

THE ARCHITECTS' JOURNAL



standard contents

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

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

I GE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
I HVE	Institution of Heating and Ventilating Engineers. 75, Eaton Place, S.W.1.	
I IBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1. Euston 2450	Sloane 3158/1601
I LA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Museum 1783
I of Arb.	Institute of Arbitrators, 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2. Temple Bar 4071	
I OB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197/5176
I R	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3. Avenue 6851	
I RA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
I SE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
I WA	Inland Waterways Association. 11, Gower Street, W.C.1.	Museum 9200
I LDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1.	
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
MARS	MARS Group (English Branch of CIAM). Secretary: Gontran Goulden, Building Centre, 9, Conduit Street, W.1. Mayfair 8641	
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service. 8, St. James's Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOTCP	Ministry of Town and Country Planning. 32-33, St. James's Square, S.W.1.	Whitehall 8411
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94-98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 37, Onslow Gardens, S.W.7.	Kensington 8161
NCBMP	National Council of Building Material Producers. 10, Princes Street, S.W.1.	Abbey 5111
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1. Langham 4041/4054	
NFBTO	National Federation of Building Trades Operatives, Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1. Langham 4341	
NPL	National Physical Laboratory. Head Office, Teddington.	Molesey 1380
NSA	National Sawmilling Association, 14, New Bridge Street, E.C.4.	City 1476
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1.	Abbey 1359
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Whitehall 9936
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh. Edinburgh 20396	
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George St., S.W.1.	Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8.	Western 1571
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3.	Mansion House 3921
