The Architects' Journal

November 28, 1957 No. 3274 Vol. 126 Registered as a newspaper. Price 1s. Building Exhibition Olympia

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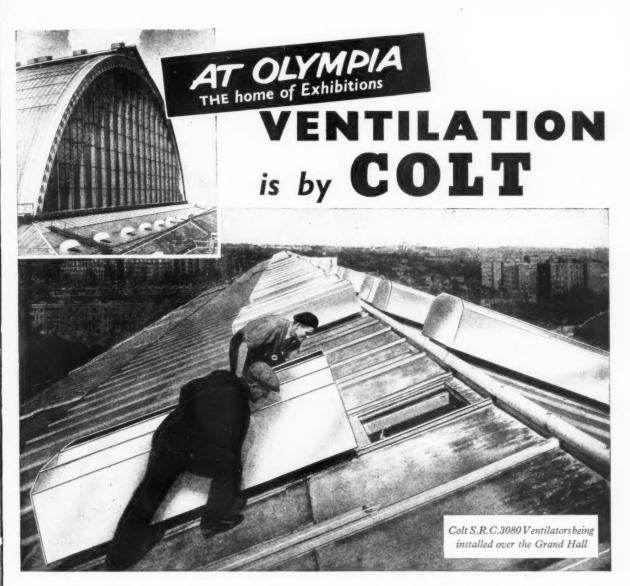


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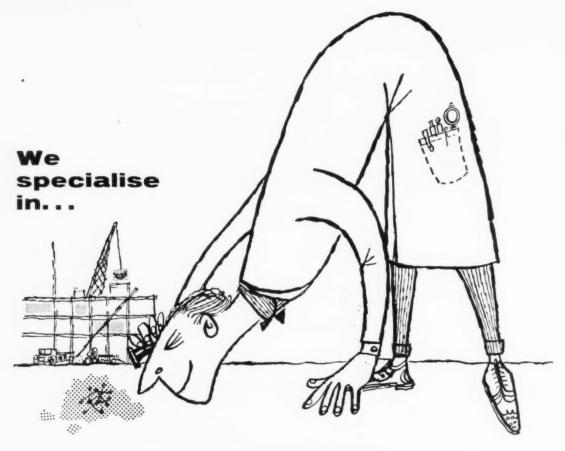
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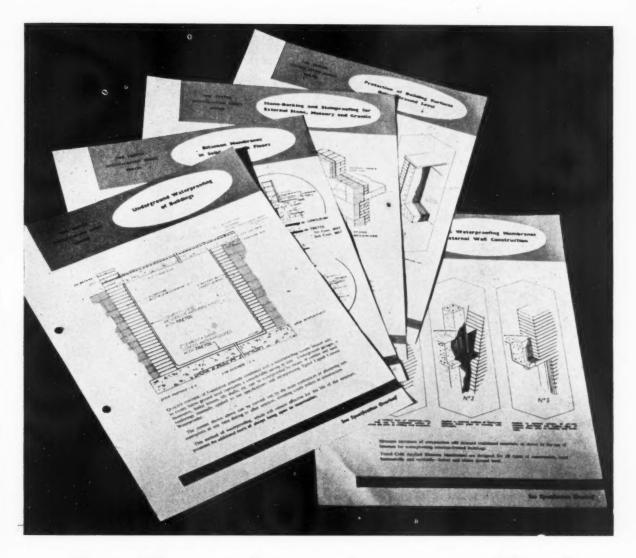
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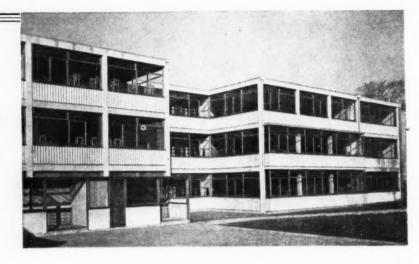
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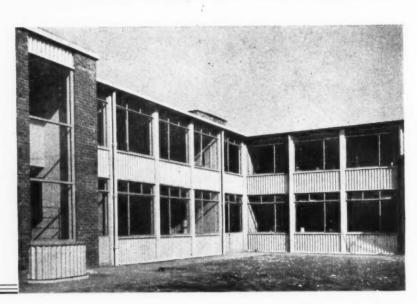


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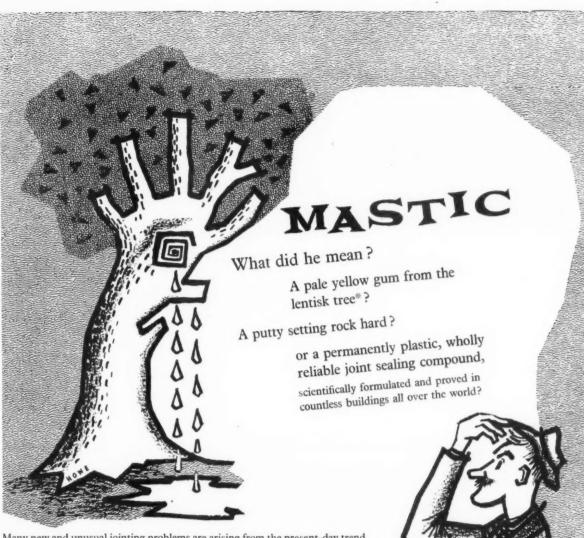
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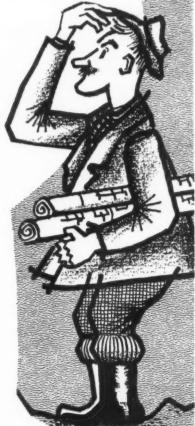
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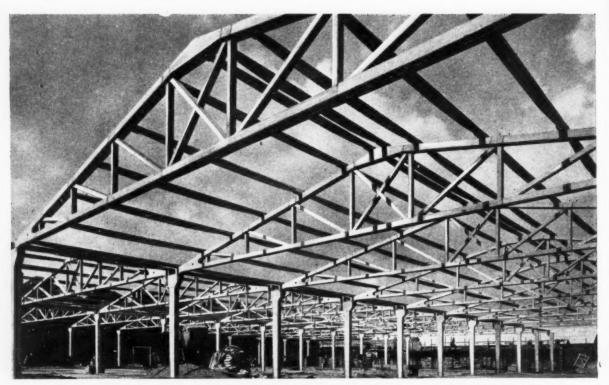


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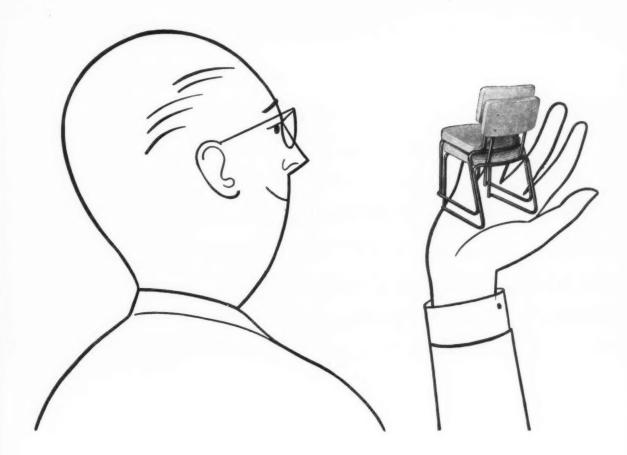
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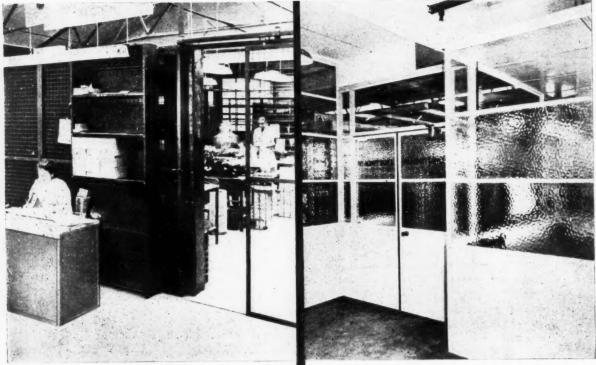


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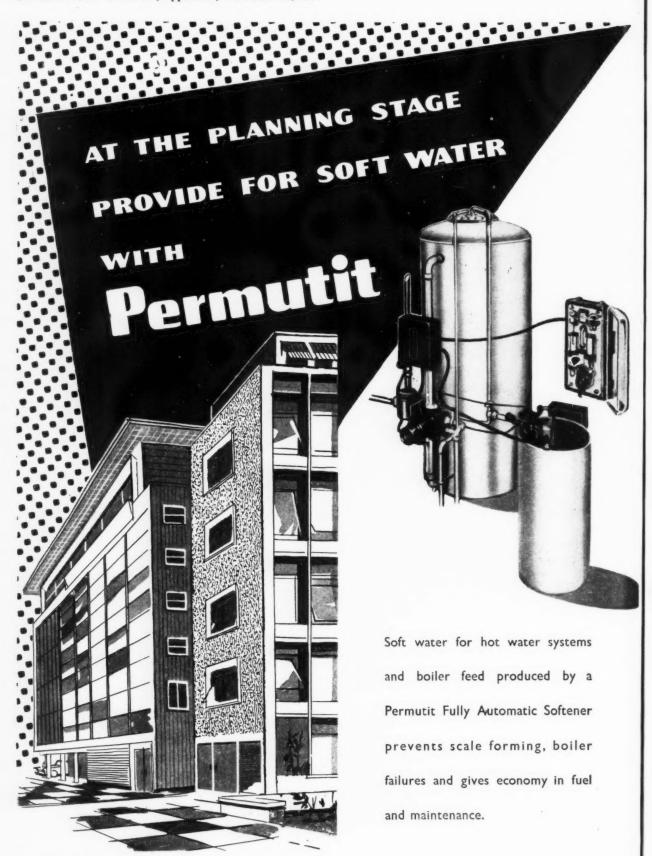
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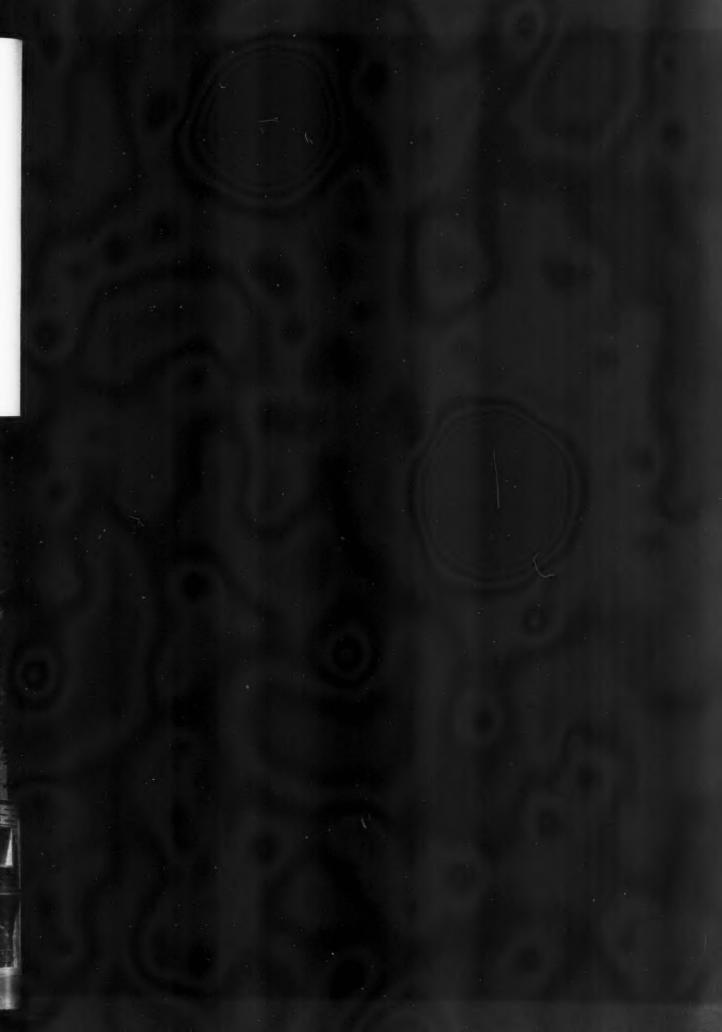
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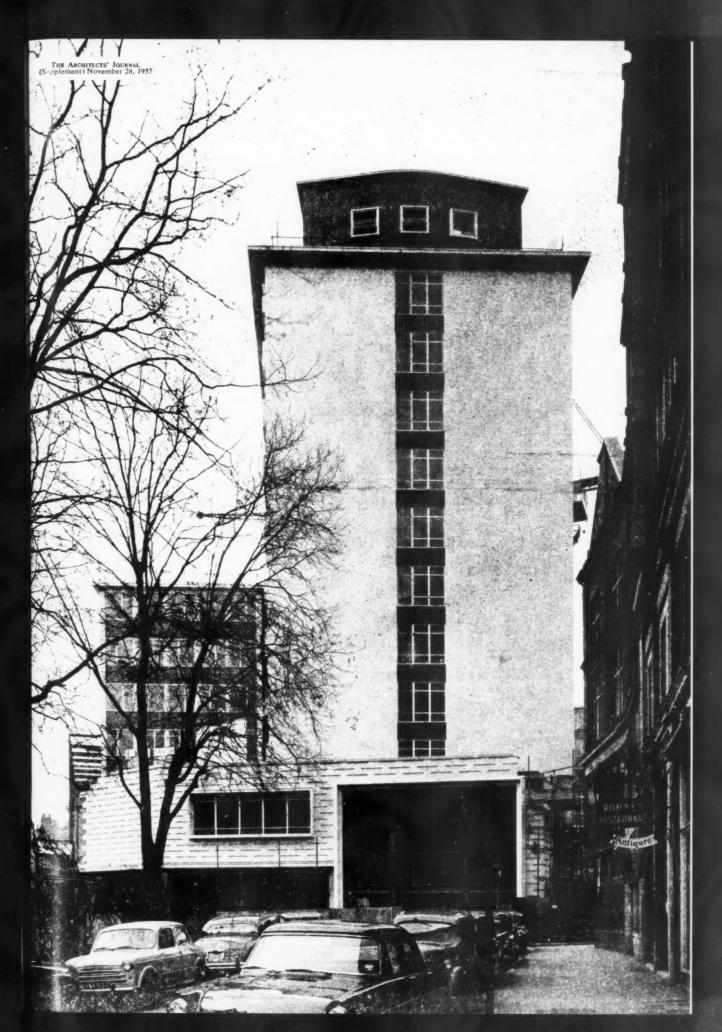
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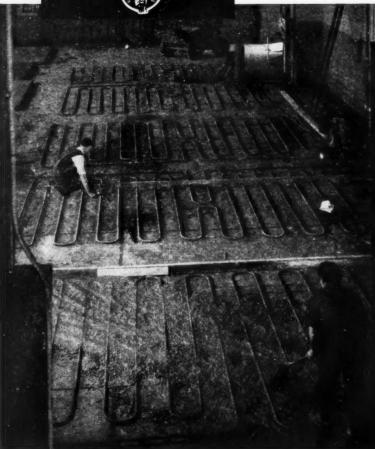








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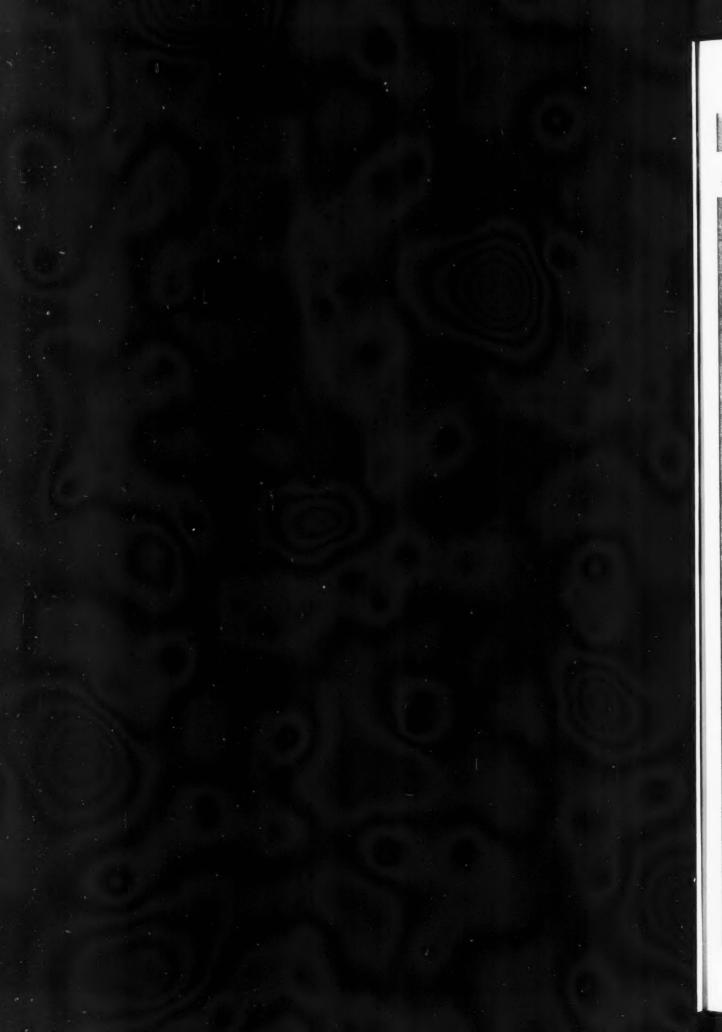
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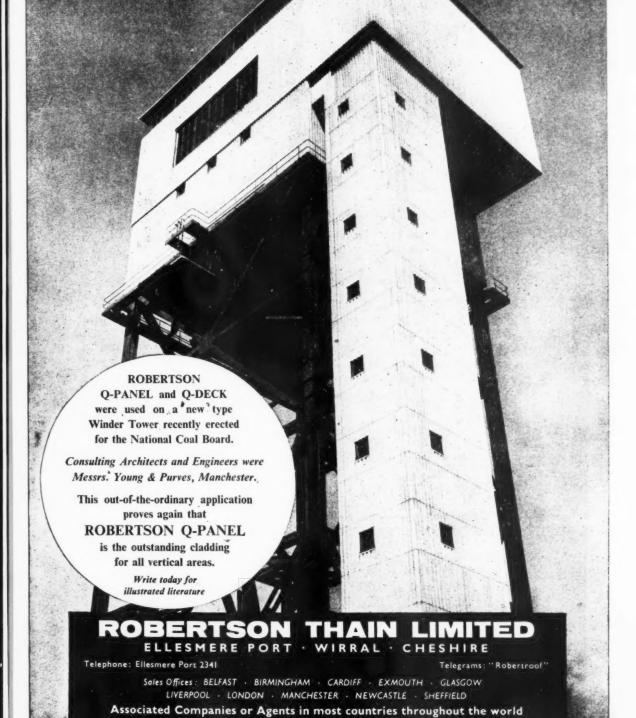
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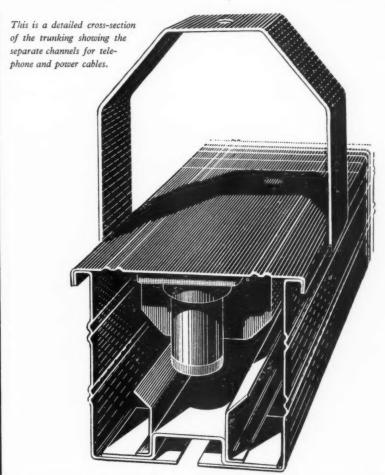
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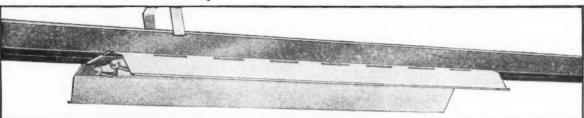
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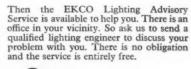
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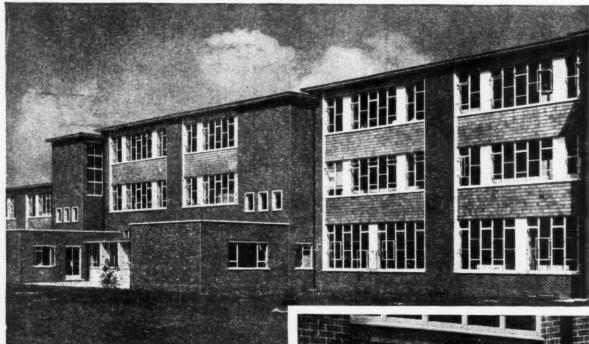
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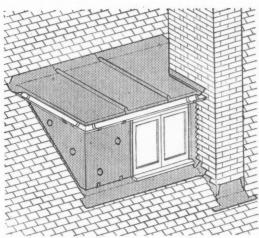
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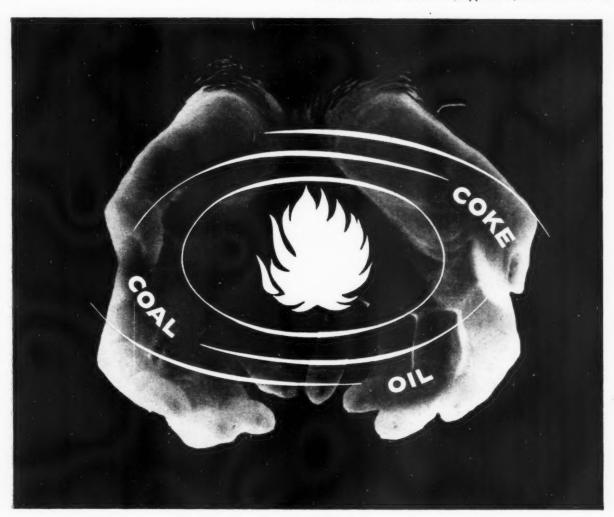


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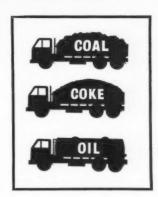
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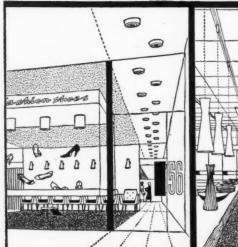
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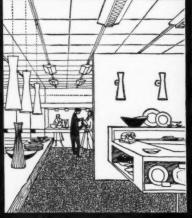
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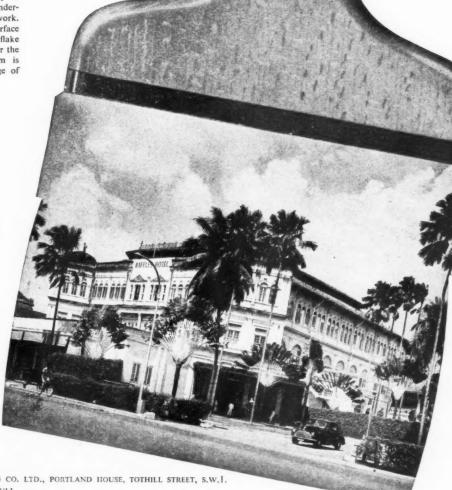
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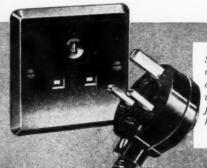
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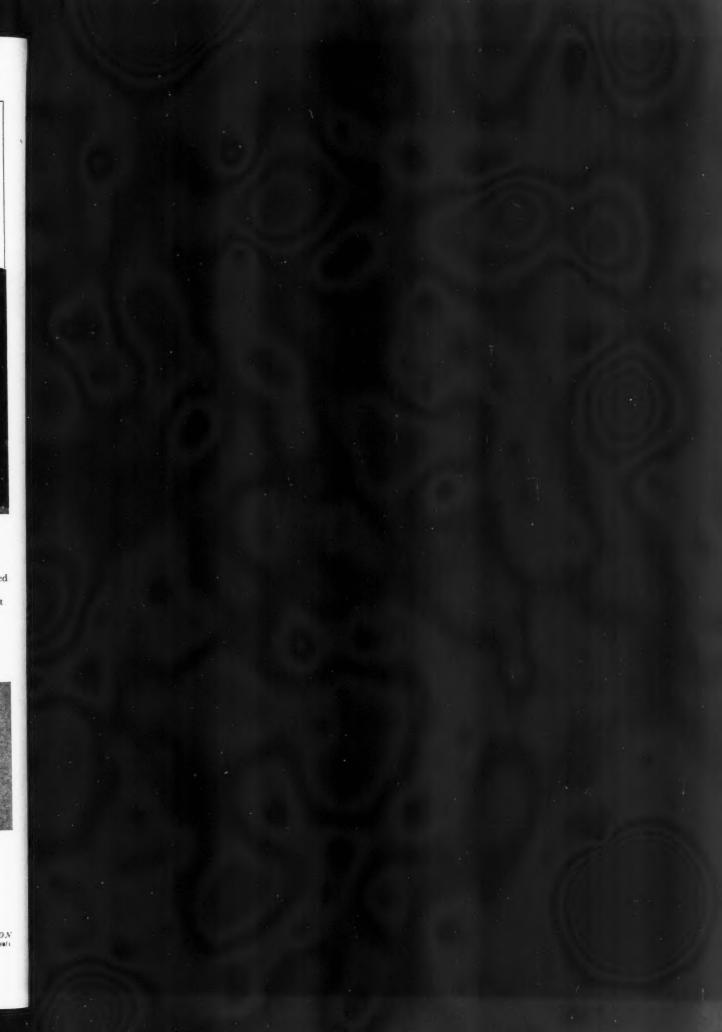
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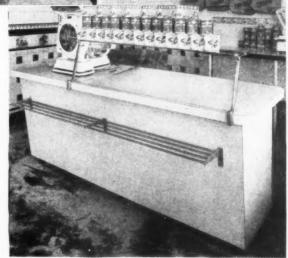
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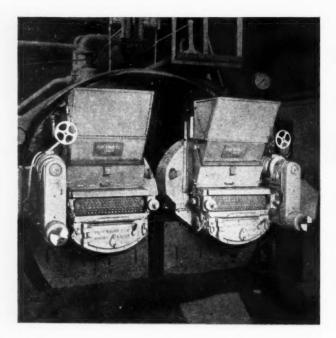
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The Riley Type 'T' Chain Grate Stoker has been developed specially to burn efficiently, and in sufficient quantities, small sized low grade coals which are high in ash content.

For Horizontal Shell-type Boilers

The stoker body is of rigid fabricated steel box structure, with zonal air control.

The grate surface is formed of die-cast links of heat resisting cast iron and high individual strength.

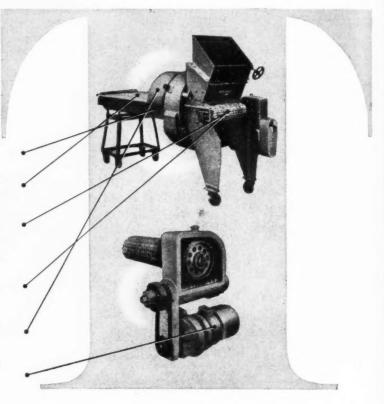
All links, except for the two rows of heavy side links, are of equal thickness and are disposed to ensure that air spacing is uniform across the grate.

Odd links can be replaced easily without withdrawing the stoker from the boiler.

Refractory lined furnace flue extension incorporates air ducts and peep-hole door.

Geared motor drive for A.C. or D.C. supply.

Please write for booklet R522.



RILEY (IC) PRODUCTS LIMITED One of the International Combustion Group of Companies.

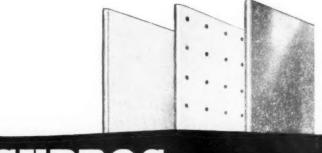
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and make the plasters that marry

into a tenacious, perfect bond



GYPROC LATH & PLASTERS

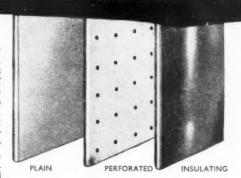
Gyproc Lath is composed of a cellular gypsum core encased in millboard liner. When a gyproc Plaster such as paristone or gyprone is applied to the surface of the lath, the gypsum crystals penetrate and interlock with the paper fibres during setting.

during setting.

GYPROC Lath is available in three grades:

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Paristone Plaster is made in undercoat and finishing coat grades. Gypstone Plaster is used for single coat work. Write for Leaflets for full information.



