. These types join the field which has for many years been dominated by the Holcon (Carda), Holcon Ltd (21 Mackenzie Street, Slough, Buckinghamshire. Slough 25431) and Tomo, Tomo Trading Co Ltd. (Packet Boat Dock, Cowley Peachey, Uxbridge, Middlesex. West Drayton 3751) window systems, and incorporate similar advanced mechanisms and locking devices.

There are several interesting uses of maintenance-free aluminium external cladding, or out frames in double glazing, in connection with units which are essentially wood windows.

Among metal window firms the latest developments are in plastic coverings and wider use of stainless steel sections.

1. Wood windows

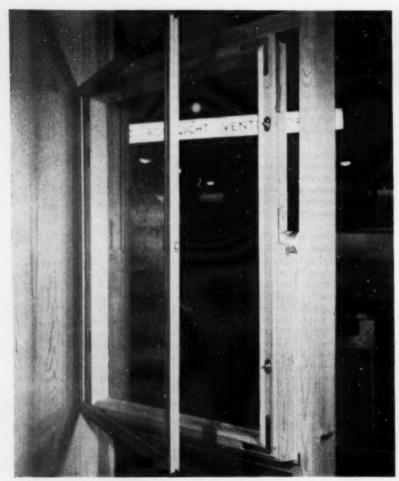
H. C. Janes Ltd (Barton, Bedfordshire. Hexton 364) demonstrated a horizontally pivoted double-glazed window with British mechanism (single-axis pivot and three-bolt lock) which is mainly of interest because of its comparatively low price. For a 4ft by 4ft window the cost (unglazed) is approximately 13s to 15s a sq ft in softwood (hardwood sill). This unit is available also in utile or afrormosia (the latter being approximately 28s a sq ft in this size).

One of the Continental windows being produced under licence, the Rotoves by Beves & Co (Joinery) Ltd (Kingston Wharf, Shoreham-by-Sea, Sussex. Southwick 2285), is a unit with German ironmongery. In nearly all cases the mechanisms are imported, the joinery being carried out in the United Kingdom.

There is one neat silver anodised drop-tail lever on each side stile, operation of one giving inwards side-hung operation, operation of both giving inward bottom-hung movement for cleaning. This window, designed for single or double glass panes, ranges in price upwards from about 12s a sq ft (softwood, unglazed), the present limit in size being 55in (maximum) to 23in (minimum) wide by 71in (maximum) to 23in (minimum) high.

Rippers Ltd (Castle Hedingham,

Halstead, Essex. Hedingham 191) is producing a single- or double-glazed horizontally pivoted unit based on the Scandinavian *Victoria* pivot, which is of the non-friction floating axis type.



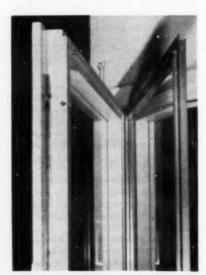
Holcon horizontal pivoting window with aluminium and timber leav



Crittall Easy-reach window-opening gear



Gerrard GU 10v30 vertical sliding window with pivot



Boulton & Paul casement window with aluminium and timber leaves

The espagnolette locking is a two-bolt mechanism, although a four-bolt lock is available. The outer casement is spring-hung at the top (when reversed) with bottom stays, for cleaning. The Victoria window is produced in four sizes: 4ft 0½in high by 4ft 0½in or 5ft 11½in wide, and 5ft 0½in high by 4ft 0½in or 5ft 11½in wide, the largest size costing about 17s 6d a sq ft, the smallest about 30s for British Columbian pine without glazing.

pine without glazing.
Probably the most interesting of the
Continental imports is the Gerrard
Unitas series of windows, J. Gerrard &
Sons Ltd (Pendlebury Road, Swinton,
Manchester, Swinton 2261), principally

vertical pivot and locking mechanisms are incorporated in the units, allowing each size range to be reasonably economical for a high-quality window. Of the horizontal pivot windows, the most interesting is probably the Unitas GU10 (single or double glazing) which incorporates a four-point lock system and the No 10 pivot which is apparently the only available fully flush pivot. This is a two-axis pivot with a very good friction control and balance throughout 180 deg and has a safe locked limit of 22 deg in the normal ventilating positions with a key release for full revolve. The maximum size for the gu10 is 8ft by 7ft 6in (maximum area 53 sq ft) if double-glazed, and 8ft by 9ft (64 sq ft) if single-glazed. For single-glazed, this window is available in British Columbian pine at about 16s a sq ft for a 6ft by 6ft window, unglazed. The wide selection of units on the stand includes heavy pivoted shop-windows and ranges upwards from the GU6(16 sq ft maximum) mounted on a single axis pivot with simplified lock, at a cost of about 10s a sq ft (unglazed, for single glazing) in softwood. There is also on display a horizontal pivot window which can be operated to slide vertically to give a full clear opening (GU10v30); this is said to be remarkably popular in France. Completing the Gerrard Unitas range is a comprehensive array of neat

because of the great flexibility offered.

Various types of horizontal and

and external louvres.
Related to this last item, the Greenwood's & Airvac Ventilating Co
Ltd (Beacon House, Kingsway, London wc2. Chancery \$135) range of above-glass ventilators has been supplemented with an anodised extruded aluminium unit available for EJMA wood, and Z range metal, windows, or specially to order) which shows a reduction in cost over steel types for lengths over about 3ft, excluding savings in decoration.

ventilator devices in anodised

aluminium, for incorporation in

heightened transome or frame, or at the

top of the glazing, with optional forms

of surface or flush controls, flyscreens,

The most interesting *Tomo* development is the bottom-hung unit which, in softwood, can be produced at approximately £1 a sq ft. The top stays are unclipped for cleaning the outer glass face.

Jayanbee Joinery Ltd (High Street, Uxbridge, Middlesex, Uxbridge 38222) has introduced the Pierson horizontal sliding window, comprising  $\frac{1}{16}$  in crystal glass sliding in hardwood frame with very simple but effective wedge and lock systems which provides a burglar- and water-proof unit. The feature of this window is the unencumbered glazing area with absence of heavy ironmongery. The price is about £1 a sq ft for the double-glazed unit.

Several firms, including Tomo,

Holcon and Gerrard, are producing aluminium external clad timber units, but perhaps the more interesting developments in this field are the double units comprising complete aluminium outer frames. Of these the Aluh window by Boulton & Paul Ltd (Riverside Works, Norwich, Norfolk. Norwich 72A, Norwich 25251) and the Carda, Holcon Ltd, similar units are worth a study. Both windows are of wood with outer frames of extruded aluminium welded at the corners then anodised. The Aluh system, imported from Switzerland, incorporates Swiss ironmongery and the window can take single, double or multi-glass pane glazing. The cost of a completed doubleglazed 5ft by 3ft window is a little over £2 a sq ft. The size limit is about 7ft in one direction by 20ft (special pivot) and various types of opening systems, side-hung and pivoted, can be used. It has been used on Boulton & Paul's new office block and factory. The similar Carda unit costs about the same, or perhaps slightly less, and incorporates a gravity locking device to close the opening leaf as the horizontal pivot window revolves. The unit provides a 3in air gap between glass panes. Unlike other Carda products, this window is shipped complete, in Swedish redwood class A which is not normally available here. This unit is also available side-hung, or vertically pivoted, and both Aluh and Carda units are applicable to curtain walling. Plastic and metal windows

One example of a wholly plastic window comes from Osma Plastics Ltd (Grove House, 551 London Road, Isleworth, Middlesex. Isleworth 7261). It is a compression-moulded window in polyester/glass fibre, based on a German patent and still in the development stage. As a result, no prices are as yet available; maximum size is 8ft by 5ft. The prototype mechanism and furniture are also German.

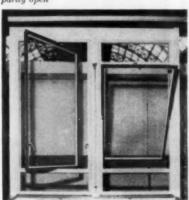
Crittall Manufacturing Co Ltd (210 High Holborn, London wc1. Holborn 6612) showed a window in aluminium plasticcovered, which is really a stoved treatment comparable with paint techniques. This is also experimental. There is an example of plastic covering to galvanised steel in the Ferroplast by Henry Hope & Sons Ltd (Smethwick, Birmingham. Smethwick 2191). This assists waterproofing, cuts down noise in operation and provides a permanent finish, the cost being about 20 per cent more than for anodised aluminium. An interesting feature of this window is the concealed espagnolette fixing on both sides with very neat furniture designed by Kenneth Grange, FSIA.

On the domestic side Crittalls and Hopes have gone into their individual design shells and come up (or out) with similar solutions to the problems of operating standard-size top-hung casements over

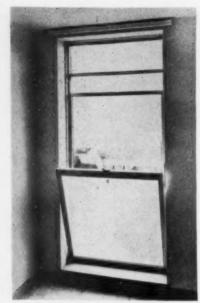
Hopes presented the Easy-work based on a



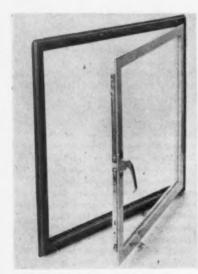
Tomo bottom hung window with one leaf partly open



Hope Ferroplast plastic window



Crittall Cambridge window



Window made entirely of polyester glass fibre by Osma Plastics



Boulton & Paul window louvre system

sprung casement with torsion control. This will be available in January 1962 at a price of £2. The *Crittall* device is the *Easy-Reach* slide-operated stainless steel cable, with thumb screw locking, which will be available in March 1962 at 30s.

The Crittall Cambridge window is a composite of bottom-hung and vertical sliding sashes, designed generally for multi-storey work requiring high safety factors, and specifically for East Road Flats development at Cambridge (David Roberts, MA, FRIBA).

The Quicktho factory-glazed (single at present) vertical slider Quicktho Engineering Ltd (5 Grafton Street, London w1. Hyde Park 1806) which has a size limitation of 7ft by 3ft 6in has an exceedingly slight meeting rail \$\frac{1}{2}\$in high. This window is a prototype and prices are not yet available, although costs per sq ft will be slightly higher than for the familiar horizontal slider owing to the incorporation of spiral balances. Hopes also shows a slim unit in stainless steel.

John Thompson Beacon Windows Ltd (Wolverhampton. Bilston 41121) showed a 360 deg vertical pivot window with automatic safety lock device. This unit is available for delivery in about 16 weeks.

Finally, the Heywood-Helliwell Ltd (Bayhall Works, Huddersfield. Huddersfield 6594) B series aluminium Continental (Swiss) window makes interesting use of the Unitas pivot hinge (No 10), the flush type referred to above. A 4ft 6in by 3ft 6in unit (unglazed but to receive double glazing) costs approximately 32s 6d a sq ft, assuming quantities of 25 or over. Maximum size is 6ft high by 5ft.

# (32) Doors: general

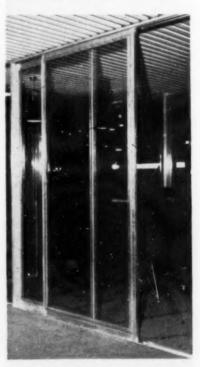
There were very few really new products this year, but a number of manufacturers have increased their ranges to include products similar to those already available from competitors. This applies particularly to folding screens and cheap pre-painted flush doors which are now supplied by most manufacturers, though quality of finish varies Both Crosby & Co Ltd (Lion Works, West Street, Farnham, Surrey. Farnham 5291/3) and F. Hills & Sons Ltd (Norton Road, Stockton-on-Tees. Stockton 67141) have introduced a plastic laminated finish in their standard range of flush doors. The Hills door is available plain or in one reproduction wood finish, while Crosby supplies a range of the usual printed laminates, including wood graining. The cost is equivalent to a wood veneer door with an applied finish. Crosby was also showing a standard wood veneer door coated with a thick film of glossy or matt clear plastic.

The Gliksten Group of Companies (Carpenters Road, Stratford £15. Amherst 3300) was showing a new finish to a standard veneer door. Known as Burnished, it is a smooth sealed finish which preserves all the character of wood grain, the pores remaining open. The cost is 4s 6d extra. These doors can also be obtained complete with factory-fitted locks.

On the stand of Boulton & Paul Ltd (Riverside Works, Norwich, Norfolk. Norwich 25251) was a new range of external doors in solid oak or BC pine and, despite some horrors, included one or two patterns suitable for general use. Two manufacturers, Ellard Sliding Door Gears Ltd (Works Road, Letchworth, Hertfordshire. Letchworth 613/4) and E. Hill Aldam & Co Ltd (Britannie Works, Red Lion Road, Tolworth, Surbiton, Surrey, Elmbridge 0090), have introduced a top-hung sliding door gear for cupboards which is similar in most details to the Double Top by Hendersons, except that it has a separate track for each leaf enabling it to be used for either one, two, or three doors.

The choice of folding internal doors has been increased at one end of the range by the introduction of WonderFold by Bolton Gate Co Ltd (Turton Street, Bolton, Lancashire. Bolton 25241). This is a cheap device which cannot be insulated, but it is less flimsy than other low-priced versions. At the other end of the range is the Markyfold by the Marky Tile Co Ltd (London Road, Riverhead, Sevenoaks, Kent. Sevenoaks 55255), an expensive door which can be soundproofed, and is available in a selection of heavy pvc finishes.

A variation of the folding door which has veneered wood folds continually

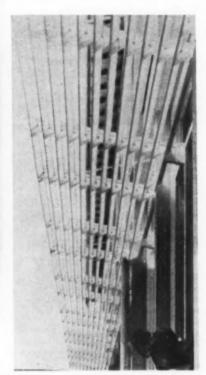


Double glazed sliding door by J. Thompson Beacon



Quicktho vertical sliding double hung window

hinged together, was shown by British Werno Ltd (79 Portland Place, London w1. Langham 7702/4) and Home Fittings (Great Britain) Ltd (Victoria Works, Hill Top, West Bromwich, Staffordshire, Wednesbury 0761). The price is comparable with Modernfold, also by Home Fittings. On the industrial scale a new collapsible gate for large openings was shown by Esavian Ltd (Stevenage, Hertfordshire. Stevenage 500). Known as the Aligate, it is made of interlocking extruded panels which run on nylon bushed wheels and forms an easily operated draughtproof gate of fine detail. Esavian also had sliding and slidingfolding windows, designed primarily for use aboard ship. These are made up of



Luxaflex aluminium sun louvre (for external fitting)



Esavian glazed sliding door

Marley folding door



Avery electric blind

special extruded sections. John
Thompson Beacon Windows Ltd
(Wolverhampton. Bilston 41121), had a
similar sliding door system, incorporating
the company's new double glazing.
Westland Engineers Ltd (Yeovil, Somerset.
Yeovil 2231) was showing a new and
very cheap aluminium "up-and-over"
garage door, and a two-piece lift-up
door for larger openings in which a
glazed area or wicket gate can be
incorporated.

Perhaps the most interesting new product was shown by British Werno Ltd. The Fairhurst folding wall is a tracked system in which entirely separate panels can be closed into a recess and covered by an additional door. This system allows great flexibility as any part of the wall can be left in any position. It is reasonably soundproof, and the only visible ironmongery is a handle to the door covering the recess. A new armoured glass door was shown by Steele's (Contractors) Ltd (Stamford Road N1. Clissold 1121). This has a special mortice lock in the normal position and is considerably cheaper than the usual top and bottom rail version. The handle shown at the exhibition left much to be desired.

## (35) Screens, louvres : general

The only new products worthy of mention in this section are of Continental or United States origin.

Showing its products for the first time at this year's Building Exhibition, though old-established in its native Denmark,

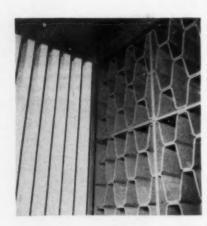
was P. I. Christensen & Co Ltd (26 Bedford Row wc1. Holborn 2918), manufacturer of Faber venetian blinds. There are two types for fitting between double glazing, which differ principally in the size of the head mounting rail. The larger Metalet 43 and smaller Metalet 22 are both available with 2in. 14in and lin wide slats. Both members can be tilted to any angle and set at any height within the window by means of an extremely neat control device. The price is about 5s 3d per sq ft complete. These blinds were to be seen elsewhere in the exhibition fitted to better quality wood double-glazed windows, eg those of Tomo Trading Co Ltd. Also shown was the Metamatic, a sturdier blind with 2in slats of stove enamelled aluminium or self-coloured polystyrene. The alternative single point control devices for this blind are continuous cord control, or collapsible swivel rod control which is also available in remote control form. The price of the Metamatic is approximately 6s 6d per sq ft. All these blinds are exceptionally well made and finished and neatly controlled. Luxaflex aluminium building components, manufactured by Hunter Douglas Ltd (33 Sloane Street sw1. Belgravia 6275), form a system of stove enamelled rolled strip profiled panels and stringers with a



Ruberoid rooflight in galvanised steel decking



Ide's flat glass sheet on standard rooflight



TIAM Sunscreens

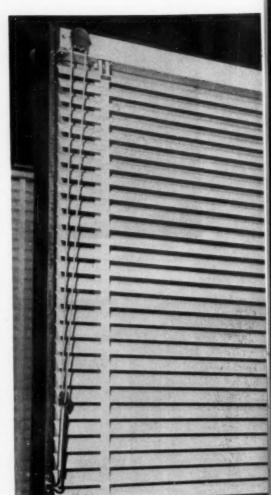
wide variety of applications, particularly in the field of fixed or adjustable sun louvres, canopies, and vertical cladding and screening. The 23 swg panels are hin to hin wide after forming by any length up to 500ft, in coils, and are finished in a range of twelve strong colours, including white and silver. When spring-fitted to a variety of stringers which are available up to 16ft, this makes a versatile building component. Prices should be available when the material is marketed here later this year. Shown by the same manufacturer was the Luxaflex Draw Drapes vertical venetian blind in which the aluminium slats are hung vertically and a single cord control enables the slats to be drawn apart like curtains and angled for sun control. At the base, nylon links hold the slats in position, preventing fluttering in draughty locations and minimising rattle. Prices can be quoted only against a specific installation.