SIA	Structural Insulation Association. 14, Moorgate, London, E.C.2.	Central 4444
SIA	Society of Industrial Artists. 7, Woburn Square, W.C.1.	Langham 1984
SNHTPC	Scottish National Housing & Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen.	
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 75, Cannon Street, E.C.4.	City 4771
TGC	The Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation. 69, Cannon Street, E.C.4.	City 4444
WDC	War Damage Commission. Devonshire House, Mayfair Place, Piccadilly, W.1.	Mayfair 8866
WEDA	Welfare Equipment Development Association. 74, Victoria Street, S.W.1.	Victoria 5783
ZDA	Zinc Development Association. Lincoln House, Turl Street, Oxford	Oxford 47988

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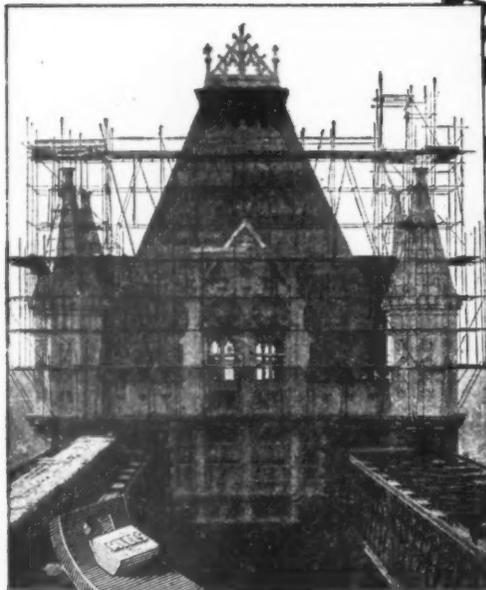
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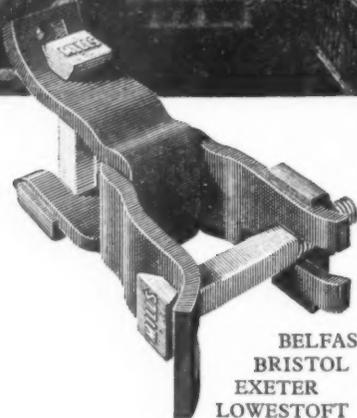
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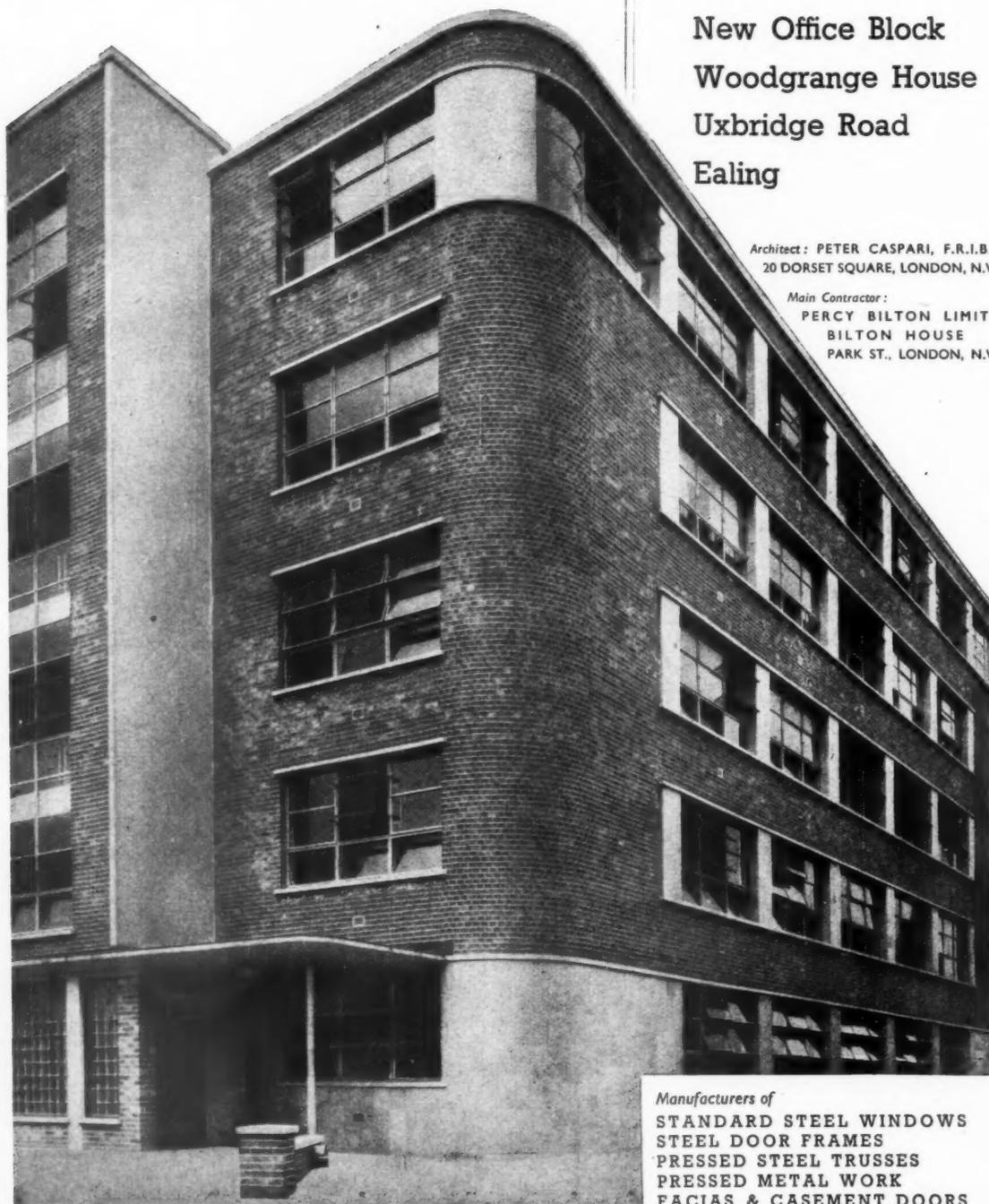
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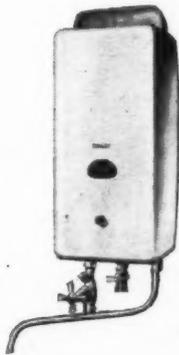
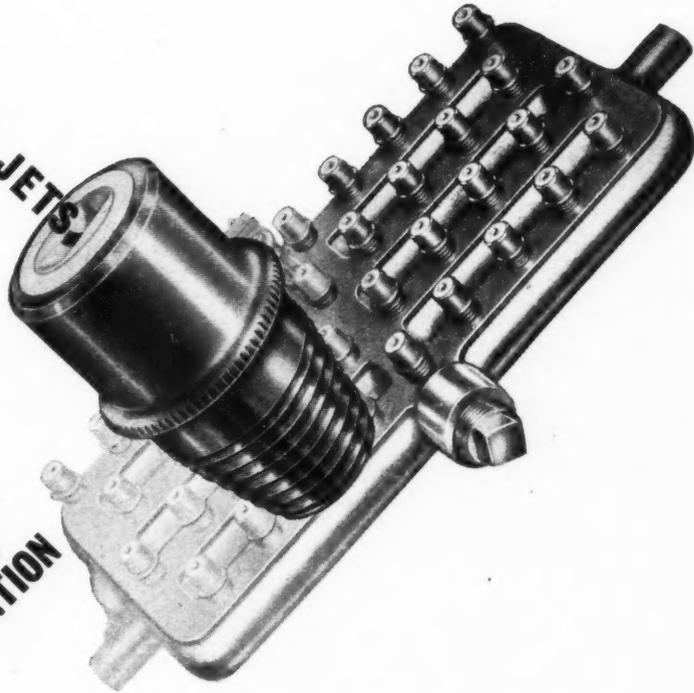
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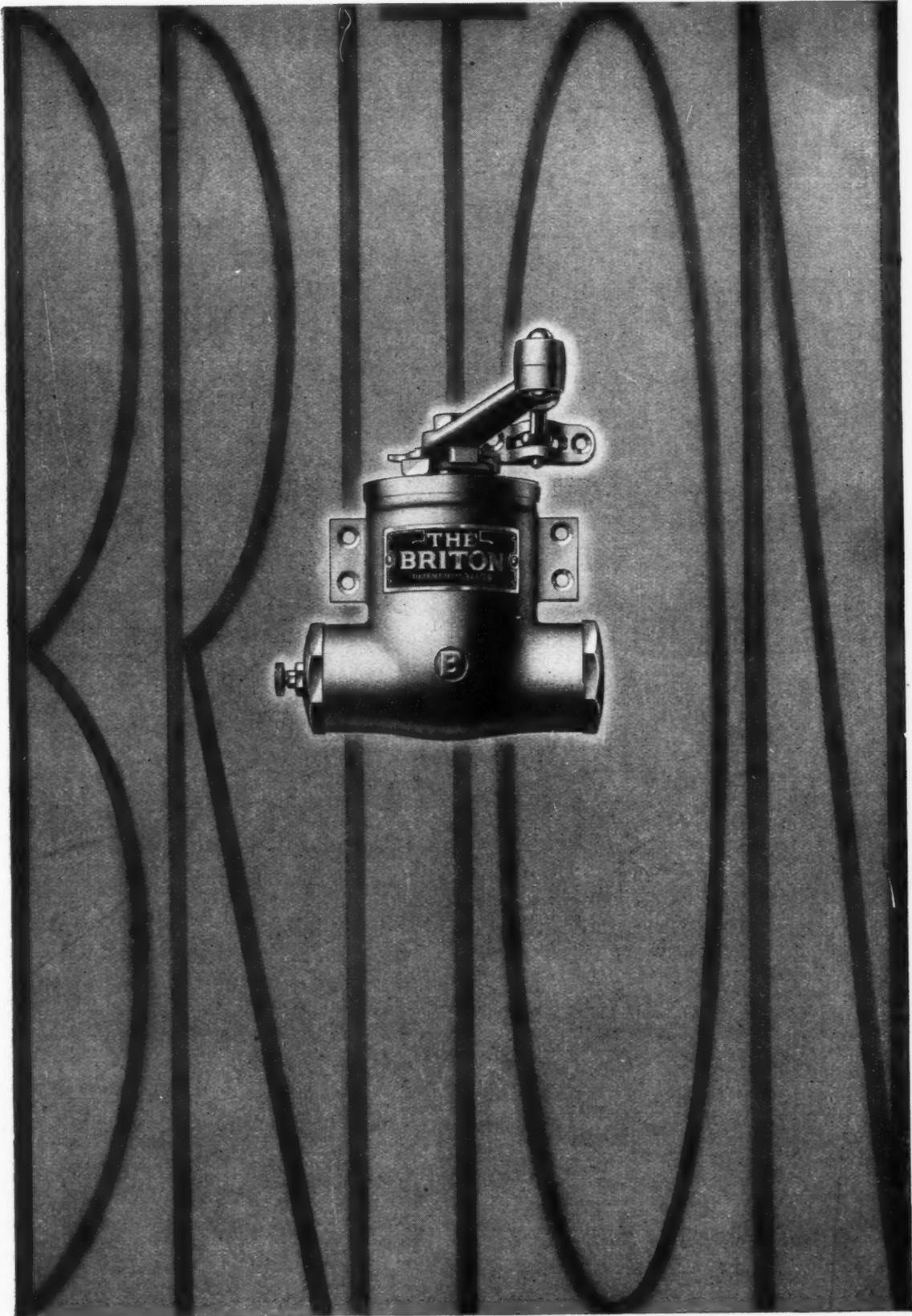