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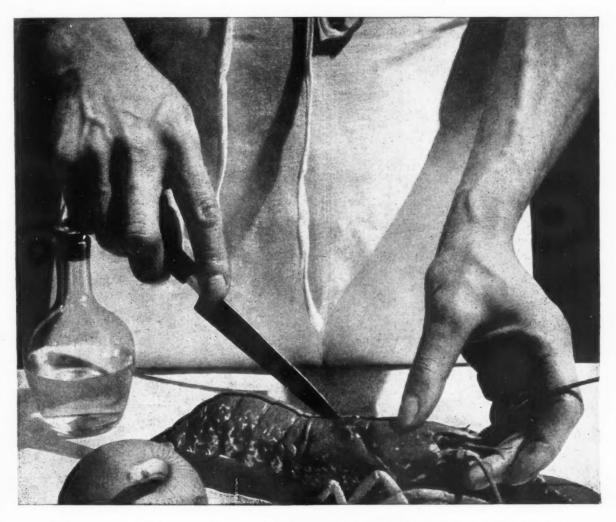
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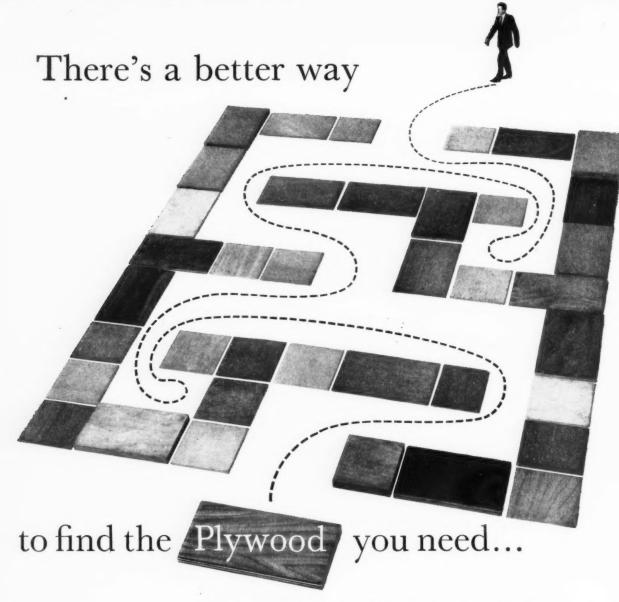




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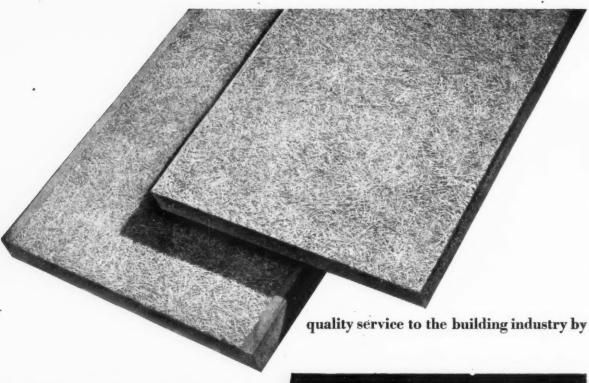
Ease and rapidity of application. LUXOL Flat can be applied as rapidly as emulsion paint. It brushes on easily and is ideal for spraying. It has excellent wet edge properties; is touch dry in 4 to 6 hours, hard dry overnight.

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Thermodare heating—available as compact cabinets or permanent underfloor installations in concrete—stores heat by night and radiates it evenly throughout the day. Control by thermostat and time switch is entirely automatic. There is no dust, mess or maintenance. Capital costs are low, and installation is simple.

We marketed the first night storage heater in this country, and are leaders in this rapidly-growing field. Ask for full particulars—the Thermodare Technical Service will gladly help you.

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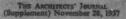
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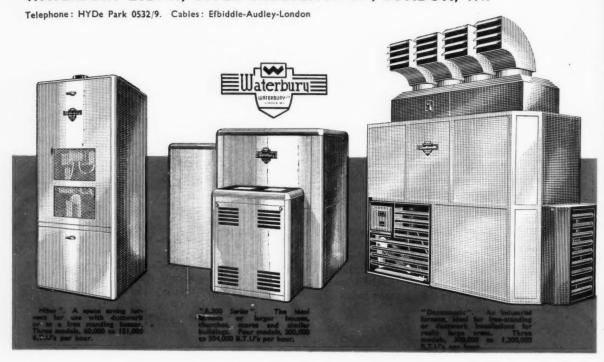


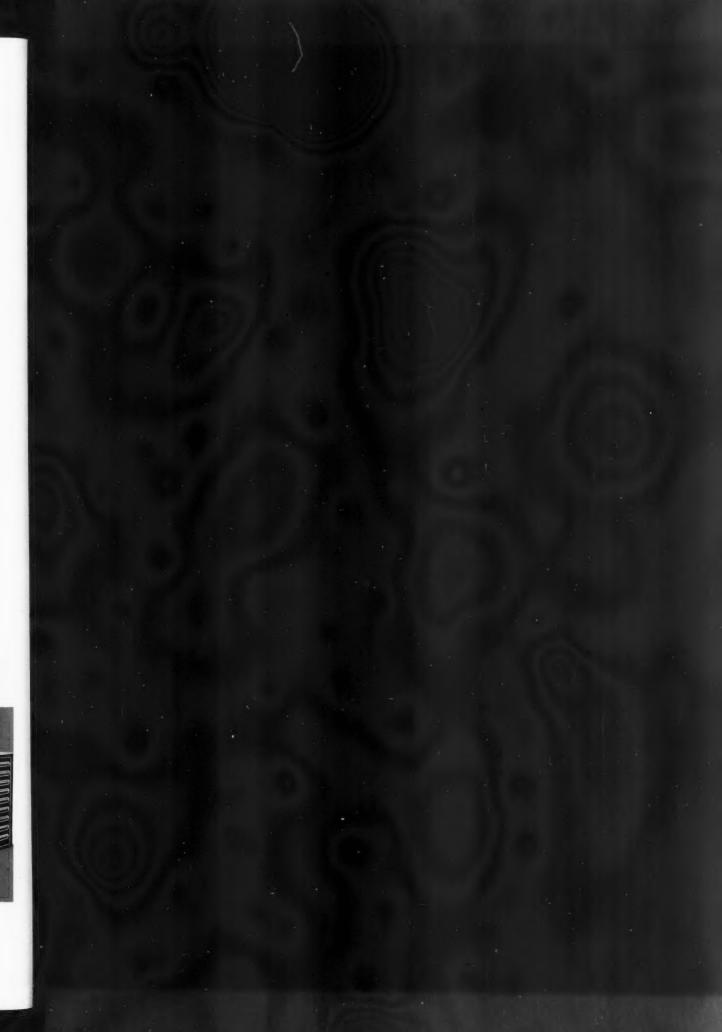
Waterbury warm air furnaces are manufactured to the high standards of all Biddle Group products and are supported by the experience of an international organisation which has manufactured warm air furnaces for fifty years. There are four main styles of furnace, each with its own range of sizes—"The Hiboy", "The Downflo", "The B.300 Series" and "The Dantomatic".

Sturdily constructed, smart and built for long life, Waterbury furnaces bring the advantages of modern automatic warm air heating to almost any type of building—factories, stores, offices, shops, churches, schools and houses.

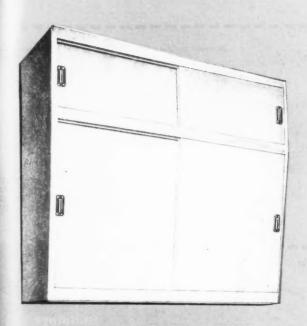
As manufacturers, Waterbury Limited, do not install warm air heating systems, but will gladly advise on the application and design of installations at any time.

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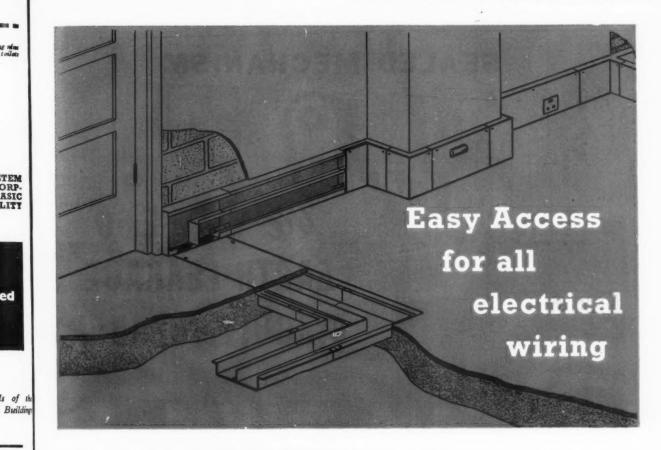
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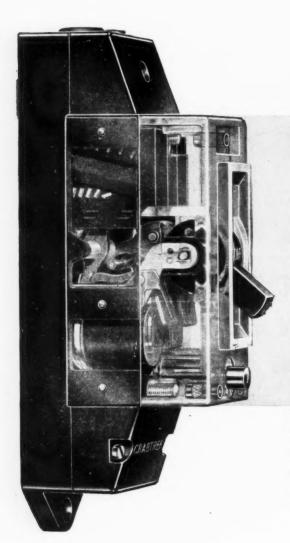
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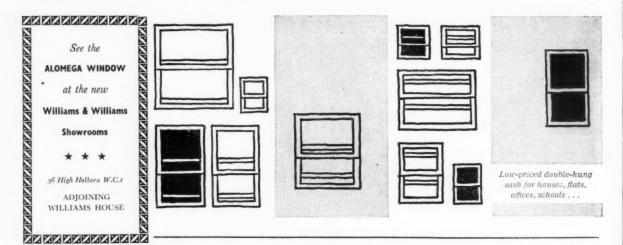
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New, much lower cost Aluminium Double-Hung Window

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(Quantities over 48)
It is primarily the new design that brings about this new low price; because there is no counterbalancing mechanism and, therefore, no need for bulky hollow jambs to house it. Also, there are several new, cost-saving techniques on the assembly line.

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Lower site costs, too. For three reasons:

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- 2. No glazing: windows are despatched ready-glazed ex works.
- 3. Next-to-no building-in: windows are completely prefabricated and assembled at the works; mounting is by woodscrews in Rawlplugs set direct into the masonry: no sub-frame.

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Standard sizes or Purpose-made

ALOMEGA Windows are available for inspection at any Williams & Williams Area Office or merchant stockist, and are made in the following standard sizes:

Type	14,	3'83"	×	1'21"	Type	24,	3'8%"	×	1'11}"
Type	34,	3'81"	×	2'81"	Type	44,	3'83"	X	3'51"
Type	15,	4'83"	×	1'21"	Type	25,	4'83"	×	1'1114"
Type	35,	4'81"	×	2'81"	Type	45	4'81"	x	3'51"
Type	16,	5'81"	X	1'21"	Type	26,	5'8}"	×	1'111
Type	36.	5'83"	×	2'84"	Type	46.	5'81"	×	3'51"

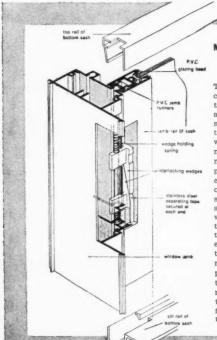
Owing to the method of construction, purpose-made sizes present no difficulty and are available up to a maximum of 19 perimeter, at approximately pro rata prices—although, of course, there will be a certain delay.



The system is very ingenious, extremely simple, and completely foolproof. The components have a laboratory-tested "life" of well over 200 years of normal use. The whole mechanism is completely enclosed and out of sight.



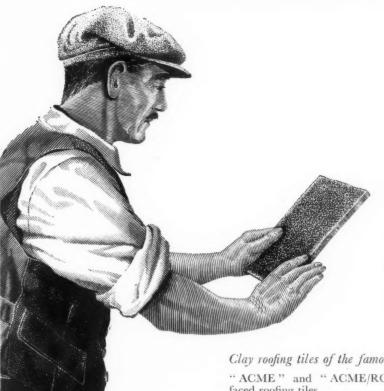
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The two interlocking wedges are contained in a channel extruded in the sash jamb. They are pushed against each other by springs sufficiently tightly to bind them in the channel so that they carry the weight of the sash. When the sash is moved the wedge assembly tends to move with it, but is held back by lugs protruding from the wedges which engage in slots cut in the fixed jamb of the window. The lugs are given a small amount of vertical play in the slots, and these are so placed that, whichever way the sash is moved, the hinder wedge (relative to direction of travel) is stopped first. The effect of this is a fractional separation of the wedges permitting free movement of the sash for as long as pressure is applied to it. As soon as the pressure is removed the two retaining springs push the wedges together once again, binding them firmly in the channel and locking the sash in its new position



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Clay roofing tiles of the famous "ACME" brands, including:

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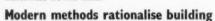


Office block for Messrs. Norrons-Tividale Ltd., Fipton, Staffs.

Beecham Buildings construct high-quality commercial and industrial buildings—from office blocks and small factories to large industrial layouts covering many acres—at prices which, over the past twelve months, have actually fallen. We accomplish it in these days of 7% by working quickly and eliminating waste.

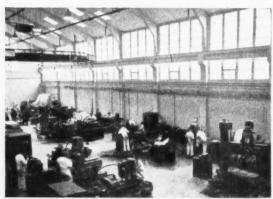
A complete organisation speeds planning

We in Beechams have the *complete* building organisation. Our staffs of architects, surveyors, builders, civil engineers and reinforced concrete experts control mobile teams of specialists on every contract. We are accustomed and happy to work with clients' consultant architects, offering them either the service of our entire organisation, or acting as general or specialist contractors, so that they may employ whichever of our specialised facilities they need. By knowing what is involved in every contract, we can quote firm prices as soon as sketch designs are agreed and so move on to a site months earlier than would otherwise be the case.

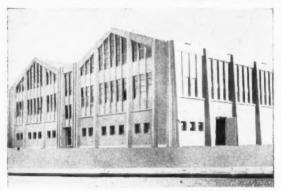


Because we employ advanced techniques, we are able without sacrificing quality, to put up a factory faster, perhaps in only half the time it would be built by older methods. With capital tied up at 7%, this saving in time is a heavy saving in money. Every contract is kept under one control so that every operation can be accurately timed to eliminate site delay. Highly mechanised casting shops produce large and varied types of structural units under ideal conditions, and our specially equipped transport fleet enables us to integrate production with erection. We also incorporate traditional construction where this is desired.

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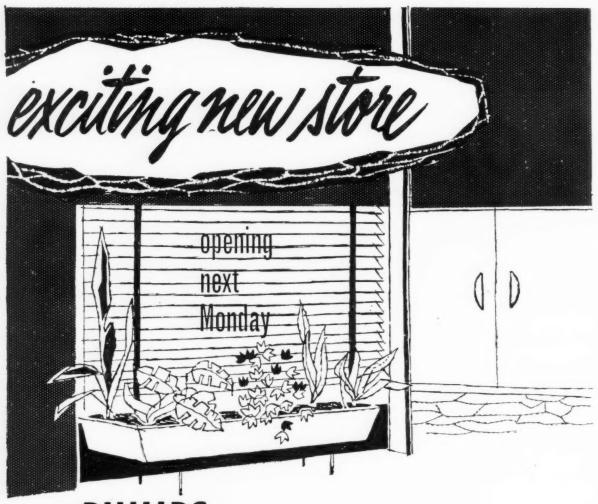
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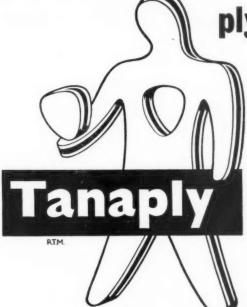
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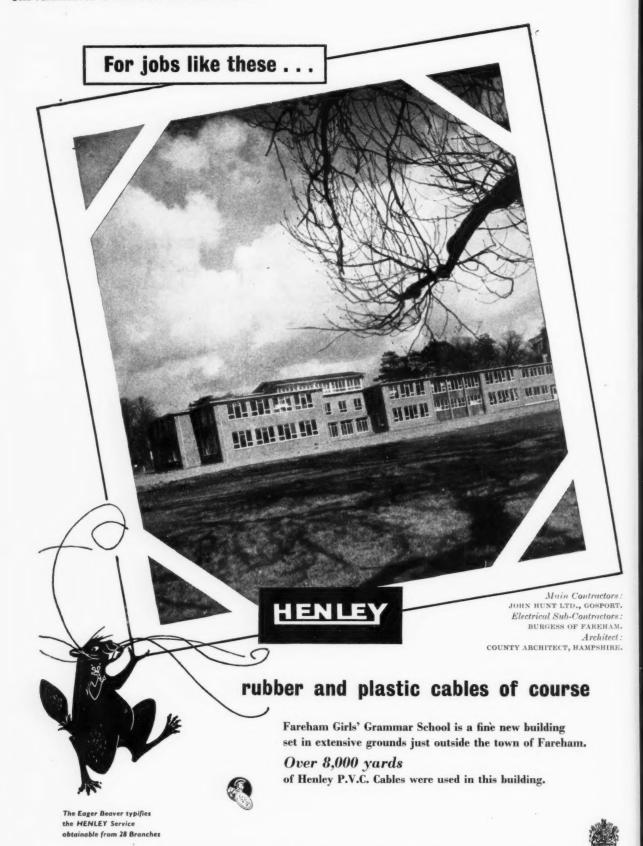
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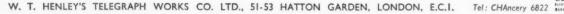
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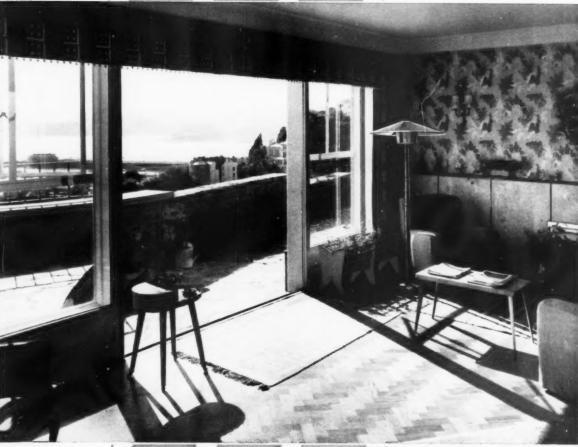








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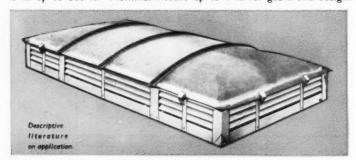
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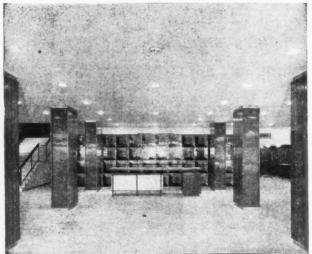
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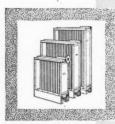
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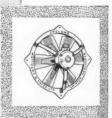
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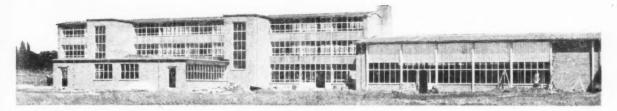
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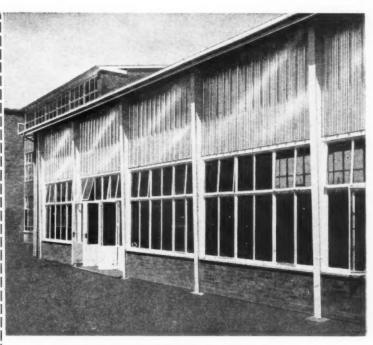
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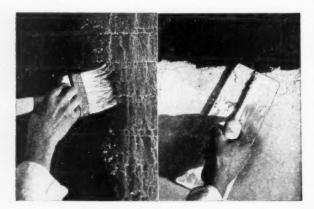
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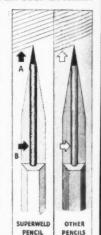
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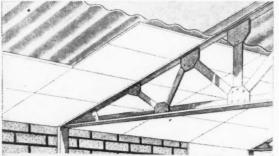
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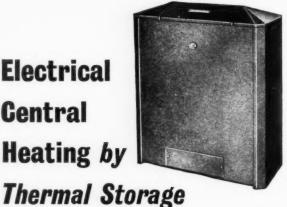
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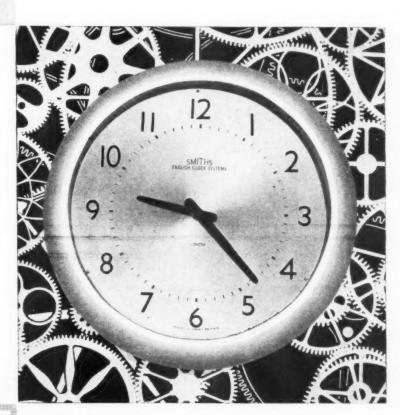
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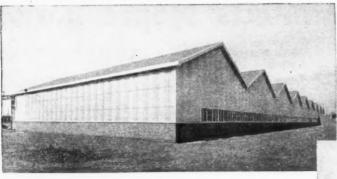


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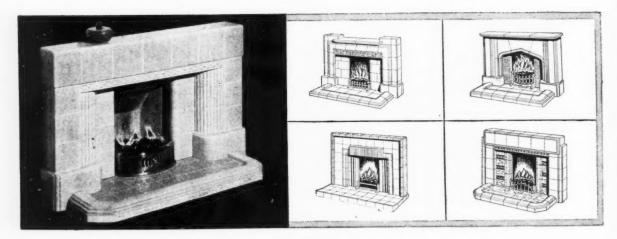
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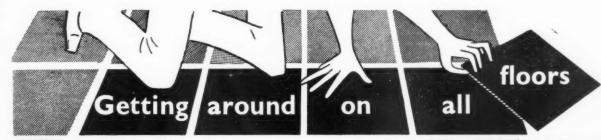
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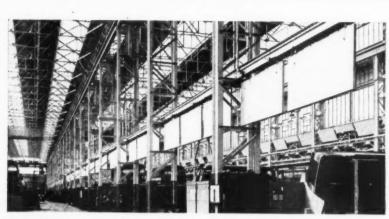


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THE ARCHITECTS' JOURNAL for November 28, 1957

Preview

Smithsons Building Exhibition ONNO

November Architectural Review The controversial Smithsons will make their first appearance as contributors to the Review in November, with an illustrated study of the Shape of the Community, in which they set against the exhausted diagrams of CIAM planning their vision of a more humane type of city. For nonvisionaries-and for visionaries too-Skill will provide a full coverage of the Building Exhibition from the technical point of view, as well as an Interiors treatment of G. A. Jellicoe's restaurant and shopping floors at Harvey's of Guildford.

Visionary qualities, spurred by hard practical necessities, illuminate Kenneth Browne's pro-

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posals for applying the ONNO traffic-directing technique to Park Lane and west Mayfair. The study of the functional tradition is advanced by Brian Spiller's article on Georgian Breweries. Buildings described in this issue will include the new Bowater Factories by Farmer and Dark, whose cladding provides a practical follow-up demonstration of patent-glazing techniques, and Rangoon University and Technical Institute, by Raglan Squire and Partners, extensively illustrated in colour. Professor



Entrance to the Library of the new Rangoon University. Architects, Raglan Squire and Partners.

Pevsner reviews Tschudi Madsen's important book on the Origins of Art Nouveau, whose character is summed up in the title Beautiful and, if need be, useful, and Dr. S. Lang will provide a note on Architectural Visitors to Padua, based upon a register kept by the university there, in which practically every English architect and amateur of note signed his name when passing through.

TUC Brasilia Street Lighting

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December Architectural Review Design for public and administrative functions will form the subject of the two most important features in the Review for December. The TUC Memorial Building, designed by David Aberdeen, which is only the second public building of consequence to go up in London since the War, will be described and illustrated for the first time in completed form, and a supporting article in Skill will examine in detail the finishes



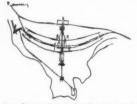
drawing of David Aberdeen's TUC Memorial Building.

and mechanical equipment that make this one of the most lavish buildings-outside the commercial field-of recent years. The other major feature is concerned with Brasilia, the projected new capital city for Brazil, typically grandiose and Latin-American in conception, but more likely than most such schemes to achieve completion. Sir William Holford,



Oscar Niemeyer's design for the Congress Building at Brasilia.

who was one of the jury who assessed the competition for the new capital's plan, introduces the project and its site, discusses the competition, and adds a few words by way of introduction to the brilliant and unconventional winning scheme, by Lucio Costa, father of Brazil's modern movement, whose report is published in English for the first time.



One of Lucio Costa's sketches for Brasilia.

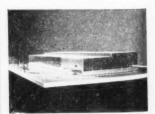
Another father of his art, John Britton, founder of English topographical studies, will be the subject of an historical article by Peter Ferriday, and the bicentenary of the birth of the great neo-Classical sculptor Antonio Canova is celebrated by one of England's leading neo-Classical scholars, F. J. B. Watson, with a chronicle of English visitors and admirers at the sculptor's studio in Rome. Gordon Cullen will tackle one of the most vexed and debated problems of outdoor detailing, Street Lighting, in terms of distribution and siting, as well as the design of equipment, and interiors to be described include the IBM offices and the Garden Centre, both in new office blocks in Wigmore Street. Foreign reports will cover the Triennale di Milano, and the Berlin Interbau exhibition, and regular features like the Counter Attack Bureau and Robert Melville's provocative art-criticism will continue.

January Architectura, Review Each New Year, the Review devotes an entire special issue to a survey of what the leading architectural offices in Britain have in hand on the first day of



Assembly Hall of a girls' comprehensive school at Southwark. Architects, Chamberlin, Powell and Bon.

The view presented by Preview is an extremely varied one; the buildings it covers range from a pub to a synagogue, by way of schools, universities, colleges, hostels, hospitals, factories, office blocks, churches, airports, planning schemes, housing layouts, a market and a seaside pavilion; and the offices and architects responsible for these projects-inprogress read like a directory of the country's top talent (as indeed they are)-the L.C.C., the Ministry of Works, ACP, T. P. Bennett and Sons, Bridgewater and Shepheard, James Cubitt and Partners, Llewelyn Davies, Easton and Robertson, Frederick Gibberd, Erno Goldfinger, Gollins Melvin and Ward. Sir William Holford, Arthur Ling, Sir Leslie Martinand so on down the alphabet to Yorke, Rosenberg and Mardall.



Factory at Wokingham. Architects, Yorke, Rosenberg and Mardall.

The reflection in Preview's mirror may prove flattering or alarming, but even where there appear to be grounds for satisfaction at the design of the buildings themselves, the environments into which they are being fitted still leave much to be desired, and though this is beyond the architects' control, it is not exempt from the watchful eye of the Counter Attack Bureau, whose month by month vigilance will be maintained even in this special issue.

GAZES

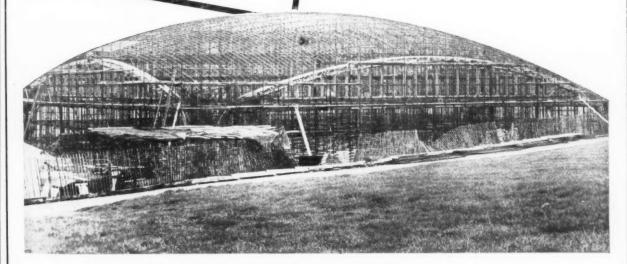
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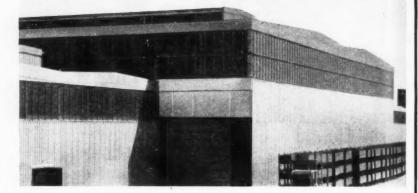
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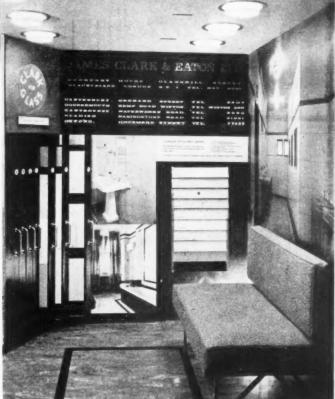
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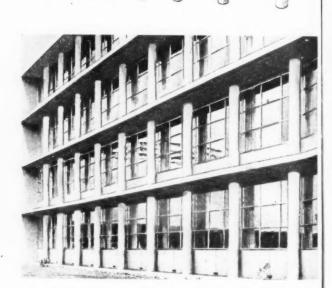


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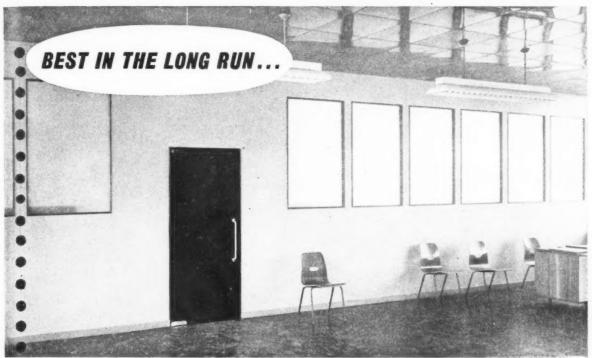
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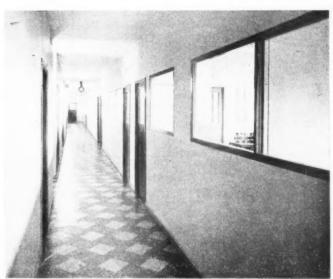
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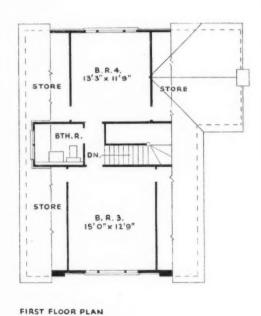
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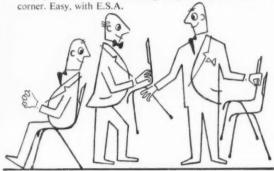


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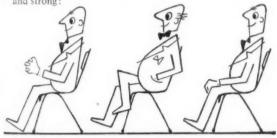
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NOT QUITE ARCHITECTURE

WHO GUARDS NASH?