### (37) Rooflights and traps: General

The problems involved in designing an efficient rooflight: avoidance of condensation and rain penetration, the provision of adequately controlled ventilation, security and ease of maintenance, have been met in various ways and varying degrees of success by manufacturers. The introduction of plastics has added further complications. The aluminium Maxadome rooflight ventilator Greenwood's & Airvac Ventilating Co Ltd (Beacon House, Kingsway, London wc2. Chancery 8135), is an example of the sophisticated standard of rooflight design which can now be achieved; concealed linkage controls, a maximum effective area of ventilation, flush liner mounting ensuring a minimum structural light cut-off and avoiding internal dust ledges, and illegal entry through the rooflight made wellnigh impossible in the detailing of dome, security clips and ventilator security brackets.

The internal and external appearance of rooflights has also been considered by Ruberoid, which can now provide them as an integral part of its Insulated Deck Roof without requiring any additional structural support, Ruberoid Rooflights can be incorporated equally well, however, with any roof decking. In order to speed work on site Cordar Ltd (34 Dean Street, Newcastle upon Tyne 1. Newcastle 26214), has developed the Combined Cordar Neolith Unit, which comprises the dome built into a standard Neolith wood wool slab decking unit using a vertical galvanised metal kerb.

Cheaper than a standard Perspex domelight, T. & W. Ide Ltd (Glasshouse Fields, London El. Stepney Green 2333), has produced a drip-dry flat glass sheet to fit standard rooflights. Drip grooves are cut on the underside of the glass which ensure that the rainwater is channelled off and does not run back under the glass and into the roof opening.



Faber Metamatic blind

# (38) Roof eaves, verges, gutters, rails:

Most notable development in this field is the remarkable expansion in plastic rainwater goods, which are now widely and readily obtainable. Otherwise the main attention of manufacturers appears to have been devoted to neatness in appearance.

Pvc rainwater goods

At least five manufacturers showed plastic rainwater systems. Products from the following were on view:

Allied Structural Plastics Ltd (Tolpits, Watford, Hertfordshire. Watford 34551). Marley Tile Co Ltd (London Road, Riverhead, Sevenoaks, Kent. Sevenoaks 55255)

Osma Plastics Ltd (Grove House, 551 London Road, Isleworth, Middlesex. Isleworth 7261).

Yorkshire Imperial Metals Ltd (po Box 166, Leeds, Yorkshire. Leeds 72222).



Combined Condor Neolith unit



Turner asbestos Slimline gutter

Redland Tiles Ltd (Castle Gate, Reigate, Surrey. Reigate 4781).

Muntz-Barwell Ltd (Alexandra Works, near Bromwich, Staffordshire. Tipton 1246).

Burn Brothers (London) Ltd (Cray Avenue, St Mary Cray, Orpington, Kent. Orpington 31311).

These pipes and gutters are all light, easy to handle, resistant to corrosion, in colours which may be acceptable without painting. Expansion has been taken into account in the design of each system. Prices of pipes are not very useful since there seems to be no fixed relationship between those and prices of fittings. Thus the prices of three manufacturers of gutters and stop ends read as follows: 4in gutter, 1s 11d a ft. Stop end 2s 9d. 4in gutter, 2s 3d a ft. Stop end 1s 8d. 41 in gutter, ls 11d a ft. Stop end ls 11d. Measured prices cannot be quoted. Manufacturers maintain, however, that reduced labour costs due to ease of handling and fixing represent a substantial saving. One comment which may be representative was that the cost fixed might be between that of cast iron and asbestos cement, with likelihood of long-term economies in maintenance and painting.

Evered & Co Ltd (Surrey Works, Smethwick 40. Smethwick 0881) showed a 5½ in by 2½ in asbestos cement box gutter without sockets, developed with special consideration for appearance. At 11s 7d a 6ft length (without fittings and subject to varying discounts) the cost is somewhat more than that of halfround gutter (a 6ft length of 5in diameter half-round gutter costs 8s 9d) but the discharge capacity is greater and downpipes may perhaps be more widely spaced. This Slimline gutter can be supplied with a durable epoxy resin finish for a 75 per cent increase in cost.

Vitreflex Ltd (Dafen, Llanelly, Carmarthenshire. Llanelly 4194) showed a new half-round vitreous enamelled gutter, Cleanline, available in all their colour range; it has integral brackets which contribute greatly to its neatness. The cost of 6ft of 4in diam gutter is 17s 6d compared with 18s 1d for the Vitreflex Standard 4in half-round gutter with two brackets.

#### (42) Finishes, internal: General

Emphasis was very much on plastics in the wide selection of wall finishes exhibited. For the first time, Formica Ltd (84 Regent Street w1. Regent 8020) displayed its new range of laminates for architects and interior designers only. This range covers 26 designs in 33 colour combinations in large scale patterns. Standard sheets are 8ft by 4ft and cost 4s 3d per sq ft. The designs are illustrated in an excellent brochure which is available. Most manufacturers have added to their range of laminate finishes and a considerable number from abroad were exhibited. Notable among these were Getalit from West Germany and Perstorp from Sweden. As an alternative to the melamine surfaced laminates, Armoride Ltd (24 Orchard Street w1. Mayfair 9941/5) showed a flexible polyester laminate called Armabord which is cheaper than melamine but not as hard wearing. The same firm exhibited a new range of vinyl-coated fabrics known as Mural Florestin. This type of material was much in evidence in a varity of colours and patterns. A quilted pvc sheet with a self-adhesive backing, aimed at the do-it-yourself market, was displayed by Dalmas Ltd (Charles Street, Leicester. Leicester 23861/5). The price is 4s 6d per sq ft.

Paniquil (Sales) Ltd (40 New Cavendish Street w1. Welbeck 0846) showed its similar material on a hardboard base and a range of Royaltex plastic faced wallpapers from America. In this material various woven materials, pressed natural leaves, butterflies and other flora and fauna are laminated on to a plastic faced sheet. Prices vary from 47s 6d to 64s per sheet, which is 23in by 95in in size. Of the more traditional materials Carter Tiles Ltd showed a new range of moulded face tiles available in 72 different colours. The most striking examples of nev designs and effects in tiling were shown by The Malkin Tiles (Burslem) Ltd (Burslem, Stoke-on-Trent. Stoke-on-Trent 87287). The Turinese range, on show for the first time, breaks away from the precise, machine-made look of modern tiles and provides a depth and richness of colour seldom achieved. Delivery time is approximately six weeks and prices average about £5 per sq yd fixed. Timber panelling, giving the appearance of boards or planks, was to be seen on a number of stands and two versions from Canada were displayed. Beauty Plank, marketed by Tentest Co Ltd (Fiboard

House, Oakleigh Gardens x20. Hillside

8801) is supplied in random widths, each plank being secret-nailed individually. The price for supplying and fixing ranges from 13s to 15s 6d per sq ft. The other called Plankply, was to be seen on Canada's own stand, formed into standard 8ft by 4ft sheets. Both are basically plywood boards with the outer laminate made up from selected strips of veneers. The effect is very realistic. Imperial Chemical Industries Ltd (Imperial Chemical House sw1. Victoria 4444) featured a new ready-mixed light-weight plaster suitable for all plastering backgrounds. It is made in two grades, a backing coat and a finishing coat, which can be applied direct to plasterboard for single coatwork. Because of its low density, good thermal insulation and fire protection are among the many advantages claimed for this new plaster. A new method of lining walls was also demonstrated by means of a colour film on show during the Exhibition. This is a new technique developed by ici to combine the advantages of a plastered surface with those of a drylining system. The method consists of applying plaster ribbons to the back of sheets of Pioneer plasterboard which are then pressed against the wall like large tiles. Joints are filled and struck as the work proceeds and the whole is finished with a skin-coat of neat plaster. The main advantages are ease of specification, quick drying, early decoration and high thermal insulation.

#### (42) Finishes, floor: General

This year's exhibition offered little that is completely new. The most interesting development is the ever-increasing use of pvc in combination with almost every type of filler, but there are too many manufacturers and importers to mention individually.

Wide variations in price generally reflect the differing percentages of pvc. Thus trade names ending in "flex" usually denote tiles with asbestos fillers and 20-30 per cent pvc, costing about 25s to 30s a sq yd laid. Prices rise steadily with increasing percentages of pvc, but (claims for "the only pure vinyl floor on the market" ring hollow when heard at the sixth successive stand. However, many products do contain over 80 per cent pvc—often in a thin wearing layer on laminated sheet of lower grade or on a hessian backing.

Apart from Foam-Plastylon, which has a thin pvc sheet on a 2mm sponge rubber base, and felt-backed pvc such as Vynoleum, resilience depends on thickness and pvc content. Foam-Plastylon is produced by Bulgomme-Silence Flooring (11 Mount Park Crescent, London w5. Perivale 6550) at 32s to 34s a sq yd, including purchase tax, for an area of reasonable size: Vynoleum is made by The Adamite Co Ltd (94 Petty France, London sw1. Abbey 5911), cost 24s a sq yd laid.

## HOPE'S standard



CANTERBURY COURT, South Kilburn Arthur M. Foyle, Ph.D., B.A.(Arch.), F.R.I.B.A., Architect

John C. Morris, B.Sc., M.I.C.E. Borough Engineer & Surveyor, Willesden

Long Life - minimum maintenance First-class Fit - bronze fittings No rust - hot-dip galvanized finish

> Patent friction-held cleaning hinge holds casement firmly open in any position - no stay clutters the cill



Send for List 356

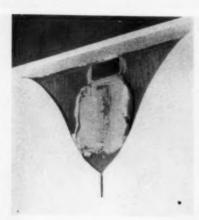
HOPE'S WINDOWS The Name Guarantees



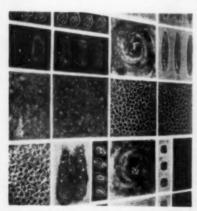
HENRY HOPE & SONS LTD SMETHWICK, BIRMINGHAM LONDON: 17 BERNERS ST., W.I



Panawall three-ply timber with natural brown elm veneer strips



Celcon Paramount plasterboard on Celcon blocks



Malkin Turinese tiles



Paniquil Royaltex wall covering

Costs range from 26s 6d for 1mm 65 per cent pve Polyflor by James Halstead Ltd (po Box 3, Crow Oak Works, Whitefield, Manchester. Whitefield 2251) to 110s for \( \frac{1}{2} \) in thick "pure vinyl." Pure transparent pvc is sometimes used for the top surface and printed with patterns on the underside. The thinnest qualities of this have now entered the printed linoleum field with similar patterns and colours, eg Consort 70 at 11s 6d a sq yd retail. Marley Tile Co Ltd (London Road, Riverhead, Sevenoaks, Kent. Sevenoaks 55255).

Colours generally seem to be better and ranges more extended, but it is easy to see which manufacturers employ good colour consultants. There is, however, much work to be done before architects will be satisfied with colours and patterns. Gold dust is "in" this year, so are various other attempts to evoke a patrician atmosphere with tesserae, terrazzo and the "lustre of solid marble." Marbling remains the standard treatment for pvc, but Nairn's vinyl tiles, Michael Nairn & Co Ltd (Kirkealdy, Scotland. Kirkealdy 2011) and Rilflex, British Mouldex Ltd (Wellingborough, Northamptonshire, Wellingborough 4033) show a welcome variation in a kind of foam-flecked shading. Holmsund Flooring Ltd (26 Calthorpe Street, London wcl. Terminus 6601) show Randitiles with irregular strips of harmonising colour forming 12in by 12in tiles at a cost of £3 a sq yd net. This firm also produces Nyletter trapezium-shaped tiles which can be arranged to break up the floor into directional or jazzy patterns. James Halstead Ltd do Kaleidotiles in the same way out of Polyflor.

It is worth briefly reviewing the range of cheap floorings. Apart from resinasbestos tiles such as Marleytile, Accotile and Semastic, ranging in price from 10s to 20s a sq vd laid, according to colour. there are also materials sold retail for home laying. Marley Tile's Consort 70 at 11s 6d a sq yd has already been mentioned, but they also do Marleyflor sheet pvc at 10s 6d and Marleutred felt-backed pvc at 18s 9d a sq yd. Semtex Ltd (Semtex House, 19 Berners Street, London w1. Langham 0401) produce Permatred textured rubber runners, 3ft and 2ft 3in wide at 21s a sq yd. There are many types of thin vinyl-asbestos tiles for doing it yourself, such as Houseproud by Michael Nairn & Co Ltd at 15s 4d a sq yd, and this firm also produces Congoleum at 4s 9d a sq yd. The latter is not easily beaten on price and wearing quality, and compares with 12s 6d a sq yd for the cheapest linoleum from the same firm.

In the medium price range of contract flooring come vinyl asbestos tiles at 25s to 30s, linoleum at 27s to 54s a sq yd laid, according to thickness, synthetic rubber at 30s to 50s for 1 in to 1 in thicknesses (British Mouldex Ltd., Semtex Ltd.) who also do studded and ribbed tiles, and Armstrong Cork Co Ltd (Bush House, Aldwych, London wc2. Covent

Garden 1101). The two latter firms also produce cork tiles at about 35s a sq yd laid.

Most timber floors also fall in the middle price range, apart from reconstituted particle boards such as Plimber by British Plimber Ltd (Rainham, Essex. Rainham 5262), or Weyroc GP by the Airscrew Company & Jicwood Ltd (Weybridge, Surrey. Weybridge 2247), which is a structural floor material with a basic price of only 13s 6d a sq yd, though to this must be added cost of laying, sanding if not fully protected after laying, and sealing. The appearance of the latter material has little to do with natural timber; neither have the standard Granwood blocks which look rather similar but attain their effects by being dyed to various colours, including blue, green, black and shades of brown. They consist of wood particles in a cement matrix and can be bedded straight on to a site slab without a damp-proof membrane. They are produced by Granwood Flooring Co Ltd (Riddings, Derby, Leabrooks 341) at 29s to 34s a sq yd laid. This firm has now bonded natural wood veneers to a cementitious base in the Safari tile, which is laid in the same way at a cost of about 30s a sq yd. This finish is similar in appearance to wood mosaic floors, which are produced in \$in thickness by most timber flooring firms. Junckers (London) Ltd (17 Hanover Square, London w1. Hyde Park 8754) showed a variant with oak or ash parquet in basket or strip pattern on a laminated softwood backing. The 12ft by 41in. strips are laid in the same way as a strip floor on battens which can be up to 2ft apart. The cost a sq yd laid on prepared battens is 52s for oak and 47s 6d for ash. The same firm does solid beech strip floors at 37s 6d to 40s a sq yd. Both types come already finished with a urea-formaldehyde sealer.

In this price bracket also come tiles such as the speckled Dorset produced by Carter Tiles Ltd (Poole, Dorset.
Poole 125) and Sinzig by Langley London Ltd (163 Borough High Street, London sel. Hop 4444). Brick paviors were shown by Sussex & Dorking United Brick Companies Ltd (Graylands, Horsham, Sussex. Horsham 2351), including, besides traditional Southwaters and a blue brindled engineering brick from Lunsford, hard-burnt Warnham stocks with an attractive rough texture at 195s a thousand.

Another very attractive finish suitable for indoor or outdoor use consists of ½-in-thick riven slate slabs in shades of purple and blue-grey, shown by the North Wales Slate Quarries Association (267 High Street, Bangor, Caernarvonshire. Bangor 2855). This finish would cost between 60s and 80s a sq yd laid. In the higher price range come terrazzo tiles with large slabs or pebbles of marble by A. Quiligotti & Co Ltd (Milton Street, Plymouth Grove, Manchester 13. Ardwick 4311) at about

#### The new, better-than-ever ASCOT G510/1

#### sets a new standard in boiling water heaters.

Extra performance and greater ease of installation are only two of the reasons why everyone concerned with planning domestic hot-water services should specify the new Ascot G510/1 boiling water heater. The threeheat G510/1 sets a new high standard for single-point gas water heaters: the improvements it embodies are sure to make it as popular with architects and planners as with plumbers and householders.

The new Ascot G510/1 is a successor to the popular Ascot 509 and has a high hot-water output. It features a fitted integral gas governor and rotary gas control, and its specification is as follows:-

Input Rating **Output Rating** 

Controls

40,000 B. Th. u./hr. 30,400 B. Th. u./hr.

Output

0-5 galls./min. raised through 100° F or 21/3 pints per minute at boiling.

Dimensions Height: 284" (with spout) Width: 74'

Depth: 71

Rotary gas control, hot and cold taps, and 3-heat

#### . and makes it even more essential to specify ASCOT!

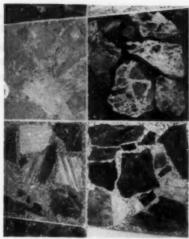


RADIATION HOUSE . NORTH CIRCULAR RD . LONDON . NW10

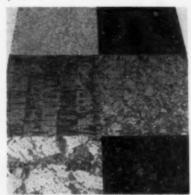
A Rediation Company

BARBOUR INDEX FILE No. 151

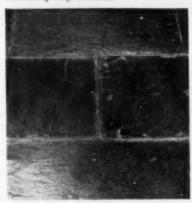




Quilligott terrazzo tile with large chunks of marble



Armstrong vinyl cork tiles



Floor by North Wales Slate



Junckers Danish beech strip flooring

90s a sq yd laid, and reconstituted marble slabs by Similpierre Marble Ltd at about 120s a sq yd, shown by Carter Tiles Ltd. The vinyl floors with high pvc content have already been mentioned. Armstrong Cork Co Ltd also import vinyl cork tiles consisting of a veneer of cork bark combined with pvc to give a very pleasant natural texture at a cost of about 120s a sq yd laid. This firm also produces Linotile, giving a harder-wearing finish than ordinary linoleum at a cost of 60s to 70s a sq yd laid.