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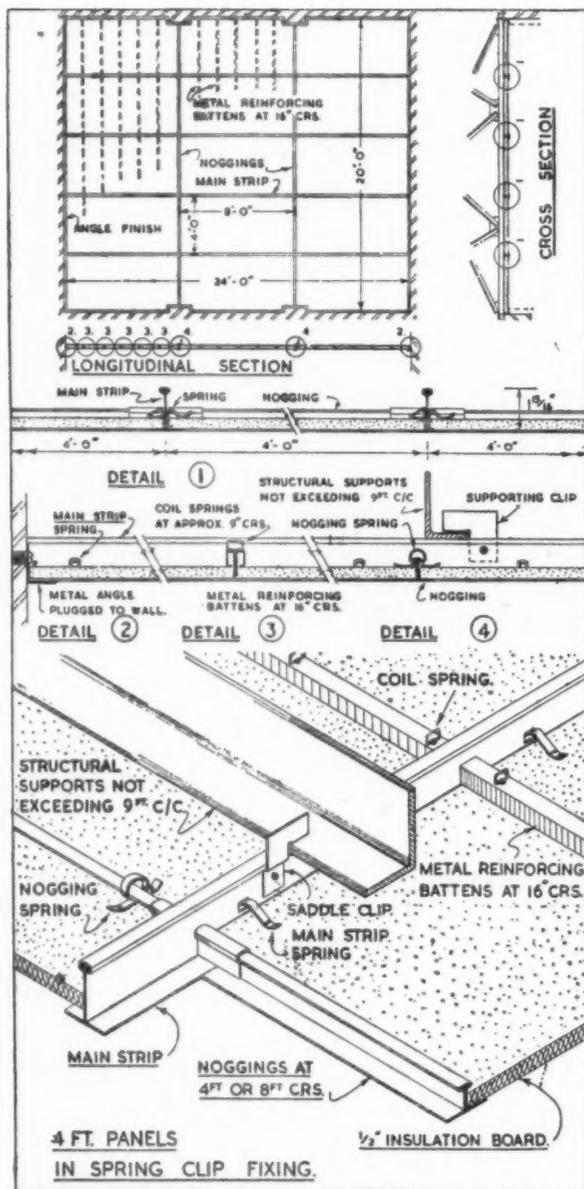


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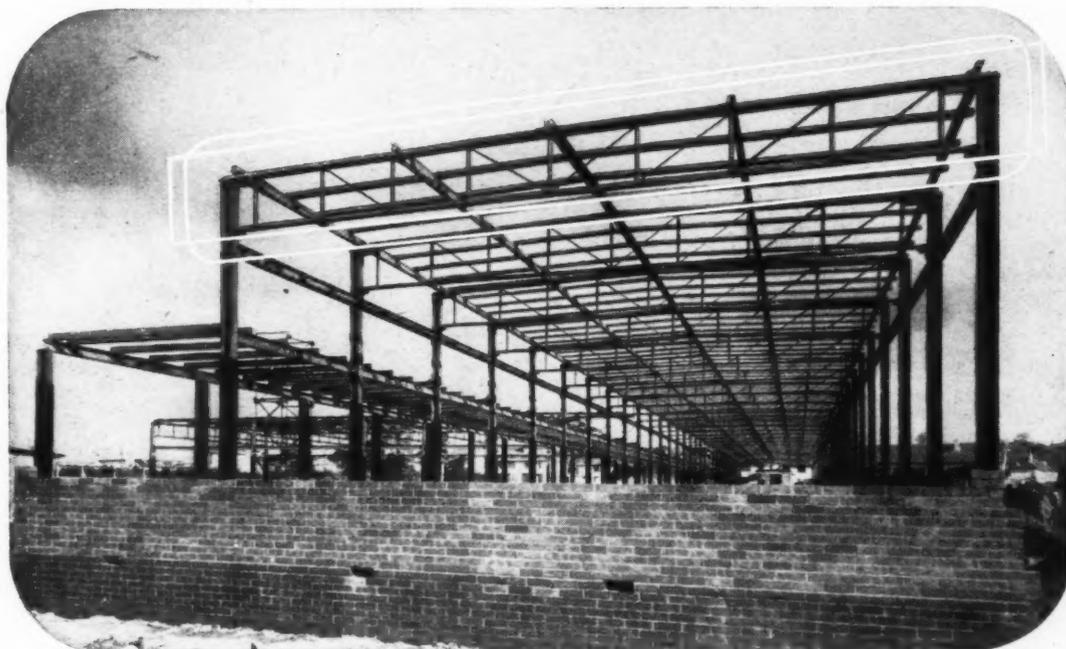
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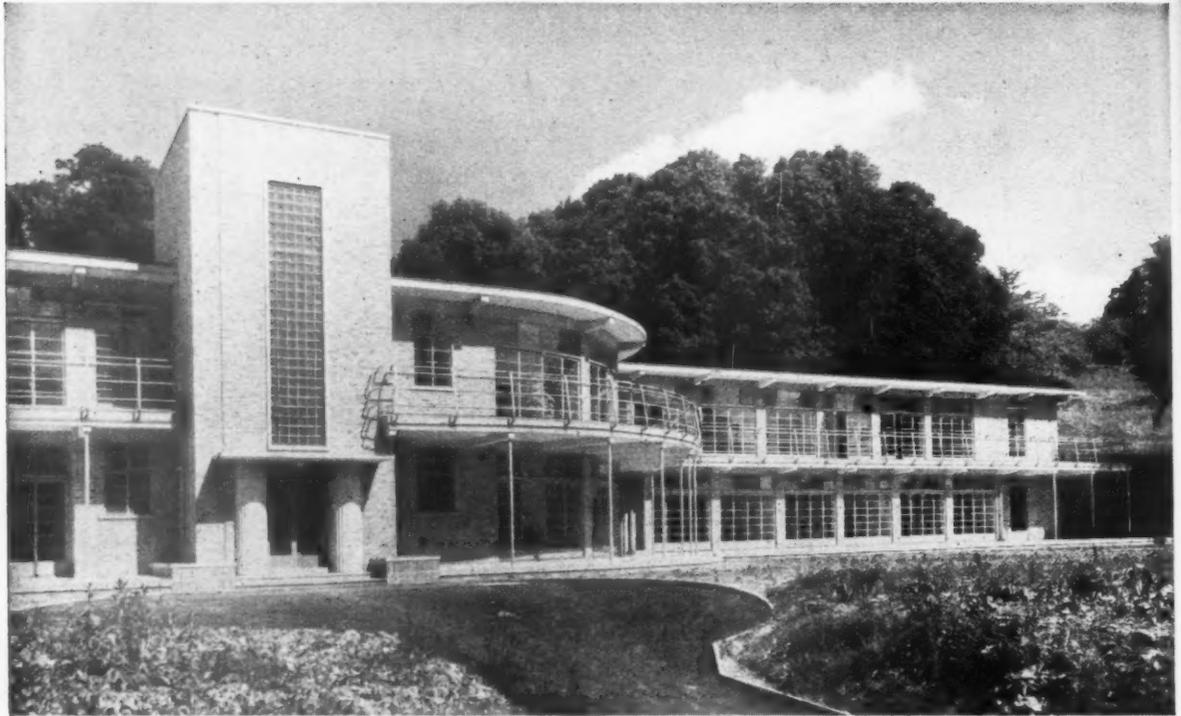
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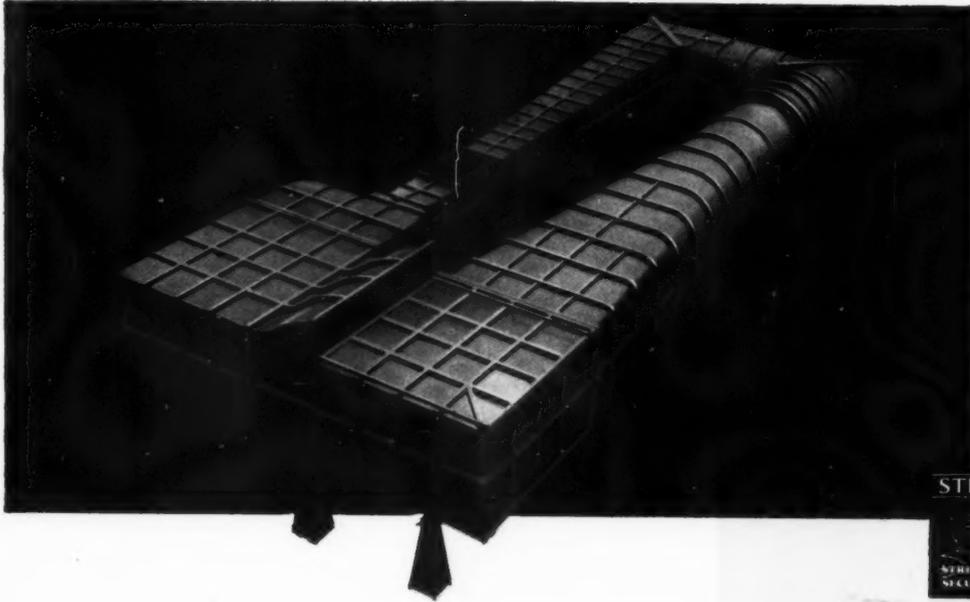
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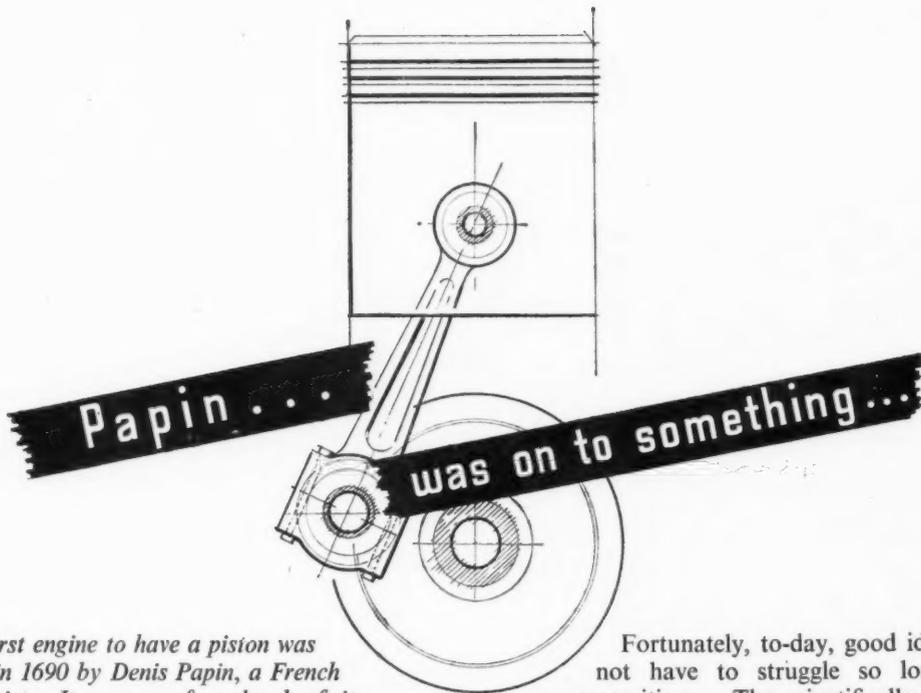
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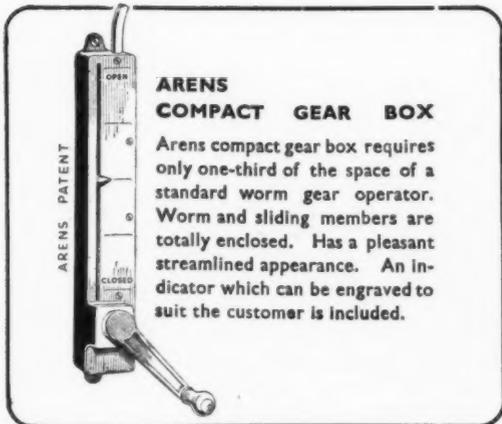