At the moment of writing the Crown Estate Commissioners are understood to have reached a decision on the future of the Nash Terraces in Regent's Park, although the decision has not yet been published. What seems certain is that the Commissioners have decided in the end—whatever their first intention may have been—to preserve at least the principal terraces. But the fact that on this occasion the right decision may have been reached does not alter the fact that the Commissioners are not properly constituted to be entrusted with the care and preservation of buildings of historical or architectural interest.

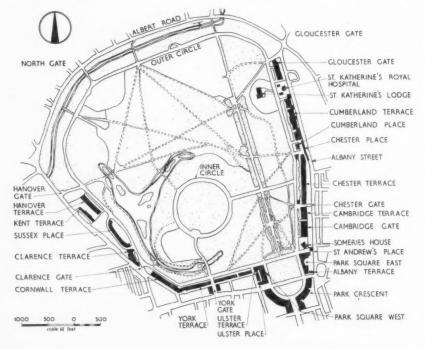
The Crown Estate consists of the most extraordinary variety of property, partly ancient Crown lands, partly estates bought solely as investments in recent years. includes hill farms and moors in Scotland. woodlands, every kind of agricultural estate in England and Wales, oyster beds and salmon fisheries, palaces, barracks, blocks of flats, offices, shops, housing estates, golf courses and industrial premises. The estate is worth more than £50 million. and has a rent roll of £3.918.000 for the agricultural property, and £1,941,339 for its urban property, mainly in London. The urban estate includes Regent's Park. Regent Street, Carlton House Terrace. Carlton Gardens and St. James's, property in Haymarket, Pall Mall, Trafalgar Square, Northumberland Avenue, Whitehall, Hyde Park Corner, Holborn and the City. Windsor and its Great Park, historic buildings at Eltham, residential estates at Hampton and elsewhere.

The Crown Estate is an historical anomaly, It consists of the land and property in the ownership of the Sovereign "in right of the Crown," as distinct from land or property held for use of a government department, and from the private property of the Sovereign (such as the Balmoral or Sandringham estates). The capital belongs



Above, Cumberland Terrace, Regent's Park. Below, plan of the Nash Terraces.

to the Sovereign, but ever since 1760 the Sovereign has surrendered the revenue to the Exchequer at the beginning of each reign in return for the Civil List. The Commissioners are required by statute to behave like prudent trustees: and the prudent trustee is guilty of a dereliction of duty if he does not seek a reasonable return or retains uneconomic property. While the Commissioners have from time to time stretched a point in a way that a prudent trustee might not have done, this obligation to get a reasonable return on their investment has been the root cause of the follies that past Commissioners have perpetuated.



It ied them to destroy Nash's Regent Street when the original leases fell in 30 years ago, and in 1932 to propose the destruction of Carlton House Terrace. This process was actually begun: no. 4, Carlton Gardens was demolished and a discordant office block erected at one end of the Terrace. In 1947, Lord Gorell's Committee, in its report on the future of the Regent's Park Terraces, while attributing most of the decay to war damage, severely criticized the Commissioners for earlier neglect, and for their method of estate management. This was to grant full repairing leases (which were not even properly enforced) thus absolving the Commissioners from all responsibility for regular maintenance. That the Commissioners outlook has not entirely changed can be seen from the fact that negotiations with London University over the use of Cumberland Terrace broke down because the Commissioners expected the University to be responsible for the structure. The Gorell report specifically questioned the fitness of the Commissioners to manage property that was part of the national

heritage, primarily because they were statutorily required to behave like prudent trustees.

It was not until the Crichel Down scandal, in which the report of the inquiry adversely criticized the Commissioners for not seeking a reasonable economic return, that something was done. A Committee sat, and reported in 1956. But its report was primarily concerned with organizing the offices of the Commissioners to secure more efficient estate management. There is only a passing reference to suggest that the Committee gave any thought to the fitness of the Commission for the management of historic buildings. It merely noted that after the publication of the Gorell report the Government undertook to make good the cost of any uneconomic retention of property from a Parliamentary Vote, and recommended that this precedent should be followed in any similar case.

The result of all this was that the Commission was reorganized by the Crown Estates Act in November last year, the redefinition of its powers being left over to be dealt with later. The Commissioners of Crown Lands were rechristened the Crown Estate Commissioners, and became an executive body of eight members for whom the Lord Privy Seal, Mr. Butler, is answerable in Parliament. There is one full-time member, a civil servant who is deputy chairman. The remaining eight members are part-time. Sir Malcolm Trustram Eve, of the Church Commissioners, is chairman, and the other Commissioners are two surveyors (one experienced in urban and one in agricultural property), two landowners, an industrialist, and a Co-operative Lord. But there is no architect, landscape architect or town

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The need for such specialist advice, preferably from a member of the Commission itself, is evident from two facts: the first is that its properties include a great many which are of architectural or historic interest; the second is that the Crown Estate is above town-planning legislation. This is reasonable enough for properties such as Windsor Great Park, but absurd when the property is a housing estate in Hackney, shops in Bradford or allotments in Egham.

Would it not be desirable, to prevent these perpetually recurring controversies, to appoint an architect, preferably with town planning and landscape architecture qualifications, to the Commission? Should the buildings of architectural and historic interest not be transferred to the Ministry of Works, which has a section organized for this very purpose, and does not expect to run them at a profit? And should the properties held by the Estate as ordinary investments not be brought in some way within the town planning legislation?

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• To preserve freedom of criticism these editors, as leaders in their respective fields, remain anonymous

The Editors

WHAT, NO DIRECTOR-GENERAL?

THE failure of the Civil Service Commissioners to fill the post of Director-General of Works in the Ministry of Works comes as no surprise to us. The Minister has decided to make no appointment "for the time being," and while the post remains vacant A. J. Filer, at present an Under-Secretary in the Ministry, will take office as a non-professional general manager on the retirement of Sir Charles Mole. most important post in the building industry will thus pass, "for the time being," from an architect to an administrator. It is to be hoped that this is in reality a temporary arrangement. It is certainly better to make no appointment now than to make a bad one, but cynics have noted that nothing endures quite as well as the "temporary." What we want to know is what steps the Minister and the Commissioners are now going to take to investigate the reason why no candidate of sufficient quality came forward.

The importance of the job, and of the right man for it, can hardly be exaggerated. More than a year ago, on September 18, 1956, we wrote: "The key to the failure (of the MOW) lies in the administration, which is clumsy, complicated and repressive. The MOW's architects' department could be the country's pacemaker for research and development in building, and for quality, speed of erection and value for money. What prevents this? The old cause: red tape, the establishment; the slow-moving machine." We added that the artificial separation of the client administrator from the architect destroved initiative and scared away good technical men, and we urged the need for a live programme of work, responsibility and equality to attract the best technical advisers. All this remains true today.

We believe that there are three reasons why the right man did not come forward. The first is that the salary of $f_{4,500}$, although large, does not have a magnetic attraction for men who can earn more and get untaxed expense allowances in private practice.

Since the right man could bring about economies that could be counted in millions in a programme worth from £,40 to £50 millions a year, it is penny-wise to stick to civil service salary scales. But even at that salary the right man might be got if the conditions were right. And the second reason is that the Director-General of Works must be given sufficient scope to effect the profound changes required at the Ministry. There must be equality with the administrators, and it must be possible for new men to be appointed to some of the higher technical posts, who will be sympathetic to his ideas and ready to co-operate rather than to obstruct the essential changes. Thirdly, as we have already said, the right man is not to be found scanning the "Situations Vacant" column. First the Minister must find him, and then persuade him to drop the work on which he is already engaged by making the Ministry post more attractive and more rewarding, a real challenge and opportunity.

If the Minister and the Commissioners will now look at the problem afresh, and in this way, their decision not to make an immediate appointment may prove to have been a wise one. But if the temporary becomes the permanent, and the administrators take over, their decision will be altogether lamentable.

chicken, Kay Cavendish and a Minister of Works; this time it was pheasant, Gerald Moore (jokes, Liszt and Granados) and another Minister of Works (Hugh Molson).

I am told that the Minister congratulated the industry on the success of the firm (not *fixed*) price tendering experiment and expressed the hope that building owners would make up their minds more quickly and that architects would produce their drawings more promptly in the future. Apparently he also threw out one interesting suggestion—that as the bill of quantities is more complicated than it need be, architects, quantity surveyors and builders should get together to see whether it could be simplified.

At this point a frantic shorthand writer at the same table asked (without stopping): "What is a p.c. sum?" My spy says he doesn't *think* this was intended ironically.

BETTER JOBS FOR THE BOYS

A memorandum (see page 804) sent by the TCPA to the Housing Management Sub-committee of the Central Housing Advisory Committee shows a distressing ignorance of the architect's job and some muddled thinking. The TCPA is anxious to establish more housing managers with "improved status, enlarged functions and achievement of high personal standard." They state that councils-and therefore, presumably, council architects, "are not strongly conditioned by what customers really prefer," and that councils " can even make them accept what they think they ought to like."

Now it never has been the architect's job to give clients what they want but to give them what they need. A very great difference. It is those architects who give customers what they wantleaded lights and w.o.o.o. in all probability-who would, if ASTRAGAL had his way, be removed from the RIBA and left to practise as mere registered architects. The architect's responsibility to his client (not customer) is to find an economic, functional and æsthetically satisfying answer to his needs. This may not be what the client wants, but that is all he is entitled to. That is the whole purpose in employing a professional man-



WELL, WHY NOT?

When is the LCC going to realize that its policy of treating each application for a tall building on its merits is not a policy at all, and can only result in an endless series of opposed applications by the would-be-developers of skyscrapers? Already, for the second time in a fortnight, the LCC has opposed at a public inquiry an application to build a tall hotel near Hyde Park: the first was the Park Lane project, the second a scheme for a 305-ft. hotel on the Bayswater side. Is there any valid reason why the LCC

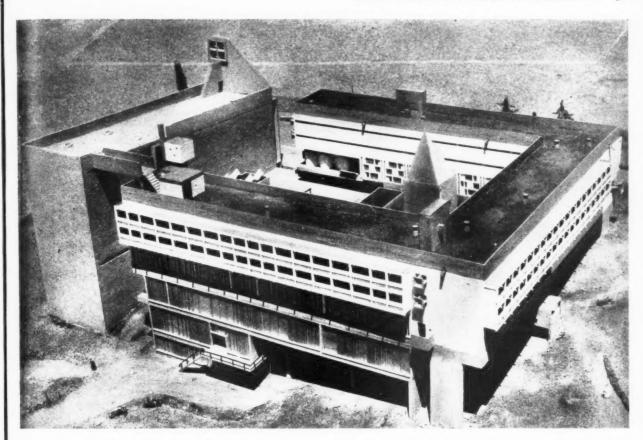
should not go much further, and bring forward positive proposals showing the sites on which, or areas within which, tall buildings would be appropriate? This, if approved, would ensure that endless time was not wasted in abortive proposals for other sites. And having taken this step the LCC could then go one further, and take some positive measures to promote the development of the sites in question. This, of course, would be planning: but is that really out of the question nowadays?

ARTIFICIAL CHAOS

Lord Mancroft, one of those oddly named Ministers without Portfolio, explained last week that one reason for handing over the assets of the new towns to a new government agencyhe compared it to the Crown Estate Commissioners—was to bring about diversity of ownership by the sale of property. It is certainly true, as he said, that diversity of ownership is normal in other towns. But is it not largely responsible for the chaos that exists in them too? It is hard to see any virtue in artificially creating a chaotic ownership in new towns which will, eventually, have to face the problem of comprehensive redevelopment that is baffling the older towns—largely because ownership is scattered in so many hands.

GOOD TIME HAD BY ALL

The spy that ASTRAGAL posts every year at the quantity surveyors' annual dinner says that where last time it was



Le Corbusier has designed this monastery, which is being built near Lyons. (See also page 832). The plan is, in its essentials, quite traditional: a simple rectangle, of which the church forms the northern side. The two upper floors on the three remaining sides of the rectangle are given over to cells (there are 100 for the students and a further 20 for the teaching staff). All the cells look outwards: not perhaps so radical a break with tradition as has been suggested, at least for a monastery on a site of this character. The cloister takes the somewhat unconventional form of two aerial bridges spanning the inner court and meeting in an "atrium," which connect the three wings of the

building with each other and with the church. There is also within this inner court a small chapel for the students: a square, roofed with an irregular pyramid, and raised to the level of the first floor on a cruciform base of reinforced concrete. In striking contrast to the other three wings of the monastery, with their double line of windows and their walls of undulating glass, the church, which closes the rectangle to the northward, will present a vast unbroken surface of reinforced concrete, unpierced by any kind of fenestration. It will be a severe rectangle, 44 m. long and 12 m. wide. To the north of the church a low structure will contain two chapels.

doctor, dentist, lawyer or architect: none of them can be relied on to give you what you want. Obviously, more often than not, the client ultimately comes to realize that what he needs and wants are the same thing, and ends a satisfied man.

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The housing manager, as an intelligent interpreter of the clients' needs, could be of very valuable assistance to the architect—he could also be a brake on development and an advocate of purely sectional or faddist views. Many of the TCPA's arguments are very plausible, but even if some of their points are correct, councils should treat with caution the idea of creating an unqualified "expert" to tell them how housing estates should be designed. The housing

manager, to be used to full effect, should have sufficient initial training to make him sympathetic towards the progressive architect's and town planner's policies—but on the training of these managers to the standard necessary to equip them for the responsible rôle the TCPA envisages, the Association makes no comment.

UNIVERSITY ARCHITECTURE

ASTRAGAL learns from Tom and Ruth Lupton (who with John Morton, were the prime movers in organizing, and superbly displaying, the current university architecture exhibition "Living and Learning") that during the exhibition's short stay at the Senate House of London University, over 1,000 people visited it, and that in

addition to the arrangements already made for the exhibition to visit Oxford, Birmingham and Leeds, the following universities have asked for the exhibition: Reading, Keele, Dundee, Edinburgh, Cardiff, Hull, Liverpool, Exeter and Manchester.

This shows that most universities are at last becoming aware of the dismal failures of their building policies over the past 50 years or so, and are anxious to see how other countries have attempted to solve the problem. Such a demand will create considerable administration difficulties for the organizers, whom ASTRAGAL suspects, have already had to dip in their own pockets to launch the exhibition (which

was made possible by an Arts Council grant). And exhibitions, as many architects know too well, can be a constant financial drain through maintenance and supervising costs. Surely, now that the exhibition is in existence -and so successful—the RIBA or the Arts Council (or even the Civic Trust) could take over the administration of it. It is probably the most potentially effective exhibition in terms of influencing the next generation of that all important person, the client, that has appeared since the '51 Festival.

Incidentally, the most significant omission in the list of universities given above is, surely, Cambridge. Now we know that such respected people as Sir Hugh Casson and Neville Conder and Sir Leslie Martin are being employed by the University to design and advise on, respectively, university development, but is that sufficient reason for not having the exhibition? Would no one profit from seeing it? Can one guarantee to get good architecture and planning by employing good architects without having good clients?

NO NEO-GEORGIAN FOR SWISS COTTAGE? Pendennis of the Observer seems to have suffered from a crossed telephone line when getting his story about Hampstead's future civic centre. He says that the borough council is quietly preparing to ask an architect to design a neo-Georgian town hall. This is happily only half true, or perhaps only one third. Several months ago the council rejected the idea of a limited competition, and since then the planning committee has reduced a list of 26 possible architects to five. The choice is said to lie between Basil Spence, supported by the modernists, and Oswald Milne, a former Mayor of Hampstead, backed by the traditionalists. The planning committee asked the council to decide in principle whether to build in "modern" or "traditional" style: but the motion was hastily withdrawn last week when it dawned on its sponsors that one could hardly debate the principle without revealing the names. It is now suggested that the council may hold a private meeting to settle the issue: but is there any good reason why the councillors should not thrash the matter out in public, names and all?

ASTRAGAL

LETTERS

Alan Daventry Reyner Banham Tina Cutter

Boom In Boxes

SIR.-Your editorial (Oct. 31), "The Boom in Boxes," sitting as it does cheek-by-jowl with Reyner Bannam's article on the Beetbelt, prompts me, a layman who sees your paper weekly, to ask whether there is any profession supplying a commodity to the general public which has less knowledge of its potential market than architecture.

There is something in this country that we have not seen for over a century: a host of intending purchasers who are only too eager to buy good design if they can find it at a competitive price. They are the ex-Lucky Jims who, after a few administra-tive promotions, find themselves now becoming Fortunate Jameses with a wife and kids, a modest bank balance and a respectable though not princely salary; and the universities are turning them out by the tens of thousands every year. They read the Guardian, not being "top people," the Spectator and House & Garden. They shop at Heals and Bentalls. They like the Span developments and they queue up to buy the Wates houses which, for all their fun-damental unadventurousness, are streets ahead of most spec. building.

But there are just not enough houses of this type to go round. Why not? are the architects doing about it?-for if they do not move, no one else can. I understand that there are hundreds of young men and women with the authentic zeal and the real creative flame just chafing away at the restrictions of large design departments. Let a few of them throw their caps over the moon, form a group and start selling good design at, say, £4,000 a packet. A little vulgar? Unprofessional? What does it matter if it will do somewhat does it matter it it will do some-thing to prevent these customers being fobbed off with "three up, two down semis" just because there is no alternative? It is no good crying "Miserere" in the professional press when your evangelism can only be done through intelligent public relations. We in the wider public have now heard about "Outrage": but the very success of an agitation of this sort confirms (who leaves little) in the height that us (who know little) in the belief that the architect is interested in large-scale planning to the neglect of one-, two- or twelve-off buildings for human consump-tion. For Heaven's sake, come down from your Corbusierian heights and tell the butcher, the baker and the off-duty bureaucrat what you can do for him.

ALAN DAVENTRY.

London.

Rushbrooke Housing

SIR.—Something seems to have got between Bill Howell and the text of my Notquite-architectural strictures on Rushbrooke (Oct. 31). It was not my own likes and dislikes that were being canvassed, but the responses of the ultimate consumers in the beet-belt. I, personally, am one of that class of espresso-pickled metropolitan exurbanites for whom the Smithsons so accurately styled-up their close-houses, and would be quite happy to join a back-porch skiffle group in a Weeks-Llewellyn-Davies environment, in the hope of getting tape-

recorded on Alan Lomax's next folk-song

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However, what I am worried about, and trying to articulate, is the attitude of the man on the clay, whose response, so far, hasn't got much farther than (and I quote) "They dunt fare ta be houses: they du look more like a lot of shuds." As a consumer, not producer of architecture, I maintain that consumers have a right to be heard, or at least to be persuaded. My own, minority section of the consuming public enjoys more than adequate facilities for addressing, and being addressed by, architects: the other 99 per cent. of the population don't, and someone had better make good this defect before architects—a profession toward whom I bear no ill-will -detail themselves right out of the market. REYNER BANHAM.

PS—The assurance about not cribbing will be found at the top of page 434 of the AJ for September 19. As to overlooked sources, it gives me equal joy to note that neither of us mentioned Aalto—which, of course, brings another whole world of peasant-style fancy dress into the argument,

Help The Hungarians

SIR,-May I ask for co-operation from readers in two cases known to me of Hun-garian refugees who are finding it imposto obtain employment as junior assistants here. I understand that there may well be other such cases.

There seems to be some prejudice on the part of potential employers, who, while sympathizing vaguely, ignore last year's sympathizing vaguely, ignore last year's appeal to help with offers of employment. (I calculate that the replies then could have been counted on the fingers of one hand.)

The profession is not often asked to help in a popular cause-it would be a pity if it were to become known that it did not help when it could. Any reader who will con-sider helping is to be praised. May I point out to all such that it costs only 3d, to tell me or the RIBA of that. No charity is sought. These people had a cause and were defeated; now they need

a chance. When considering whether to help them, we do well to remember by what

means they were defeated.

TINA CUTTER.

London

DIARY

Slum clearance. Talk by J. P. Macey. At the RICS, 12 Great George Street, S.W.1. 5.45 p.m. DECEMBER 2

Exhibition of Photographs by Alan Irvine. At the AA. 34, Bedford Square, W.C.I. Monday to Friday, 10 a.m.-6 p.m.; Saturday, 10 a.m.-1 p.m. DECEMBER 2 TO 14

Modular Furniture. Paper by John F. Hard (Managing Director of D. Meredew Ltd.). At the RSA, 6 John Adam Street, W.C.2 7.30 p.m.

Architectural and Building Requirements as Related to Atomic Energy. Talk by Sir John Cockcroft. At the RIBA, 66 Portland Place, W.1. 6 p.m. DECEMBER 10

Portrait of a Town. Exhibition in graphs of Guildford. Prepared by the Exhibition in photoford School of Art. At the RIBA, 66. Portland Place, W.I. Monday to Friday, 10 a.m.-7 p.m.: Saturday, 10 a.m.-5 p.m. DECEMBER 13 TO 18

Informal Display of Modular Society Members' Products. At the BC, 26, Store Street, W.C.1. 7 p.m. DECEMBER 18

NEWS

LOCAL GOVERNMENT

What the New Bill Means

The Local Government Bill, published last week, follows the lines of the White Papers published earlier this year. The proposed transfer of planning control powers to all urban district and borough councils with more than 60,000 population (and in certain circumstances to the smaller urban district and borough councils, and to rural district councils) has, however, been omitted. This, it is understood, is due primarily to the failure of the local authority associations to agree on the proposed delegation of powers. The principal proposals of the Bill are the replacement of the percentage grant for a number of services (of which educations). for a number of services (of which educa-tion is by far the most important) by a block grant, the delegation of certain health, block grant, the delegation of certain bealth, welfare and education services to the larger district councils, the creation of two Commissions to review the areas of counties and county boroughs, and to consider claims for extension of boundaries or promotion to county borough status. The Commissions will review the local government pattern of five conurbations in Tyneside, Merseyside, South-West Lancashire, the West Midlands, and West Yorkshire. The areas and functions of London local government are not affected by the Bill, but a Royal Commission has been set up to review local government in Greater London.

MANAGEMENT

The Value of Research

A correspondent writes: The National Management Conference organized by the British Institute of Management and held recently at Bournemouth, had as its theme "Research—A Signpost to Better Management," and was attended by

as its theme "Research—A Signpost to Better Management," and was attended by some 600 delegates.

One of the chief impressions gained from the papers and discussions was the very large amount of production which is due enurely to research. There were indications that in America some 80 per cent. of the enormous expansion in production which has occurred since the war was on processes or products which were unknown at the beginning of this period. While the cost of this research is formidable, the successes deriving from only 10 per cent. of it (the remaining 90 per cent. being abortive), has shown a return on the capital in some (though probably optimistic) cases at between 100 per cent, and 200 per cent, per annum. British research and development expenditure doubled (in real terms) between 1938 and 1950 and is still rising fast. The most interesting of the new developments is progress in operational research. This is a technique which will undoubtedly become increasingly important. This is advanced method study, though it employs much more intricate and complex techniques than are used in work study. Briefly the procedure consists in analysing the probe than are used in work study. Briefly the procedure consists in analysing the problem, obtaining the necessary data, and then by reducing the problem to a mathematical formula, solving it with the aid of an electronic experter. tronic computer

I was assured that this process could easily be adapted to solve some of the major problems in the building industry. It is not difficult to see that some of the various complex ratios relating to the height of

building, type of structure, finishes and services could be ordered by this means into some recognizable pattern of optimum solu-tions which would act as targets for the

Apart from the few stalwarts that one might expect to find at such a gathering the building industry did not appear to be represented at Bournemouth. Nevertheless, building was mentioned several times during building was mentioned several times during the papers and discussions. There would appear to be no reason at all why building should not look upon research in the same light as other industries do. An interesting aspect of research in the building industry which was mentioned by one of the speakers, when dealing with the proposed Free Trade Area, was the need for building to become a much more international industry through research work on such matters as modular co-ordination. co-ordination.

REGIONAL PLANNING

AGM of Association For Research and Documentation

A correspondent writes:

The only association in Britain which is concerned exclusively with the study of regional planning—the British group of the International Centre for Regional Planning and Development—held its first annual general meeting in London recently.

The Centre has entrusted its British group

—the largest in existence at the present time—with the vital task of studying the problems of documentation and research so as to build up a pool of knowledge and experience for the use of the Association as a whole; and the main purpose of the meeting was to report on the progress so far achieved and decide upon further action. Since the field of regional planning is so wide and involves contributions from so many specialists, the first step the group has taken is to produce a pamphlet which summarises both the aims of the centre and the scope of regional planning itself, and a paper by Leslie Ginsberg which attempts to define "the meaning of a region." Although both these documents are first attempts at a very difficult task they represent a considerable advance on the rather vague notions that have been current up to now. "Regional Planning" they suggest can be described in Lewis Mumford's words as "the conscious direction and collective integration of all those activities which rest upon the use of the earth as site, as resource and as theatre," and of the region itself they say "the regional unit in which we are interested is based on human activity and need, and as such its boundaries are -the largest in existence at the present time-with the vital task of studying the itself they say "the regional unit in which we are interested is based on human activity and need, and as such its boundaries are more likely to be social and economic than purely geographic." They go on to point out that seen in these terms regional planning is teamwork par excellence and embraces a much wider variety of professions and skills than would traditionally be concerned with "town planning."

In his report on the working programme, Dr. Stirling, from the London School of Economics, explained that since effective documentation can only develop from organized research, the Group's first task should be to conduct a basic research programme which could provide some results for publication in the near future, and emphasized that this must be a serious full-time activity. Such a scheme, he thought,

time activity. Such a scheme, he thought, must necessarily be on a modest scale and must necessarily be on a modest scale and in the first instance might be concerned with an analysis of practical examples of regional planning schemes associated with river valleys, and secondly with an examination of "Current trends in regional planning"—a theme which the United Nations' Bureau of Social Affairs had asked the British group to develop at an international conference in the Far East

next. year. His proposed programme was supported by Dr. Wibberley, who underlined the importance of a scientific approach to research, and Dr. Koenigsberger, who pointed out the very urgent need to provide reliable information that could be put to practical use by the man in the field.

After the formal business of election, Professor Gardner-Medwin, chairman of the group, asked Dr. Wise to read his paper on "The Translation of Economic Planning into Physical Planning." Speak-

the group, asked Dr. Whe to read his paper on "The Translation of Economic Planning into Physical Planning." Speaking as an economic geographer, Dr. Wise discussed the relationship between physical and economic planning, taking examples from Britain. He suggested that many of our past failures to regulate land use effectively can be traced to our failure to realize the full implications of the developments that were taking place—particularly economic papers. that were taking place—particularly eco-nomic and industrial development. Such a realization he thought must necessarily a realization he thought must necessarily involve thinking on a regional scale. Today, a second industrial revolution was taking place whose consequences in land use terms were bound to be very great. If we were to avoid the mistakes and prevent the waste that occurred during the first industrial revolution we must learn to think and plan in regional terms when dealing with our problems today. Only in this way could the severe conflicts over claims on land—as were now taking place over the Milford Haven site—be resolved. To achieve orderly development in a regional context he maintained that co-operation must be developed tained that co-operation must be developed between many different groups of tech-nicians and specialists. In facilitating this co-operation the British Group had a vital part to play.

Dr. Koenigsberger developed the applica-tion of this principle to the under-developed countries. Here the principal objective was raising the living standards of the mass of the people by planned capital investment schemes. Economic planning and government intervention were accepted as normal but the relationship between physical and economic was often misunderstood and conflicting claims for the use of land frequently arose. These conflicts need not and should not arise if co-operation could be developed, leading to unified work in the region.

leading to unified work in the region.

In his closing address, Professor Gardner-Medwin described the Association as "a unique group with unique opportunities." They had now advanced beyond the initial formative stage and were in a position to go forward towards the practical realization of Patrick Geddes' concept of "simultaneous thinking" which was the basis for all successful regional planning. It should be their objective to foster this idea—particularly through scientific research.

It is now evident that the International

ularly through scientific research.