In the industrial field the chief development is in the use of epoxy resin floors such as Epiflor by Tretol Ltd (Tretol House, The Hyde, London NW9. Colindale 7223), which is intended primarily for patching old concrete, and Trinasco by Limmer & Trinidad Lake Asphalt Co Ltd (Trinidad Lake House, 232 Vauxhall Bridge Road, London sw1. Tate Gallery 4388), which costs about 60s a sq vd laid, or 75s when buffed to give a light finish like a fine terrazzo. These floors are resistant to most types of oils, dilute acids and alkalis. Altro pve floors by Adamite Co Ltd have similar properties at a cost of 32s to 40s a sq yd laid and are claimed to be highly wear-resistant.

Abrasion tests between different materials give inconsistent results but are useful for comparing different grades of the same material as shown by the abrasion machine testing tiles for industrial use on the Carter Tiles stand. Finally, there have been developments in the use of very thin floating screeds such as Synthanite by Semtex Ltd and Tretoscreed by Tretol Ltd, and in the introduction for pvc and rubber floors of adhesives with a high degree of damp resistance, such as D Paste and D Powder by Armstrong Cork Co Ltd. and BR 188 synthetic rubber adhesive by Tretol Ltd.

The presentation of manufacturers' information shows a big improvement: many leaflets are classified according to the sfs system, and many are now printed on A4-size paper, which makes filing them for reference much easier.

#### (46) Finishes: Flat roofs

Generally the major roof finish development seems to be in the field of site application and off-site prefabrication. The shortage of site labour and the fundamental problem of roofing the building quickly to keep the structure dry have been tackled by a few firms with a variety of answers and, one hopes,

Farmiloe Sealants Ltd (Nine Elms Lane, London sw8. Macaulay 7121) have produced a butyl finish in sheet form in various colours that they bond to a deck in the factory. This resulting composite deck can be quickly fixed and weatherproofed on site—350yd per day have been laid. The deck can be specified by the architect, but the exhibit at the

stand was on Stramit (Stramit Boards Ltd. Packet Boat Dock, Cowley Peachey, Uxbridge, Middlesex. West Drayton 3751). The deck can be laid dead flat and is estimated to have 30 years' life. Price is 27s 6d a sq yd plus cost of deck to which it is bonded. Farmiloe Sealants Ltd also have a new base primer, type 650, which can be brushed on and will stay tacky for a long period. The usual type of mastic tape will then press on and stick. This is better than the spirit primer and costs about the same.

The British Uralite Group of Companies (Uralite House, Whitehall Place, Gravesend, Kent. Gravesend 49111 showed Weatherdeck is a steel deck, with Nuraphalte finish and insulation bonded on in the factory; it can be fixed on site as the above in pieces up to 18ft lengths. The cost, including deck, is £3 a yd, fixed.

Langley London Ltd (The Tile Centre, 163-167 Borough High Street, London sel. Hop 4444), showed Veral metal-faced bituminous sheeting, with either copper, aluminium or stove-enamelled aluminium finish, has been used in France. It can be applied very quickly on site, being merely softened by blowlamp and laid: it cannot be laid flat. Price, material only, copper 28s 6d a vd; aluminium 13s 6d a yd; stove-enamelled aluminium 17s 6d a yd. It is available in three colours.

William Briggs & Sons Ltd (PO Box 19, East Camperdown Street, Dundee, Angus) showed copper-surfaced asbestos-based bitumen felt similar to the above, but in tile form and not so quick on site. Briggs also have a Bitumetal deck with pvc coloured bottom finish-Colorclad.

The Ruberoid Co Ltd (Commonwealth House, 1-19 New Oxford Street, London wcl. Holborn 8797 and 9501) showed a new metal deck with flat soffit designed for use with Ruberoid top surface specification. The price is 16s a yd increase over normal corrugated galvanised deck. Ruberoid also showed (similar to the one mentioned above) and a copper-finished bitumen felt roofing which has been on the market for some

Turners Asbestos Cement Co Ltd. (Trafford Park, Manchester 17 Manchester Trafford Park 2181) have added to their range of asbestos decks a new deck without flat soffit which is consequently cheaper.

#### Metal roofing

Copper Development Association (55 South Audley Street, London w1. Grosvenor 8811) report the introduction of new machines for forming seams which will speed up site fixing time. The Lead Development Association (34 Berkeley Square, London w1. Grosvenor 8422) have a new end detail for hollow lead roll, which is a neat Alcan Industries Ltd (Bush House,

## ELECTRIC FLOOR WARMING

13 978 (5 6)



Swimming baths at Wythenshawe. Architect: Leonard C. Howitt, M. Arch., B.A. (Manch.), Dip. T.P., D.P.A., F.R.I.B.A., M.T.P.I., Ex-Manchester City Architect

All electric operation with floor warming makes good sense for swimming baths...

Issued by the Flectrical Development Association, 2 Savoy Hill, London W.C.2

Up-to-date swimming baths, like the one erected by Manchester Corporation at Wythenshawe, must be designed to operate with maximum efficiency—and comfort. That is why the plans for this one are all electric and include a withdrawable floor warming system for all spectator accommodation, as well as for changing rooms, restaurant, etc. Every possible installation is electric, from the heating of the pool and the hot water supplies right down to photo-electric cells operating the showers.

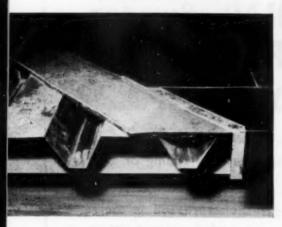
**Down-to-earth** questions—of the kind that councils must always consider—are taken care of comprehensively in this project. The electricity supply comes from the baths' own substation. And because floor warming (and water heating) will be at off-peak times, a special cheaper tariff will be used. Besides this, electricity is clean, easily maintained and obviates fuel supply or stores.

TECHNICAL DATA OF ELECTRICITY INSTALLATION	Connected load kW
Lighting	69
Motive power	67
General power, including electric kitchen	40
Space heating (floor warming) Pools water heating, including	201
plenum ventilating system and showers	720 three 240 kW water heater

Thinking of installing electric floor warming? Write to your Electricity Board for details.



Briggs copper strip tile roofing



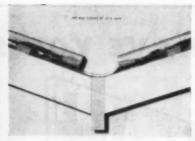
Nuralite Weatherdeck



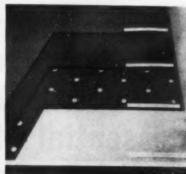
Nuralite Twinrib



End details for hollow lead roll: Lead Development Council



Marley preformed rigid vinyl valley trough for low pitch tile roof



Rubavent roofing system

Aldwych, London wc2. Temple Bar 8430) are showing sealed end Snaprib which is fairly neat and economical for cheap buildings, and a stove-enamelled Snaprib in part of the BS colour range which will be available next year. The cost will be 8d per ft increase over unpainted. Alcan also have a barrel vault aluminium deck which can span up to 20ft and is useful and attractive for industrial use. The price, for the material only, is £13 per square. British Aluminium Co Ltd (Norfolk House, St. James's Square, London sw1. Trafalgar 8888) have an end detail similar to the one described in the preceding paragraph.

#### Clay and concrete roofing

There is not much that is new in this section.

Robert Abraham Ltd (43 Bankhall Street, Liverpool 20. Bootle 2084) seem to produce the lowest-pitch coloured concrete tile at 15 deg at 11s 9d a yd, materials only.

Marley Tile Co Ltd (London Road, Riverhead, Sevenoaks, Kent. Sevenoaks 55255) have a new preformed rigid vinyl trough for low-pitched tile roofing.

(47) Finishes, pitched roofs: General Architects are continually seeking new ways of waterproofing their roof structures, especially for flat roofs where an impervious skin is essential.

The ideals they seek are simplicity in

laying (without the use of highly skilled craftsmen or complicated machinery) and long life.

Manufacturers are continually striving to produce solutions for the architect: some adequately tested and guaranteed, others not so adequately tested and doubtfully guaranteed, if at all. One old friend in a new guise is Nuralite Twin Rib Roofing (The British Uralite Group of Companies, Uralite House, Whitehall Place, Gravesend, Kent. Gravesend 4911). This is an alternative to the Nuralite roll cap system, having flat seams in place of the standing rolls, giving a cleaner roof line. The sandwich joints of the flat seams are heat-sealed, and the roof has a guaranteed life of 25 years. It may be laid from flat up to a 40-deg pitch. The price fixed is approximately 20s a sq yd.

A new metal-faced bitumen roofing, Veral, has been introduced from France by Langley London Ltd (163/7 Borough High Street, London sel. Hop 4444), the metal facing being either 99.5 per cent purity aluminium, stove-enamelled, or copper. The bitumen is reinforced with woven glass fabric. Surfaces require priming with a bitumen solution prior to heat welding the Veral on to it. For roofs below 41-deg pitch a single layer of felt should be laid beneath the Veral. Prices range from 13s 6d a sq yd for aluminium, 17s 6d stove-enamelled and 28s 6d copper-faced; no guarantee is given.

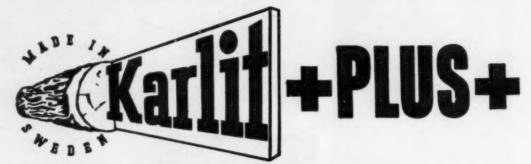
William Briggs have introduced a Copper Foil Striptile for use on sloping roofs of 10 deg and above. This consists of pre-bitumised asbestos-based roofing felt in strips 3ft by 1ft 6in with 1oz Anaconda copper foil strip 9in wide. The price, supplied and fixed, ranges from 35s to 38s a sq yd for areas of 500 sq yd and above.

The Limmer & Trinidad Group of Companies (Trinidad Lake House, 232/242 Vauxhall Bridge Road, London swi. Tate Gallery 4388), in an attempt to overcome the problem of waterproofing lightweight roofs, especially those of complicated shape, is now marketing a plastic roofing. This is Trinasco Plastic which is applied to a thickness of approximately 40 thou by spray gun. It can be supplied to order to the British Standard colour range, and the price per sq yd is approximately 26s. No guarantee or indication of the expected life of this material is given.

#### (51) Installations, Refuse Disposal

Our society seems to have reached a state of acute uncertainty on the fundamental issue of whether it is best to reduce refuse to its smallest possible bulk by burning or grind it up so that it can be carried away by water. There were two entirely different new exhibits, each representing one of these approaches. On the Gas Council's stand

#### **HAVE YOU SEEN?**



## The new hardboard from KARLHOLMS AKTIEBOLAG, Sweden with the essential "PLUS" points of quality

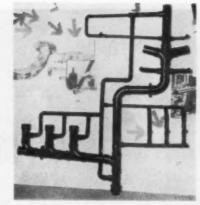
- Has a close even texture with a very smooth hardened surface resisting abrasion. Economical to paint—no sealing or priming required.
- Is sealed by impregnation during manufacture and is therefore sealed in depth. Karlit Plus can be sanded without losing its sealed properties.
- Is highly moisture resistant.
- Has an even moisture content—between 6-8% on leaving the Swedish mill—this makes for greater stability after fixing.
- Moisture content and all other properties are carefully controlled by use of the most up-to-date electronic computer.

Obtainable from Timber & Building Materials Suppliers or details from

TIMBER, PULP & BOARD SALES LIMITED
CITY WALL HOUSE, CHISWELL STREET, LONDON, E.C. I

there was the Caloric gas-fired incinerator marketed by Radiant Heating Ltd (Radiant Works, London, NI. North 1677). Capable of taking 2 cu ft of refuse and all smoke and smell from combustion, it would be of great use to hospitals, shops and restaurants sited in a smokeless zone. It requires a 6in flue and costs £115

The second was a large garbage grinder, the commercial model 128 In-Sink-Erator marketed by Wynbourne-Satoba Equipment Ltd (90 City Road Ecl. Clerkenwell 6006). This is primarily designed for grinding sanitary towels, surgical dressings, etc and, of course, offers a way of disposing of these without a flue. Price is 88 gns.



Burn Brothers Terrain pvc soil drainage



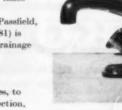
Elona floor gulley



Temple Tubes polypropylene access drop and fittings for pitch fibre pipes



Vitreflex Cleanline gutter and Streamline rainwater pipe



Bourner mixer tap

waste falls are critical as in single stack systems; and a neat, all polypropylene access door unit in a short section of pipe with taper sockets for incorporation in the stack.

J. S. and F. Folkard Ltd (Capitol House, The Broadway, Mill Hill NW7. Mill Hill 6961) showed a new visual glass base diluting trap which is an extension to the Folkard range of laboratory waste fittings. The glass receiver is very resistant to corrosion and the contents can be observed. This asset might be of particular interest in cases where valuable items could be carried down the waste. One gallon (£4 10s) and two gallon (£6) sizes are available.

#### (53) Installations, water: General

The supply of hot and cold water for domestic purposes is not without its problems to the architect, but a large percentage of these problems should have been ironed out successfully at this year's exhibition.

Over the past twelve months there has been a steady improvement in design and efficiency of existing fittings, and a few manufacturers have produced some commodity which is entirely new. The trend generally seems to be one of streamlining and the removal of awkward projections and crevices; this is particularly noticeable in the various types of pillar taps for sinks, baths and washbasins.

One of the latest products from James Barwell Ltd (Great Hampton Street, Birmingham 18. Birmingham Northern 1307) is their unusually styled Ambassador tap produced in two sizes, for bath and washbasin. On the same stand is a variation on the Deck Pattern combination sink fitting in which the built-in hot rinse attachment replaces the flexible hose connection of early models. To use this attachment you press one small lever.

A completely new idea on the working principle of sink taps is shown by F. H. Bourner (Fixings) Ltd (Manor Royal, Crawley, Surrey. Crawley 26166). This deck-type combination sink fitting has non-rising heads to the control taps, thus eliminating the dirt trap caused by laying bare the greasy spindle of the standard pattern. The price of this fitting is reasonable at £6 10s. We have always welcomed the high standard of bathroom and kitchen fittings produced by Barking Brassware Co Ltd (5 River Road, Barking, Essex. Rippleway 3057) and any new additions to their range are eagerly sought. The latest product of this firm, a new manually operated shower fitting, has proved of great interest. The retail price is £12.

Most manufacturers are keeping up to date with the production of shower fittings of various types to meet an increased demand for shower baths in this country. Walker Crosweller & Co Ltd (Whaddon Works, Cheltenham, Gloucestershire. Cheltenham 56317)



Many manufacturers in this field have made extensions or improvements to their existing ranges of products. Econa Modern Products Ltd (Highlands Road, Shirley, Solihull, Warwickshire. Solihull 4981/5) has a new combined floor gulley and waste. This is a very neat solution to the problem of providing a floor gulley to take flow washdown in lavatories and combines a waste connection for lavatory basins. The cost is approximately £8 and delivery takes three to four weeks.

Temple Tubes Ltd (Temple Mill, Passfield, near Liphook, Hants. Passfield 281) is marketing a new above ground drainage system. Two fittings have been introduced for the soil and waste systems: a waste pipe connector, available in lin, 11 in and 2in sizes, to be fitted to the soil pipe after erection, which may be of great advantage when



#### 22,000 fittings for copper tube

The Kontite range of 22,000 types and sizes of fittings for copper tube is the largest in the business. Many of these can be supplied straight from stock. Specials take only a little longer. Every Kontite fitting makes a perfect joint with copper tube, every Kontite fitting is cast in gunmetal to resist corrosion — particularly dezincification. Specify Kontite pipe fittings and be sure of complete reliability.



#### ELETTICOM SE



KAY & CO (ENGINEERS) LTD  $\cdot$  DEPT. A  $\cdot$  BLACKHORSE ST  $\cdot$  BOLTON  $\cdot$  LANCS Telephone: Bolton 21041/4  $\cdot$  A member of the ALENCO Group of Companies



Barking Brassware Co Ltd shower mixing valve



The Leonard 72 thermo' controlled shower valve by Walker Crosweller & Co Ltd (above) and (below) the same firm's Mira manual control valve for a shower





Permutit automatic water softener

have produced two new mixing valves ideally suited for use as shower control taps. The manually operated Mira, of very pleasing appearance, is constructed to enable the user to adjust not only the temperature but also the volume of water; this is achieved by the use of two dials incorporated in the valve face: black for water volume, grey for temperature selection. The Leonard 72 is unique in that it breaks away completely from the traditional type of thermostatic mixer.

Previously the control of water flow through any type of thermostatic controller necessitated either non-return valves together with an outlet tap, or two inlet control taps; this new valve combines the two functions concentrically in one unit. The top control knob operates like a simple tap and determines the volume of flow; the lower handle selects the desired temperature and maintains it. thermostatically, regardless of volume or other influences. This valve is designed to work on a 5ft head minimum, and up to a maximum pressure of 120lb/sq in and it will work satisfactorily with a pressure variation between hot and cold supplies of up to 5 to 1. The Mira valve costs £8 10s, Leonard 72 £15 10s 6d. For a number of years Kay & Co (Engineers) Ltd (Bolton Brass Works, Blackhorse Street, Bolton, Lancashire. Bolton 21041) have been producing gunmetal fittings for copper tube and have kept abreast of all new developments connected with water

services generally. Their latest product

polythene tube of all gauges and sizes.