It is now evident that the International Centre, and its British Group, are established as respectable and serious-minded groups of responsible people concerned with the study of regional planning. After a difficult start they have been able to develop satisfactorily relationships both with the national governments (the Belgian Government has in fact provided office space and secretarial help for the International Headquarters in Brussels) and with international organizations that work in similar fields. The successful seminar held recently at the Hague contributed a great deal to this The successful seminar held recently at the Hague contributed a great deal to this recognition although it demonstrated how much work has still to be done before the conflicting points of view on regional planning can be reconciled. It is unfortunate, to say the least, that the opportunity of setting up the International Centre in Britain was missed, since most of the initiative came from British sources; but the importance of the British group has been recognized in that it is from them that the Centre hopes to obtain much of its basic information. At the moment the British group is working under considerable diffigroup is working under considerable diffi-culties. They have not yet got adequate accommodation and more important still no full-time research workers. The nature

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of the work to be undertaken requires fulltime work by skilled specialists. The association has valuable and important tasks ahead of it. It is to be hoped that it will receive the co-operation and support it deserves.

TCPA

What the Architect Doesn't Know

The Town and Country Planning Association has sent evidence to the sub-committee set up by the Central Housing Advisory Committee which is considering the functions of housing managers and the control of council housing estates. The Association believes that only the housing manager—and a housing manager with greatly improved status—can properly represent tenants' wishes, and that he should play an important part in design and layout considerations. ASTRAGAL comments on this report (printed below) on page 800.

1. Housing is the provision for persons and families of a fundamentally important commodity, service, or satisfaction. The design of dwellings, and of their arrangement, affects intimately the daily lives of large numbers of people for generations. You might think, reading some architectural papers, that housing is primarily the creation of a pleasing or "exciting" scene to be enjoyed by spectators of taste. Reading a council debate, you might think housing mainly a matter of shortening a waiting list in the quickest practicable way. And, reading some Ministerial manuals, you might think a prime consideration is to save agricultural land. These attitudes, or tendencies to attitudes, are of course all based on valid factors that must be regarded. But they are exaggerations that often have undue influence in public housing, because of the nature of the machinery by which decisions on housing schemes are made. 2. In public housing, dwellings have to be produced in bulk, and let on short-term produced in bulk, and let on tenancies to families usually pressing need of decent homes. in rather duction for semi-desperate customers produces a situation resembling a "sellers' market," where selling firms (in this case, councils) are not subject to the salutary pressure of competition. They are not strongly conditioned by what customers really prefer. They can give them what they will just put up with. They can even make them accept what they think they ought to like

like.

3. Designs for dwellings are prepared by architects and decided upon by council committees within canons laid down by the Ministry. Architects of public housing schemes often have little or no contact with occupiers of such schemes. Their own education (a severely taxing one) has necessarily been largely concerned with techniques of construction and principles of aesthetics. Even what they learn of customer demand in matters of room sizes, arrangement, fittings, front and back gardens, path access, and layout of plots, comes to them mainly through writings of architects. This is all the more limiting because current aesthetic discussion (naturally interesting to architectural students) is much concerned with the plastic arts with their emphasis on creativeness, originality, and intriguing novelty. This is not necessarily wrong, or avoidable. But time does not permit architectural education itself to make an architect an expert in the social aspects of housing. He cannot be both the designer and the designer's client. And few would dispute that all good building is the result of the co-operation of a good architect with an intelligent client who knows what he wants. 4. The representative of the consumer or client in this case is the council or its

housing committee. Comparison of its situation with that of the speculative builder is of interest The speculative builder is often criticized, and too often rightly, for his low aesthetic standards, for lack of imagination in layout, and for taking advantage of his customers' ignorance in matters of quality that only experts can detect. But he has to sell every house separately to a willing buyer, who in many cases has other choices. He has to think very intently about what the customer likes, of which process of selling he is constantly reminded. He cannot escape the customer's clear preferences. He will, using his close knowledge of what is likely to appeal, try new things out on a small scale; but if they don't catch on he quickly drops them. Thus much can be learned for the purposes of housing policy from what the speculative builder provides
especially as to the factors of accommodation, arrangement and fittings that are generally acceptable to prospective permanent occupiers. The shortcomings that he too often displays in exterior design, layout and structural quality are due to the absence of the technical and aesthetic contribution the architect makes. Where the builder for the market is guided by good architectural advice, there should be little worry with the final product.

5. The council or council committee is not normally in as close touch with, or as much subject to, the preferences of the customer. It is (or ought to be) as much concerned as the speculative builder for initial cost, and it has reason to be more concerned for cost of maintenance. It is susceptible to the ideas of the architects, whose contribution is essential, but whose likely limitations of outlook have been suggested above. Though some of its members may have intimate knowledge of current consumer reactions, many, probably the majority, have not; and the same is true of the officers who present schemes to the housing committee. Again, the council and its architect have to respect the canons laid down by the Ministry whose approval of schemes must be obtained. And the Ministry's officials, extremely able as they are, are at a remote distance from the customer, and subject to political influences that may be inimical to the customer's actual preferences.

6. It is for these reasons that we think that, in public housing, it is of the utmost importance to bring into all discussions and decisions on the design of schemes, the housing manager. He alone of the whole set-up is, or could be, in close contact with the occupier—a relationship analogous to the architect-client or builder-purchaser relationship. If he has that contact, a housing manager can help the authority to avoid many mistakes or to provide many improvements, in the choice of type, internal design and equipment of houses, and such matters as the size of gardens, depth of forecourts, position of paths and trees, and kinds of fences and hedges. His advice will also be valuable in considering the provision and placing of playgrounds, allotments, and neighbourhood community facilities, since he knows how they are used, or if they are not used, why not.

7. Many people believe that surveys or social research can provide the information needed for decisions on housing policy or design. This is to misunderstand the sort of contribution such studies can make.

8. A higher status for the housing manager therefore seems to us essential for a more satisfactory adjustment of policy to tenants' desires, within the technical and financial limitations.

9. A housing manager taking a full part in the consideration of the design and layout of new schemes would be, by reason of his contact with the occupants, in a better position than any other officer to explain to them the policy of the authority. No house or neighbourhood in this limited world can have a complete assembly of every possible desirable feature. Some tenants will feel

the absence of one feature and some of another; and when they do not understand the necessity of choice or compromise, they all tend to be convinced of the stupidity of the authority, for conflicting reasons. If the housing manager knows that the choice was deliberately made and why, he can explain it to the tenant. And if tenants genuinely think the choice was wrong he can reflect their view to the authority. He is in a uniquely good position to perform this two-way function of public relations, 10. The value of this two-way service of the housing manager may in some cases extend to community associations and other voluntary organizations in the housing areas.

11. It follows that the housing manager must be a person of the necessary quality and training, on the social as well as technical side, to understand tenants' requirements and to relate these to economic and

other practical considerations.

12. It follows also, we think, that the organization of the housing management department shall be such that the chief housing manager, who takes part in design discussions, should himself (or herself) retain close contact with people in the houses built. This was, of course, one of the principles of Octavia Hill, and though one of her reasons (that of grading-up substandard or deprayed slum-dwellers) has become of less importance, the value of close and continuous contact remains for other reasons. The emphasis should now be rather on constant efforts, in original design, minor alterations, modernizations, new fittings, etc., to make dwellings as satisfactory as possible to the occupiers, to suit changes of habits or desires, and (within economic or rent-paying limits) to improve accommodation. And Octavia Hill's belief that good, sympathetic managers can influence some tenants towards better use of their houses and gardens remains true. cashier receiving rents at the council office cannot fulfil this function. Nor can a repairs superintendent, trained only in building construction and maintenance, and calling at houses only when a tap is leaking or a floor exhibits dry-rot. Octavia Hill's view that a person of some quality, with both technical and social training, should call at each dwelling at frequent intervals, is sound for many reasons. Its particular value, in the present connection, is that it perpetually re-educates that person in the feelings and attitudes of the families housed. For this reason there is a great deal to be said for the collection of weekly or monthly rents at the dwellings, since this gives a "natural" and unobjectionable reason for calls that might otherwise be resented as "nosey" or officious.

13. We suggest that it might be worth while for all senior officers of the housing department, including the chief housing manager, to take part in the rent-collection calls in rotation. Housing managers would thus become really knowledgable about the acceptability of the dwellings as well as about all other aspects of occupation, letting and maintenance. They would be in a position to take an extremely important part in the design of further schemes and the improvement of those that exist. Close contact with tenants generally is, of course, difficult for a chief housing manager of an authority with a very large number of dwellings. For this reason it would appear to us desirable to decentralize administration to a number of areas or districts, each with a qualified and responsible housing

manager.

14. The raising of the status of housing managers would draw into the profession men and women of first quality, and encourage educational institutions to adapt their courses to the enlarged function which we see as necessary for the general advance of living standards, or standards of occupancy, and fundamental economy in the sense of the best value for capital and revenue expended.

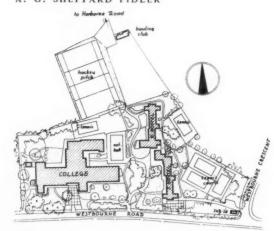
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CRITICISM

by J. M. Richards

TEACHERS' TRAINING COLLEGE, BIRMINGHAM

designed in the office of the city architect
A. G. SHEPPARD FIDLER



Site plan

First some facts. This is a training college for 200 students, taking a two-year course. It consists of a main building in which are the teaching, social and administrative accommodation, and two hostels, each housing 65 women students. The other 70 places are for day students. There is a possibility that a third hostel for men students may be added later, in which event the classroom wing of the main building will be extended to the east and a second floor added along its north side.

The site, in Edgbaston, is of nine acres and is in an area of residential character. It had some well grown trees. The first question we must ask is about the use made of it. What do we think not only of the buildings but of the spaces between the buildings? There must have been some temptation to give the scheme a collegiate character, making the buildings look inwards, in traditional college style, to one or more enclosed quadrangles. But perhaps the architects thought the tree-planted adjoining sites gave pleasant enough views to justify an open type of plan, or perhaps they thought the site was too small to provide

Below, looking towards the entrance of the main building (which faces south) from the public road. Above the entrance is the library; to the right is the teaching wing. The single-storey wing projecting forward from it is the students' common-room.



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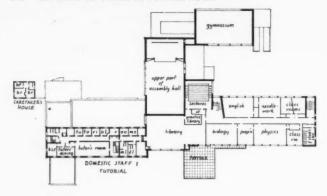
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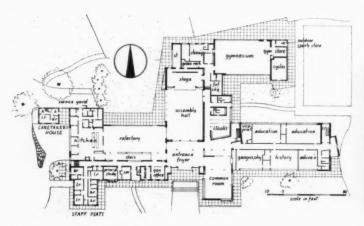
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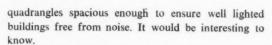
and



First floor plan



Ground floor plan, main block



Anyway they have placed the main building parallel

Below, looking worth-west from the main gate: on the right, the entrance with the library above it; on the left, the administrative wing with the principal's flat in a penthouse on the roof.





The teaching wing of the main building, seen from the east; i.e., from the direction of the two students' hostels.



The east side of the main block, with the teaching wing on the left and the gymnasium on the right.

with the road, set back a little way from it and nearly filling the western part of the site, and the two hostels end to end at right-angles to it, with space for tennis courts behind them. The hostels face the teaching wing of the main building, but also look past it, so that there are distant views to be had from most windows and plenty of green backgrounds. My only criticism is that this arrangement breaks up the available ground in a way that does not leave one well defined or sufficiently enclosed area. The grassed area between the main building and the hostels is too wide to bring all the buildings into a coherent relationship, but too small to give a park-like or campus character to the layout. Yet the open feeling the architects have gone for is not disagreeable, and the views obtained from the hostel windows across the face and back of the main building have been well thought out.

Now as to the planning of the separate buildings. The main building strikes me as first-rate, and the spatial effects created in the sequence of large rooms at the centre are unusually interesting. The first of these is the large entrance hall, which has a glazed front. Its back is the glazed end wall of the main assembly-hall. On the left is the dining-hall, which also connects through glazed screens to the side of the assembly-hall so that the two can be used together. The dining-hall has its dais (where the staff tables are placed) on the long side, and on the opposite long side it opens on to a garden terrace; so does the assembly-

hall. Both are one-storey, the assembly-hall being the higher of the two.

The front part of the dining-hall wing has two storeys and contains administrative, staff and tutorial accommodation with staff living quarters at the far end. There is also a penthouse flat for the principal. At the end of the dining-hall are the kitchens. To the right of the entrance hall as you come in is the three-storey teaching wing, with its own staircase hall which also leads to the cloakrooms and changing-rooms at the

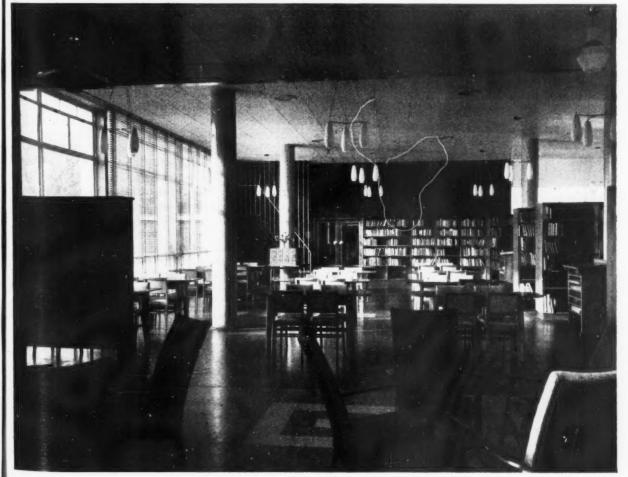


Above, the interior of the dining-hall, looking through the glass screen between it and the assembly-hall.

Left, the entrance hall, showing the main entrance doors on the left. Straight ahead are the doors leading to the administrative wing and behind the columns the doors into the dining-hall.

Below, the library. The large south window over the main entrance (see photograph facing) is on the left. Between this main library and the teaching wing is a small practice library.





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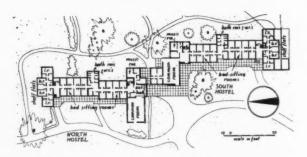
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oles are ng side emblyback and through them to the gymnasium. This forms a separate wing parallel to the teaching wing. So the different functions of the building—social, teaching, administrative, etc.—are clearly differentiated and their circulations kept separate, yet they are placed so that they can be used together where that is helpful; for example, the changing-rooms adjoining the gymnasium are also part of the back-stage arrangements of the assembly-hall.

The entrance area is where the social life of the building is focused, and the students main common-room is situated here, occupying a separate single-storey wing pushed forward alongside the entrance. It is a particularly pleasant room with windows on three sides. Above the entrance hall is the library, providing a first-floor link between the staff wing and the teaching wing. It can use the flat roof of the common-room as a terrace.

The only, fairly small, criticisms I can make of this very well worked out plan are that the sick-quarters are perhaps not very suitably placed in a basement underneath the staff living quarters (though here they have the advantage of a garden outlook and a private entrance direct into the garden), that in the staff living quarters, where there are three flats, the plan-

The two students' hostels: looking at the end of one hostel with the other on the right. The two single-storey buildings, on the left of the picture and between the two hostels, are the common-rooms.



Ground floor plan, students' hostels (upper floors are similar without the common-rooms which link the buildings at ground floor level only)

ning seems a little poky, with too much of the space taken up by poorly lit passages, and that the library, though well placed in other ways, is over the noisiest part of the building and faces on to the one place where motor-cars will be stopping and starting. I was not there long enough, however, to check whether the library is sufficiently quiet to work in; nor could I check the acoustics of the dining-hall when occupied. Even the best behaved crowd of students seems to make a lot of noise at meals, with great carrying power, and in many school and college buildings this is not effectively dealt with.

The planning of the two hostel buildings raises some more important questions, notably the size of the study-bedrooms provided for each student. The two buildings are set in echelon and join at ground floor only. The internal planning is more or less identical, the chief difference being that the single-storey common-room is at the south end of one block and the north end of the other, to bring them both near the common approach path. The upper floors are identical but reversed.

They consist of four floors, each with study-bedrooms on either side of a central corridor, which is interrupted by a central bathroom and lavatory block. At one end are preparation, hairdressing, ironing and similar rooms; at the other are staff flats, two to each floor, on ground and first floors only. This corridor method of planning the rooms is, I am sure, less satisfactory from the social point of view than the traditional collegiate method of planning round separate staircases, and makes it more difficult to avoid an institutional atmosphere. But the latter is more expensive and more difficult to supervise. On the other hand sound insulation is less difficult because rooms need have only one party wall.

If there are good reasons for using the corridor planas I must assume there were in this case—it is important to break up the corridor so as to avoid the long depressing vistas you get in a hotel. Here there is one break in the length of each building, but the corridors would be more cheerful if they were a little wider and better lit. On the ground and first floors they only get whatever light comes in from the side through the staircase well and central lobby. Lighting is better on the two top floors where the corridors have end windows above the roofs of the service rooms and staff flats.

This narrow corridor access makes it all the more important that there should be some feeling of space when you enter the rooms, and my chief criticism of the two hostel blocks is that the study-bedrooms are not big enough. They are 11 ft. 6 in. by 10 ft., including the space taken up by built-in wardrobe and washbasin closet: 115 sq. ft. for the student to sleep, read, write, keep her clothes and other possessions and entertain her friends—in fact live all her private and some of her social life. The Ministry of Education in its bulletin on training-college hostels, recommends a minimum of 140 sq. ft.. and says that prewar hostels gave the student 100-110 sq. ft. of private room area, but that the area has risen since the war to an average of 130 sq. ft. in 1953 and 1954 and that some recent



The west side of one of the hostels. The projecting block in the centre contains the bathrooms, etc.; the two-storey block

on the left contains staff flats; between them are the windows of the students' study-bedrooms.

hostels have provided 150 sq. ft. or more. So the Birmingham figure is nearer the prewar standard than the best postwar standard.

Of course it is largely a question of cost, and the Birmingham hostels provide other facilities, like the preparation and hairdressing rooms, that prewar schemes certainly would not have had. Nevertheless the quality of the study-bedroom is the key to the standard of living set in a hostel, and that is where the money should first of all go.

The Ministry mentions that some recent colleges have provided 165 sq. ft. for each student, which is enough to be divided into a small bedroom and a larger living-room study, but goes on to say that "some training college observers" (whoever they may be) "hold that many students are unused in their private lives to the generous personal accommodation represented by such 'sets' or suites of rooms. They consider that the student needs to graduate through more communal ways of living to the maturity that can use such accommodation to advantage." And the Ministry finds "substance in this view." I find in it an alarming resemblance to the "coals in the bath" attitude to housing standards. Surely whatever the educational advantages of communal ways of living

(which everyone, including students, gets plenty of anyway) the student's real need is for plenty of privacy.

To get back to Birmingham: since the provision of good-sized rooms is a matter of money, the only suggestion I can make is that perhaps economies in the common-rooms provided in each hostel would have made rather larger study-bedrooms possible. These common-rooms are large, handsome rooms, but not large enough for all the 65 students at once. Do they then serve any essential purpose, or do they simply duplicate the rôle of the common-rooms in the main building? Is not this where social activities should be concentrated, and would not a quite small sitting-room in each hostel—even a bay off the entrance-hall—have been enough?

Apart from the size of the study-bedrooms I found the hostels very well laid out and equipped and the standard of finish and detailing very civilized. Normally when one visits a new building one can only speculate whether the finishes will wear well. But in this case, although the whole scheme is only just finished, the hostels had been built first and had been in use (the students being taught in temporary accommodation nearby) while the main building was under

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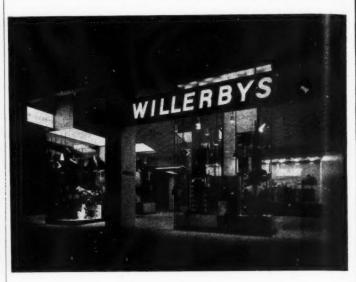
construction. The hostels had therefore already had a year and a half's wear when I saw them last month, and had stood up to it extremely well.

The interior finishes in the brand-new main building are equally satisfactory and the whole effect of the interiors, their furnishing, equipment, etc., is excellent. The rooms and other spaces are well lighted and good use has been made of clear, bright colour. The building is of steel frame construction with reinforced concrete floors and roofs. Cladding is mostly brick, with rustic facings in two colours, but pre-cast slabs with a green granite aggregate have been used here and there; for instance, as infill panels beneath some of the larger windows. I have no criticisms of the outside, which has a good deal more charm than photographs can show. The most difficult problemhandling openings of many different sizes and elements of different scales, varying from the nearmonumental to the domestic-has been well dealt with. The only thing I am inclined to query is the use of two colours of brick, which introduces an unnecessarily busy quality into a composition which already has enough interest by virtue of its fairly complicated geometrical form.

I find this change of material for the sake of change more disturbing in the two hostel blocks, where the two colours of brick are supplemented by panels of cement rendering and hardwood boarding, and its restless effect is further emphasized by a trick of projecting the brick walls forward at each corner, beyond their return face, which butts up against them. This might be called an expression of function if the buildings were of cross-wall construction and the return faces were simply infilling. But they are of loadbearing brickwork, so this treatment of the corners is quite arbitrary. The motive, presumably, was to break up the long line of the façade, but this would have been better done by a real change of direction in the plan, which would have served the useful purpose of eliminating the long vista down the central corridor. The façade as subdivided by these vertical wall-edges, and separated into areas of buff and red brickwork, lacks the unity that might have been given it by the repeated rhythm of the study-bedroom windows. Altogether the hostels suffer from a certain gracelessness to which I am sure the rigid demarcation of each element-vertically and horizontallycontributes, and which makes them much less satisfactory than the main building.

There is always some vagueness about the proper attribution of buildings from a big public office, especially when there have been changes at the top, so I should add that the first sketches for the training college were made early in 1953 by Alexander Steele (now City Architect of Edinburgh) when he was architect to the City of Birmingham education committee. The scheme came under the control of A. G. Sheppard Fidler, City Architect, in 1954 and the final designs and working drawings were done by J. R. Sheridan-Shedden, now Deputy City Architect, who succeeded Alexander Steele in charge of educational buildings. The toal cost of the scheme, including £37,000 for furnishing, was £376,000.

construction. The hostels had therefore already had MEN'S TAILORS SHOP IN OXFORD STREET



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A shop for Willerby & Co. Ltd., men's tailors, at 28-32, Oxford Street, W.I, has been designed by C. J. Epril and Associates. The architects received instructions in April, 1957, and the premises were opened on September 6. The main entrance from Oxford Street, above, is 12-ft. wide and is protected when the shop is open by a heated air curtain, and at night by a sliding door, behind the right-hand island showcase, above. When not in use, this door slides on a track behind the show window. The shop front has a terrazzo floor and mosaic walls. Inside the shop there are varying floor levels with the fitting rooms leading off a balcony on two sides of the shop. On the right wall is a mural by A. W. Wellings, depicting fashions through the ages. Behind this wall are the manager's and clerical offices. There are three departments in the shop:—bespoke tailoring, ready-to-wear and ladies departments—and the twelve fitting rooms are easily accessible from each. The island type showcases in the entrance area were designed on a 4 ft. module, which the architects have found in practice to be ideal for displaying tailored articles. The shopfitters were Fredk. Sage & Co. Ltd.



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Building Exhibition: part 1

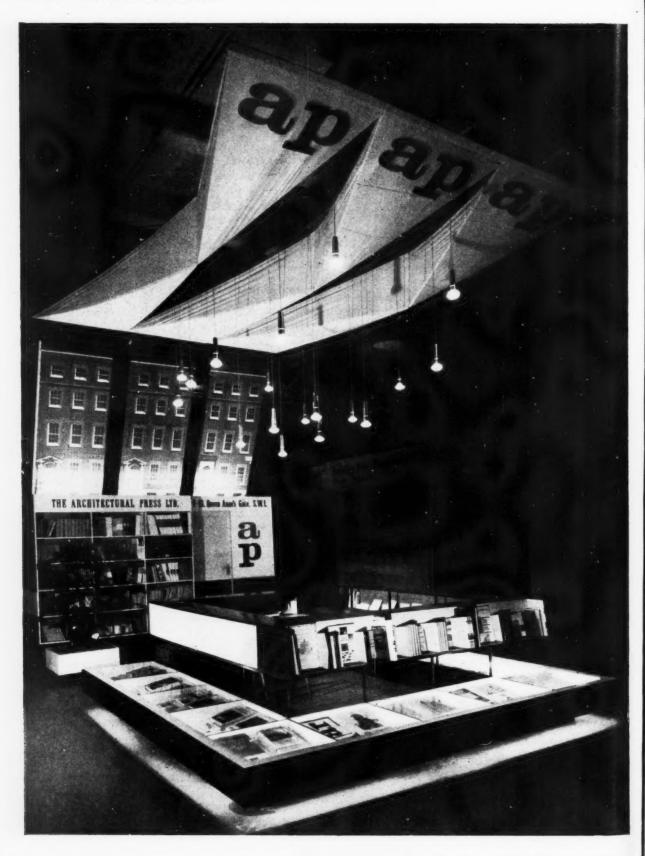
We are publishing our report of the Building Exhibition in two parts. This week we report on services and equipment, applied finishes and treatments, and furniture and fittings; next week we shall report on building materials and products. In order to give structure to our report (a quality which the Exhibition itself so conspicuously lacks) we have decided to reduce its vast content to the classification used in the AJ Library of Information Sheets. As we are reporting on services and equipment and what we may call "the extras" before we report on the main construction sections, we start midway in the classification sequence, that is, with "27: sound control and acoustics." So that readers may form some notion of the full content of the exhibition, we append below a list of the classification headings to be covered in our second article, together with the firms to be mentioned and their products.

Sections 1-26 (to be reviewed next week)

Co. Ltd.

Classification	Firm	Product	Classification	Firm	Product
GENERAL			14. Building blocks and slabs	Cotswold Dale Stone Co.	Lightweight Terlite cladding
1. General practice	Hudes Merchandising Corpn. Ltd.	Nestler draughting equipment	ana siaos	FBBM/Flynn Bros Atlas Stone Co. Ltd.	Profiled concrete blocks Spectraglaze
	G. A. Harvey & Co.	Plan chest			
	(London) Ltd. W. Ottway & Co. Ltd.	Sightmaster surveying level	15. Sheet materials	BIP Reinforced Products Ltd.	nylon sheeting
4. Planning and design	Cape Building Products Ltd.	Fire resistance diagrams		Cascelloid Ltd. Celotex Ltd. Novobord Ltd.	Cascelloid polished flat sheet Gold Star hardboard Novotan
	**			L. Keizer & Co. Ltd. Turners Asbestos Cement Co. Ltd.	Solastos Turnall asbestos partition board
CONSTRUCTION	(by materials)			Holoplast Ltd.	Holoplast 80 Panel
6. Concrete	The Butterley Co. Ltd. Expandite Ltd.	Aglite lightweight aggregate, Barra 55 and Barrolin C concrete additives	16. Roof sheets	Turners Asbestos Cement Co. Ltd. British Aluminium Co. Ltd.	Turnall Largespan combined sheets and Colourglaze finish Longer Rigidal corrugated sheet
7. Cements, mortars and plasters	The Cement Marketing Co. Ltd.	Hydracrete water-repellent cement		Weatherall Roofing Co. Cascelloid Ltd.	Nuraphalte Selfex corrugated roofing
	Thomas Hedley & Co. Ltd.	Entrainit mortar additive			sheet
8. Glass	Pilkington Bros. Ltd.	Armourclad and Muroglass	17. Roof tiles and	Redland Tiles Ltd.	Stonewold interlocking slate Redland 50 rooflight
12. Miscellaneous	J. H. Sankey & Son Ltd.	Moistop polythene coated building paper	slates		Eaves filler for 52 pantiles
	British Paints Ltd. Secomastic Ltd.	PRC sealing materials Secostrip sealing strip	18. Wall and floor tiles	Dennis M. Williams Ltd. Zanelli (London) Ltd. John Ellis & Co. Ltd. Langley London Ltd.	IFO mosaic Ceramica Milano mosaic Mosaic Profilewall tiles 2 in. floor tiles
CONSTRUCTIO	N (by products)				Moulded wall tiles Faience grille units
13. Bricks	Eastwoods Sales Ltd. Cape Building Products Ltd. DSIR-BRS Maidenhead Brick & Tile	Wessex Multi-coloureds Uxbridge blue-black flints Packed bricks feature Keytoclad tiles		Carter Group of Companies	Saivo glass mosaic and tesserae Range of "colour-on-colour"





The Architectural Press stand, designed by Dewar-Mills Associates. The background panels depicting Queen Anne's Gate are in Wareite and were designed by Gordon Cullen.

Sections 1-26 (to be reviewed next week)

Clas	ssification	Firm	Product	Classification	Firm	Product
	Wall and floor tiles continued	Safety Tread Ltd. Michael Nairn & Co. Ltd. H. & G. Thynne Ltd. James Halstead Ltd.	Endurite No. 2 tiles Vinyl tiles Wall tiles, new patterns Ejecta polystyrene wall tiles	22. Ceilings (other than acoustic)	Burgess Products Ltd. Bellrock Gypsum Industries Ltd.	Electric ceiling heating Studless plasterboard
		and the state of t	Lieuta polystyrate wan thes	23. Doors and frames	Thames Plywood Manufac-	Hollow skirting and archi-
W. J. C.	Floor and wall finishes	British Plimber Ltd. Bakelite Ltd.	Stair treads Warerite		turers Ltd. Crosby & Co. Ltd.	Flush door
		Planiflex Ltd. Semtex Ltd.	Flexible timber panelling Carpet underlay New lineleum colours	24. Window frames and roof glazing	Henry Hope & Sons Ltd.	Reversible casement Combined window and heating unit
		Armstrong Cork Co. Ltd.	PVA floor finish		Avgee Ltd.	Resistal window
		The Adamite Co. Ltd.	Joint sealing in PVC floors		The Crittall Mfg. Co. Ltd.	Continental window
		Floor Treatments Ltd. Synteko Ltd.	New floor hardener New floor hardener			Window range for multi- storey flats. Vinyl weather-
		Dohm Ltd.	Industrial flooring paint			strip
					Holcon Ltd.	Triple-glazed Carda window
20.	Floors and roofs.	Cable Covers Ltd.	Long span floor		Chamberlin Weatherstrips	Insulate window
	Structural	Omnia Constructions Ltd.	Omnia floor		Ltd.	B 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	elements	Concrete Ltd. Sommerfelds Ltd.	Bison floor		Quicktho (1928) Ltd.	Dual horizontal sliding window
		H. Newsum Sons & Co. Ltd.	Lattice steel purlin Diaframe decking		Frederick Braby & Co. Ltd.	Vertical sliding sash
	Partitions and	The Crittall Mfg. Co. Ltd.	Fenestra wall developments	25. Complete	Brockhouse Steel Structures	Hinged stair
	walls. Structural	H. Newsum Sons & Co. Ltd.	Wallpak curtain wall	structures	Ltd.	
	elements	Gardiner Sons & Co. Ltd. Metal Sections Ltd.	Muragard curtain wall Fire-resisting wall		Terrapin Ltd.	Mobile classroom
		D. Anderson & Sons Ltd. Fibreglass Ltd.	Pyrodek gypsum concrete roof system	26. Miscellaneous	The Expanded Metal Co. Ltd.	Uniframes

The stand for Adamsez Ltd., designed by Dewar-Mills Associates.



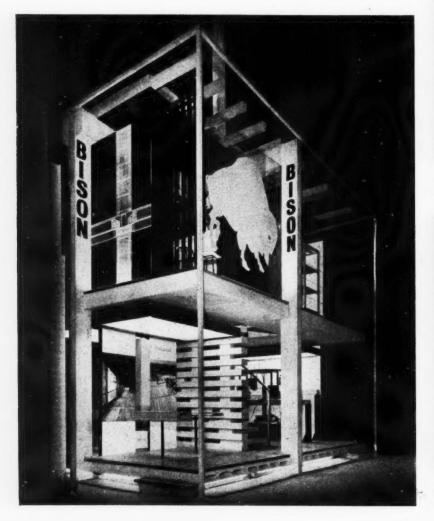
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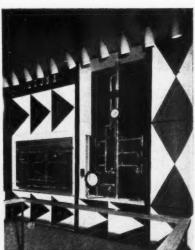




Above left: the Silexine stand, designed by Anthony Gregory. Above right: stand for Atlas Lighting Ltd., designed by John and Sylvia Reid.

Below: t're stand for Concrete Ltd., displaying Bison floors, designed by Stillman and Eastwick-Field.





Close-up of the stand for Econa Modern Products Ltd., designed by Graham Winteringham.



Stand for the National Federation of Clay Industries, designed by Handisyde and Taylor.

Services and equipment

27 Sound control and acoustics

There were several additions to the already overwhelming range of acoustic tiles on the market.

BURGESS ACOUSTIC TILES (Burgess Products Co. Ltd., P.O. Box 11, Hinckley, Leics. Hinckley 700), which are of perforated metal, are now available in six sizes

Above: the Rabbit Warren acoustic panel, made by the Tentest Fibre Board Co. Ltd. Below: Travertone acoustic tiles, made by Armstrong Cork Co. Ltd.



and stove-enamelled to any BS shade. They may be combined with a ceiling heating system. Price (unfixed) is between 2s. 1½d. and 2s. 9d. sq. ft. according to quantity.

HERMESEAL ACOUSTIC TILES (Hermeseal Acoustics Ltd., 4, Park Lane, W.1. Grosvenor 4324) are made in grooved and chequered patterns as well as the more usual perforated pattern. The grooved type is also obtainable in board form and in two thicknesses, $\frac{1}{6}$ in. and $\frac{1}{16}$ in. Price (unfixed) for grooved tiles $\frac{4}{6}$ in. thick is 2s. 7d. sq. ft.

TRAVERTONE (Armstrong Cork Co. Ltd., Acoustics Dept., Kingsbury, N.W.9. Colindale 7080) is an acoustic tile made of compressed mineral wool, and has a most pleasant appearance, as may be seen from the photograph. It is also incombustible. Price (unfixed) is 3s. 3d. sq. ft.

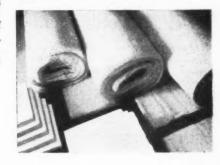
JABLITE (Jablo Plastics Industries Ltd., Mill Lane, Waddon, Surrey. Croydon 2201) consists of expanded polystyrene, weighs only 1 lb. a cubic foot, and will not support combustion. One of its uses is as an acoustic absorbent, for which it may be obtained in either board form or as perforated tiles. Its natural colour is white, but a prototype range of pale colours was on show at the Exhibition. Prices vary according to type, thickness and colour: examples are 1s. 0½d. sq. ft. for white ½ in. board, 2s. 5½d. sq. ft. for 1 in. coloured tiles (unfixed).

The RABBIT WARREN acoustic panel, made by Tentest Fibre Board Co. Ltd. (Fiboard House, Oakleigh Gardens, N.20. Hillside 8801) is available with a large number of surface materials: natural and lacquered hardboard, hardboard wood imitates, and wood veneers. Behind the perforations in the surface are grooves of varying depths in a fibreboard backing, which give good absorption coefficients of a wide range of frequencies. Panel sizes are 2 ft. square, 4 ft. square, and 4 ft. by 8 ft. Price per sq. ft., unfixed, for the example illustrated (wood veneer) is from 12s.

thin felts, quilts and waddings. It is easily bonded to other materials, and is already obtainable with aluminium foil both sides. The full range of uses is too extensive to describe here. One application of interest, however (other than as a thermal insulant), is as a wadding behind p.v.c. leather-cloth. where a quilted effect may be produced by the application of radio-frequency welding. JABLITE expanded polystyrene (Jablo Plastics Industries Ltd.) has already been mentioned as an acoustic board. It has many more uses, however, as a thermal insulant, for which purpose it is obtainable as sheets, blocks, half-cylinders, etc., (see photographs). Sheets are made in thicknesses from ½ in. to 10 in., and even in the smaller thicknesses the material is rigid enough to span considerable distances, since



Bonded Fibroceta: above, with aluminium foil bonded both sides; below, in the form of wadding.



Below: Fibreglass cavity wall insulation.

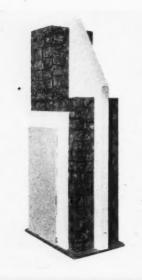


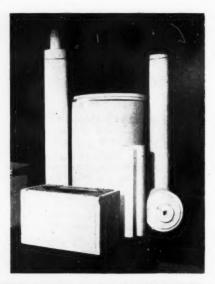
28 Thermal

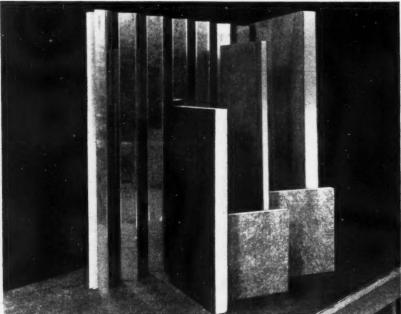
Thermal insulation

In the field of thermal insulation there were some very interesting new developments. Courtaulds devoted their entire stand to their new product BONDED FIBROCETA (Courtaulds Ltd., 16, St. Martin-le-Grand, E.C.1. Monarch 8811). It consists of supercrimped acetate fibres bonded together with a plasticizer under heat treatment. By varying the process a large number of densities, thicknesses and rigidities can be produced, and consequently the material can be obtained in the form of rigid "boards,"

of Clay Taylor.







The uses of Jablite: top left, in sheet or slab for n for insulating walls and roofs; top right, in special moulded forms for insulating tanks and pipes; above, as a core for "sandwich" constructions.

its own weight is only 1 lb. per cu. ft. Another new plastic insulating material is PHENFOAM (Phoenix Rubber Co. Ltd., 91, Bishopsgate, E.C.2. London Wall 1622) which is foamed polystyrene. It looks like pure white beans glued together, weighs under 1 lb. per cu. ft., but at the moment is only obtainable in slabs 8 in. thick.

A new form of FIBREGLASS was also on show (Fibreglass Ltd., St. Helens, Lancs. St. Helens 4224). It is called Cavity Wall Insulation, and consists of pellets of glass fibre which are poured into the cavity; the U value of an 11-in. cavity wall is thus decreased from 0.30 to 0.10.

29 Space

Space heating

Space and water heating were probably the best represented categories in the whole exhibition. The preoccupations among manufacturers were what you would expect: oil continues to make headway despite the experience of Suez; there is more solid fuel equipment which will burn smokeless fuel (or which will burn bituminous coal "smokelessly"); the gas industry has made great strides in the simplification of the flue problem, and the protagonists of almost all fuels seem to have turned their attention to the problem of how to make best use of stray airborne heat. But whereas at the previous Exhibition these were mostly content to use convection currents, this time they seemed to prefer more elaborate methods using fans and ducts.

Starting at the humblest end, the only de-

velopment of the open fire was the SOFONO LOW VIEW CONVECTOR FIRE (Grange-Camelon Iron Co. Ltd., Falkirk). This burns coke and has a very neat method of adjustment. It is a comparatively simple affair selling from £4 3s. 6d., and has an advantage from a tenant's point of view that it is not technically a "fixture" (see photo). Next in the order of complication is the new RAYBURN NO. 2 CONVECTOR FIRE (Allied Ironfounders Ltd., 28, Brook Street, W.1. Grosvenor 8941-9) which is a built-in fire with an adjustable convector head designed to fit tight under any reasonable overhang. It is designed for rooms of up to 1,750 cu. ft. and sells from £14 7s.

There is a number of new openable stovesthis being evidently regarded as the most likely English compromise between efficiency and a-view-of-the-fire. For rooms up to 2,750 cu. ft. there is the SUNGLOW (Warrington Light Castings, Ltd., Warrington, Lancs). This can be obtained with a back boiler and sells at from £19 15s. Then there are two models of the AUTOVECTOR (Smith & Wellstood Ltd., Bonnybridge, Stirlingshire. Bonnybridge 111), one, the No. 30, for rooms of up to 3,500 cu. ft. and the other, the No. 50, for rooms of up to 5,500 cu. ft. The first sells at from £31 8s. 9d. and the second £36 15s. 6d. (see illustration). Allied Ironfounders, Ltd. also have a new entry in this class, the RAYBURN NO. 3 for rooms of up to 4,000 cu. ft. which sells from £28 14s. By far the most interesting from the technical point of view-though it is also the most uncouth to look at-is the SUNBEAM SMOKE CONSUMING STOVE (Chatwins Ltd., Market & Phoenix Foundries, Ltd., Tipton, Staffs. Tipton 1677-8). This was designed by Professor M. W. Thring of Sheffield University and is claimed to have an efficiency of 70 per cent -which must be a record for this class of stove-and to burn coal with a smoke reduction of 85 per cent. This is achieved by relating the firebox and the fuel hopper in such a way that the coal in the former is converted into coke before it is finally burnt. Another surprising claim made for this stove is that if "shut down" it will burn for 48 hours before refuelling. The price is from £29 19s. 9d.

There is surprisingly little that is new among unit type heaters for other fuels. There is a new addition to the Drugasar range of balanced flue gas space heaters, DRUGASAR TYPE 3BN (F. A. Borchardt, Ltd., 506, High Road, W.4. Chiswick 4466-7) which has magneto ignition and is therefore, to the layman, indistinguishable from an electric appliance. There is a new DIMPLEX SKIRTING BOARD ELECTRIC CONVEC-TION HEATER (Dimplex Ltd., Millbrook, Southampton. Southampton 74425-9) in ratings of 300 and 450 watts, selling at £4 11s. 6d. and £5 8s. 8d. respectively. Lastly, there is a very interesting Swedish paraffin stove which is sold under the trade name EBEPE (Domestic Installations Co. Ltd., 74, Earls Court Road, W.8. Western 3202-4). These are fixed heaters (i.e. for installing in a fireplace or where there is a flue), are very neat to look at, and can be provided with a boiling plate. Three models are obtainable over here: "Sport" for heat-

1817

ing up to 6,000 cu. ft.; "Minor" for heating up to 12,000 cu. ft.; and "standard" for up to 16,000 cu. ft. These sell for £37 10s., £43 10s., and £48 10s. respectively, the boiling plate being an extra.

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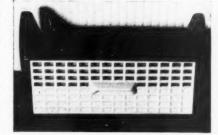
0).

A comparable product to this last, of British manufacture (though it burns gas oil, not paraffin) is the REDFYRE INDUSTRIAL SPACE HEATER (Newton Chambers & Co. Ltd., Light Castings Dept., Thorncliffe, nr. Sheffield, Ecclesfield 3171). Though designed as an industrial heater, and designed to heat comparatively large areas (B.t.u. range is 12,000-45,000), it has a good visual character (as can be seen from the illustration) and could well be used in schools, church halls and other places of that kind. Passing to space heating systems, there was little new in the class which depends on the circulation of hot water. The latest developments in this field are skirting heating (introduced by Crane last time), underfloor heating, and, of course, small pipe heating. The last of these (which will be familiar to Journal readers) was treated at length on the BCURA stand, but as it has not generally given rise to any proprietary systems it will not be discussed at any length here. The small pipe system can, of course, be used with any heat source which is susceptible to thermostatic control. Oil firing is, all things considered, a likely choice and there was at least one natural draught oil fired boiler at the Exhibition which was advertized as being particularly suitable for small pipe heating. Made by Perkins (C.M.E.) Ltd. (Mansfield Road Works, Derby. Derby 48237) it is in the 30,000-50,000 B.t.u. range and, together with the circulating pump, costs £99 (see illus-. tration). Another product does call for comment here, however-FLEXAMENT PERIMETER HEATING (Flexaire Ltd., 268-70 Vauxhall Bridge Road, S.W.1. Victoria 2006-8). This is a very sensible product which comprises a convector heater and a complete system of service ducting within a very neat under sill casing (see illustration).

Warm air heating

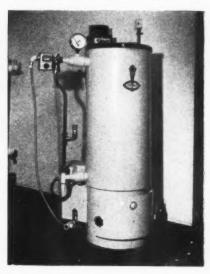
Without a doubt the most interesting development in space heating is the emergence on the market of a considerable number of appliances which aim at heating the house by blowing heat extracted by the hot water system. Time alone can tell whether this is going to give a satisfactory service, the grand questions being, first whether people are going to like warm air heating at all, and second whether the extraction of heat from the hot water circuit is not going to reduce your chances of getting a bath as hot as you want it when you want it. In the meanwhile it must be admitted that the economics of this method of heating seem to be very favourable; appliances are both cheap to install and cheap to run.

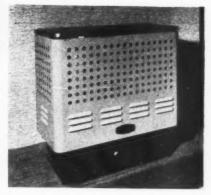
The pioneers of this form of heating in the



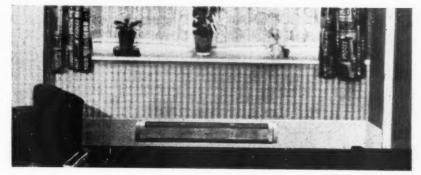


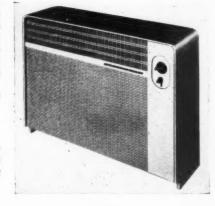


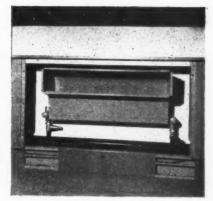




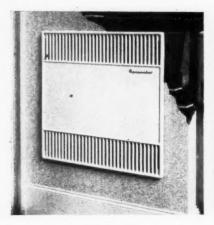
Top left: the Sofono low view convector fire. Centre left: the Sunglow openable stove. Above left: the Esse Autovector stove. Top right: the Perkins oil-fired boiler. Above right: the Redfyre industrial space heater.

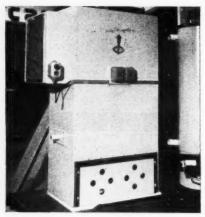




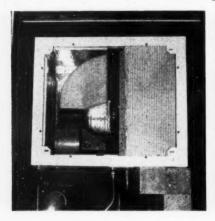


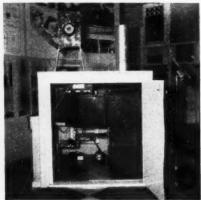
Above right: the Dimplex skirting electric convection heater. Right: the Drugasar type 3BN gas space heater. Far right: Flexament perimeter heater.



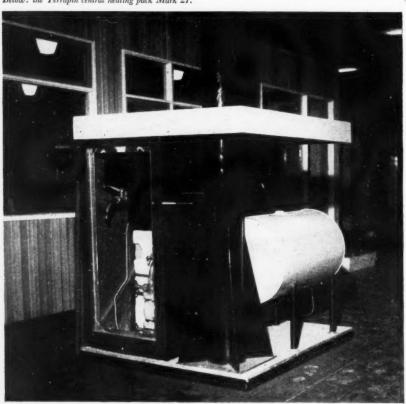


Above left: the Agavector warm-air heater. Above right: the Perkins Airmatic industrial heater. Below left: Radiation Ductair 20. Below right: the Halcyon F.45 gas warm-air heater.





Below: the Terrapin central heating pack Mark 27.



domestic field are, of course, Radiation Ltd. Their first venture was the HEATMASTER which was on show at the 1955 Exhibition. The Heatmaster (Radiation Group Sales Ltd., Solid Fuel Division, Leeds 12. Leeds 638011) does everything. Based on a solid fuel cooker (which is claimed to burn bituminous coal smokelessly and to be the first solid fuel cooker to have full thermostatic control), it provides 15,000 B.t.u. worth of space heating and hot water. The Heatmaster differs from the other products we are considering in that the supply of hot water increases when the space heating is turned on. Its price varies with the installation, but is given as about £260 installed. Radiation have now come forward with another product which, as it is a heat exchanger with fan and ducting only, falls exactly in the space heating class. It is called DUCTAIR 20 and is obtainable from the Warm Air Division of Radiation Group Sales Ltd., 10, Mortimer Street, London, W.1. The Ductair 20 is an insulated cabinet containing a water-to-air heat exchanger which is connected to a Radiation water heater, whether solid fuel, gas or oil, and to a simple duct system. Space heating output is 20,000 B.t.u. water heating 5,000-10,000 when the space heating is on, 26,000-30,000 when it isn't. The overall cost of a Ductair installation is given as about £225.

For those who do not want the expense and bother of ducting there are two JANITOR WARM AIR HEATER CABINETS (Janitor Boilers Ltd., Vale Road, Camberley, Surrey. Camberley 2471-3). One of them, Model 3, has a B.t.u. rating of 21,000-25,000 and the other, Model 5, a B.t.u. rating of 31,000-35,000, their prices being £71 and £77 both ex works. They contain a heater element and fan and require only to be connected to the hot water and electricity supplies. A comparable product is the AGAVECTOR (Allied Ironfounders Ltd., 20, North Audley Street, W.1. Mayfair 8454). This is for connection to an Agamatic boiler and has a rating of 15,000 B.t.u. There are two models: a free-standing cabinet which sells for £83 and a wall model for building in (see illustration) which sells for £67 10s. 0d. The only warm air heater designed exclusively for gas is the HALCYON F45 (William Sugg & Co. Ltd., 67-73, Regency Street, S.W.1. Victoria 3211). This has a 17,000 B.t.u. rating and is claimed to provide full heating for 2,500 cu. ft. (see illustration). The heater as at present marketed requires an ordinary gas flue, but the makers hope shortly to produce a balanced flue version for use with an SE-duct. The cost of an installation varies with the complexity of the ducts but is given as "under £100." The last of the domestic warm air systems is the MERRIWARM (J. T. M. (Sales) Ltd., 6-8, Malt Street, S.E.1. Bermondsey 4465). This is a heat exchanger with ducts which is designed to operate off a normal hot water storage cylinder. It is recommended that the boiler should be of 40,000 B.t.u. rating but it is claimed that "phenomenal results" have been obtained from a boiler of only 25,000 B.t.u. rating. The "Merriwarm" was originally designed for bungalows and comprises a small rectangular

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unit which lies on the ceiling rafters and distribution ducts which radiate out to the ceilings of the different rooms. The makers point out that in summer it can provide cool air circulation. The cost of a "Merriwarm" (but excluding the boiler and the normal hot water pipework) is given as about £230.

An interesting industrial application of the forced draught warm air principle is the AIRMATIC DIESELIZED CLEAN AIR HEATER (Perkins C.M.E. Ltd., Mansfield Road Works, Derby. Derby 48237), a free-standing unit which combines warm air heating with air cleaning. The model shown in the photograph opposite is of 150,000 B.t.u. rating and sells for £198 ex works.

The last exhibit in the space heating category is one which we believe to be quite unique. The TERRAPIN CENTRAL HEAT-ING PACK MARK 27 is a packaged oil fired heater (comprising boiler, burner, flue, oil storage, accelerator, expansion tank and electrical controls) which was originally developed for large building sites. The manufacturers are Terrapin Ltd. (6, Porter Street, W.1. Welbeck 7996-7). The roof and boiler house are of resin bonded fibreglass and in the pack shown at the Exhibition were white and bright red, the flue and tank being black and bright yellow (see illustration). Packs are made with burners from 100,000 to 150,000 B.t.u. rating; the price of the example illustrated is £450 ex works.

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Ventilation

A new VENTILATING UPSTAND in galvanized steel, illustrated here, is now being made by Colt Ventilation Ltd. for G. & B. Gardner & Newton Ltd. (17, George Street, St. Helens, Lancs. St. Helens 3042). Gardner & Newton, who are glass-benders, make the



The Colt ventilating upstand made for G. & B. Gardner & Newton Ltd.

glass domes—square, rectangular and circular—to go on top of it. Prices of the complete unit—upstand with control louvres, \(\frac{1}{2}\)-in. rough cast dome—range from £24 3s. 6d. for a 24-in. circular dome to £92 10s. 6d. for a 72-in. circular dome.

31

Cooking

It seems to be a convention in the trade that new cookers (and also, incidentally, new refrigerators) should be shown not at the Building Exhibition but at the Ideal Home Exhibition. In fact there was only one new cooker of note, the YORKMASTER (Radiation Group Sales Ltd., Solid Fuels Division, 7, Stratford Place, W.1. Mayfair 6462). This cooker (like the Heatmaster) is designed to



The Radiation Yorkmaster cooker.

burn bituminous coal smokelessly, and gives full thermostatic control of the oven. Though well insulated, it is not a heat storage cooker; though it also provides hot water it apparently uses little fuel and requires refilling only once in 24 hours. Price approximately £125.

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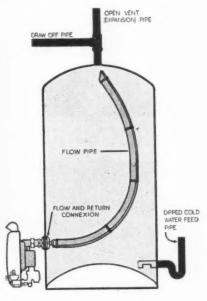
Water heating

By contrast with cooking, water heating was well represented. Two turns of events have taken place. First, manufacturers are again interested in producing good small boilers in the 20,000 B.t.u. class, and second, an increasing number are providing oil-fired alternatives. To these we might add a third: the immense improvement in the standard of design of casings. In this respect the boiler is fast becoming the best looking piece of furniture in the house: it is far superior to most kitchen cabinets.

Starting again at the humblest end of the water heating world, that is, with unit heaters and back boilers, there was only one development which seemed to call for comment. That was the NEW WORLD STRATALYN INJECTOR WATER HEATER (Radiation Group Sales Ltd., Radiation House, 7, Stratford Place, W.1. Mayfair 6462). This is in effect the gas equivalent of an electric immersion heater being designed for attachment (with a single connection) to a hot water storage cylinder for summer use,

though it can, of course, be used as the sole source of heat. It is very neat, rates at 6,000 B.t.u. and sells for £16 19s. (see diagram).

The next humblest form of water heater is the 20,000 B.t.u. domestic boiler. A relative newcomer to this class is the CRANE 20 (Crane Ltd., 118, Wigmore Street, W.1. Welbeck 1688). This is for use with hot water storage tanks of 25-35 gals. capacity and sells for £25.



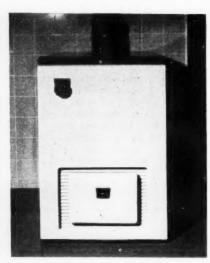
Sectional diagram of Stratalyn heater.

The RAYBURN NO. 2 BOILER (Allied Ironfounders Ltd., 28, Brook Street, W.1. Grosvenor 8941-9) is a scaled-down version of the Rayburn No. 1 which has been on the market for some time. Its rating is not quoted, but is probably of the order 20,000-25,000 B.t.u., as it will heat a storage tank of up to 40 gallons (see illustration on page 820). Price is £27.

The JUNIOR ARISTOCRAT (Glow-Worm Boilers Ltd., 47, Hatton Garden, E.C.1. Chancery 6971) is of 20,000-22,000 B.t.u. rating and will heat a storage tank of up to 40 gallons in addition (so the makers claim) to a wall radiator and towel airer (see illustration on page 821). Price is £23 10s. 0d. An interesting new product in the class of oil-fired heaters is the REDFYRE DOMESTIC WATER HEATER (Newton Chambers & Co. Ltd., Thorncliffe, nr. Sheffield. Ecclesfield 3171). This is a 20,000 B.t.u. heater which is provided with an integral storage tank. The whole is contained within a single stainless steel cylinder and looks very handsome (more so than in the photograph). It is made in two models: one with a 22-gallon and the other with a 33-gallon tank, the boiler (which is the same in both cases) being claimed to provide up to 30 sq. ft. of radiators in addition to hot water. Prices are £66 3s. 9d. for the 22-gallon version, £77 4s. 5d. for the 33-gallon version.

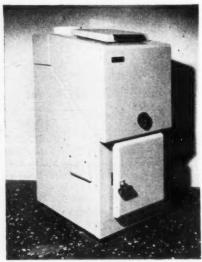
Another oil-fired water heater is the KEROMATIC (Keromatic Ltd., Cupid Green Foundry, Hemel Hempstead, Herts. Box-



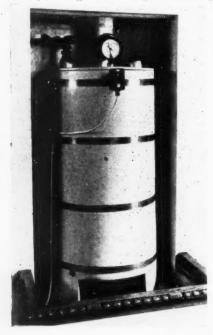


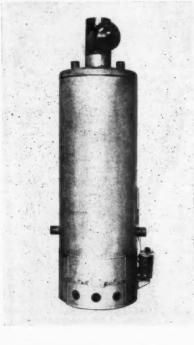
Above left: the Janitor 0.1 oil-fired boiler. Above right: the Rayburn No. 2. boiler. Below left: the Watts model 45A. Below right: the Janitor Junior.





Below left: the Redfyre central-heating boiler. Below right: the Redfyre water heater.





moor 3630) (see photo, page 821). It has a vapourizing burner with a rating of about 20,000 B.t.u. and sells for £72 (excluding the tank).

Reverting to solid fuel, the next new boiler in ascending order of size is the JANITOR JUNIOR (Janitor Boilers Ltd., Vale Road, Camberley, Surrey. Camberley 2471-3), again a smaller version of a well-established product. Rated at 35,000 B.t.u. and designed for burning anthracite Beans or Large Peas, it has the gravity feed hopper which we associate with Janitors and needs refuelling only once in 24 hours (or if used for hot water only, every two or three days). It burns with an efficiency of 75-80 per cent. and has been designed to provide hot water and full central heating for a 3-4 bedroom house. Price ex works is £75 (see illustration).