A recent innovation in the plumbing world is the introduction of polyester

glass fibre cold water storage cisterns, which are resistant to attack by waters

mass produced by Osma Plastics Ltd

Isleworth, Middlesex. Isleworth 7261)

production of a 50-gallon actual size is

being considered. This type of cistern can be drilled and cut in much the same

manner as traditional makes. Weight of

are at the moment available only in 30/25-gallon capacities but the

(Grove House, 551 London Road,

with a high acid content. These cisterns,

in this field is a complete range of Kontite fittings suitable for use with

the 30/25 size is only 15lb; price £3 19s.
Water softening is becoming more prevalent as people all over the country are demanding softer water. The Permutit Co Ltd (151 Regent Street, London w1. Regent 2972) have been producing softeners to suit all sizes of system. The latest advance in this line is n fully automatic cabinet model made of Fibreglass, which can store lewt of salt or the equivalent of 18 regenerations, times of regeneration being set by the automatic control equipment. This softener employs the base exchange principle used in all Permutit products

and is suitable for use with all water

pressures operating between 20 and 100 lb/sq in. The price of the Automatic Water Softener is £241 11s 2d.

Purity of drinking water is essential, and this is harder to achieve in the case of a local or private supply from a well or river. A. Bell & Co Ltd (Kingsthorpe, Northampton. Northampton 2540) have been producing the Belco chlorinator for a number of years so this is no new product; but the demand for this type of equipment is increasing as people become more conscious of the danger in using polluted water. The working parts to this chlorinator are relatively simple and maintenance is reduced to changing the chlorine container. Prices vary according to the model chosen but generally come within the £20 to £60

#### (56) Installations, Heating: General

The general picture showed the development of the packaged unit consisting of boiler or air heater, water heater, circulator pump, where required, and control panel-all provided within a single casing, complete with automatic control and even time programming clocks. The emphasis was on oil- or gas-fired units, the greatest developments being in the use of town gas for central heating. For this no fuel storage is required, nor even a flue, this being superseded by a short length of exhaust stack or a flush balanced flue unit. In the field of electric space heating the only new system was an intermittently operated electric ceiling heating system.

Fireplaces and solid fuel fires
The only innovations were hole-in-the-wall
fireplaces inset into the wall above floor
level with either a cantilevered hearth or
no hearth at all. Byron Fireplaces Ltd
(84 Petty France, London swl. Abbey
3040) showed these; so did A. Bell & Co
Ltd (Kingsthorpe, Northampton.
Northampton 2540), their design No
1947A being particularly acceptable.
This measures 3ft 1½in wide by 1ft 11in
high and projects 2in from the wall face.
With a stainless steel frame and an 18in
Superheat 40 fire with under draught, it
costs around £50.

New designs in enclosed solid fuel fires were the Parkray 33 and 66, enclosed room heaters with a single large glass firebox door, well designed, the 33 being for space heating only and the 66 with a back boiler. Sizes are related to normal fireplace recesses and the units, when installed, project 7in into the room. These fires are made by Radiation Parkray Ltd (Radiation House, North Circular Road, London NW10. Willesden 1234). Samuel Smith & Sons Ltd (Beehive Foundry, Smethwick 41, Staffordshire. Smethwick 1251/3) showed a nevz free-standing thermostat-controlled solid fuel fire in an unusual shape but of clean design, the Richmond, which can heat a room of up to 3,300 cu ft volume, using about 711b fuel, in ten hours. No boiler version is available.



#### Who specified this wastepaper basket....?

He was a very talented architect, who knew all about design and quite a bit about comfort, but he missed a vital point. Design has three dimensions; comfort has four—length, breadth, depth and human nature. His client could never have kept a grate like this stoked. It was bound to end up as an ornate wastepaper basket.

At least there was no attempt to solve the problem in a plain-blunt functional way. This was a period fireplace and quite unashamedly decorative. You couldn't use an electric heater with it. Or could you?

Yes, if it was the right kind of electric heater. A Magicoal period fire is quite the best compromise in a situation like this. Nothing else re-creates the atmosphere of the original fireplace so cleanly and so easily. May we send you a catalogue? Better still, why not visit our showrooms in Newman Street?



#### BERRY'S ELECTRIC MAGICOAL LIMITED

Touchbutton House, Newman Street, London, W.1 Catalogues and information:

2nd Way, Exhibition Grounds, Wembley Hill, Middlesex. Tel: WEMbley 3201

Richard Baxendale & Sons Ltd (Bamber Bridge, Lancashire. Preston 85271) now have central heating " packs " consisting of their 16in or 18in Patent Baxi fire with back boiler, circulating pump, four or five radiators and towel rail. These packs cost between £81 and £96 according to size; installation costs, including piping, are estimated at about £70 making a total of between £150 and £166 for a complete small house central heating and hot water system. Tayco Boilers Ltd (170 Victoria Street, London sw1. Victoria 2431) showed a new Thematic range of solid fuel boilers with thermostatic control; all are available in a choice of six colours. The interestingly shaped Super Thermatic has an output of 27,500 Btu/hr and costs £32 10s. The smallest of the range has an output of 13,000 Btu/hr continuously and costs around £25 10s. This represents a cheap range of thermostat-controlled small solid fuel boilers of acceptable design. Other new solid fuel boilers were the Sofonomatic manufactured by the Grange-Camelon Iron Co Ltd (a subsidiary of Federated Foundries Ltd. 4 Stratford Place, London w1. Mayfair 5054) who showed these with their Selecto-Heat Unit for small-bore heating systems. This unit consists of a manually operated mixer valve and electric circulator pump encased in a sheet metal rectangular box.

Oil-fired systems

Ideal-Standard Ltd (Ideal Works, Hull, Yorkshire. Hull 68971) were exhibiting a new range of Paragon Elite oil-fired boilers with electric controls. These have fan assisted type burners for use with domestic grade oil, so overcoming the problems of flue draughts. Four ratings are available of 35,000, 45,000, 55,000 and 65,000 Btu/hr. They have control facilities for room thermostat, electric programme clock and can also have a circulator pump fixed at the rear of the casing. The design is straightforward with a front control panel. The basic boilers cost from £106 to £121, the pump £35, and other controls extra. Thomas Potterton Ltd (20 Buckhold Road, London sw18. Vandyke 7202) have produced a new range of pressure jet domestic boilers, the AOA42, burning paraffin, with an output of from 36,000 to 42,000 Btu/hr. These are of all enclosed design and measure only 18in wide by 24gin deep by 36in high. A circulating pump can be enclosed within the casing. Cost is £120 basic, plus £38 for the pump. The pressure jet burner is quiet in operation and gives on-off operation with automatic ignition. Perkins Boilers Ltd (Mansfield Road, Derby. Derby 48235) were showing the new oil-fired Mini Boilers. These measure only 11in wide by 22in deep by 36in high and are designed to have the rear 11in of the case built into a cavity external wall; they do not need to be floor mounted, neither do they require a flue. The products of combustion are discharged to the outside air through a

short exhaust pipe and both inlet and outlet air is fan-controlled. The whole burner unit which is a vaporising high-low type burning paraffin or vaporising oil, is sealed off from the interior by a one-piece casing so that no odours can penetrate the interior. The output of these units is either 25,000 or 50,000 Btu/hr. They are available as water heaters for domestic hot water or central heating, or as natural convector or fan-blown air heaters for direct space heating or by duet distribution. Cost for a 50,000 Btu/hr unit is about £63 10s. Double units of 100,000 Btu/hr are also available for external mounting, including weatherproof casings, and these cost £160. This is a small, efficient unit requiring no floor space or flue. Among larger-scale boilers J. Stone & Co. (Deptford) Ltd (Arklow Road, London se14. Tideway 1202) were exhibiting their Stone-Vapour boilers, complete packaged oil-fired units, burning diesel or gas oil for steam production. These units of American type have coiled tube boilers which can produce a pressure of 200lb/sq in of steam within two minutes of a cold start. Such boilers are ideal for steam heating systems within buildings as they are compact, much lighter than conventional steam boilers and require little attention. They can be automatic in operation by time clock control. Size of a 5,260,000 Btu/hr unit is 6ft 4in long by 4ft 71 in wide by 7ft 33 in high, complete with all gear; weight 6,600 lb. Such a unit would be suitable for upper floor or even roof mounting in high buildings. Cost is around £4,700 for a typical unit pack.

A new whole house oil-fired heating system, the Baxi Oil 30A, was on show on the stand of Richard Baxendale & Sons Ltd. The unit measures only 21in by 19in on plan and fits into a recess of normal room height; it requires a 3-in asbestos flue pipe and has a vaporising, high-low burner. It heats air direct and can have underfloor ducting or stub ducts to adjacent rooms. It has an output of 30,000 Btu/hr. The complete installation, with all necessary duct work, thermostats etc, would probably cost between £180 and £200 for a normal three-bedroomed house.

Town gas systems

There has been a considerable increase in the number of gas-fired boilers available, International Boilers de Radiators Ltd (Terminal House, Grosvenor Gardens, London swl. Sloane 6621) had on view their new International Super 45, which has a balanced flue system. The boiler is of compact design with an external control panel and is made of Stelvetite plasticcoated rust proofed steel, with a combustion unit sealed off from the interior of the building. This completely automatic boiler has a circulator pump within the casing; it costs £136 with pump, £126 without; output is 45,000

Btu/hr. It has double control for either full central heating and water heating, or water heating only. There are no taps to control; it can be operated by remote thermostat and by time clock programme Thomas Potterton Ltd have developed a new automatic control system for their Diplomat 31,000, 44,000, 67,000 and 100,000 Btu/hr range of gas boilers. This consists of a five-position control switch operated through a four-tappet electric clock, so that once the time programme has been set on the clock, its operation can be selected by just switching. Again, a circulation pump can be included within the casing. These boilers are of acceptable design and range in price from £103 to £155 according to size, complete with pump and controls. The basic boiler costs some £52 less without pump or controls. Ideal-Standard Ltd showed their range of newly designed Kingston gas boilers, ranging from 25,000 to 87,000 Btu/hr and costing between £60 and £107. These boilers are only 2ft wide by 2ft 41 in deep by 3ft high, but require a normal 3in to 41in flue pipe. These boilers can also be fitted with a circulator pump within the cabinet and, as an extra, complete automatic controls. The Ideal Elite gas boilers are of similar specification but have outputs up to 220,000 Btu/hr.

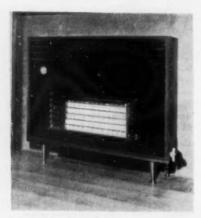
Radiation Parkray Ltd have developed a complete gas-fired, small-bore central heating system, complete with water heater. The complete unit is the Parkray G301/2, the central heating unit only the Parkray 6301/1. The complete heater unit goes into a space 24in wide by 34in high by 12in deep and so will fit under a work top. It has a sealed burner unit with balanced flue outlet, requiring no chimney. It has an output of 25,000 Btu/hr for space heating and an additional gas-fired water circulator for water heating; the circulation pump is mounted outside the casing, but within the 24-in width. The only visible equipment is a small electric control box. The complete unit costs £101, excluding piping, radiators

The Gas Council (1 Grosvenor Place, London sw1. Belgravia 4321), showed a wide range of gas-fired direct air heaters, one new heater of this type being an imported Lennox Unit in two sizes, GHI-35 and GHI-41. The units are 161 in wide by 27% in deep by 40% in high, and consist of an automatically controlled burner, fan unit and air filter; they require a 4-in flue pipe. Cost is about £70 for the smaller unit, duct-work for distribution being extra Another gas-fired central heating system using ducted air is the Radiation Ductair g105. This unit, measuring 32in by 231 in by 141 in, can be wall-mounted; it can have a flue pipe if mounted in an internal position, or a balanced flue if on an external wall. Cost of the complete installation, including all necessary duct-

work, is between £95 and £135, depend-



Richmond fire by Sam Smith



Flavel Debonair gas fire

ing on length of ductwork involved. Its Btu/hr output is not given, but is likely to be adequate for a normal threebedroomed house.

Independent gas space heaters of new design were shown by F. A. Borchardt Ltd (486 High Road, London w4. Chiswick 4466/7). These Drugasar heaters include hand-operated magnetic ignition and complete flame protection control; they use a balanced flue outlet and the combustion chamber is sealed off from the interior. These new models, type JBN, range in output from 12,000 to 44,500 Btu/hr. They are 101 in deep, but vary from 25in to 32in high and from 32in to 60in long, according to output. The cost is from £55 to £79, including four-position thermostat control.

Other gas space heaters of the independent type were two new designs in radiation/convection heaters; the first, the New World Sunbeam fire was presented by Radiation New World Ltd (Radiation House, North Circular Road, London NW10. Willesden 1234). It is 24in wide by 233in high by 71in deep and has a heat output sufficient for a room up to 3,000 cu ft volume. The cost is £23, including draught regulator and automatic ignition: a thermostat can be incorporated as an extra. The second heater is the Flavel Debonair which was shown by Sidney Flavel & Co Ltd (Eagle Foundry, Leamington Spa, Warwickshire. Leamington Spa 8700) on the Gas Council's stand. It is a neat rectangular design to stand on a hearth; it has a vitreous enamel front enclosed in a hardwood surround, draught control for ventilation purposes and automatic ignition. Heat output is 15,000 Btu/hr, and the cost for the size 28in wide by 24in high by 61in deep is £25 to £26.

#### Electricity

There was only one major new item in this field, the ESWA electric ceiling heating system. This incorporates a foil type heater element sandwiched within kraft paper which is laid above a plasterboard or plaster ceiling with thermal insulation applied above it. The system operates on normal tariff but, being controlled by an air thermostat, the current is switched on intermittently as there is a time delay between the heat being emitted by the ceiling and the air temperature rising to thermostat setting. Therefore, although the current is not continuously on, the thermal capacity of the ceiling finish enables the heat output to be continuous and to be controlled by the duration of the "on" period. The system has already been installed in a number of different building types and running cost has been comparable with, and often cheaper than, other heating systems. Ceiling panels can be divided into sections with separate control to achieve more economic operation when full heating is not necessary. Capital cost is given as about 5s a sq ft of heated

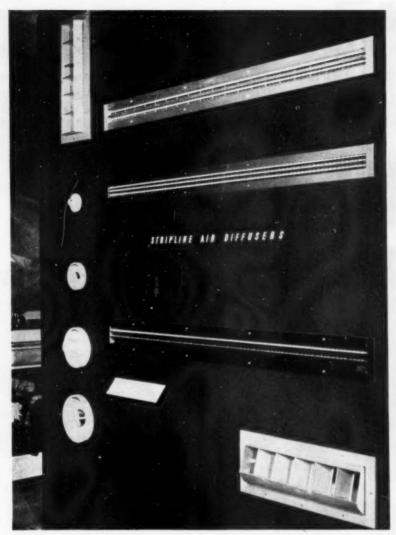
area. The system has been used in Scandinavia for about 15 years with very successful results.

There was a new heater cable for underfloor installation made by British Insulated Callender's Cables Ltd (21 Bloomsbury Street, London wcl. Museum 1600) with a butyl rubber insulation. It is slightly higher in price than other heater cables, but is capable of withstanding considerably rougher treatment during laying. Ekco Heating & Electrical Ltd (41 Old Street, London Ecl. Clerkenwell 1261) have improved the design of their inset convector heaters. The new types are called WI and WIC. The Rheostatic Co Ltd. (Farnham Road, Slongh, Buckinghamshire, Slough 23961) have produced a new control for off-peak thermal storage heating systems, the Ratiomatic, which appears to be a satisfactory system of controlling the period of charge. Block storage heaters now carry purchase tax, but are available to all users on the off-peak rate. Falk Stadelmann & Co Ltd (91 Farringdon Road, London Ecl. Holborn 7654) have a new infra-red high-level heater, the Falcon, of compact design including a pull switch; loading 750 watts, cost £5 ls. Heatrae Ltd (Norwich, Nor 29a, Norfolk, Norwich 23193) have a new range of Sleekline space heater panels with three-heat control, but the shape and design of these are unfortunate. One new product is the Sterling Axiatherm range of convectors which have been well designed for recess fixing (Sterling Domestic Appliances Ltd. Chiltern House, Berkeley Street, London w1. Hyde Park 1561). These convectors are of 2kW and 3kW loading and, being fan-blown, are quick reacting. Control of fan speed can give full or half output related to loading and the fan can be used for cold air circulation in summer. Cost: 2kW £29 8s; 3kW £31 10s.

#### Radiators, convectors, unit heaters

New developments in the Aga space heating system (Allied Ironfounders Ltd. 28 Brook Street, London w1. Grosvenor 8941) consisted of a new fan-blown convector unit for surface mounting: the size is 15% in wide by 8% in deep by 20in high, with a three-speed fan control to give heat outputs of 5,000, 7,500 and 10,000 Btu/hr. This unit is for use with a small-bore accelerated heating system and requires 1-in pipe connections. Cost: £39. Also on the stand of Allied Ironfounders was the Agavector Senior model, consisting of a large fan-blown convector unit for mounting in a central vertical duct to produce an air heating system for distribution to a number of

There was a wide variety of new designs in steel radiators, all intended to reduce thickness or height. Steel Radiators Ltd (Stelrad Works, Bridge Road, Southall, Middlesex. Southall 2603) had a new one, the Nuvello, which is a composite



Hall Thermotank vent louvres

design between a column and a panel radiator. Available in two widths, 14in and 25 in with a heat output of 1.6 Btu/sq ft/hr/deg F, this model is out of stock owing to considerable demand. Cost is about 6s 4d per sq ft of heating surface. Glow-Worm Boilers Ltd (47 Hatton Garden, London Ecl. Chancery 6971) were showing a new range of pressed steel radiators only in thick, with corrugated surface pattern; these were also available in double form 2in thick. Heat output is 2.0 Btu/sq ft/hr/deg F. Although these radiators are of simple design, the smaller surface pattern tended to show up surface defects and damage. The same firm also showed well-designed skirting heaters with strong horizontal pattern; these are only 6in high and are available with coupling cover plates for long runs. Fenton Burn & Co Ltd (Armfield Close, West Molesey, Surrey. Molesey 7777) have developed a new slim fan-blown convector unit. By using a newly designed centrifugal fan it has been possible to reduce the thickness of these units from over 13in to 9in making a

much more compact unit particularly for mounting under windows.