New in the 40,000 B.t.u. range is the TAYCO ROYAL 40R THERMOSTAT BOILER (Robert Taylor & Co. (Ironfounders) Ltd., 170, Victoria Street, S.W.1. Victoria 3972), price £41 10s.; while in the 45,000 B.t.u. range there is the WATTS MODEL 45A (Watts Automatic Boilers, High Street, Lydney, Glos. Lydney 392), an automatic solid fuel boiler which is once more the lowest rated version in a well-established range: price ex works £85. Janitor have another entry in the 80,000 B.t.u. class, this in the form of an oil-fired boiler, the JANITOR TYPE 0.1, which has been designed to provide hot water for the six- to eightroomed house with 7 to 9 radiators. Price is £218. Also at this rating is the new REDFYRE OIL-FIRED CENTRAL HEATING BOILER (Newton Chambers & Co. Ltd., Thorncliffe, nr. Sheffield. Ecclesfield 3171) which has been designed to run on diesel oil and to provide domestic hot water plus 300 sq. ft. of radiator surface. The model shown in the photograph is enclosed in thermal insulation panels. Price from £128 11s. 10d., according to the type of control chosen.

One somewhat divergent type of oil-fired boiler which has entered the English market in recent months is the Swiss HOVAL boiler (manufactured under licence by A. J. Riley & Son Ltd., Victoria Works, Batley, Yorks. Batley 657). The Hoval range runs from 60,000 B.t.u. rating upwards. The main point of interest is the inclusion of an indirect cylinder directly above the boiler, an arrangement which gives an efficiency which is claimed to be as high as 80-83 per cent. The dome-like plate in the upper part of the version illustrated in the photograph is a removable cap giving access to the indirect cylinder to allow the fixing of an immersion heater for summer use. Price of the 60,000 B.t.u. model is £263.

Hot water tanks

In the report of the last Exhibition we drew attention to the Fortic Primatic combination tank, not because it was new, but because we felt that architects do not take enough interest in the subject of hot water tanks and thence are insufficiently aware of the saving in first cost which this kind of tank effects. The FORTIC PRIMATIC PATTERN 8 (Range Boilers Ltd., Stalybridge, Cheshire. Stalybridge 3353-7) is the latest version in



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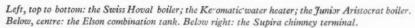
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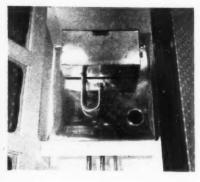
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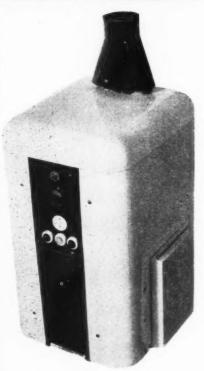


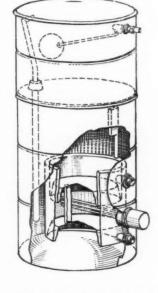


the series. It has the usual arrangement of hot water cylinder with cold water cylinder above (with, of course, insulation between), but the hot water side is in the form of an indirect cylinder and in the primary circuit is an electric immersion heater (see diagram). The point of this is that it enables an immersion heater to be used in hard water areas.

tion in this place the new range of SE-DUCT FLUES (True-Flue Ltd., Convector House, Acacia Road, N.W.8. Primrose 7161-2). The SE-duct (which gets its name from the South Eastern Gas Board, who first developed it) is a very important development in gas technology as it permits an almost unlimited number of gas appliances to discharge into a single flue. It is only applicable, however, to balanced flue appliances; but though at the moment the variety of these available is very limited, more are being put into production. The invention is also of advantage to balanced flue appliances as it means that these need no longer back on to an external wall.

The only other flue development of importance is the SUPIRA CHIMNEY TERMINAL (Omnia Constructions Ltd., 121, London Wall, E.C.2. Monarch 2272-6). This is a Swiss invention which has been on the English market a matter of a year and which has the most important advantage that it really does do away with down draught—from whichever quarter it may come. The trade price is £4 4s, per terminal.





Cut-away of the Fortic Primatic Pattern 8 water heater.



Another product which, though by no means new, is not so well known to architects as it might be is the ELSON COMBINATION TANK (Elsy & Gibbons Ltd., Elson Tank Works, Havelock Street, South Shields. South Shields 2586-7). This is also a device for saving plumbing and space, being a combined indirect cylinder, cold supply and expansion tank, all of copper. Versions can be obtained with 30-, 35- and 40-gallon storage tanks and in a number of different arrangements to accommodate hard and soft water and different space requirements.

Gas flues

Though they are not necessarily related to water heating, it seems reasonable to men-

33Water supply and sanitation

Ball-valves and syphons

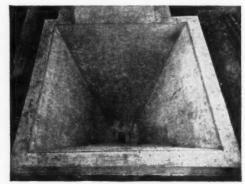
There were a number of encouraging developments in cold water plumbing, particularly in connection with that traditionally troublesome piece of equipment, the ball-valve.

The most interesting new BALL-VALVE is that developed by A. Sobolev of BRS and made under licence by Kings Langley Engineering Co. Ltd. (Kings Langley, Herts. Kings Langley 2215-6). It has a moulded nylon nozzle which eliminates cavitation damage—one of the main faults of the old type—and a rubber diaphragm, which cannot jam, instead of the usual piston. Adjustment of the ball is possible without bending the ball-arm. At the moment this ball-valve is on limited sale; approval of the local water engineer is required. Eventually, when tests are complete, this type will probably supersede that recommended in BS. 1212.

Ingenuity

This large greenhouse was constructed by Messrs. C. Zwetsloot & Sons with their Nursery labour. The structural framework is iron tubing with welded joints and conveys hot water from a stand pipe with flexible coupling. When the plants have finished flowering, the whole of the greenhouse is moved forward to ground previously planted. It is transported over pulley wheels fixed in line on dwarf concrete piers, the heat being uncoupled and re-connected to a stand pipe in the new position.

When additional greenhouses called for a larger Boiler House with an elevator pit, this too was constructed with Nursery labour. The depth of the pit is 16' 6" from ground level and, upon excavating, subsoil water was found at a depth of 7 ft. and water bearing sand at 13' 6".



Completed pit surrounded by 9' 6" head of subsoil water.

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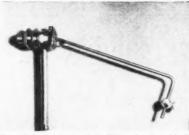
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Services and equipment continued





Above left: cut-away of the BRS-developed ball-valve, made by Kings Langley Engineering Co. Ltd. Above right: the Eternum all-polythene cistern by Fordham Pressings Ltd.

Another BALL-VALVE, which has been on the market for about six months, is made by Fordham Pressings Ltd. (Melbourne Works, Dudley Road, Wolverhampton. Wolverhampton 23861-2). This, together with the same firm's polythene syphon, has now been incorporated in an all-polythene flushing cistern (the first) called the ETERNUM. The model exhibited was a prototype; several modifications will be made before it is put into production.

The PRESTEX BALL-VALVE, made of brass, has a magnet which holds the ballarm down until the water level has returned to normal. Advantages claimed are silence and quicker refilling (Peglers Ltd., Prestex House, Marshalsea Road, S.E.1. Hop 2461) The HAWK POLYTHENE SYPHON (Hawkhead, Bray & Son Ltd., Phoebe Lane Mills, Halifax. Halifax 4794). now fitted as standard in Hawk Flushing Cisterns, has an internally reinforced syphon bowl which prevents seizing of the piston due to distortion. Another product by the same firm is a p.v.c. cone for making the connection between the flush-pipe and w.c. It is claimed that no further jointing material is neces-

A new POLYTHENE SYPHON has also been introduced by W. & J. Lawley Ltd. (Britannia Works, Sams Lane, West Bromwich, Staffs. West Bromwich 0195).





Above left: the Unatap, by Crosweller & Co. Ltd. Above right: the Barwell bath tap. Below left: the Barking Trapped Waste fitting. Below right: the No. 65 inclined bibtap. These last two items are by Barking Brassware Co. Ltd.





Plumbers' brassfoundry

The main exhibit on the stand of Walker Crosweller & Co. Ltd. (Whaddon Works, Cheltenham, Glos. Cheltenham 56317) was the UNATAP, which has already achieved considerable fame, although recently introduced. The tap mixes hot and cold water and produces a spray jet at the low maximum rate of 5 pints per minute. In this way half the amount of water usually used for hand-washing in factories, offices and schools can be saved.

Three new taps were shown on the stand of Barking Brassware Co. Ltd. (5-11, River Road, Barking, Essex. Rippleway 3057-9). These were the No. 65 INCLINED BIBTAP. the No. 64 TAP with a nozzle extendible to any length, and the No. 107A BATH TAP with an inclined head which makes operation easier in situations where the tap is close to a wall. All these items are very well designed. Every tap produced by the company is now obtainable equipped with a SPRAY INSERT—a very simple but carefully considered device-for cutting down water consumption on hand-washing. Another new product of Barking Brassware is the BARKING TRAPPED WASTE, an ingenious waste fitting incorporating the firm's Goblet waste, a rubber seal to the underside of the sink, two swivel joints which allow installation in any position, a flange to cover the entry of the pipe into the wall, and very easy access for cleaning the trap by the removal of two finger-nuts (see photograph).

A DECK PATTERN TAP No. 2099E, for lavatory basins and baths (illustrated here) and a FAIRLINE No. 1314D mixer combination for baths were the new products on show on the stand of James Barwell Ltd. (35, Berners Street, W.1, Langham 6202-3).

Aerators for fixing to taps have now been on the market for some time. Ideal Boilers & Radiators Ltd. (Ideal House, Gt. Marlborough Street, W.1. Gerrard 8686) are now producing one, the ISA AERATOR, which is an integral part of the tap.

Baths and washbasins

In the category of baths, washbasins and w.c's, there was a fair sprinkling of new patterns, but not many that architects would appreciate. Among the baths there was one product which was new by virtue of its shape and one which was new by virtue of its material. The first of these is the ALLIED CAPRICE (Allied Ironfounders, Ltd., 28, Brook Street, W.1. Grosvenor 8941-9). This, as you can see from the illustration, is a sort of combined shower-andfoot tray and a sitting bath and might well come in useful where there was little space or where children have to be bathed. Price is from £20, approximately. The second is what the makers claim to be the first full size PLASTIC BATH to be made in this country (Thermo-Plastics Ltd., Dunstable, Beds. Dunstable 1444). Though some may feel that this is an illegitimate development of the familiar washing-up bowl, there is quite a lot to be said for it; it is warm to the touch (the plastic is Perspex), will not chip, is said to be easily cleaned and is, in

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A demonstration installation of the new Lumenator Module lighting system, produced by Lumenated Ceilings Ltd., using plain acrylic plastics diffusers. Some of the decorative vinyl plastics diffusers can be seen at the top of the picture.

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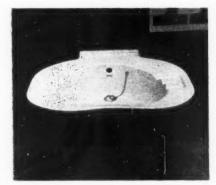
Services and equipment continued

any case, a sensible design. Price is between £35 and £40.

A third new bath is Shanks' PARVA (Shanks & Co. Ltd., 81, New Bond Street, W.1. Mayfair 6812). This is in white porcelain ename'led iron and is interesting for its cross section. Whereas the traditional bath has a sloping side and is therefore much narrower at the bottom than the top, the Parva has a relatively steep side, giving a greater width at the bottom. It is also two inches shallower.

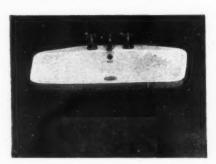
There were no new w.c's that qualified for mention though in fairness to the industry we must point out that we are comparatively well supplied with sensible products in this class. There were, however, two new prototype washbasins (one called the ORCHID, the other the AVION) both of which have been developed by Adamsez, Ltd. (75, Victoria Street, S.W.1. Abbey 5846) for New Zealand House (architects Robert Matthew and Stirrat Johnson-Marshall). Both are wider and shallower than the conventional occasion lean both your elbows in them and wash your neck without spraying soapy esting basin (and one which, in its shape, seems to owe much to the great reform worked by Messrs Adamsez) is the IMPERIAL. SYBARITE PORCELAIN

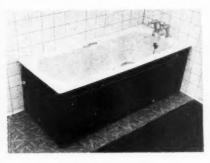
pattern, with the idea that you can on water on to the floor. The ORCHID is priced at £23 8s., and the AVION at £13 12s. 3d., both prices including fittings. Another inter-





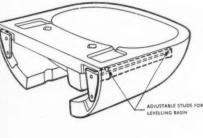
Above left and below left: the Adamsez Orchid and Avion washbasins. Above right: the Sybarite Imperial Porcel in lavatory basin. Below right: the Shanks' Parva bath.





Below left: the Allied Caprice bath by Allied Ironfounders Ltd. Below right: the Shanks' Marnock basin, showing the concealed bracket.





LAVATORY BASIN (Leeds Fireclay Co. Ltd., Leeds House, Cavendish Place, W.1. Langham 3511). This is in vitreous china. a material which is commonly less expensive, lighter and less easily chipped than fireclay, and in this instance is provided with one of Walker Crossweller's Spraytaps. Price is £3 Os. 3d. for the basin alone (see illustration).

A fourth and last basin worth noting, also in vitreous china, is Shanks' MARNOCK. This has a particularly good shape and has the added virtue that the brackets are concealed within the form of the basin (see diagram). This basin comes in two sizes, the prices of which, without fittings, are from £4 17s. 6d. for the small and from £6 9s. for the large.

Sinks

Recent developments of the sink which has become so important a piece of furniture, are confined to the substitution of plastic as a material for both sink and draining top and the insertion of the waste disposal unit. Perhaps the most important result of the first of these developments is the fact that the light weight of the material has encouraged the manufacture of a single unit for both sink and board, thus overcoming the old difficulty of how to provide a watertight joint between the underside of the board and the top edge of the sink. This difficulty was, of course, overcome years ago by stainless steel; but the plastic sink-cum-top is a much cheaper product and the temptation to revert to teak and fireclay is less. The temptation still remains, however, and it is to be hoped that, as glass fibre becomes more popular, the difference in cost will disappear.

One new range of Perspex sinks is the CRELENE (Eastwoods Ltd., 158-160, City Road, E.C.1. Clerkenwell 2040). There is a single draining board pattern, which can be obtained right- or left-handed, and a double draining board pattern. The retail price of the first is £8 12s. 6d. and of the second £12 (all complete with waste, plug, chain and stay). All are obtainable in white, ivory and eau-de-nil (which is described as "exotic sea green-just right for the contemporary kitchen ").

Another plastic sink, made this time of glass fibre-or if you prefer it, of polyester resin glass fibre laminates-has no trade name but is manufactured by Glow-Worm Boilers Ltd. (47, Hatton Garden, E.C.1. Chancery 6971). This is obtainable in the single draining board pattern only, but rightand left-handed, and is sensibly provided with an upstand curb against the wall, thus, presumably, adding to its strength (which in



The Glow-Worm glass-fibre sink.

any case is considerable) and making a better sink to wall joint (see illustration). Price is £11 5s. 0d Another sink which is new on the market

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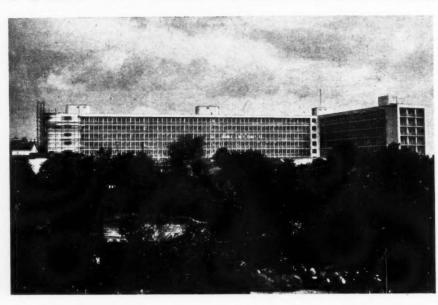
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Services and equipment continued

is the HOSTESS (Ideal Boilers & Radiators Ltd., Ideal House, Gt. Marlborough Street, W.1. Gerrard 8686). This is a two draining board type with upstand back edge or porcelain enamelled cast iron and sells for £18 15s. 0d. with detachable overflow and waste.



The Black & White Stargena sterilising sink.

Among specialized sinks an interesting exhibit was the BLACK & WHITE STAR-GENA STERILIZING SINK [Black & White (Accrington) Ltd., Suffolk House, 5, Laurence Pountney Hill, E.C.4. Mansion House 5931]. This is for use in schools (where, of course, MOE insists on plates, etc., being sterilized when washed up) and offers an improvement on MOE's requirements: the bowls are of stainless instead of galvanized steel and, to save fuel, are insulated with fibreglass. Lastly the standing overflow has been eliminated. They are obtainable in gas, electric and steam versions. The electric version, with two immersion heaters, is shown in the illustration. The price of this model is £52 11s. 6d.

Of the various sink disposal units on the market there was, we believe, only one on show at the Exhibition. This was the WHIRL-A-WASTE (W. & G. Sissons Ltd., St. Mary's Road, Sheffield, 2. Sheffield 22118). This is described as a "commercial disposer" having been developed primarily for canteens. It is available in two models,

one of ½ h.p. and the other of ½ h.p. The prices of these are £58 10s. 0d. and £74 respectively. Though they can be attached to the sink waste the makers do not advise this since it means that the sink cannot be used when the machine is working and they therefore also supply it with a stainless steel hopper for fitting to a preparation bench (see illustration). Prices with hopper are £64 7s. 0d. and £79 17s. 0d.

Drainage

It is sometimes hard to realize that the great British drainage revolution was made only three or four years ago. Such a period of time is, of course, very short to the Building Industry. Nevertheless the speed with which the ideas have caught on among builders and district surveyors (even among architects) is most encouraging. This period of between-the-exhibitions is therefore a period of consolidation, of catching up in the field of manufacturing and technique, with the general acceptance of the single stack indoors and the pitch fibre pipe out-of-doors.

To take indoors first, attention has been riveted mainly on the problem of providing for the single stack. The very precise requirements as to the angle and position of entries to the single stack and the inevitable tendency to gather a great many wastes to the stack in a bunch have created some nasty problems in manufacturing and fixing.

One manufacturer who is able to deal with this problem with the maximum of grace is Econa Modern Products Ltd. (Aqua Works, Highlands Road, Shirley, Solihull, Warwicks. Solihull 3078) if only because the whole contraption is made-waste, joints and stack-out of one materialcopper-and because the firm is used to making a tailor-made job. The main purpose of the magnificent stand, however (certainly the best stand ever to be devoted to a plumbing subject), was to question the validity of certain applications of the one stack idea (see page 814). The danger, it seems, is from the occasional dishcloth which is absentmindedly swilled down the pan and which, if you are unlucky, can unseal your traps. To get over this, Econa

propose what they call an "intervent" unit which represents a partial revision to the older one pipe system, i.e., with a combined soil and waste but with a separate ventilation stack. The complication which this leads to is, of course, the kind of thing which Econa take in their stride. They will, however, do an ordinary single stack if the architect insists.

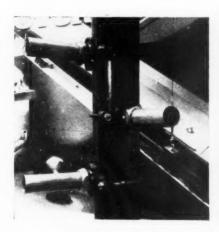
At the last Exhibition Federated Foundries Ltd. (4, Stratford Place, W.1. Mayfair 5054) introduced their FF neoprene joint, which much eased the site fixing problem of internal drainage. In the intervening two years they have introduced their FF SPUN PIPE with its constant wall thickness (hence even caulking space at the joint) and its neat single ear fixing (see drawing). We may say, therefore, that cast iron responded very adequately to the challenge of the single stack; certainly (as you may judge from the photograph) the cast iron product is very convincing. Nevertheless it is clear that the pre-positioning of waste outlets in the stack implies a certain limitation in the siting of basins, w.c.'s, etc., and imposes a more exacting task on the fitter; and that there is therefore a case to be made for the kind of pipe which is easily drilled when in situ and to which connections can be easily made. This problem has been tackled by two firms, interested in two completely different materials. The first of these is Turners Asbestos Cement Co. Ltd. (Everite House, Southwark Street, S.E.1. Waterloo 4712) who have produced the EVERITE SINGLE STACK SOIL CON-NECTOR to enable joints to be made in an asbestos cement soil stack on the site (see

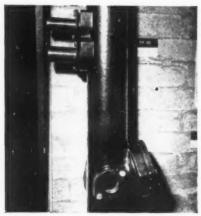


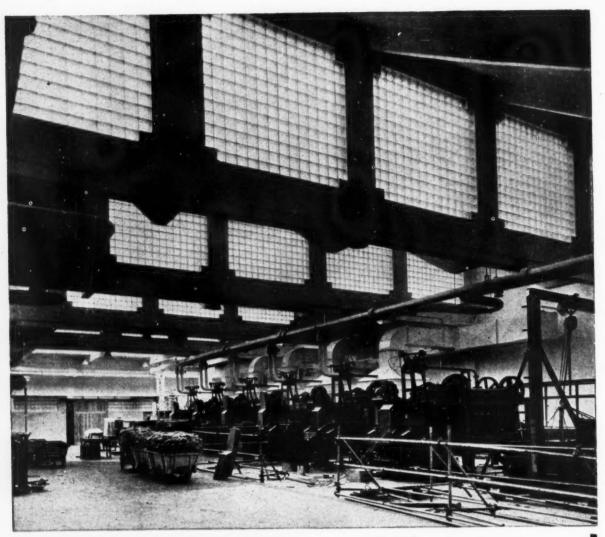
Left: single-ear fixing of the FF spun pipe, seen in photograph below right. Below left: the Everite single stack soil connector.



Left: the Whirl-a-Waste sink disposal unit.







THERE IS NO LIMIT... to the applications of Pilkington's "Insulight" Hollow Glass Blocks. Here, the Glass Blocks are providing thermal insulation with consequent absence of condensation, in addition to an even distribution of natural light. They are shown fixed in the North Lights of the mercerising room of J. & P. Coats Ltd., Paisley. Wherever "Insulight." Hollow Glass Blocks are used they give substantial benefits—bringing light into the interior while providing effective heat and sound insulation. They also add to the appearance of a building.



'INSULIGHT' HOLLOW GLASS BLOCKS

For further information on the use of glass in building, consult the Technical Sales and Service Department at St. Helens, Lancs. Telephone: St. Helens 4001; or Selwyn House, Cleveland Row, St. James's, London, S.W.1. Telephone: Whitehall 5672-6. Supplies are available through the usual trade channels.

PILKINGTON BROTHERS LIMITED, ST. HELENS, LANCS.

"INSULIGHT" is a registered trade mark of Pilkington Brothers Ltd.



Services and equipment continued



Left: Key-Conex connections for use with pitch-fibre pipes.

photograph). The connector consists of a polythene boss with sealing gland, compression ring and brass nut, and a cast iron coupling with brass nuts. A single unit connector costs £1 2s. 9d., a double unit (i.e., for two wastes) £2 4s. 6d.

The other firm to be interested in this problem is the Key Engineering Co. Ltd. (4, Newgate Street, E.C.1, City 1185-7) who naturally desire to bring their pitch fibre pipes within the building also and who to this end have produced the KEY-CONEX CONNECTOR. 95 deg. and 45 deg. connections for w.c.'s, are already obtainable in pitch fibre; the point of the new connector, therefore (as can be seen from the photograph) was to enable site joints to be made for the wastes. Initially the company intend to supervize the jointing and it is therefore not yet possible to quote prices. Granted that pitch fibre pipes as such will be familiar to readers, the only development in external piping is the marketing over here of a French pitch fibre pipe FLEX-PIPE D by Flexpipe Ltd. (270, Regent Street, W.1. Regent 3605-9). This is made in 10 ft. lengths (i.e., some 2 ft. longer than the longest English made pipe) and therefore presumably requires fewer joints.

One other product which comes under this sub-section is the NORCON PREFABRI-CATED SEWAGE DISPOSAL PLANT Norcon Ltd. (Castlegate, Reigate, Surrey. Reigate 4781). This is an alternative to our homely English septic tank, being. apparently, in common use in Germany and America. The disposal plant works on a different principle from the septic tank and comprises two cylindrical containers in precast concrete, the first (and smaller) being a sedimentation tank and the second and larger being a filter tank surmounted by a Revol automatic self dosing sewage distributor which gyrates by gravity. The whole contraption is claimed to occupy less space than a septic tank, to be less expensive, and to give no more trouble. The cost of units for 1, 2, 4 and 8 houses are approximately £75, £120, £160 and £221 respectively.

34 Illumination

Of the lighting fittings for tungsten lamps, opal glass seemed the most popular material, and two new ranges were shown at the Exhibition. The SATINA range (A.E.I. Lamp & Lighting Co. Ltd., Crown House, Aldwych, W.C.2. Temple Bar 8040) consists of twelve different shaped shades each of which may be used singly or in clusters on a multiple fitting. Colours available are white and pink. A most ingenious shadecarrier has been incorporated which enables the shades to be lifted off the lampholder for bulb-changing. Four of the twelve shades are shown here.

FORREST MODERN DECORATED GLASS-WARE is an extension of the already well-known opal glass range (George Forrest & Son Ltd., 30, Osborne Road, W.3. Acorn 5083). The decoration is of strips in one of five colours. The five shapes available are the same as before.

A new series of fittings for display purposes, the ATLAS DISPLAY range, was shown by (Atlas Lighting Ltd., 233, Shaftesbury Avenue, W.C.2. Temple Bar 1599). These consist of a number of interchangeable units which may be applied to any one of four basic outer casings to give directional, dispersed, focused and coloured lighting effects.

In the fluorescent field the same firm were showing new domestic fittings called the SOCIAL range; two of these are shown here. The price of the KV/0020, a single tube fitting, is £7 9s. 1d., and that of the KP/2240, which has two tubes, is £18 1s. 2d. Atlas also showed some new commercial fluorescent fittings: the ATLANTIC range (already becoming well known), a very simple WAFER fitting, which although fixed to the ceiling surface protrudes only $3\frac{1}{4}$ in., and MODULITE flush fittings for incorporation in suspended ceilings, on a 1-ft. module.





Four types of Satina shades. Above left: G4010; above right: 64011; below left; G4001; below right: G4004.



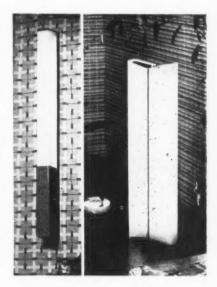


Below, two of the Forrest modern range of decorated glassware; left, type W; right, type Y.





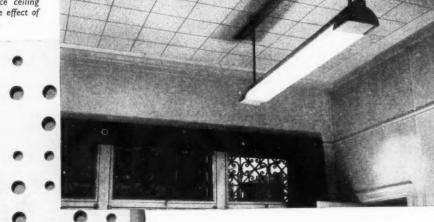
Below, two of the Atlas Social range of light fittings; left, type KV/0020; right, type KP/2240.



vise reduction

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Illustrations show Standard and Random patterns and a view of an office ceiling which demonstrates the decorative effect of Armstrong Acoustic Tile.



Available in two patterns and two thicknesses, $\frac{1}{2}''$ and $\frac{3}{4}''$, in $12'' \times 12''$, $12'' \times 24''$ or $24'' \times 24''$ tiles. Installations can be undertaken on new or existing buildings by the Armstrong Acoustic Dept. Write for information folder Pub. No. 350.

Armstrong

ARMSTRONG CORK COMPANY LTD., Acoustic Dept.' Kingsbury, London, N.W.9. Telephone: Colindale 7080

Services and equipment continued

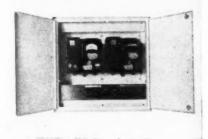
Miscellaneous: services & equipment

Electric power supply

A most interesting exhibit was that of Mantel Metalworkers Ltd. (121, Gurney Street, S.E.17. Rodney 6441) who make sheet metal CABINETS CONTAINING CONTROL GEAR AND METERS for domestic electrical installations. The example we show here is a semi-flush type equipped with gear for normal electrical supply and also for floor heating, including the necessary time-switch and contactor for off-peak operation. The price of this example is £15 14s. 4d. complete; it should be pointed out, however, that the meters shown are of the pre-payment type (more expensive) as this particular installation was for localauthority housing.

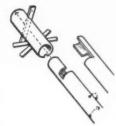
Telecommunications

A very well designed telephone receiver, the NEOPHONE, has been put on the market by Siemens Edison Swan Ltd. (Siemens House, 3. Avon Trading Estate, Avonmore Road, W.14. Fulham 9471). Obtainable in 21 colour combinations, the receiver has a lightweight handset with a hygienic mouthpiece.





General reduction in weight has been made possible by the use of a printed circuit. The receiver may be used for internal telephone systems, or in place of the usual GPO re-



Far left: electrical installation cabinet by Mantel Metalworkers Ltd. Below left: the Neophone telephone receiver. Left: Socket of the Arnhold built-in building bracket.

ceiver (although not, of course, supplied by the GPO) with which it compares favourably in price.