Hall-Thermotank Ltd (Regina House, 1 Queen Street, London Ec4. City 9561) had some American-type line air diffusers of very pleasant design. These were for wall mounting or could be used in long lengths round perimeters of ceilings. They are between 3in and 5in wide, and are available in three types with different air distribution patterns.

#### **Ancillary equipment**

Danfoss (London) Ltd (13 Queensway, London w2. Bayswater 9321), manufacturers of non-electric, capillary-type control equipment, produce thermostatic radiator valves, costing about £6 each, which have numerous applications to hot water and steam space heating systems. These valves, types RA and RAI, can have either integral or remote phial units for either air or water temperature operation. As well as individual control of radiators and convectors, the valves can be used to control the rate of primary hot water

flow into an indirect cylinder water heating system in relation to the temperature of the water in the outer cylinder. In this way they control the heat output of the boiler in relation to direct demand of the the hot water system, regardless of the space heating load.

On another stand\* an interesting item was a double wall asbestos cement flue pipe for avoiding condensation problems with normal flue pipes. These pipes are in considerable demand and there is at present a delay in delivery. (\*The British Uralite Group of Companies, Uralite House, Whitehall Place, Gravesend, Kent. Gravesend 4911.)

(68) Installations, special: general

From the point of view of the British architect, there was one development of major importance in this section. This was represented by The British Vacuum Cleaner and Engineering Co Ltd (Goblin Works, Leatherhead, Surrey. Ashtead 866) of a central vacuum installation. This installation is not greatly different from the familiar Lamson pneumatic tubes for whisking money from counter to cashier in shops. Pneumatic tubes with sockets in each room and concealed in the structure, terminate in a dust container placed so that it can be emptied from outside the house. The housewife merely plugs in a length of lightweight plastic hose with cleaning tool attached. This system, which is not limited to the domestic field, is cleaner, easier, and avoids carrying a heavy appliance about and emptying a dust sack. Prices vary for each installation, but for a two to four bedroom house average at about £100 plus Purchase Tax. See illustration on page 1072.



GEC California air conditioner

#### (57) Installations, Ventilation, Air conditioning: General

The "Californian" complete room air-conditioner unit by GEC was the only new item of real interest in this important section. With a cooling load of 1,900 watts and a heating load of 2,160 watts, it is designed for external wall mounting. The condensate is removed through an outside grille by the condenser fan and does not therefore need to be piped or emptied. The cost is £20 2

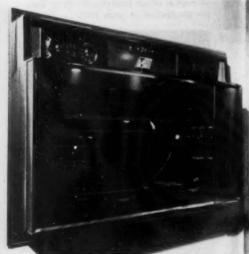




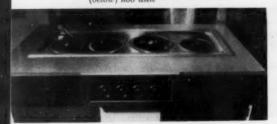
Creda oven and hob units

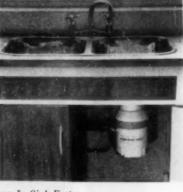


Tricity oven and hob units



Thompson-Tappen oven (above) and (below) hob unit





ISE In-Sink-Erator



Cannon foldaway spit and grill

Swedish electric cooker with detail showing hinged elements





#### (73) Kitchens, fixtures and equipment: General

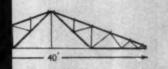
Technically, the kitchen is the part of the house which is developing most rapidly; but, though the sellers of kitchen equipment are almost pathologically sensitive to the importance of what they call styling, it is certain that they are not getting sufficient lead from architects on the functional changes which should accompany this. To take, first, the kitchen as a whole, there appeared to be no genuine progress towards solving the problem of how to ventilate the kitchen. Greenwood's & Airvac Ventilating Co Ltd (Beacon

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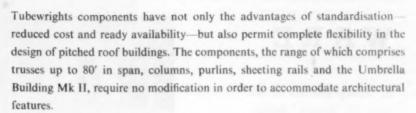
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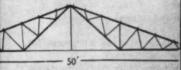
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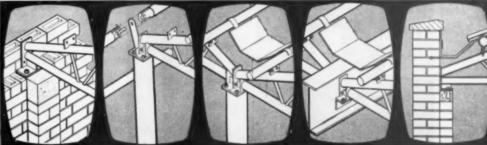
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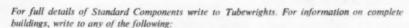
Truss landing on brick

Truss landing on eaves

Truss landing on hor dary wall with gutter







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Moffat oven and hob unit



Adamsez "Spastic" basin



Carter's soap trays



1C1 plastic cistern

House, Kingsway, London wc2. Chancery 8135) have altered the shape of the canopy for use with their admirable Mechavent-75 Mk II fan unit, but in making it more apt to hurry cooking smells out (they have sloped the sides) they have made it visually less acceptable. There were several new sinks. Edward Curran Engineering Ltd (Cardiff. Cardiff 33644) have a new large double drainer in vitreous enamelled steel; the Avon. It measures 63in by 21in, has a larger bowl than most and retails for £9 14s 6d. One rather interesting item from the same firm (though it is new only in the sense that some architects may not know of it) is a range of vitreous enamelled sink bowls for building-in. Sizes and prices of these are as follows (the size in each case is the inside dimension): 18in. by 12in 17s

22in by 14in 21s
28in by 16in 27s.

W. & G. Sissons Ltd (St Mary's Road,
Sheffield 2. Sheffield 22118) offer a
relatively new range of satin finish
stainless steel sinks designed for housing
estates which brings down very
considerably the price of this material.
If bought in lots of 50, the smallestsized single drainer sells for £5 18s 6d.
One last development in sinks is the
marketing by Dahl Brothers Ltd (21
Morley Street, London sel. Waterloo
4075) of a range of sinks in which their
stainless steel bowls are glued beneath

4075) of a range of sinks in which their stainless steel bowls are glued beneath a drainer of post-formed Formica. This is, of course, all part of the drive for that colourful kitchen that all housewives are supposed to want, but the resulting sink, though expensive, is at once very practicable and good-looking. The double drainer model sells for £41 5s. A similar idea, executed in fireclay, was put forward by Adamsez Ltd (75 Victoria Street, London swl. Abbey 5846) in their Prisink. This sink has an unglazed rim for gluing beneath a bench top of some other material. It is made in three sizes, all 61 in deep, at the

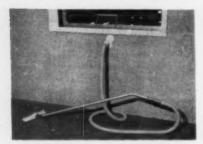
16in by 8in, £5 12s 6d. 16in by 16in, £5 18s 3d. 20in by 16in, £6 16s.

following prices:

#### (74) Cloakrooms, Bathrooms and Lavatories

The bathroom, unlike the kitchen, is not a place where striking changes are to be expected. There were a number of washbasins and we pans which have been styled slightly differently, but in this context different styling does not rank as newness unless it is accompanied by some evident functional gain. It could not be said that any of the baths, washbasins or we pans "shown for the first time" at the Exhibition showed an improvement, or even a serious variation, on the normal functions which they serve. There was nothing comparable to that dubious and, we think, shortlived variation of the bath, the flat bottom, which was all the rage last year. Nor had there been any further suggestions for a correctly shaped basin served by a spray tap. Also, we were sorry to see that the one important innovation in we pans at the last Exhibition, the pan with the extra low seat, does not seem to have made any great headway with trade or profession. Innovations this year took the form not of improvements on the standard function but of ranges extended to cover specialised functions. It is unfortunate from the point of view of this report that this provision for special functions probably takes these products out of this (73) category and puts them into different sectors of the (8)-(89), but since these developments evidently reflect a general trend in the manufacture of bathroom and cloakroom equipment it seems reasonable to mention them. Thus Shanks & Co Ltd. (Tubal Works, Barrhead, Scotland. Barrhead 1061) has put on the market a new bath for infants which, to the uninitiated, looks more like a washbasin with a wide flat surface on one side. A workmanlike and well-designed job, it is in vitreous china and sells for £23 13s 6d. Adamsez Ltd (75 Victoria Street sw1.

Abbey 5846), whose designs in vitreous fireclay seem to have reached an ultimate in supplying the architect's requirements for ordinary equipment, at least so far as appearance is concerned, also seems the most ready to follow his demands for special purpose fitments. On the Design for the Disabled stand there was a washbasin designed so that a person in a wheel-chair could be brought directly underneath it. It sells for £6 15s 9d. This firm also showed its new Lotus Alcove washbasin designed specially for student hostels and hotel bedrooms and, indeed, any other places where washing hands is not the only purpose to which the basin is put. Its principal characteristic is a wide shelf on each side and so that these will not be made sticky by wet soap a drained soap tray is provided. The basin costs



Vacuum installation with local points to enable a house to be cleaned from a wheel chair

#### (94) 725.54 Homes for the physically handicapped

The stand showing Design for the Disabled (presented by the organisers of the Building Exhibition and designed by Michael Wolstenholme of J. Godfrey-Gilbert & Partners) dealt with the subject in a much broader sense than is indicated in this sfb classification. For it covered not only institutional homes but all homes where the disabled might be, and included mothers with young children as well as old crocks.

The most interesting equipment on show

was undoubtedly the Central Vacuum plant (British Vacuum Cleaner & Engineering Co Ltd., Goblin Works, Leatherhead, Surrey. Ashtead 866), which enables an old person to clean the house from a wheel chair. Accompanying the exhibition was a particularly good hand-out listing points which an architect must remember. We can do no better than quote from it:

Changes in level should be kept to a minimum and where possible ramps should be included instead of or as well as steps. This is also useful for prams. Stairs and steps should have handrails. Windows should be low enough for the chair-ridden to sit and look out in comfort.

Floor finishes which can be polished to become dangerously slippery should be avoided.

Long-handled bolts on the doors allow elderly people to lock up at night and safety catches on windows should be easy to operate. Exterior doors should have a bolt and chain fitted.

Master switches for the electric light all over the house should be sited near the front door and at the bedside so that the nervous, elderly or disabled can flood the house with light on entry or in emergencies.

Wide connecting hatches between rooms could be used more often. These can be closed to ensure privacy but their function to summon help, carry on a conversation or place a telephone is too often disregarded.

Kitchen. This should be planned so that it forms part of the home, not a place where a woman works in isolation.

Methods of achieving this integration include a communication hatch with a

wide sill so that a mother can keep an eye on her children, answer the telephone placed on it, pass dishes through, answer questions.

Height of the sink and working surfaces should be calculated for whoever is to use them most. A strong pull-out leaf provides the necessary height variation for such operations as mixing and peeling. Make storage space reachable. Do not install shelves which are too high, too low or too deep. Revolving shelves in corner cupboards make their contents easier to reach.

Racks in which dishes are placed on their sides avoid the weight and instability of stacked crockery. Keep working surfaces at the same level so that heavy pans can be slid along them rather than lifted.

A pull-down oven door can be used as a shelf. Washing machines which open at the front are easier for wheelchair users. Taps with simple levers are easier for weak wrists than the conventional screw-down type.

A two-way parcel or milk hatch saves waiting in for deliveries.

There should be toe space under the cupboards.

Bathroom. A safe and efficient means of heating must be installed from the very beginning. This avoids the introduction of makeshift heaters when the house is finished.

Hand basins should be firmly fixed in case they have to serve as an occasional support. Enough space should be left under them for a wheelchair.

Safety handles or bars should be fixed to the bath and sited to give a forward and upward pull.

A seat which extends across the bath can be used as a slide when stepping in is too difficult.

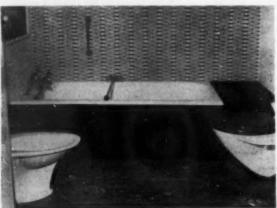
A shower is often easier and quicker than a bath.

Remember that, in a lavatory, warmth helps natural function.

Clearance should be left under the lavatory pan to make cleaning easier. Bedroom. Cupboard space is important but rails at different heights should be provided so that clothes can be put away at the most comfortable level by all members of the family.

Doors should slide, not swing open so that wheelchair users or the elderly have no awkward and painful manoeuvring. Windows should incorporate a device for easy opening and, where necessary, a safety catch. A night ventilator which airs without draughts is useful. Light switches should be accessible so that they can be reached quickly and without alarm. Luminous switches help.

Bathroom for a disabled person. Note the seat at the rear end of the bath, the hinged rail on the bath and bracketed lavatory pan for easy cleaning



#### (94) 725.56, Homes for the aged

Without a doubt the stand of the Ministry of Housing and Local Government was the most interesting among those of the Government departments. Designed by the Design Research Unit it was charming to look at



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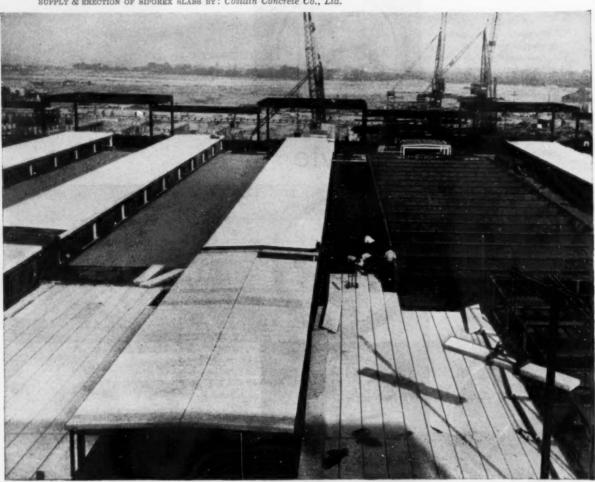


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In all, 200,000 sq. yds. of roofing is being used for the new Ford factory, now under construction at Halewood near Liverpool. For two-thirds MERSEYSIDE of that area (in fact 25 acres) Ford have chosen Siporex reinforced, precast roofing units. Why Siporex? Because its remarkable properties permit higher speeds of erection at a lower cost. Siporex roofing is light, really light, in fact only a quarter the weight of normal concrete. It has a thermal insulation ten times greater. It combines strength with dimensional stability and is resistant to fire and frost. Siporex is today's outstanding building material.

Siporex may be seen on Stand No. 1308 at this year's British Industries Exhibition (Olympia, 15-29 November). Visitors to the stand will be very welcome.

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Duncan House, Dolphin Square, W.1. VICtoria 3172 & Newarthill, Lanarkshira, Scotland, Motherwell 41



Ministry of Housing and Local Government stand

and was also of great technical interest. Devoted exclusively to homes for old people, it was centred on the scheme which the Ministry has designed for Stevenage, using a modified version of the CLASP construction.

This was described and discussed as a constructional system in last week's AJ and therefore nothing need be said here of this aspect except, perhaps, to congratulate the Ministry and Cleeve Barr as the Ministry's architect for this resolute application of new constructional methods to the field of housing. One or two comments can be made on the planning and social aspects of the scheme.

In general physical standards are higher than those suggested in the Ministry's publications. The shared toilet has, thank goodness, gone, but the shared bathroom remains, which is a very great pity. The Ministry's handout recorded that as old people often use corridors for neighbourly chatting these are to be provided with small sitting spaces. This seems a good idea, not only on account of the facility offered but also because it helps to break up the long corridors which are such a feature of the design, reminding us of the earliest, pre-Hertfordshire post-war schools. However, they do contribute to the one really serious criticism which can be levelled at the concept of the scheme, the effect of institutionalism which it produces. The fact that the home comprises a two-storey block, free standing in an ample site, adds to this effect. The inhabitants are, so evidently, in "a big building"; they have been "institutionalised." To English people who have no tradition of flat dwelling, the single house is the symbol of independence and it is a pity that this has been lost. There were also some excellent anthropometric studies of old people on the stand. These make a first-rate architect's tool and we hope that they will soon be made available in published

#### Dg

Materials, clayware, ceramic: General

This material was mainly represented at the Exhibition by individual tile manufacturers whose products are considered in this review under the functional elements or construction headings in which they occur. There was, however, one development at the Exhibition which relates to the general use of clayware, irrespective of form or setting. Ceramic Consultants Ltd (36 Thayer Street w1. Welbeck 8398) is a group comprising four designers, Tarquin Cole, David Metcalf, Gilbert Shipley and Roy Keeble, and three manufacturers, Rye Pottery, Hathernware Ltd of Loughborough and Shaw's Glazed Brick Co Ltd of Darwen. The group aims to draw together the manufacturer and the artist potter and, at the level of design, aims particularly to give the tile mural a third dimension. This was expressed at the Exhibition by "projection" or "facet tiles" which project from the mural surface in the manner of ledges or brackets. Visiting architects who may not have felt drawn to this particular idea could hardly have failed to be impressed by the group's use of clayware to produce large freestanding objects. These included a barbecue, or alternatively, an indoor stove and a large flower container, forms which the architect would normally only think of producing in metal or precast concrete. In both cases the clayware version is greatly preferable and prices do not seem prohibitive. The cost of the barbecue illustrated here (ie on a one-off basis) is about £100. Developments along these lines could easily make clayware an entirely " new " architectural material.

Developments along these lines could easily make clayware an entirely "new" architectural material.

In lightweight concrete developments towards increasing the strength to weight ratio are becoming increasingly important. Several new aggregates are available for in-situ work or in block form.

#### Dp3 Aggregates: lightweight

Leca (Great Britain) Ltd (Buckhurst Hill, Essex. Buckhurst Hill 4444) opened their factory for producing expanded clay aggregate in April 1961. Concrete with this aggregate has excellent weight to strength properties of 20–35 lb per cu ft and up to 2,500 lb per sq in. The "k" value lies between 1.4 and 1.8. An unusual property is the low Young's Modulus of Leca concrete which apparently accounts for the infrequercy of shrinkage cracks.

The concrete, with various mixes, is suitable for in-situ work, including walls, floors, roofs and insulating screeds.

Precast blocks and hollow floor units are manufactured with Leca aggregate by other firms. When cut through by saw the concrete has a surprisingly decorative surface which makes it suitable for cladding panels.

#### Ff2 Bricks and blocks: Concrete, heavy

Cornish granite is the aggregate for a heavy concrete facing block called Riven, introduced by The Atlas Stone Co Ltd (Artillery House, Artillery Row, London swl. Abbey 3081). As implied by the name, the face of the block has a rough-hewn appearance of controlled ruggedness. Colours are grey, green, red, black and buff. Depth is 4in, but face dimensions range from 2in by 24in to 8in by 16in. Crushing strength is up to engineering brick levels at 6,000/7,000 bper sq in: permeability is equally low. Cost is approximately 40s a sq yd, supply only.

#### Fg Bricks and blocks: Clay: General

The most noticeable innovation in bricks is the use of colour on facings. The Sussex & Dorking United Brick Companies Ltd (Graylands, Horsham, Sussex. Horsham 2351) have applied a cold glaze (Glaztex) to a dense engineering brick with a rough-textured surface. The colour range is considerable, including black, bright red, two interesting greens, dark blue and grey.

#### F14 Bricks and blocks: Concrete, lightweight

Hemelite is a lightweight aggregate of low carbon content clinker (5 to 7 per cent) of a light grey colour. It is produced in block form by Hemel Hempstead Lightweight Concrete Ltd (Redbourn Road, Hemel Hempstead, Hertfordshire. Boxmoor 5510) to widths of 24in, 3in, 4in, 6in, 9in and an interesting 10in cavity block. Porosity and drying shrinkage (0.036 per cent) are low for a concrete block; the mean compressive strength is 520 lb per sq in, the "k" value 1.7. The 10in cavity block may be obtained with an applied finish. Its width will give a lower slenderness ratio than the usual 104in two-leaf cavity wall, with obvious structural advantages.



Hemelite 10in cavity block



Thermalite wall units showing filling joint lower block reinforced

The price is 720s, compared with 336s for the same brick without Glaztex and 1,300s with a fired glaze.

The London Brick Co Ltd (Africa House, Kingsway, London wc2. Holborn 8282) are experimenting with new textures and colours, including a light blue sand-

#### Gf2 Structural units: concrete, heavy

faced facing brick.

Portcrete Ltd (Abbey Yard, Bath. Bath 3248), an associated company of The Stone Firms Ltd. have introduced precast concrete structural members with Copstone aggregate. The interesting features of this product are the high compressive strength of 8,000 lb per sq in, obtained mainly from the properties of the crushed aggregate, and the smooth finish. The finish is more than satisfactory for both interior and exterior use. Savings will be made by omitting the plaster and decorative finishes and by the general reduction in weight. Cost is about £3 a cu yd, but the manufacturers claim that savings in finishes and weight will offset the extra cost over normal aggregate concrete.

#### Gf4 Structural units: concrete, lightweight

New lightweight concrete products from Thermalite Ytong Ltd (Hams Hall. Lea Marston, Sutton Coldfield, Warwickshire, Coleshill 2081) are 18in wide wall and roof units in aerated reinforced concrete. There are three forms of the wall unit, all with 30 lb per cu ft density. Used horizontally, they have a dry t and g joint with foamed plastic sealing strips, vertical joints being covered by a cover strip: spans are up to 19ft 6in. Used vertically to full storey height, the units are grouted together. Thicknesses are 4in, 6in, 8in and 92in, and the "k" value is 0.75. For use in internal partitions the units are 3in or 4in thick, with square butt joints secured by an adhesive. Cost of the 6in wall units a sq yd, delivered and erected within 25 miles of Hams Hall, is 34s. to 36s. Roof units have a density of 40 lb per cu ft and will span, according to depth, up to 19ft 6in. The "k" value is 1.0. The surface of all these units is smooth enough to receive paint direct.

#### (I) Tubes and pipes

The introduction of plastics is the dominant note here. Plastic pipes, plastic covered pipes and plastic pipe supports were all on show.

There were two makers of rigid pve piping. Aspect piping by Allied Structural Plastics Ltd (Tolpits, Watford, Hertfordshire. Watford 34551) of 1in to 6in diameter and Polyore But by Yorkshire Imperial Metals Ltd (po Box 166, Leeds, Yorkshire. Leeds 72222) in \$\frac{1}{2}\$ in to 6in diameter but with a limited range of fittings above 2in. From the architect's point of view the properties appear very similar. While

these pipes are suitable for normal cold water or gas supply, their main advantages are a high degree of corrosion resistance and flexibility where movement is likely. The price list shows lin Polyore BH Series P2 (87 psi working pressure at 20 deg c) at 1s 3d per ft (up to 500ft), and Aspect Class II (87 psi) at 71d per ft. Yorkshire Imperial Metals Ltd also supplies Polyore B for underground piping. Kuterlex polythene and pvc covered copper tubing by Yorkshire Imperial Metals Ltd has been marketed for some years. Principal uses, says the manufacturer, have been gas boards. but recently this tubing has been used more extensively for piping water. The plastic covering provides protection from corrosion in aggressive soils with advantages over the traditional protective tape. Black polythene on BS 1386 tube is used for water pipes and red pvc on B659 tube for gas. The additional cost of this protection above the normal cost of the copper varies from 4d per ft for in tube to between 7d and 9d per ft for lin tube. Maclow plastic pipe clips, also by Yorkshire Imperial Metals Ltd, which operate by snap action, are readily available, neat in appearance and have a single screw fixing. They are suitable for temperatures up to 60deg c and are resistant to corrosion. Polythene and pvc pipes from hin to 2in diameter can be accommodated and some sizes of copper tube to BS 659. Prices range from 5s 3d to 6s 9d per doz for 1 in diameter pipes, to 10s 6d to 11s 6d per doz for lin pipes.

#### Uo Claddings and facings: Glass: General

" Within the brief span of two years the Continental urban scene has been modified by the development of a glass building component whose U-shaped channel form somewhat resembles that of steel sheet piling." Profilit (BTB Ltd. 10 Upper Thames Street, London Ec4. City 4321) is a cast glass channel, 10 & in wide with 18 in flanges, in lengths up to 16ft. It is available with or without parallel or crossed wire reinforcement. Fixing is dry into a metal section at top and bottom with foamed plastic packing: the butt joints may be sealed with mastic strip or neoprene. The unit can be used in various ways, vertically or horizontally in walls, for canopies or roof lights. Double glazing is extremely simple and clear: glass windows or louvres may be incorporated in the wall. Curved plan shapes are easily obtained for interior partitions. The cost is "comparable with normal glazing in metal frames, with a considerable advantage over double glazing in frames." The double glazed wall has a U value of 0.42. When the channels are used horizontally purlins should be at 5ft centre to centre. Profilit is manufactured in Austria and distributed in the United Kingdom by BTB Ltd.

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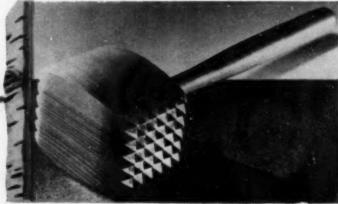
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Lathe-worthiness: nother strong point of Canadian

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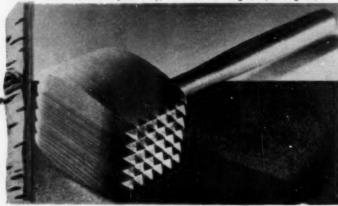
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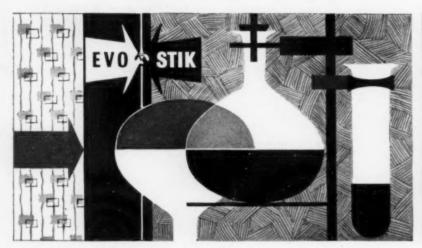


Lathe-worthiness nother strong oint of Canadian

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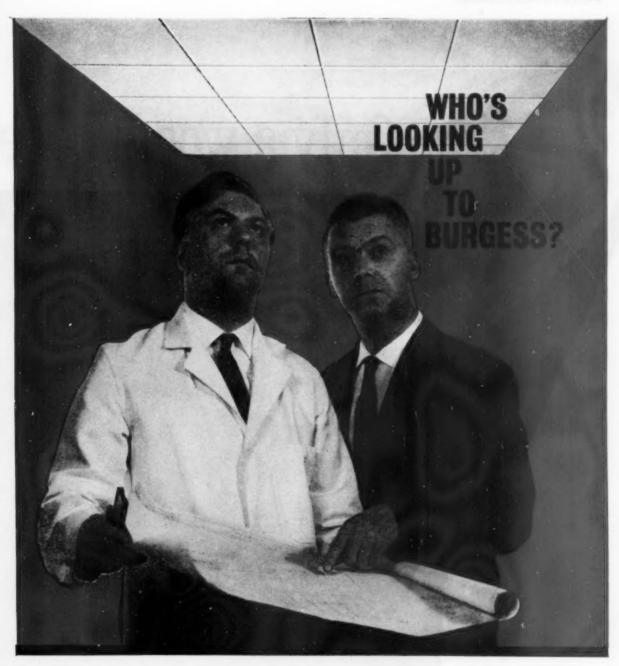


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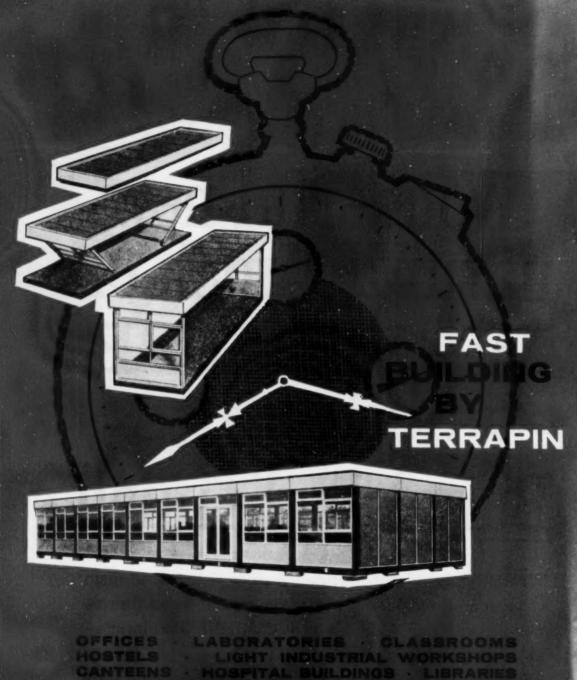
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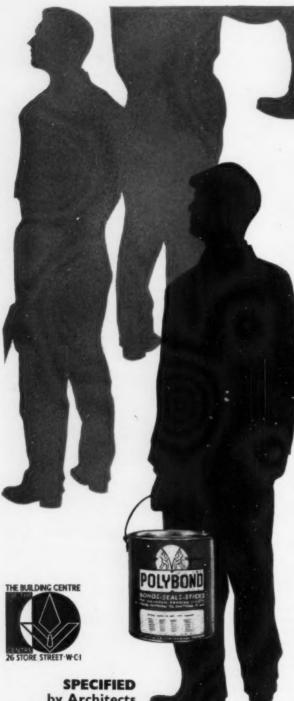
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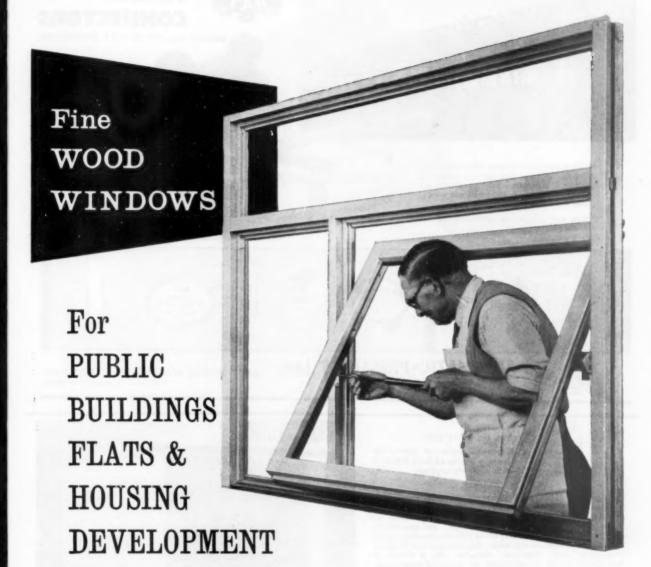
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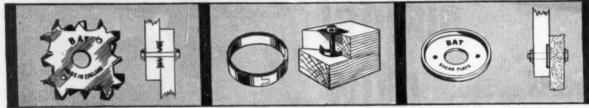


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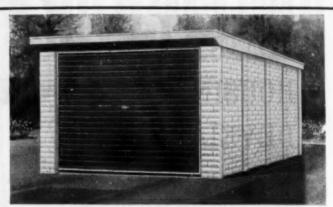
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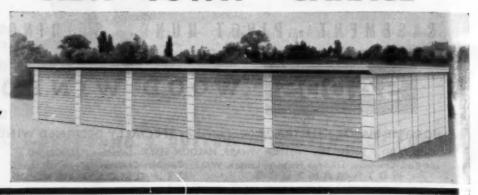
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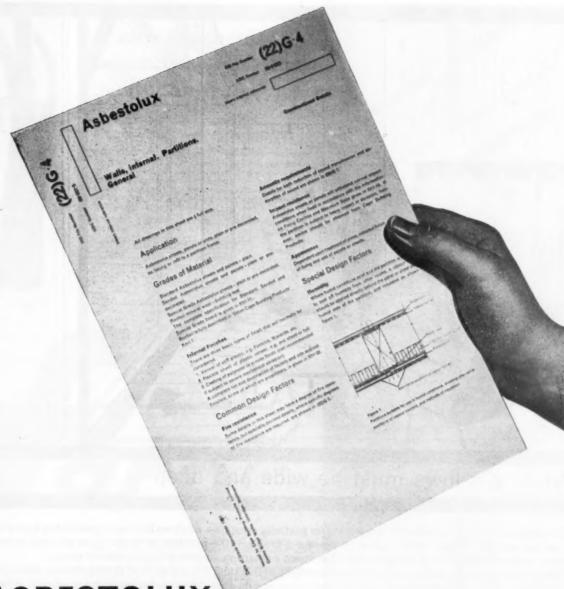
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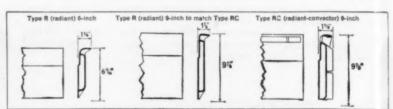
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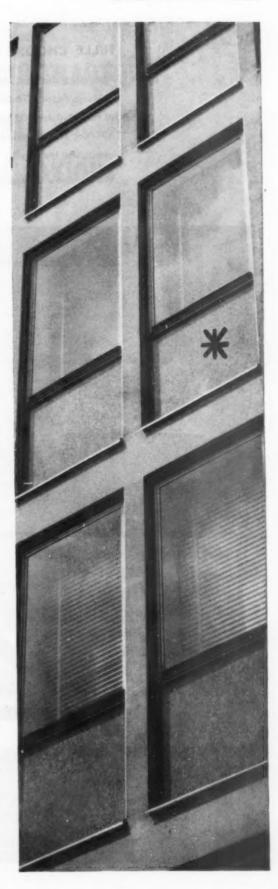
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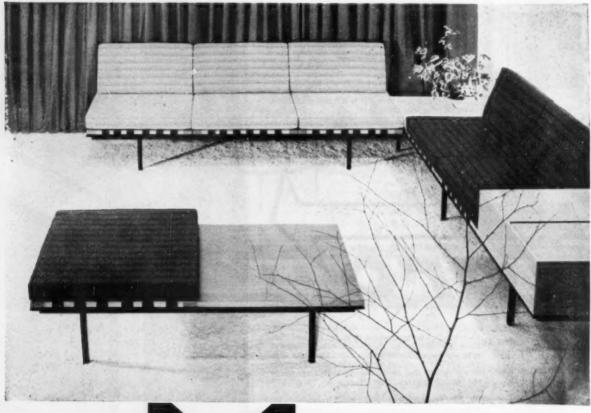




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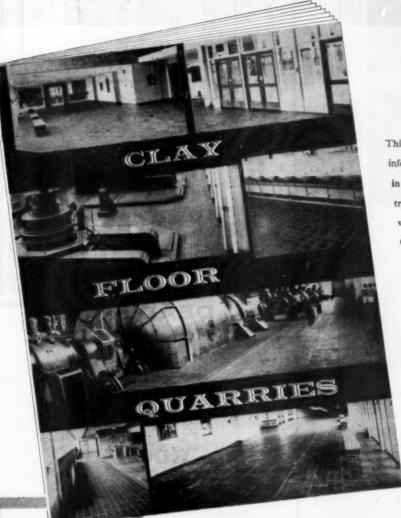
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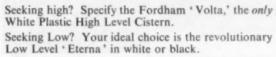
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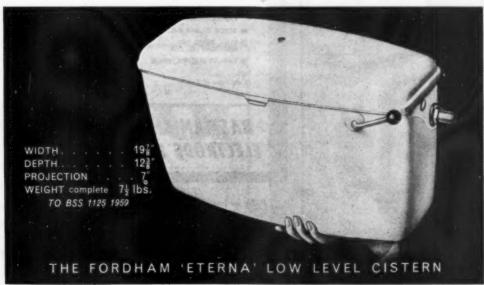
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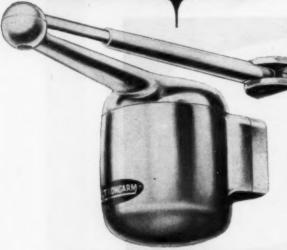
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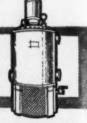
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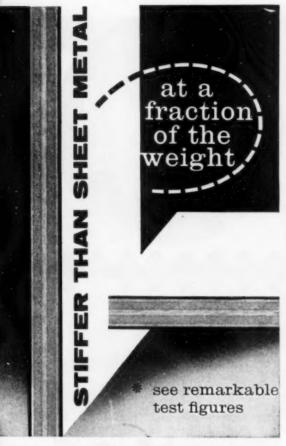
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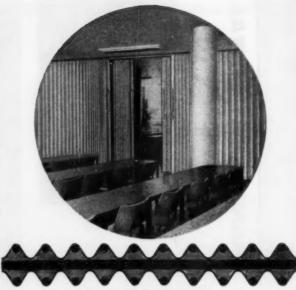
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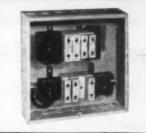
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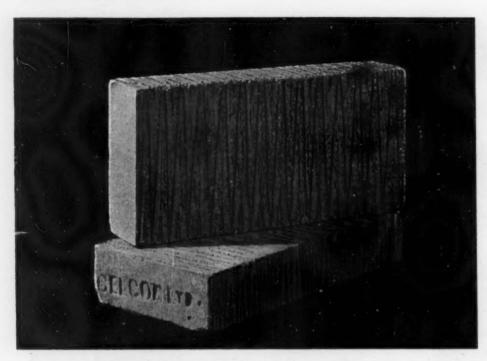
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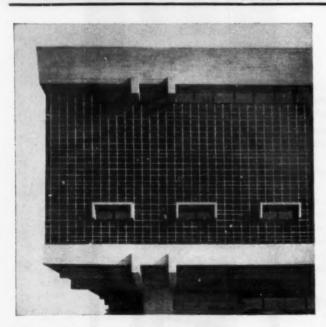
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The Architectural Press
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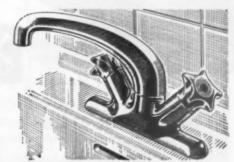