Maintenance of buildings

In a most praiseworthy attempt to cut the cost of building maintenance, Arnhold Building Brucket Co. (47, Hillcroft Crescent. W.5. Perivale 1141) have produced a scaffolding unit, the BUILT-IN BUILDING BRACKET, which may be clipped on to brick walls in any position once a number of permanent sockets have been installed. The sockets are almost invisible when not in use, and may be built into existing walls as well as new work. Price is approximately £9 10s. for each complete unit.

Applied finishes and treatments

Paints, stains, varnishes and polishes

The architect faced with this subject is compelled to make the evidently unfair decision of omitting mention of many excellent firms who manufacture orthodox paints and of mentioning only specialist applications. On paint proper, however, it was good to notice that the BS 101 colours (see BS.2660) are steadily gaining ground.

Chief among the new developments (though it was first marketed in this country more than a year ago) is POLICROME (International Paints Ltd., Grosvenor Gardens House, S.W.1. Tate Gallery 7070). This, as the makers point out, is "not just a paint but a system of decoration": ready mixed pigments are sprayed on to the surface producing a dappled film which is claimed to be as durable as three-coat work oil paint. Though it is only guaranteed for internal use in this country, it is used out of doors in America (its country of origin) and International Paints are trying it out on the exterior of their building in Grosvenor Gardens. The result is not everyone's cup of tea and should in any case be used with discretion: but it is a useful addition to our stock of effects.

A very interesting range of products at the other end of this category is XYLAMON- STAINS (Silexine Paints Ltd., Richford Street, W.6. Shepherds Bush 4461). These are available in Grass Green, Dark Green, Signal Red, Wine Red, Canary Yellow and Silver Grey. Put on with a brush they are timber preservatives usable, broadly speaking, wherever you would use creosote, and should prove a welcome relief from it. Cost (if bought in gallon cans) is 63s, per gallon, the coverage of one gallon being 300 sq. ft. of rough timber, 600 sq. ft, of planed timber.

A third and last entry in this category is TILEX (Tretol Ltd., Tretol House, The Hyde, N.W.9. Colindale 7223). This is a coating based on a combination of synthetic resins which produces "a tile-like finish for walls." At 60s. per gallon it is intended as a cheaper and (because jointless) a more hygienic substitute for glazed tiles in places like bathrooms, kitchens, corridors, etc., and is available in 18 colours.

Fire resisting treatments

Most interesting among new fire-resistant treatments is EXOLIT FIRESTOP (" Exsud" South American Minerals & Products Ltd., 26, Cowcross Street, E.C.1. Clerkenwell 2101-6). This is a foam barrier-building fireproofing compound which can be applied to virtually any building surface (and which in turn can be overpainted by any decora-

tive finish) to provide Class I (i.e., very low) flame spread under BS.476. It has been tested at Boreham Wood and is being used at the new Jaguar factory.

applied finishes: miscellaneous

Under this heading there was one apparently outstanding product. Marketed under the (to architects) distressing trade name GLAMOROCK (Surface Protection Ltd., 18, London Street, E.C.3. Royal 8511) it was in effect a very thin two coat external rendering suitable for applying to almost any surface (except oil paint). Natural rock, available in a surprising range of colours, is ground to three degrees of fineness to produce three finishes and is applied in a clear-setting plastic cement. If complete waterproofing is required the surface should be coated with a clear-setting plastic lacquer which is also supplied. GLAMO-ROCK has been in use for some three years in South Africa (where it was originally developed) and is claimed not to fade, craze or peel. The application of GLAMOROCK presents no particular difficulty (it was demonstrated on the stand) and the price of the raw materials per sq. yd, in the London area for the smooth (including the waterproofing lacquer) works out at 7s. 3d. The coarser finishes are slightly less expensive.

DUNDEE, PERTH AND LONDON SHIPPING COMPANY'S PREMISES AT DUNDEE WHARF, LONDON



Main Contractors: W. & C. French Ltd., Buckhurst Hill, Essex Consulting Engineers: J. C. Melliss & Co.. Westminster, S.W.1

4,616 SQUARE YARDS OF MARLEY FLOOR BEAMS

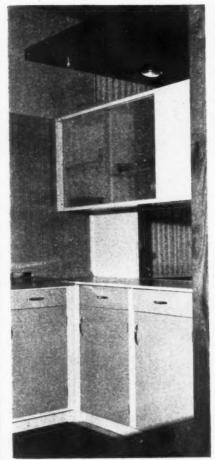
WERE SUPPLIED AND FIXED

The beams, 12" wide \times 6" deep, form the roof to an additional storey of a large wharfside building. In the main, the beams are of 10ft. span carrying a total loading of 72lbs. per sq_are loot.



Fully detailed information on Marley Floor Beams is available from PEASMARSH, GUILDFORD, SURREY Guildford 62986 S. OCKENDON, NR. ROMFORD, ESSEX Sth. Ockendon 2201 SHURDINGTON, NR. CHELTENHAM Shurdington 334/5 WATERLOO, POOLE, DORSET Broadstone 026

Furniture and fittings

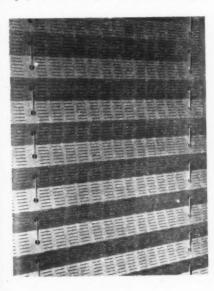


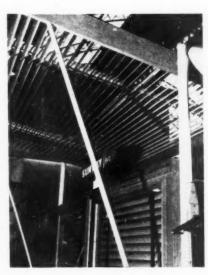


Left: the Hygena two-way assembly kitchen cabinet (on the right of the picture). Above: the Ezee VJF4 sink cabinet. Below: the Sissons CU 1036 sink cabinet.



Below left: a detail of the Balastore pleated fibre-paper blind. Below right: the Sunway Ve Vo skylight blind, showing the Arens twin-cable gear.





42

Furniture: general (fixed and free-standing)

There were several new designs of kitchen cabinets; on the whole the standard of design seems to have improved, with cleaner lines and good colours—and of course the further introduction of patterned plastic facing materials.

The HYGENA TWO-WAY ASSEMBLIES (Hygena Cabinets Liverpool Ltd., Kirkby Industrial Estate, Liverpool. Simonswood 2614-6) are designed either to separate kitchen and dining-room or for use as free-standing furniture in an open plan. They are available in two lengths, 3 ft. 6 in. and 5 ft. 3 in. and have drawers and cupboards opening both ways. Prices vary according to type and exact specification; the model shown here is £44 10s. 0d.

The EZEE VJF4 sink cabinet (Ezee Kitchens Ltd., 46, Davies Street, W.1. Grosvenor 5068) has a 3 cu. ft, refrigerator under the draining board. The finish is vitreous enamel and the complete unit costs £88 10s. 0d. The same model with a stainless steel sink and drainer is £99 7s. 2d.

The SISSONS CU 1036 sink cabinet (W. & G. Sissons Ltd., St. Mary's Road, Sheffield. Sheffield 22118) shown here is part of a complete new range of kitchen furniture obtainable in oak, a number of colours, combinations of these, or with Formica faced doors. The complete sink unit costs £35 17s. 0d.

Yet another sink cabinet, the LEISURE BIF 18/36 (Leisure Kitchen Equipment Ltd., 149, Regent Street, W.I. Regent 8355) is available in beech and birch or beech and cream paint, with a choice of porcelain enamel or stainless steel sinks. Prices range from £18 12s. 6d. to £26 13s. 6d.

Among the blinds and curtain tracks exhibited were few new developments. The most interesting was perhaps the BALASTORE pleated fibre-paper blind (Airelite Venetian Blind Co., 11, Watkin Road, Wembley, Middlesex. Wembley 3212-3), which is extremely cheap—a blind to cover a window 3 ft. wide and 7 ft. high costs only £1 4s. 6d.

Another product by the same firm, but at the other end of the price scale, is LUXAFLEX DRAW DRAPERY a sort of venetian blind with vertical slats. Made in a large number of colours, in sizes up to 16 ft. long and 12 ft. high. Price for a window 6 ft. long, 7 ft. high, is £20 5s. 4d. A horizontal venetian blind for skylights is an addition to the SUNWAY VE VO range (Venetian Vogue Ltd., Slough, Bucks. Slough 24595-6). This may be operated either by an endless cord, or by Arens twincable gear.

for his own home

F

18



A. G. Sheppard Fidler, F.R.I.B.A.,

Birmingham City Architect with

L. J. Multon, F.R.I.B.A., in association.

. . . this architect chose





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Furniture and fittings continued

An ELECTRICALLY-OPERATED VENETIAN BLIND has been introduced by Deans (Dean's Blinds (Putney) Ltd., 329-33, Putney Bridge Road, S.W.15. Putney 2533-5) and an ELECTRICALLY-OPERATED CURTAIN TRACK by Avery's (J. Avery & Co. (Est. 1834) Ltd., 81, Gt. Portland Street, W.1. Museum 9237).

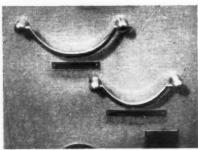
There were some additions to the SILENT GLISS range of curtain tracks (Silent Gliss Ltd., 39, Berners Street, W. 1. Museum 0032), including flush recessed tracks, 1039 and 1040, for hand and cord operation.

Two new designs of domestic delivery

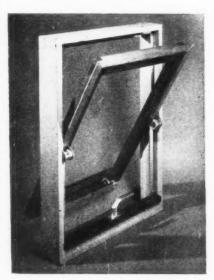
hatches were to be seen. The BEACON DELIVERY HATCH (John Thompson Beacon Windows Ltd., Beacon Works, Wolverhampton. Bilstone 41121) for milk, bread and other provisions is illustrated here. It is very sturdily constructed of zinccoated steel, and costs £9 7s. 6d.

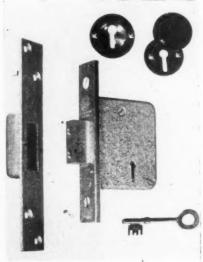
The new LOGICOL FUEL DELIVERY HATCH (Logicol Fuel Storage Units, Tavu Works, Waterloo, Huddersfield. Huddersfield 174) is made with either a single door or twin doors and has been designed to meet the recommendations of the CUC. The prices are £4 12s. 6d. and £4 17s. 6d.





Above left: the Beacon delivery hatch. Above right: two brass drop-handles by A. J. Binns Ltd.





Above left: the Matterson pivot hinge. Above right: the Chubb "Castle" mortice dead lock. Below left: plastic built-up lettering by Ward & Co. Below right: Ifo ceramic letters.





44 Fittings

There was very little new in the iron-mongery field. A range of ANODISED ALU-MINIMUM FURNITURE of anonymous German origin is being marketed in this country under the name SIDLEEN (Associated Brassfounders Birmingham Ltd., Willesden Works, Old Oak Lane, N.W.10. Elgar 4774). It includes lever handles with nylon bushes for silent action and long life. A new range of FURNITURE IN SATIN NICKEL BRONZE was also to be seen on Eastwoods' stand (Eastwoods Ltd., Eastwood House, City Road, E.C.1. Clerkenwell 2040); this is well designed and the material is most attractive.

A. J. Binns, Ltd. (29 Store Street, W.C.1. Museum 5802) were showing the QUICKSET American lockset, which was illustrated in the November 14 issue of the JOURNAL, and also a few new small ironmongery items, among them the brass drop-handles for drawers shown on this page.

The MATTERSON PIVOT HINGE (Matterson Huxley & Watson (Sales) Ltd., Coventry. Coventry 64081) is illustrated here: it enables the sash to be turned through 180 degrees for cleaning and will lock in any position. Another new product by the same firm is the MATTERSON WEATHERSTRIP, consisting of an aluminium extrusion with a rubber insert; this may be fixed to either new or existing joinery.

For counterbalancing very heavy sliding sashes, there is a new "S" TYPE SPIRAL BALANCE (Unique Balance Co. Ltd., West Hendford, Yeovil, Somerset. Yeovil 2231-2). These were originally evolved for ships' windows, and so are specially protected against corrosion. Price is about £5 a pair. The lock illustrated on this page is the new version of the CHUBB "CASTLE" MORTICE DEAD LOCK (Chubb & Son's Lock & Safe Co. Ltd., 175-6, Tottenham Court Road, W.1. Museum 5822). It has a box locking plate for extra security. Chubb also showed their new STRONGHOLD HOOK AND STEADY BOLT LOCK for sliding doors.

45 Miscellaneous

Only one stand in the Exhibition was devoted entirely to lettering and signs (Ward & Co., 128, Cheltenham Road, Bristol 6. Bristol 21536), but this in itself made up for the absence of others. A new line from this firm is ALL-PLASTIC BUILT-UP CHARACTERS (three-dimensional) available in a number of type faces. The photograph reproduced here shows two such characters, one with a Formica face. Ward's are now also producing CAST ALUMINIUM characters in any known type face.

Another wholly delightful lettering exhibit was a CERAMIC LETTER made by the Ifo tile people (see illustration). This is obtainable from Dennis M. Williams Ltd. (42, Thames Street, Kingston-upon-Thames, Surrey, Kingston 9998-9).

Contractors' equipment at the Building Exhibition

Considering that it was unfitting for an architects' journal to turn a blind eye to the vast assemblage of contractors' equipment at the Exhibition, we asked the AJ Research Fellow, Matthew Wallis, who is studying the influence on design of site operations and equipment, to look round on our behalf. He reports as follows.

In the heavy building equipment section there are few new machines, although a number of exhibits have undergone considerable modification and development. This section is also notable for the absence of a number of manufacturers of large construction equipment who generally exhibit at the Municipal and Public Works Exhibition but could usefully show their products here as well.

The question of space may be the limiting factor to a large extent, but, as the stand of Machinery (Continental) Ltd. shows, models are a very useful way of resolving this problem. Film units showing the equipment at work can often also convey more than the actual machine displayed. In this connection congratulations are due to Saville (Tractors) Ltd., Mackay Industrial Equipment Ltd., Machinery (Continental) Ltd., and F. E. Weatherill L'd. for films showing the operation of their equipment. It may perhaps be useful to reflect that the showing of actual pieces should be considered an adjunct to the main display and not its basis. Facts and figures about the equipment should be prominently displayed, as done by Whitlock Bros Ltd. concerning the new Dinkum Digger. What is the equipment, what does it do, how does it do it, how many men does it displace, where has it been used: those are the questions the exhibitors should aim at answering, in an attractive, graphic way.

This raises the problem of who the exhibition should be aimed at. At the moment it is concentrating on the builder, its main customer. But surely it is time to make an effort to attract the interest of the general public as well as that of the specialist. Building, the largest of the nation's industries, has as exciting a story to tell as the steel, aircraft or oil industries, and where better to show it than in the display of the machines which are taking out the backbreaking jobs of construction and making possible things undreamed of in the pickand-shovel days? It is the traditional romance of man versus nature which will attract to the industry the best of our young

There are a number of successful stands, the best being those which are least crowded and where a piece can be studied in comfort from all sides. To pack four or five machines into a confined space may be an interesting garaging problem, but it has little to do with successful display. Amongst the best stands are those of: A. C. E.

Machinery Ltd., Massey-Harris-Ferguson. and Parker Saville Ltd. Also special marks to Wickham Engineering Co. Ltd. for display of an operating conveyor belt, to Rapid Metal Developments Ltd. and Bri.ish Building & Engineering Appliances Ltd. for imaginative formwork construction, and to Sterling-Safway for displaying various ways in which their scaffolding units can be used. Much of the exhibition space is taken up with various types of excavator, the loading shovel and tractor shovel predominating. The loading shovel tyre-mounted is used both as an excavator and a loading machine. The tractor shovel, either track or tyre mounted, combines the power and excavating capabilities of a bulldozer with the usefulness of loading equipment. In the loading shovel excavator range there is a new companion model to the well-known Dinkum Digger, the new model having fourwheel drive and being able to dig trenches up to 14 ft. deep with a 40 cu. yd. capacity per hour in normal ground. It also has 190 deg. slewing with 18 ft. reach.

International Harvester Co. of Great Britain Ltd. are exhibiting a new rubber-tyred tractor shovel, model HO, with four-wheel drive. This is a very large American machine of 125 b.h.p. The rubber-tyred model has the advantage over the crawler tractor type by virtue of its greater speed. This firm is also showing a crawler tractor shovel, model B643, with a Clamshell bucket. It is capable of very precise stripping and fast dumping or loading into lorries.

A number of firms are showing scaffolding of various types. A more unusual type is shown by Sterling-Safway, consisting of unit scaffolding based on a number of prefabricated frames. These are designed for 6 ft. 4 in. lifts, lifts suitable for concrete frame erection, and can be extended with a bracket scaffold capable of being positioned at any height for brick cladding lifts. It becomes very economical on higher buildings where towers of these prefabricated units are spanned between with lattice ledgers. The firm is now thinking of developing a method of suspending the bracketed scaffold from these ledgers in order to be able to cope with brick cladding lifts when using this more economical type. The cost of a building of total area 97,500 sq. ft. (period of erection 36 weeks) was £4,360, or the equivalent of £4 8s. per 100 sq. ft.

Two well-known crane makes, Liebherr and Weitz, are shown by *Tower Cranes Ltd.* and *Machinery (Continental) Ltd.* respec-

tively. They represent the two basic types of tower crane, the German with a luffing jib, and the French with a fixed horizontal jib and a crab. Weitz have now introduced a new light tower crane of 10·7 ft./ton capacity with a maximum reach of 36 ft. 1 in. and maximum height under the hook of 41 ft. It is obviously designed for building blocks of flats of up to four storeys. Liebherr have developed a compensating unit which keeps the load at a constant height when the jib is being raised or lowered.

Handling of concrete is, of course, as always, a very interesting and increasingly important problem. There are two conveyor belt systems shown, one by Wickham Engineering Co. Ltd. and the other by David Roberts & Co. (Engineering) L.d. These conveyor belts are very flexible, as they can be added to in unit lengths of 16 to 18 ft., and the units can be swung and slid under each other. The whole concrete handling operation becomes mechanized when this type of conveyor is used with an automatic tipping hoist such as the new 10-cwt. A.C.E. mobile builders hoist of 8 cu. ft. capacity. Another method of conveying concrete, shown by Machinery (Continental) Ltd. is the "Placy ' pneumatic concrete transporter, of French design. It has an advantage that the pipe is clear of the concrete most of the time and is therefore easily cleaned. It can pump concrete to a height of 200 ft. and up to 2,000 ft. horizontally. There are a number of these machines now operating in this country. They can place comfortably 16 cu. yd. of concrete per hour.

Most interesting to the architect are various prefabricated shuttering systems which are being displayed by a number of firms, amongst them Acrow (Engineers) Ltd., British Building & Engineering Appliances Ltd., Kwikform L'd., H. Newsum Sons & Co. Ltd., Rapid Metal Developments Ltd.. Scaffolding (Great Britain) Ltd., and others. The problem of the shuttering sub-contractor or the builder is to try and fit the standard units on to buildings which have not been designed to hold them. Though the manufacturer is now providing a very wide range of sizes, the builder cannot deal with frequent changes in sizes of members and with dimensions going into fractions of an inch. It seems reasonable to expect that architects should design to suit these prefabricated forms in the same way as they have chosen to design to suit various standard windows, rolled steel joists, etc. Literature on standard sizes and method of erection was available on the stands, and all firms were very keen to explain the potentialities of their systems as well as the difficulties which hamper their attempts to provide forms which will give the architect even greater flexibility.

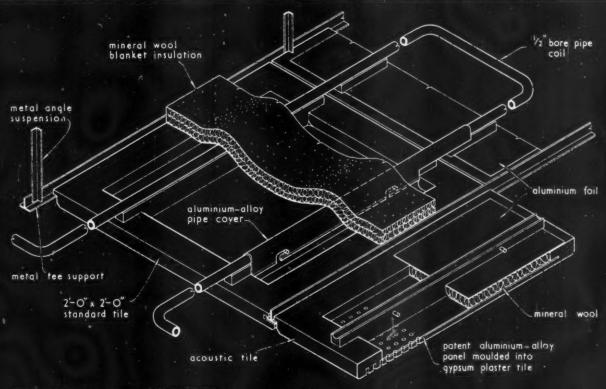
Looking to the future, one hopes that at the next Building Exhibition there will be more collaboration between the manufacturer and the distributor to explain their product to the wider public, that there will be less duplication of items, and more concentration on a selected unit shown with all the modern graphic techniques, such as films, charts showing production use, and demonstrations.



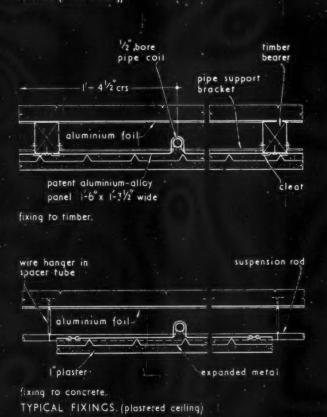


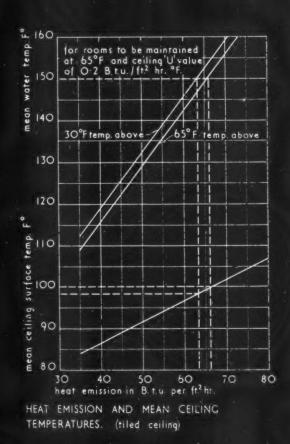
SPACE HEATING HOT WATER

The Architects' Journal Library of Information Sheets 647. Editor: Cotterell Butler, A.R.I.B.A.



GENERAL ASSEMBLY OF COMPONENT PARTS. (tiled ceiling)





29.H5 · STRAMAX · RADIANT HEATING AND ACOUSTIC CEILINGS

This Sheet describes Stramax radiant heating and acoustic ceilings. Two types are available, tiled or plastered, and both may be suspended from any type of structure. The drawing on the upper face of the Sheet shows the general assembly of component parts with the tiled ceiling, and the typical fixing details on the lower part show the plastered ceiling. The heat emission and mean ceiling temperature graph is for the tiled ceiling.

Principle

The system consists of a suspended ceiling incorporating a hot water pipe coil to which is clipped a patent aluminium-alloy panel. Heat is transmitted through the aluminium-alloy panel, by conduction, to a plaster and expanded metal construction or plaster tiles and then, by radiation, from the under surface to the room below. The upper surface is insulated by aluminium foil or a mineral wool blanket. Services can be concealed behind the suspended ceiling and are accessible in the case of the tiled ceiling.

Weight

The weight of the suspended ceiling, including pipework plus water, is approximately 6 lb. per sq. ft.

Components

Pipe coil: This is prefabricated to close limits in steel tube of $\frac{1}{2}$ -in. diameter nominal bore and is welded throughout and hydraulically tested before fixing.

Plaster tiles: The tiles are made from gypsum plaster and those required for heating have an aluminium-alloy panel moulded in during manufacture, as shown on the face of the Sheet.

A ceiling is erected with a proportion of unheated tiles (which may vary according to requirements), and these latter are without the aluminium-alloy insert. Sound-absorbing tiles have the perforations carried right through the plaster tile and aluminium-alloy insert where this is fitted. Heating tiles are each provided with two channels at the back for fixing to the pipe coil by means of specially-formed aluminium-alloy pipe covers: tapered slots on the pipe cover engage with pegs on the side of the tile channel.

Patent aluminium-alloy panel: Those for use with plastered ceilings are 1 ft. 6 in. by 1 ft. 3½ in. wide and those inserted in the gypsum plaster tiles are 1 ft. 8 in. by 1 ft. 8 in.

Fixing

Tiled ceiling: The plaster tiles are clipped to the pipe coil, using two pipe covers for each heated tile, and mineral wool placed over the backs of the tiles. Where standard tiles are used, mineral wool is placed over the upper surface but acoustic tiles are pre-filled with mineral wool and sealed over with aluminium foil. The ends of the pipe coil are suspended from the roof structure with rust-proofed hangers. All types of light fitting, particularly the 2 ft. 0 in. module type, can be accommodated in the ceiling.

Plastered ceiling: The pipe coil is suspended on a

steel rod system which is attached to the roof structure as shown in the sections on the lower face of the Sheet. The brackets of the wire hangers used in the fixing to concrete are usually cast in the roof slab. The patent aluminium-alloy panels are clipped to the pipe coil along the straight run and expanded metal wired up hard to their underside. Plastering is carried out to a Stramax specification.

Finish

Pipe coil: This is painted to resist corrosion.

Plastered ceiling: The plaster can be plain or roughfinished

Tiled ceiling: Tiles are available with many decorative treatments, plain and perforated, and can be painted almost immediately after erection.

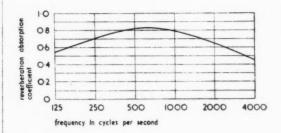
Heat Emission

The graph on the face of the Sheet gives the heat emission, mean ceiling and water temperatures for the tiled ceiling. The figures are slightly improved for the plastered ceiling, as shown in the following example:

With a mean water temperature of 150° F. and a room temperature of 65° F., the ceiling surface temperature will be 101° F., giving an emission of 68 B.t.u./ft.² hr. For a top floor having a roof "U" value of 0.2 B.t.u./ft.² hr., F. and external air at 30° F., the emission will be 65 B.t.u./ft.² hr.

Sound Absorption

The small graph shows the reverberation absorption coefficients for varying frequencies. The peak has been arranged to coincide with the frequency of noise level which is encountered in the majority of requirements for sound-absorbing treatment. The graph shows values achieved under test by the National Physical Laboratory.



Further Information

The manufacturer maintains a technical service to advise on problems relating to the Stramax ceiling and to prepare detailed schemes for installations.

Compiled from information supplied by:

Stramax Ceilings (G.B.) Ltd.

Address: 19, Rea Street South, Birmingham, 5. Telephone: Midland 4674.

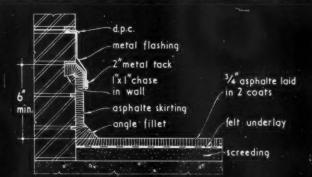
Telegrams: Stramax, Birmingham, 5.



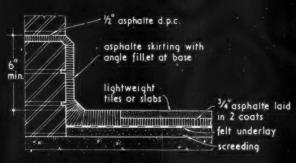


ASPHALTE APPLICATIONS ROOFING

The Architects' Journal Library of Information Sheets 648. Editor: Cotterell Butler, A.R.J.B.A.

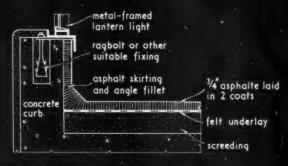


CONCRETE ROOF

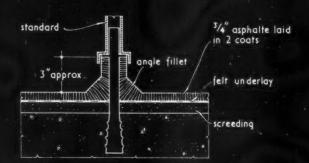


WITH TILE FINISH

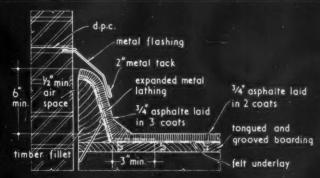
TYPICAL ROOF CONSTRUCTIONS.



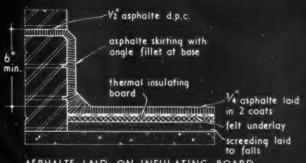
CURB TO LANTERN LIGHT



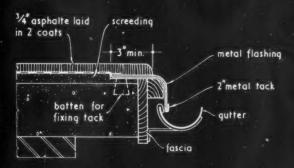
TREATMENT OF METAL STANDARD



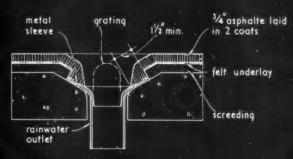
TIMBER ROOF



ASPHALTE LAID ON INSULATING BOARD



FINISH AT GUTTER



FINISH AT RAINWATER OUTLET THROUGH ROOF.

12.F2 ASPHALTE ROOFING

This Sheet is one of a series on asphalte dealing with its use for roofing. Sheet 12.F1 describes its use in building construction. Other Sheets in the series deal with specific applications in flooring and paving and in damp-proofing and tanking.

Asphalte may be used as a covering for curved, flat, pitched or mansard roofs, gutter linings and all types of weathering. On an adequately prepared substructure the asphalte will stay in position even on vertical surfaces and may easily be carried round dormer cheeks at the same time as the main roof slope is being covered. As asphalte is waterproof and extremely durable, it is a suitable covering for flat roofs intended for use as roof gardens or reservoirs. One of the advantages of asphalte for roofing is that it may be dressed round any projections in the roof surface. The asphalte is carried up the face of any chimney stack, lantern light, etc., and jointed to the horizontal with a stout angle fillet at the base and tucked into a chase at the top.

A timber substructure should be rigid and free from any tendency to shrink and warp, with joists close enough to ensure this. Boards should be adequately seasoned and protected from rain during erection, and should be firmly and adequately nailed, with nail heads punched below the surface. For general notes on substructures, see Sheet 12.F1.