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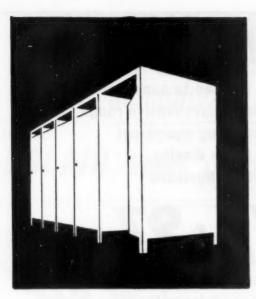
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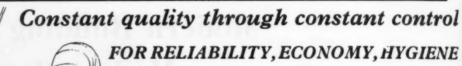




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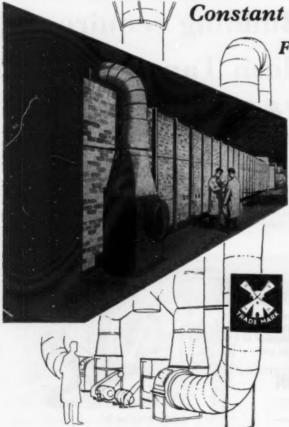


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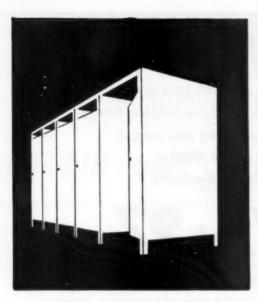
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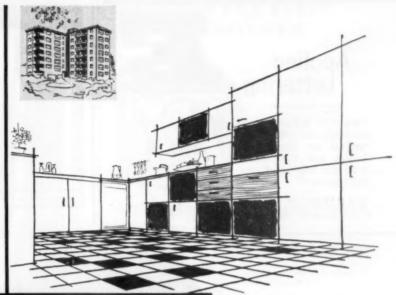
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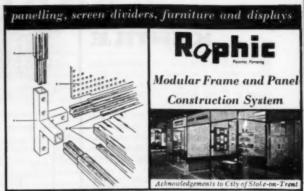
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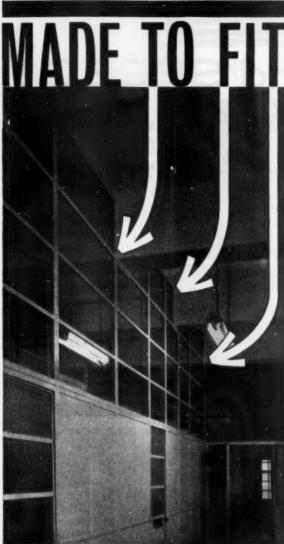
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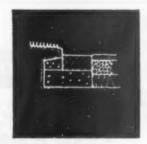
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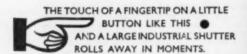
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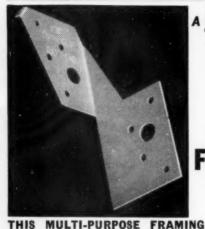
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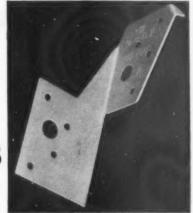
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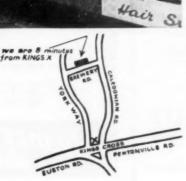
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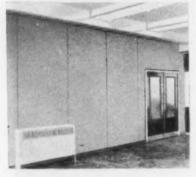
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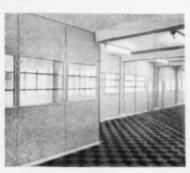
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This comprehensive office has an extremely interesting and vast programme of work to carry out during the next twenty years or so. The architectural and planning works include comprehensive redevelopment of urban areas, multistorey buildings, schools of all types, colleges and various civic buildings.

The salary scale for these assistantships is up to £1,560 per annum with placing according to experience. Preference given to young and enthusiastic qualified men who have the ability but lack a real opportunity to apply it. There will be scope for personal initiative in this office. A five-day week is in operation and the usual conditions concerning Superannustion apply. Advances up to 100 per cent of valuation will be made available, where needed, for the purchase of suitable houses in or near Glasgow by successful applicants.

Please apply on application forms from the Principal Administrative Officer, 20, Trongate, Glasgow, C.1.

A. G. JURY,

City Architect & Director of Planning.

C1. A. G. JURY, City Architect & Director of Planning. 89917

SHROPSHIRE
There are vacancies for ARCHITECTS in the COUNTY ARCHITECT'S DEPARTMENT on all Grades up to the maximum of A.P.T. V (£1,480 p.a.). In addition to the usual building programme of new schools, police stations, welfare homes, etc., work in the Department includes the New Shirehall (nearly £1,000,000) and the development of SCOLA.

Appointments are subject to the N.J.C. Conditions and a five-day week is in operation. A disturbance allowance or weekly separation allowance is payable to a married man taking up an appointment.

Architects interested in working in Shropshire are invited to write to the County Architect. Ralph Crowe, A.A.Dipl., A.R.I.B.A., A.M.T.P.I., Column House, London Road, Shrewsbury, giving details of their training, qualifications and experience.

EASINGTON RURAL DISTRICT COUNCIL

EASINGTON RURAL DISTRICT COUNCIL Applications are invited for the undermentioned pointments in the Engineer & Surveyor's

Appointments in the Engineer & Survey.

Department:—

(a) ARCHITECTURAL ASSISTANT (£815—£960 per annum). Applicants must be experienced in Municipal Housing and General Architectural work.

(b) SURVEYING ASSISTANT (£815—£960 per annum). Preference will be given to persons with previous municipal experience.

Applicants for both appointmen.s must have the qualifications specified by the National Scheme of Conditions of Service for the Grade concerned. the qualifications of Service to.
Scheme of Conditions of Service to.
Scheme of Conditions of Service to.
Housing accommodation, if required, will be
Housing accommodation, if required, will be subject to the Local

rovided.

The appointments will be subject to the Local overnment Superannuation Acts and to the accessful applicants passing medical examina-Government Applications on forms obtainable from the undersigned must be received by 14th December. 1961.

D. CONYERS KELLY Clerk of the Cou uncil.

Council Offices. Easington, Co. Durham. CITY OF NOTTINGHAM
Applications are invited for the following posts
the Planning Section of the City Engineer's
partment:

Applications are invited for the following posts in the Planning Section of the City Engineer's Department:

(a) ASSISTANT PLANNING OFFICER.

A.P.T. V, £1,310-£1,480 per annum.
Applicants should hold a Town Planning or an Architectural qualification.
There is a large volume of Creative Planning work on hand with a strong emphasis on Central Area Redevelopment with scope for original and imaginative ideas.

(b) TOWN PLANNING ASSISTANT.

A.P.T. II, £815-£960 per annum.
Applicants should be either an experienced draughtsman capable of preparing first class work for litho reproduction or a young man intending to quality as an A.M.T.P.I. and who has made some progress with his studies. Commencing salary for each post will depend on experience and qualifications.
Applications on forms to be obtained from the City Engineer and Surveyor, Guildhal, Nottingham, are to be returned to him by Friday, 8th December, 1961.

CHERTSEY URBAN DISTRICT COUNCIL Applications are invited for the appointment of CHIFF ASSISTANT ARCHITECT (A.P.T. V. £1,310-£1,480 per annum) from Associates of the Royal Institute of British Architects.

The work is principally multi-storey housing but schemes for libraries, a community centre and swimming bath are included in the next five years' programme. Good opportunity for individual responsibility and initiative.

Housing available if required.
The appointment is permanent and pensionable. Applications giving details of experience, etc., to N. C. Goldsmith, M.B.E., M.I.Mun.E., F. R.S.A.

WORCESTERSHIRE COUNTY COUNCIL REDEVELOPMENT OF TOWN CENTRES Applications are invited for the following appointments to reinforce the staff engaged on schemes of urban renewal:—

AN ARCHITECT/PLANNER, Scale "A." £1,365-£1,565.

A PLANNING ASSISTANT, A.P.T. II/III. £815-£1,40.

A DRAUGHTSMAN, Misc. IV, £625-£685.

Applications for the first appointment should be

#815-£1.140.

A DRAUGHTSMAN, Misc. IV. £625-£685.

Applicants for the first appointment should be onalified architects with practical experience in the design of schemes for the redevelopment of built-up areas. The planning assistant should be of Intermediate standard in the B.I.B.A. or

he of Intermediate standard in the R.I.B.A. or T.P.I.
Apolicants for the draughtsman's appointment should have some ability in architectural drawing and previous experience in a Planning Department would be an advantage.

Purther particulars of these appointments and forms of application can be obtained from:—The County Planning Officer, County Buildings, Worcester (T.194)

THE UNIVERSITY OF MANCHESTER APPOINTMENT OF ADDITIONAL PLANNING ASSISTANT
Applications are invited from registered Architects for the appointment of an additional Planning Assistant in the Bursar's Department. The successful candidate will be required to assist in the co-ordination and control of an extensive building development programme, and the salary will be in the range £1.200—£1,400 per annum.

Further information may be obtained from the Bursar, University of Manchester, Oxford Road, Manchester 13.

LANCASHIRE COUNTY COUNCIL

Manchester 13. 1310

LANCASHIRE COUNTY COUNCIL
PLANNING DEPARTMENT
PLANNING ASSISTANT required at MANCHESTER A.P.T. I to A.P.T. IV (£645-£1,310),
commencing and maximum salary according to
qualifications and experience. Candidates should
have an appropriate University degree and/or
be studying for or possess a recognised qualification in town planning, architecture, surveying
or engineering.

ntion in town parameters and removal expenses and removal expenses and removal expenses a maximum of £125 may be granted in Disturbance

Disturbance allowances and removal expenses to a maximum of £125 may be granted in approved cases.

Applications, giving age, qualifications, present appointment, experience, etc., and two referees to the County Planning Officer (S). East Cliff County Offices, Preston, by the 12th December. 1368

Applications invited for the following appoint-

SENIOR PLANNING OFFICER
(REDEVELOPMENT).
(1.350-£1,456 Scale "A."
C1.310-£1,450 A.P.T.
Salary according to qualifications and experience.
For redevelopment schemes including high
lensity Urban Renewal, requiring enthusiastic

architect.
Planning oualification and housing experience additional advantages.
Post permanent and pensionable subject to satisfactory medical certificate. Temporary housing accommodation in approved circumstances or up to 95 ner cent. advance for house purchase. Removal expenses loan. Five day working week. Application forms. returnable within 10 days of publication, to Council House.

ARTHUR LING.

City Architect and Planning Officer.
1345

BOROUGH OF SWINDON
(a) SENIOR TOWN PLANNING ASSISTANT—
A.P.T. IV.
(b) TOWN PLANNING ASSISTANT—A.P.T. I

or II.

Applications are invited for the above appointents on the staff of the Borough Engineer and

ments on the staff of the Borough Engineer and Surveyor.

The town is rapidly expanding to provide accommodation and work for about 20,000 people from the Greater London area under the previsions of the Town Development Act and the present population of the Borough is approximately 92,000.

There is considerable scope for imaginative and skilful planning work in the layout of large open areas earmarked for expansion; in urban renewal, particularly where the central business and shopping area is being remodelled and developed on the pedestrian way principle; and general planning control work.

the pedestrian way principle; and general planning control work.

(a) SENIOR PLANNING ASSISTANT, A.P.T.

IV (£1,40-£1,310).

Candidates should have had suitable experience and have passed the Final Examination of the Town Planning Institute. Development control experience would be an advantage, and additional experience in surveying and valuation with some qualification under the R.I.C.S. would also be belieful.

experience would be an advantage, and additional experience in surveying and valuation with some qualification under the R.I.C.8, would also be helpful,

(b) PLANNING ASSISTANT, A.P.T. I (£645—£815) or A.P.T. II (£615—£960) according to experience; candidates should have an appropriate Intermediate qualification.

A five-day week is in operation.

Housing accommodation will be offered to married candidates from other areas, and assistance towards removal expenses may be granted. Applications on forms to be obtained from the Town Clerk, Civic Offices, Swindon, must be returned by Thursday, 14th December.

1305

AIR MINISTRY Works Department, London, requires MODEL MAKERS for work concerning a wide variety of architectural and engineering projects. Salary (inner London scale) £658 at age 21 to £1,048 max, p.a. Candidates must be able to prepare mock-up and accurately finished models to all scales from sketches and working drawings of any type of structure, including colouring and landscaping; and be fully conversant with the use of the various materials necessary. Appointments are non-pensionable by retirement/resignation gratuity payable after five years' of longer service. Five-day week with 264 days and leave ner year initially including public holidays, Application forms from Manager (K.X. 3867), Ministry of Labour, Kings Cross Employment Exchange, 1. Barnsbury Road, London, N.I. Candidates selected will be interviewed in Air Ministry, London, and certain expenses reimbursed.

1297

LANCASHIRE COUNTY COUNCIL

viewed in Air Ministry, London, and certain expenses reimbursed.

LANCASHIRE COUNTY COUNCIL PLANNING DEPARTMENT PLANNING DEPARTMENT PLANNING ASSISTANTS required at LIVER-1,310), commencing and maximum salary according to qualifications and experience. Candidates should have an appropriate University degree and/or be studying for or possess a recognised qualification in town planning, architecture, surveying or engineering.

Disturbance allowances and removal expenses to a maximum of £125 may be granted in approved cases.

Apolications, giving age, qualifications, present appointment, experience, etc., and two referees, to the County Planning Officer (U), East Cliff County Offices, Preston, by the 12th December, 1859.

ARCHITECTURAL AND HOUSING
DEPARTMENT
Applications are invited for the appointment

Applications are invited for the appointment of:

(a) SENIOR ASSISTANTS (Architectural)—
Salary £1,425—£1,670 (Scale "B"),

(b) A S S I S T A N T S (Architectural)—Salary £1,400—£1,565 (A.P.T. IV/Scale "A"),
Applicants should be Associates of the Royal Institute of British Architectr or hold equivalent qualifications.

Further particulars and application forms returnable by 18th December, 1961, from the City Architect and Director of Housing, Blackburn Chambers, Dale Street, Liverpool, 2,
The appointments are superannuable and subject to the Standing Orders of the City Council. Canvassing disqualifies.

THOMAS ALKER.
Town Clerk.
1338 (J7095)

PUBLIC WORKS DEPARTMENT
GOVERNMENT OF ADEN
Duties: To work in the Architects Branch of
the Department on the design of schools, public
buildings and housing (including low cost
housing) and to supervise construction by con-

act. Qualifications: Candidatés must be A.R.I.B.A. and between 26 and 55.

Onalifications: Candidates must be A.R.I.B.A. and between 26 and 55.

Terms of appointment: On contract for one tour of 18-24 months in the first instance. Salary in scale £1.281—£2.409 plus 12½ per cent. gratuity. Free passages. Ontifit allowance. Accommodation available. Children's Education Allowances. Generous home leave. Write to Director of Recruitment. Department of Technical Cooperation. Carlton House Terrace. London, S.W.I., quoting RC.201/10/2182. and giving full names. age, qualifications and experience.

his most important book since Towards a New Architectur

# Corbusier

The record of a life's work—architecture, painting and sculpture—written, illustrated, and designed, by the world's most eminent and controversial architect. 84s.

THE NORTH WESTERN ELECTRICITY
BOARD
CLERK OF WORKS (FOURTH ASSISTANT
ENGINEER)
ENGINEERING DEPARTMENT
AREA BOARD HEADQUARTERS
MANCHESTER

ENGINEER)

ENGINEERING DEPARTMENT
AREA BOARD HEADOUARTERS

MANCHESTER
Applicants should have been building craftsmen and must have had previous experience as either Clerk of Works or General Foreman on work comprising all trades on small and large contracts. They must bossess a sound knowledge of construction and be able to supervise the work of all trades including pointing and installation of heating systems, and other specialist services. They must be capable of setting out, checking and recording variations, control of day work, and be able to submit clear and concise reports.

Starting salary within the range 4900/£1,165 p.a. according to qualifications and experience. Grade K.H. N.J.B. Conditions.

Applications on forms to be obtained from the Secretary. The North Western Electricity Board, Cheetwood Road, Manchester, 8, and returned to him by 13th December, 1961.

BRACKNELL DEVELOPMENT CORPORATION

Applications are invited for the following posts in the Quantity Surveyor's section:

A.P.T. It: Salary range £615—£950.

Applications for Grade I should be of R.I.C.S. Intermediate standard and those for Grade II should have passed their R.I.C.S. Intermediate Quantities sub-division).

Varied duties embracing all aspects of Quantity Surveying on Housing, Town Centre and Industrial Buildings.

Superannuation schemes, medical examination. Housing available.

Apply by 15th December, 1961, stating age, education and qualifications, experience and appointments held (with dates and salaries), and names of two referees, to General Manager (Q.S.A.). Bracknell Development Corporation, Farley Hall. Bracknell, Berks.

BEESTON AND STAPLEFORD

URBAN DISTRICT COUNCIL

Applications are invited from suitably qualified persons for the post of ASSISTANT ARCHITECT, within Grades III I/IV, the range of which is 1806—£1,310 per annum.

The post offers excellent opportunities to gain experience in a rapidly expanding district.

Housing Accommodation will be provided for married applicants, reasonable removal expenses will be reimb

aid.
Applications stating age, qualifications and exercine, together with the names of two referees, to be forwarded to the Architect to the Council, own Hall. Beeston, Nottingham, not later than 0th December, 1961.

H. D. JEFFRIES, Clerk of the Council.

Town Hall.

Town Hall.

Reeston.
Nottingham.

BLETCHLEY URBAN DISTRICT COUNCIL
APPOINTMENT OF ARCHITECTURAL

APPOINTMENT OF ARCHITECTURAL

The Council is engaged in the second stage of Town Development which will require the provision of some 1,200 dwellings of all kinds, Shops, Factories and Offices, as well as other associated buildings over the next four or five years.

Applications are invited for an ARCHITECTURAL ASSISTANT in connection with this work, at a salary within Grade III of the A.P.T. Division of the National Scale of Salaries, and subject to one month's notice on either side and the Southern Provincial Council Scheme of Conditions of Service.

Applicants should have had a sound training in architectural work and have reached the Intermediate R.I.B.A. Standard.

Housing accommodation will be provided, and if the successful candidate uses his own car in connection with his duties, an allowance will be made on the Casual Users Scale, for a car not exceeding 1014 c.c.

Applications stating details of age, qualifications, experience, present and past appointments, with the names and addresses of two persons to whom reference may be made, should be delivered to the undersigned by noon on Monday, 11th December, 1961.

J. F. SMITHIE, O.B.E., M.I.Mun.E., Engineer and Surveyor.

Council Offices, Bletchley. 3rd November, 1961.

To November, 1961.

EXETER CITY COUNCIL
CITY ARCHITECT'S DEPARTMENT
SENIOR ASSISTANT ARCHITECTS required
on A.P.T. Grade III (£960 to £1,140) and Å.P.T.
Grade IV (£1,140 to £1,310) on the established
staff to work on an interesting and varied programme of work. Entry point on the salary
grade will depend on experience.
Provision of housing accommodation will be
considered and removal expenses will be paid.
Applicants must be Associate Members of the
R.I.B.A. N.J.C. Conditions of Service. Successful
candidates will be required to pass a medical
examination.

examination, Applications, stating age, experience and qualifications, should be received by the City Architect, Municipal Offices, Exeter, rel later than 8th December, 1961.

COUNTY OF SOMERSET

SECRETARY FOR COUNTY ARCHITECT
Applications are invited from well-qualified and experienced secretaries for a post requiring ability and initiative in a busy and developing office in pleasant surroundings.

Salary 1710-4915 p.a. according to qualifications and experience.

Applications, with full details of present post and salary and past experience, to reach the County Architect. The Crescent, Taunton. Somerset, by the 4th December, 1961. [Envelope to be marked "Secretary."] [1306]

CITY OF BATH
CITY PLANNING AND ARCHITECTURAL DEPARTMENT
Applications are invited for the following appointments within the grades shown:

(a) PLANNING ASSISTANT (Development County) - A.P.T. IIII/IV (£960-£1,310 per annum).

Control—A.P.T. III/IV (£960—£1,310 per annum).

(b) TWO ARCHITECTURAL ASSISTANTS—A.P.T. II (£815—£960).

(c) ONE JUNIOR ARCHITECTURAL ASSISTANTS—TANT—A.P.T. I (£645—£815).

The programme of building works is extensive and interesting and these appointments afford an opportunity for good experience.

The commencing salary for each appointment will be fixed at a point within the scales commensurate with qualifications and experience.

Applicants for post (a) should have passed the Final Examination of the Town Planning Institute; and should be experienced in the preparation of reports on planning applications and applications under the Advertisements Regulations in the City Areas. Experience in the preparation of Tree Preservation Orders will be an advantage.

preparation of Tree Preservation of the an advantage.

A five-day week is in operation and the Council is prepared to provide housing accommodation if required.

Applications, stating age, experience and qualifications, together with the names and addresses of three referees, should be sent to the City Planning Officer and Architect, 7, North Parade Buildings, Bath, by Monday, 11th December, 1961.

JARED E. DIXON.

Town Clerk.

COVENTRY CORPORATION
Applications are invited for the following

Applications are invited for the following posts:—

(a) ARCHITECTURAL ASSISTANT
A.P.T. III: £960—£1,140 p.a.
A.P.T. III: £961—£1,140 p.a.
A.P.T. III: £961—£1,140 p.a.
A.P.T. II: £645—£15 p.a.
for varied programme of work on educational projects. Commencing salary according to experience/stage of qualification.

(b) TRACER—DRAUGHTSMAN/WOMAN
Salary £590 at age 20 rising to £760 according experience/qualifications for work in either architecture and building or planning.

Additional local award £26 p.a. in certain circumstances on salaries up to £795. Posts permanent and pensionable subject to satisfactory medical certificate. Five-day working week. Staff canteen facilities.

Application forms, etc., from Department of Architecture and Planning, Council House, returnable by 11th December.

CHESTERTON RURAL DISTRICT COUNCIL ARCHITECT'S DEPARTMENT
Applications are invited for the appointment of QUANTITY SURVEYOR, salary A.P.T. II-III according to qualifications.

The appointment will be subject to the N.J.C. Conditions of Service. Local Government Superanniation Acts, medical examination and one month's notice on either side.

Housing accommodation will be provided if required.

Applications, suitably endorsed, with full

required.

Applications, suitably endorsed, with full details of experience and qualifications, accompanied by the names and addresses of two referees, to be sent to the undersigned not later than the 11th December, 1961.

W. H. HAYWARD,

County, Hell.

County Hall Hobson Street. Cambridge.

COUNTY COUNCIL OF MIDDLESEX APPOINTMENT OF COUNTY PLANNING OFFICER

APPOINTMENT OF COUNTY PLANNING OFFICER
Applications are invited for the established appointment of County Planning Officer within the scale-43,750 × £150 (4) × £160 (1) -£4,510.
Applicants must possess organising and administrative ability of a high order, as well as extensive experience of Town and Country Planning and of consultation with local authorities, statutory undertakers and property owners. Preference will be given to applicants who are Chartered Town Planners and also possess one or more of the following qualifications. University Graduate, Fellow or Associate of the Royal Institution of Chartered Surveyors, Fellow or Associate of the Royal Institution of Christian Architects. Member of the Institution of Civil Engineers, or of the Institution of Municipal Engineers. Prescribed conditions. Applications (three referees) to the undersigned, Guildhall, Westminster, S.W.l. by 15th December, 1961. Canvassing disqualifies.

KENNETH GOODACRE.

Clerk of the County Council.

BOROUGH OF EDMONTON

BOROUGH ARCHITECT'S DEPARTMENT
ASSISTANT QUANTITY SURVEYORS
Applications are invited for the appointment of Assistant Quantity Surveyors, one on Grade A.P.T. III and one on Grade A.P.T. III and one on Grade A.P.T. III of the National Scales of Salaries. Commencing salary will be in accordance with qualifications and experience. Redevelopment programme includes multi-storey flats, Town Centre redevelopment, industrial dwellings and offices. House purchase facilities available.

Applications on forms obtainable from the flown Clerk, Town Hall, Edmonton, N.9, to be delivered by the 8th December, 1961.

BERKSHIRE COUNTY COUNCIL
APPOINTENT OF ARCHITECT-PLANNER J.N.C. B.C. (£1,425-£1,825)
Applications are invited from suitably qualified and experienced Architect-Planners for the above appointment in the County Planning Department. The successful candidate will be in control of a special section to be set up within the Department to carry out necessary survey work and prepare town centre redevelopment proposals for a number of towns in the County. The salary will be fixed within Scales B.C. (£1,425-£1,825) according to qualifications and experience.

The person appointed will also be expected to undertake negotiations with the Local Authority and interested parties in the formulation of proposals.

Application forms and further particulars

and interested parties in the formulation of proposals

Application forms and further particulars obtainable from the County Planning Officer, 7.

Abbot's Walk, Reading, Berkshire. Closing date 23nd December, 1961.

2288

HEFFIELD REGIONAL HOSPITAL BOARD Applications invited from Registered Architects for the following appointments:—
PRINCIPAL ASSISTANT ARCHITECTS SENIOR ASSISTANT ARCHITECTS
ASSISTANT ARCHITECTS.
Salaries within the range £905—£2,035
Grade and commencing salary according to qualifications, experience and personal qualities.

Many large new projects to be covered within an expanding £50 million capital works programme.

an expanding 120 Interest and the property of the property of

GLOUCESTERSHIRE COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT Applications are invited for the followippointments:—

ppointments:—

(a) ASSISTANT ARCHITECT — "CAREER CLASS" commencing in A.P.T. IV (21,140—21,310 p.a.) progressing to A.P.T. V (21,130—21,480 p.a.) subject to satisfactory report on reaching appropriate incremental point in Grade. Applicants must be Registered Architects and Associate Members of the

Grade. Applicants must Architects and Associate Members of the R.I.B.A.

(b) A R C H I T E C T U R A L. ASSISTANTS—"QUALIFYING CLASS." Vacancies exist in the following Grades:—

A.P.T. I: Salary £645-£315 p.a.

A.P.T. III: Salary £315-£960 p.a.

A.P.T. III: Salary £315-£960 p.a.

A.P.T. IV: Salary £316-£1,310 p.a.

A.P.T. IV: Salary £1,140-£1,310 p.a.

Applicants for posts in Grades I and II should have passed the Intermediate Examination of the R.I.B.A. and for Grades III and IV the full R.I.B.A. Final Examination.

N.J.C. Conditions of Service: superagnuation: medical examination Canvassing will disqualify. Applications, stating age, present position and salary, details of previous appointments, together with the names and addresses of two persons for reference, must reach the County Architect. Shire Hall, Gloucester, by 15th December, 1961.

Clerk of the County Council.

ARCHITECT
MINISTRY OF WORKS, GOVERNMENT OF
SIEBRA LEONE
Duties: To prepare plans and specifications
for Government Buildings including houses,
offices and hospitals and other Government and
Municipal buildings.
Qualifications: A.R.I.B.A. essential. A.M.T.P.I.
decirable.

POPLAR BOROUGH COUNCIL
PRINCIPAL ASSISTANT ARCHITECT required. Grade A.P.T. V. (21,310/21,480 per annum.
plus 245 London "weighting"), Projects include
multi-storey flats and maisonettes, houses and
public buildings.

multi-storev flats and maisonettes, houses and public buildings. Application forms from Borough Engineer and Application forms from Borough Engineer and Surveyor. Poplar Town Hall. Bow Road, E.5. Closing date 18th December, 1961.

CITY OF WORCESTER APPOINTMENT OF ARCHITECTURAL STAFF

APPOINTMENT OF ARCHITECTURAL STAFF

Applications are invited to fill two vacancies for ARCHITECTURAL ASSISTANTS in the City Engineer and Surveyor's Department within A.P.T. Grades I/II (salary £645 to £960).

The appointments are superannuable and subject to medical examination.
Housing accommodation will be offered, if necessary, and the Corporation are prepared to make a contribution towards removal expenses.

Casual Users' Car Allowance will be applicable. Applications, statings age, present and previous appointments and experience, together with the names of two referees, are to be sent to the City Engineer and Surveyor, 22. Bridge Street, Worcester, by 7th December.

BERTRAM WEBSTER.

DRAUGHTSMAN (ARCHITECTURAL) required by Wandsworth Borough Council, Salary Misc. III-VI (£955 rising to £365). Grade and salary according to experience. Forms from Borough Engineer, Municipal Buildings, S.W.18, returnable to me by 18th December.

J. NOEL MARTIN, Town Clerk. 1346

NORTHERN IRELAND HOUSING TRUST
ARCHITECTS

THE Northern Ireland Housing Trust has
vacancies for the following posts:—

(a) ARCHITECT, Class I "B" on a scale of
£1,456-£1,654. Candidates must be Associates
of the Royal Institute of British Architects.

(b) ARCHITECTURAL ASSISTANT, Grade
"B" on a scale of £905-£1,128, Candidates
must have passed the Intermediate examination of the Royal Institute of British Architects.

tion of the Royal Institute of British Architects.

The persons appointed will be required to contribute to a superannuation scheme which allows for the transfer of benefits in local government schemes in suitable cases.

Honsing accommodation and assistance with removal expenses may be arranged for married candidates.

Please apply not later than 8th December, 1961, giving details of age, education, qualifications and experience, including present post and salary, to the General Manager, Northern Ireland Housing Trust. 12 Hope Street, Belfast 12.

For post (a) please mark envelope 33/98.

For post (b) please mark envelope 33/99. 1276

STEVENAGE DEVELOPMENT CORPORATION Applications are invited for appointment as ASSISTANT ARCHITECT in the Chief Architect's Department at a salary commensurate with qualifications and experience, but not exceeding a maximum of £1,480 per annum. Applicants should be either Associates of the Royal Institute of British Architects, or studying for same, and have experience in design and construction of modern buildings.

Living accommodation may be available in due course in an appropriate case. Local Government superannuation; five-day week.

Applications giving details of experience and names of two referees should be sent to the Chief Administrative Officer, Daneshill House, Danestrete, Stevenage, Herts, not later than Thursday, the 7th December, 1961. STEVENAGE DEVELOPMENT CORPORATION

KENT COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
The volume of work undertaken by this Department requires the filling of vacancies now existing for ARCHITECTS. Enthusiastic and competent ARCHITECTS are invited to join in a large and varied programme. Salaries within range £1,40—£1,480 a year. Applications to be sent to the County Architect, Springfield, Maidstone. S1292

COUNTY BOROUGH OF BLACKPOOL
Applications (by 18th December) invited for:—
(a) ASSISTANT PLANNING OFFICERS,
A.P.T. V (£1,30/£1,480)
(b) ASSISTANT PLANNING OFFICERS,
A.P.T. III/IV (£950/£1,310).
Offering experience in redevelopment of central area and clearance areas; review of the Development Plan and development control,
Five-day week. Housing not provided but mortgage scheme operated (up to 100 per cent. in suitable cases).
Application forms, etc., from Arthur Hamilton,
B.Sc., A.R.I.B.A., Borough Surveyor, P.O. Box
17, Municipal Buildings, Blackpool, 1295

COUNTY BOROUGH OF BLACKPOOL
Applications (by 13th December) invited for:—
(a) ASSISTANT ARCHITECT—A.P.T. III/IV
(£960/£1,310 p.a.),
(b) ASSISTANT QUANTITY SURVEYOR—
A.P.T III/IV (£960/£1,310 p.a.),
Five-day week, Housing not provided but mortgage scheme operated (up to 100 per cent. in
suitable cases),
Application forms, etc., from Arthur Hamilton,
B.Sc., A.R.I.B.A., Borough Surveyor, P.O. Box
17, Municipal Buildings, Blackpool.

Competition

36s. per inch; each additional line 3s. THE UNIVERSITY OF LIVERPOOL

OPEN COMPETITION

Architects are invited to submit designs for halls of residence for 1,100 to 1,200 students on the Carnatic site at Moseley Hill. Liverpool. The cost of the works will be approximately £1,500,000.

A .......

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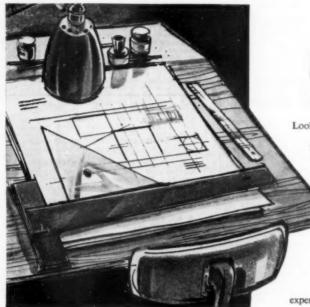
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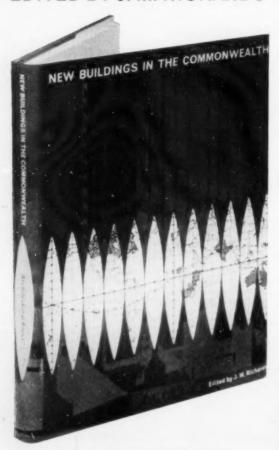
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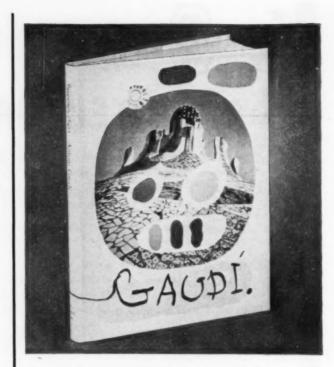
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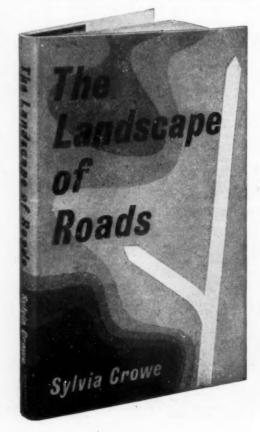
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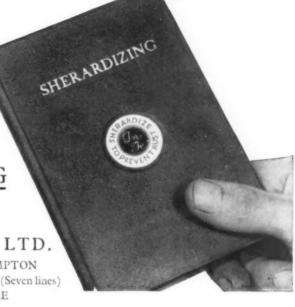
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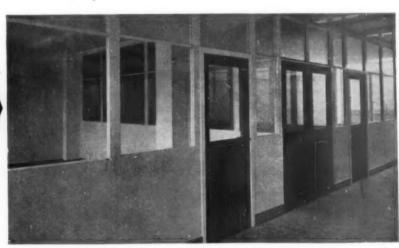
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