Preparation of Surfaces

Falls: In order to leave flat roofs free from standing water the roof should be slightly sloped. Details of methods for achieving this are given on Sheet 12.F1. Keying: A suitable key should be provided on sloping or vertical surfaces. The methods in which this may be done are described on Sheet 12.F1.

Underlays: On all flat roofs it is essential that contact between the substructure and the asphalte should be prevented by interposing a layer of felt laid loose with lapped joints. On vertical or steeply sloping timber surfaces, felt should be interposed between the timber and the asphalte and secured to the timber with galvanized large-headed felt nails. Also, metal reinforcement should be fixed over the felt to provide a key as shown on the face of the Sheet.

Flat areas are laid in bays in two coats. The junction between adjoining bays in any coat should be at least 6 in. from a junction in a preceding coat. On slopes up to 30°, two coats of equal thickness totalling not less than \(\frac{3}{4} \) in. are recommended. On vertical concrete or brick surfaces, including skirtings, upstands and drips, and on slopes over 30°, two coats of equal thickness should be laid, totalling not less than \frac{1}{2} in., or three, totalling not less than \$\frac{1}{2}\text{ in. On vertical timber surfaces asphalte should be in three coats to a minimum total thickness of 3 in. Roofs subject to traffic require two coats of asphalte, the first 3 in. and the second of special hardened grade not less than \$ in. After laying, a solid angle fillet, 2 in. wide, should be formed at all internal angles. For a roof designed as a reservoir three coats of asphalte of equal thickness are essential. On horizontal surfaces and slopes up to 30° the total thickness should be 11 in. On vertical surfaces and pitches over 30°, three coats totalling $\frac{3}{4}$ in. in thickness, should be laid. A solid angle fillet should be formed at all internal angles.

Skirtings: The minimum height for a skirting is 6 in. It is preferably continued through the wall as a d.p.c., but, where it is tucked into a chase in the brickwork, it should be pointed with frost-resisting mortar or protected by a metal flashing. Skirtings for timber and concrete roofs are shown on the face of the Sheet.

Flashings: Metal flashings should be used with the asphalte in cases where there are conditions of extreme exposure or where high temperatures are anticipated. Examples are shown on the face of the

Thermal Insulation

In addition to ensuring comfortable temperatures inside the building, thermal insulation in flat roofs prevents the roof structure moving, through solar radiation, and damaging the roof. Insulation may be by an insulating medium above and/or below the roof slab, or by a reflecting light-coloured upper surface.

Where roofs are to receive traffic, asphalte should be laid on felt placed directly over the substructure and light-coloured tiling super-imposed, as shown on the face of the Sheet. The tiling should provide a degree of insulation by solar reflection and/or its inherent insulating properties; otherwise, an insulating medium, e.g., cork, should also be used.

Roofs not intended for traffic may have a white heat-reflecting surface. Paints should not be used unless approved by the asphalte contractor. For a permanent finish, white spar chippings may be embedded in the asphalte at the time of laying, or applied afterwards with a suitable adhesive.

Specification Note

In addition to the information normally required by the asphalte contractor, the following details should be supplied:

(1) Whether the roof is intended to take other than occasional pedestrian traffic.

(2) Type of special surface finish, if any, required. (3) Any unusual conditions which the roof is expected to withstand.

Relevant British Standards

BS 988: Mastic asphalte for roofing, type A (limestone aggregate). BS 1162: Mastic asphalte for roofing, natural rock with high bitumen content (6-10 per cent.).

Compiled from information supplied by:

Val De Travers Asphalte Ltd.

Head Office: Val De Travers House, 21-22, Old Bailey, London, E.C.4.

Telephone: City 7001 (10 lines).

Works: Sun Wharf, Creekside, Deptford, London, S.E.8.

Telephone: Tideway 2611.

Branches: Birmingham, Canterbury, Exeter, Glasgow, Lincoln, Liverpool, Manchester, Newcastle.

NOTE.—Throughout this series of Sheets the spelling asphalte has been adopted to comply with this manufacturer's usage.





working detail

CANOPY: SHOP IN STOCKHOLM

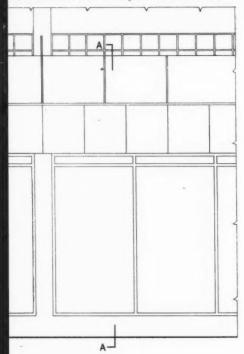
Sven Backstrom and Leif Reinius, architects



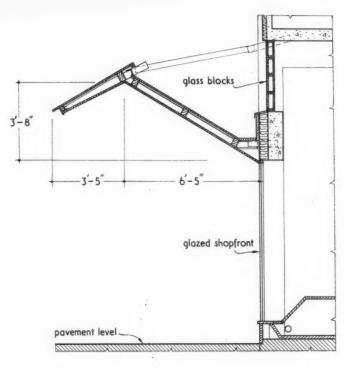
The interest of this detail lies less in the construction used (which is simple enough) than in the form. This has been determined by the desire to provide a canopy to the full depth of the pavement without excluding too much light from the shop window. It will be noticed that the traditional shop fascia has disappeared: it has been replaced partly by neon signs which stand above the roof of the canopy, partly by hanging signs suspended from the apex of the canopy. It is interesting to record that all the signs shown in the photograph were designed by one architect, Erik Thelaus. They are made from 5mm, steel rod welded and painted black, and sheets of coloured Perspex.

CANOPY: SHOP IN STOCKHOLM

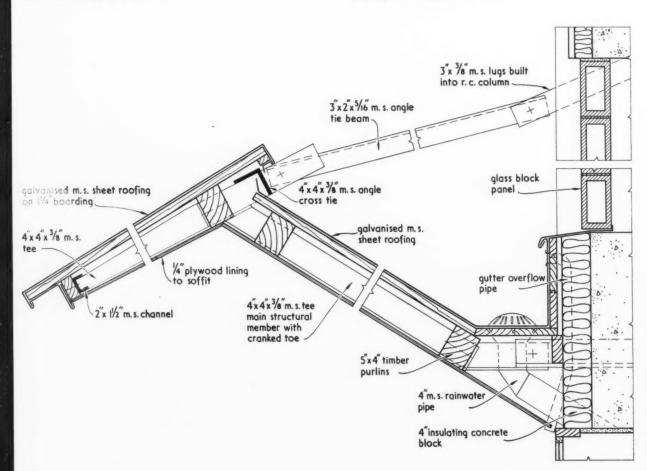
Sven Backstrom and Leif Reinius, architects



ELEVATION. scale 1/" = 1' - 0"



SECTION A-A. scale 1/4 - 1'- 0"



DETAIL OF CANOPY.

note: figured dimensions in feet and inches are approximate



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lasi an har des ner par eve zvii ead sq. wi vio a an M cit mi tie

FLATTED FACTORY IN BIRMINGHAM

The first flatted factory building to be completed in England was opened last week in Dartmouth Street, about a mile from the centre of Birmingham, by the Lord Mayor. This scheme designed by Philip Skelcher and Partners, in association with A. G. Sheppard Fidler, city architect, will eventually accommodate 46 firms with an average of 13 employees each, at a rent of about 5s. 6d. per sq. ft. per annum, of which is. 3d. will be a charge for the services provided by the Corporation. The rent for a typical firm will be about £,550 per annum for approximately 2,000 sq. ft. Many of the small businesses in the city, which are now carried on in premises which lack the ordinary ameni-



ties of industrial life, are being displaced by major slum clearance schemes, and these firms will be given priority in the allotment of space in flatted factories. The Dartmouth Street building, which

will be followed shortly by a smaller scheme at Holloway Head, has a floor area of nearly 119,000 sq. ft. and cost about £420,000. The scheme will be fully illustrated in a later issue of the JOURNAL.

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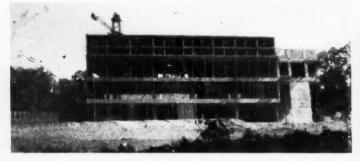
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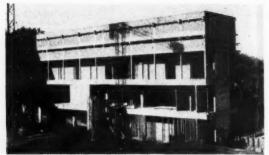
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CORBUSIER'S MONASTERY NEAR LYONS





These pictures show building progress on Corbusier's monastery in the grounds of the Château de La Tourette (near Lyons) which has been the home for many years of a small Dominican community. (See also page 801.) Each cell has its own balcony, divided from the cell proper by a glass wall. The students' cells are of uniform dimensions: length 5.92 m., width 1.83 m., height 2.2 m., with a balcony 1.66 m. in depth. The professors' cells are slightly wider—2.26 m. Corridors, lighted by a continuous glazed strip at head-height and vertical light-shafts, extend around three sides of the inner court and provide access to the cells. Below the cells are the various public rooms: library (south wing), recreation rooms for the students (east wing), and reading rooms (west and part of south wing). Below the reading rooms in the west wing is the refectory and chapter-house, and below them, on the ground floor, the kitchens, heating-plant and domestic offices. A terrace on the western side of the monastery affords independent access to these offices, and also to the church. All the public rooms are lighted by means of great plates of corrugated glass, three and a half metres high, divided by vertical concrete strips spaced at irregular intervals. Work is already far advanced on the three wings of the monastery, though comparatively slight progress has yet been made so far as the church is concerned. It is hoped that the new buildings will be ready for occupation in January, 1958. So far as can be judged at this stage of the construction, there seems every reason to suppose that Le Corbusier's second ecclesiastical commission will be no less memorable than his first. La Tourette promises to be a notable landmark in the working out of the Dominican policy of going to the "Maîtres au dehors" rather than to the accepted "ecclesiastical" architects.

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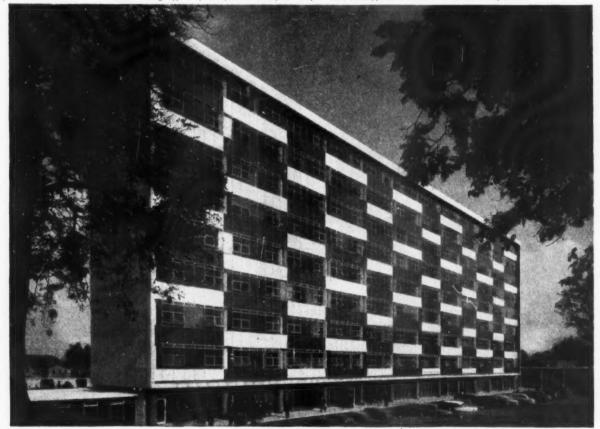
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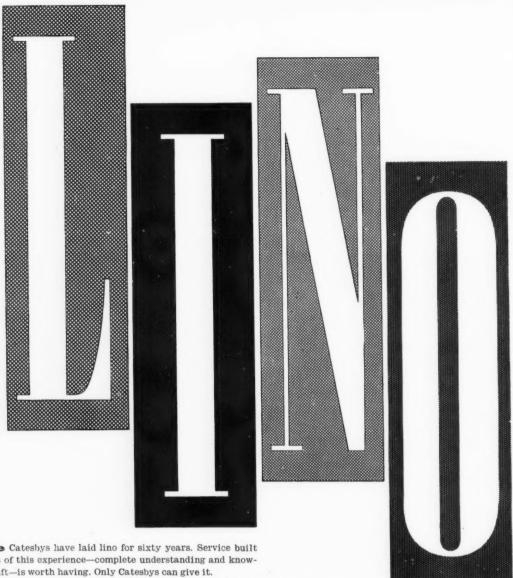
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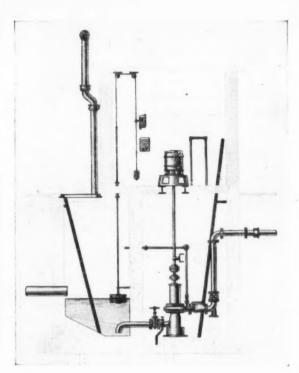
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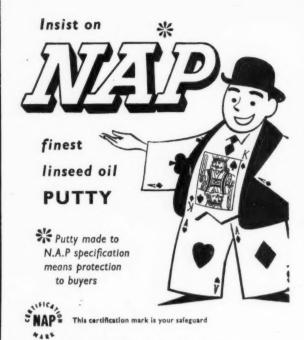
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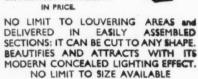
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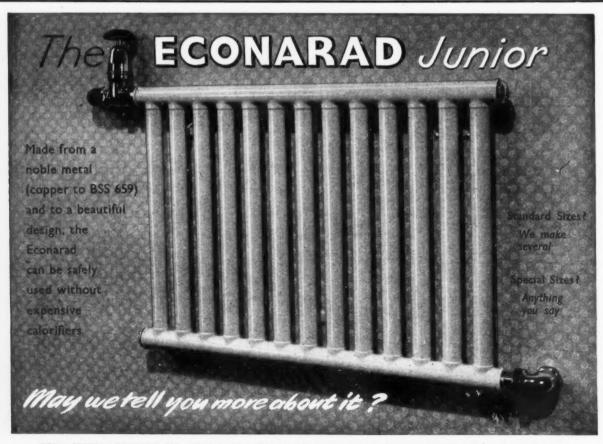
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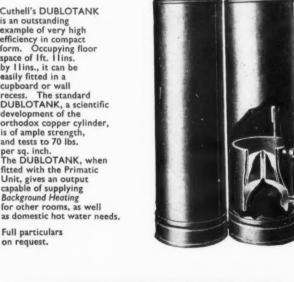


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This authoritative textbook has long been recognised by architects, engineers and advanced students as the standard work on its subject. First published before the war, it has already run through five printings in two editions. For this new edition, the third, the book has been thoroughly revised, brought up to date and largely reset. Much new information, based on recent research, has been added. The data generally has been brought into line with the IHVE Guide to Current Practice (1955 edition), as for instance, the heat transmission of building materials and the flow of water in pipes. The chapter dealing with the pipe-sizing of hot water systems has been re-written with special reference to pump circulation, and graphical methods of simplifying calculation are described. New equipment and systems now referred to include high temperature radiator heating, the pressurization of high-pressure hot water by gas, medium-pressure hot water, forced convectors, heated acoustic ceilings, electric floor warming and night-storage heaters. The chapters on air-conditioning have been extensively revised and re-arranged to include unit-conditioners, primary air systems, cooling by cold coils, and high velocity air-distribution using single or double ducts; whilst the section on refrigeration has been expanded into a separate chapter. Size 9 in. by 64 ins. 612 pages, with 97 tables and 420 line-

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illustrations; also 32 pages plates. Third edition, revised and enlarged 65s. net, postage 2s. 0d.

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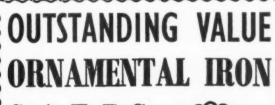
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saper Replies to Box Numbers should be addressed sare of "The Architects' Journal," at the address

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LONDON COUNTY COUNCIL

Selections for appointment are now being made from ARCHITECTS DEPARTMENT

Belections for appointment are now being made from ARCHITECTS who have passed their Final Examinations this summer. Starting salaries up to £712 10s. a year, in scale £637 10s. to £860. Vacancies also for ARCHITECTS of experience statarting salaries up to £1,090.

Pull programme of Houses, Flats, Schools, and sany other interesting buildings.

Application forms and full particulars from the irchitect (Ref. AR/EK/46/57), The County Hall, £B.1. (1609)

LANCASHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
ARCHITECTS, who have recently passed their
final Examinations, are invited to apply for
posts with starting salary of 4750 a year in a
sale which rises to £1,030.
Applicants with experience may be offered
higher starting salaries.
Interesting programme of Schools, Technical
Colleges and similar work.
Applications, obtainable from the County
Architect, G. Noel Hill, F.R.I.B.A., M.T.P.I.,
P.O. Box 26, County Hall, Preston, to be returned
mot later than Monday, 9th December, quoting
Ref. A/AJ.

BOROUGH OF FINCHLEY

Ref. A/AJ.

BOROUGH OF FINCHLEY
ARCHITECTURAL ASSISTANT
HOUSING AND TOWN PLANNING
DEPARTMENT
Salary within the Special Scale, according to
qualifications and experience (£755×£40 to £1,030,
tequiring R.I.B.A. Final Examination or
squivalent and 5 years' experience), plus London
reighting. Experience in Local Authority
Bousing and design of multi-storey flats an
dvantage.

weighting. Experience in Local Authority Housing and design of multi-storey flats an advantage.

Subject to satisfactory service, anticipated duration of the appointment will be 2/3 years.

The National Scheme of Conditions of Service and the Local Government Superannuation Acts apply, and medical examination required.

Applications, stating age, full particulars of qualifications and experience, and accompanied by copies of two testimonials (or the names of two referees), to the Borough Housing and Town Planning Officer. The Avenue, Finchley, N.3, by and later than first post on Wednesday, the 4th December, 1957.

R. M. FRANKLIN.

R. M. FRANKLIN, Town Clerk

Municipal Offices, N.3.

Municipal Offices, N.3.

CARSHALTON URBAN DISTRICT COUNCIL ARCHITECTURAL ASSISTANT, Engineer and Surveyor's Department. Must hold R.I.B.A. Intermediate Examination Certificate and have had good training, be experienced in detailing and a competent draughtsman. Salary within scale range (725–6845 p.a., plus London "weighting" (23) at age 26).

Carshalton has a population of 63,000 and has a large and varied programme of building works. Application forms, obtainable from the undersigned, must be returned, with names and addresses of three referees, not later than 10th December, 1967.

Canvassing will disqualify.

C. H. DURRANT, Clerk of the Council.

District Council Offices, The Grove, Carshalton, Surrey.

BEESTON AND STAPLEFORD URBAN
JUNIOR ARCHITECTURAL ASSISTANT,
Grade I (£575-£725)
Applications are invited for the above appointment, with commencing salary within the scale according to qualifications and experience.
Applications, naming two referees, to the Surveyor Town Wall, Beeston, Nottingham, by 10th December, 1957.

H. D. JEFFRIES

H. D. JEFFRIES, Clerk of the Council. 8171

HAMPSHIRE COUNTY COUNCIL
PLANNING ASSISTANT required in the SouthWest Area Planning Office. Lyndhurst, A.P.T.
Grade I (£875—£725). Commencing salary in
accordance with qualifications and experience.
Candidates should preferably have passed the
Intermediate examination of the Town Planning
Institute or of a related professional body and
have had experience in the Planning Department
of a Local Planning Anthority. The appointment
is pensionable and subject to a satisfactory medical report. In approved cases the County Council
assist with removal and other expenses.
Applications, stating axe, education, qualifications and experience with a copy of one testimonial and the names of two referees, should
peach the Clerk of the County Council. The
Castle, Wincheser, by 6th December.

8153

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DENBIGHSHIRE COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT, WREXHAM

Applications are invited for the post of CHIEF QUANTITY SURVEYOR, A.P.T., Grade V (£1,175—£1,325), in the above Department. Candidates must be Corporate Members of the Royal Institution of Chartered Surveyors, Sub-Division III (Quantities Section); must have wide experience in the preparation of Bills of Quantities for all types of building works for a County Authority, measurement of works on site, preparation of interim certificates and final accounts, and must be capable of taking charge of a Quantity Surveying Section. Application forms may be obtained from me. Completed application forms to be returned to me by 30th November, 1957.

W. E. BUFTON,

Clerk of the County Council.

W. E. BUFTON,
Clerk of the County Council.
County Offices, Ruthin.

ROYAL BOROUGH OF KINGSTON-UPONTHAMES
BUILDING SURVEYING ASSISTANT
A.P.T. Grade II
Commencing at £725 rising to £845 per annum,
plus London weighting.
Applicants must have a good all round knowledge of building trades and be capable of preparing specifications, estimates and supervising
contracts in connection with the maintenance
and repair of corporate buildings, etc.
National Scheme of Conditions of Service and
Local Government Superannation Acts apply.
Canvassing will disqualify. Details and forms
of application from Borough Surveyor, Guildhall,
Kingston-upon-Thames. Applications by 16th
December, 1957.

A. B. ROGERS.

A. B. ROGERS, Town Clerk.

Guildhall, Kingston-upon-Thames. 19th November, 1957.

NIMISTON-UPON-THAMMES.

19th November, 1957.

CITY OF NOTTINGHAM EDUCATION COMMITTEE

COLLEGE OF ARTS AND CRAFTS Principal: ALFRED H. RODWAY, A.R.C.A. Head of the School of Architecture: D. W. NOTEN, B.Arch.(Hons.), Liverpool, A.R.I.B.A.

Applications are invited for the post of full-time STUDIO MASTER in the School of Architecture, which is recognised for exemption from the R.I.B.A. Final Examination. Duties to commence on the 1st January, 1958, or nearest date possible thereafter. Candidates should be Architects, preferably holding the degree or diploma of a recognised School, and should have had a minimum of three years practical architectural experience after registration. Subject to the conditions governing full-time teaching service, the person appointed will be given such opportunities as may be practicable to maintain prefessional practice. Salary to be in accordance with the Burnham Technical Scale for Grade II Assistants.

ssistants.

Application forms and further particulars from the Principal, College of Art and Crafts, Waverley treet, Nottingham, to whom the forms should be returned within 10 days of the publication of the advertisement.

W. G. JACKSON, Director of Education.

Education Office, Exchange Buildings, Smithy Row Nottingham.

COUNTY BOROUGH OF BOURNEMOUTH BOROUGH ARCHITECT'S DEPARTMENT Applications are invited for the appointment

Applications are invited for the appointment of:—

(a) TWO ASSISTANT ARCHITECTS. Salary Grade Special Scale (£750—£1.030 p.a.).

(b) ARCHITECTURAL ASSISTANT. Salary Grade A.P.T. I (£575—£725 p.a.).

Successful candidates will be appointed at present salary if within the incremental scale. Candidates for post (a) must be fully qualified (by examination) Members of the R.I.B.A. for post (b) to have passed the Intermediate Examination of R.I.B.A.

Application forms and further particulars from Borough Architect, Town Hall, Bournemouth. Completed applications to reach me by 10 a.m. 14th December, 1957.

A. LINDSAY CLEGG.

Town Clerk.

B181

AUSTRALIA—UNIVERSITY OF SYDNEY Applications are invited for the position of ENIOR LECTURER IN ARCHITECTURAL ONSTRUCTION within the Department of

CONSTRUCTION within the Constructive Constructive. Salary for a Senior Lecturer is within the range £A1,800-£70-£A2,150 per annum, plus cost of living adjustment (£70 men. £53 women) and will be subject to deductions under the State Superannuation Act. (The current scale of salaries is at present under revision.) The commencing salary will be fixed according to the qualifications and experience of the successful annihient.

qualincations and experience of the successful applicant.

Finance may be available for home purchase in approved cases to married male appointee.

Further particulars and information as to the method of application may be obtained from the Secretary. Association of Universities of the British Commonwealth, 36, Gordon Square, London, W.C.1.

The closing date for the receipt of applications. in Australia and London, is 28th December, 1957.

COUNTY BOROUGH OF DERBY
BOROUGH ARCHITECT'S DEPARTMENT
1. SENIOR QUANTITY SURVEYOR. Special
Grade (£750-£1,030 per annum), Qualifications:
A.R.I.C.S. (Quantities) or A.I.Q.S. or A.I.A.S. with propriate experience, ASSISTANT BUILDING INSPECTOR, A.P.T. de I (£575-£725, par approximately)

2 ASSISTANT BUILDING INSPECTOR, A.P.T. Grade I (£575-£725 per annum).

The position is that of assistant to the Senior Building Inspector and applicants must have a thorougn knowledge of Building Byelaws and ancillary duties.

Qualifications: Higher National Certificate in Building, or equal.

Commencing salary according to qualifications and experience. Permanent superannuable appointments, subject to one month's notice and to medical examination. National Conditions of Service.

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Service.

Application forms obtainable from and to be returned to the Borough Architect, The Council House, Corporation Street, Derby, not later than Thursday, 12th December, 1987.

G. H. EMLYN JONES, Town Clerk.

CITY OF LEEDS
CITY ARCHITECT'S DEPARTMENT
Applications are invited for the following appointments:—
Post

No. 1. SENIOR ASSISTANT ARCHITECT, A.P.T. IV, £1,025-£1,175. 2. ASSISTANT ARCHITECTS, A.P.T. III, £845-

£1,025. 3. ASSISTANT ARCHITECTS, A.P.T. 11, £725— 4. ARCHITECTURAL ASSISTANTS, A.P.T. I.

4575-£725.

5. DRAUGHTSMAN, A.P.T. I, £575-£725.
Candidates for posts Nos. 3, 4, 5, should be capable draughtsmen with experience in Structural design. or general Architectural work.

6. ASSISTANT QUANTITY SURVEYORS, A.P.T. III. £845-£1.025. 7. ASSISTANT QUANTITY SURVEYORS, A.P.T.

I, £575-£725. 8. ASSISTANT SURVEYOR (LAND), A.P.T. I.

8. ASSISTANT SURVEYOR (LAND), A.P.T. I, £575—£725.
Candidates are asked to clearly indicate the post for which they wish to be considered. The commencing salary may be at any point within the salary scales as indicated. The payment of salary increments will be subject to satisfactory service and will be granted normally with effect from the lst April following the completion of six months' service.

The appointments are subject to the Locat Government Superannuation Acts 1937-1953 and the successful applicants will be required to pass a medical examination.

Application forms may be obtained from the City Architect. Priestley House. Quarry Hill. Leeds, 9, to whom they should be returned to gether with copies of three recent testimonials, by 12 moon on Thursday, 5th December, 1957.
Canvassing in any form, either directly or indirectly, will be a disqualification.

Priestley House.

Priestley House, Quarry Hill, Leeds, 9. 14th November, 1957.

Leeus, 9.

14th November, 1957.

SHEFFIELD REGIONAL HOSPITAL BOARD Applications are invited for the following posts on the Board's Architectural Staff:—
ASSISTANT ARCHITECTS—candidates must be Registered Architects and have passed the requisite examinations, Salary £700—£1,015.

ARCHITECTURAL ASSISTANT—candidates hould have passed the Intermediate Examination of the R.B. Or an examination giving exemption thereform a can examination giving exemption thereform a control of the Register of t

CITY OF WORCESTER
APPOINTMENT OF SENIOR ASSISTANT
ARCHITECT
Applications are invited for this appointment
within the Special Grade (salary £750-£1,050).
Candidates must hold the A.R.I.B.A. qualifications and should preferably have had municipal
experience.

tions and should preferanty have had minutopate experience.

The appointment is superannuable and subject to a medical examination.

Housing accommodation will be provided if necessary and a contribution will be made, if required, towards removal expenses.

A casual user's car allowance will be available. Applications stating age, present and previous appointments and experience together with the names of two referees are to be sent to the City Engineer & Surveyor, 22. Bridge Street, Worcester, by 10th December, 1957.

BERTRAM WEBSTER.

Town Clerk.

Guildhall. Worcester.

The post of Director of planning of the City and District of Vienna is soon to fall vacant. Applicants with an academic career and international experience of professional activities who can give evidence of successful and lengthy experience in a similar post of the same seniority should address their applications to the Magistrat der Stadt Wien, wien I, Neues Rathaus, Biro der Geschäftsgruppe I, 5. Stiege, I, Stock, Tür 308, by the 31st December at the latest.

Knowledge of the German language and at least on other foreign language is required. Applications should be accompanied by an exhaustive account of the applicant's career, and indication of the salary required. Original documents should not be enclosed.

BOROUGH OF BEXLEY ASSISTANT ARCHITECT
Applications are invited for this appointment, at a salary within the Special Scale (£750-£1,030 per annum) plus London weighting.
Candidates should have experience in Schools and Housing projects, and must have passed the Final R.I.B.A.

Forms of application and conditions of appointment properts.

Final R.I.B.A.

Forms of application and conditions of appointment are obtainable from the Berough Engineer,
West Lodge, Broadway, Bexleyheath, Kent, to
whom completed applications must be returned by
30th December, 1957. The Council may be prepared to assist in the provision of housing accommodation. Canvassing will disqualify.

ARTHUR GOLDFINCH,
Town Clerk.

1838.

A vacancy for Assistant Architect exists in the office of the Chief Civil Engineer, British Railways, York.

A phicants must be Chartered Architects with Applicants must be Chartered Architects with Practical experience and have ability in Architectural design and knowledge of modern building technique.

Commencing salary £809 per annum within the range £809-£956 per annum.

Limited residential free travel, etc.
Applicants should apply in writing, giving particulars of age, experience, qualifications, etc., to Chief Civil Engineer, British Railways, North Eastern Region, York

STEPNEY M.B.C. require ARCHITECTÜRAL ASSISTANTS, salary up to £1,060 p.a. Must be Registered Architects and suitably qualified. Forms from Town Clerk, 227, Commercial Road.

E.1. COUNTY BOROUGH OF STOCKBORT.

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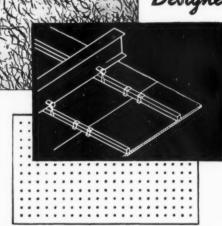
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