The first engine to have a piston was built in 1690 by Denis Papin, a French physicist. It was so far ahead of its time in fact, that 100 years later Napoleon considered steam-engines, based on Papin's designs, too revolutionary to be of military value.

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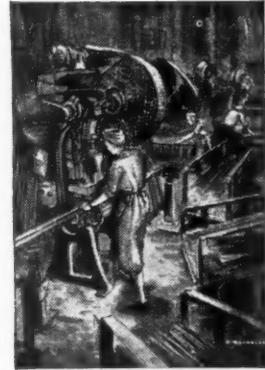
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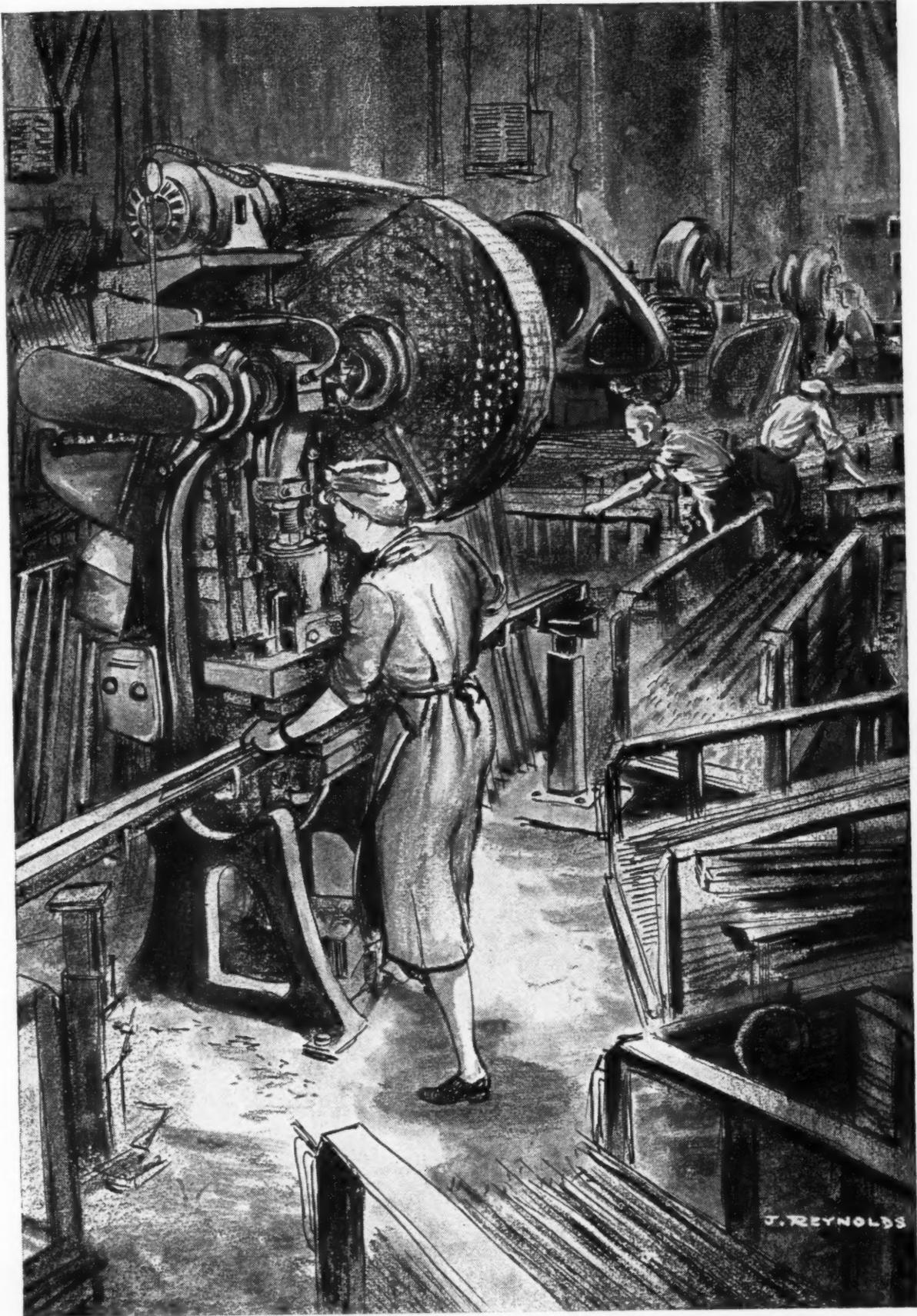


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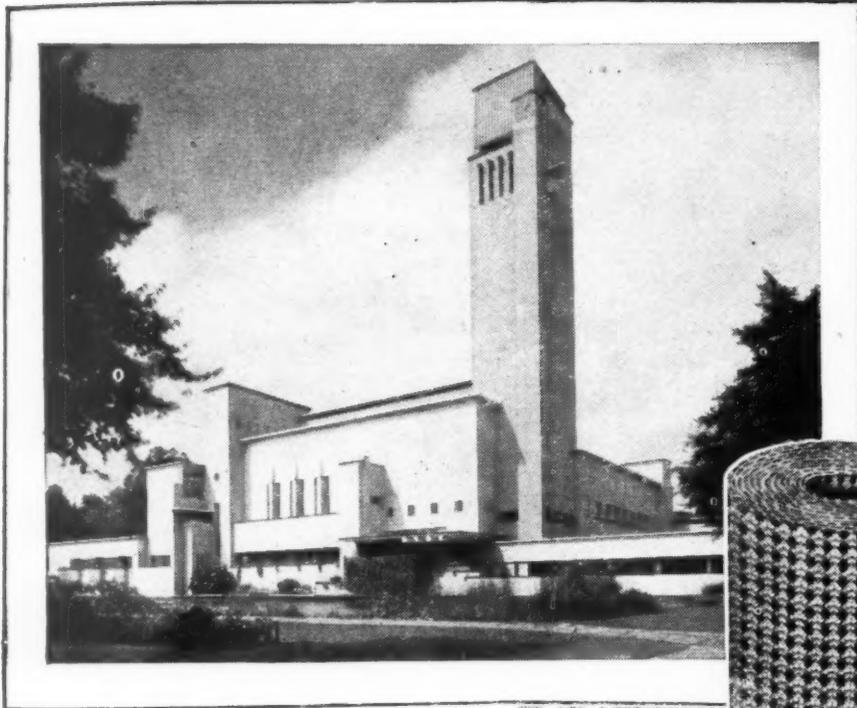
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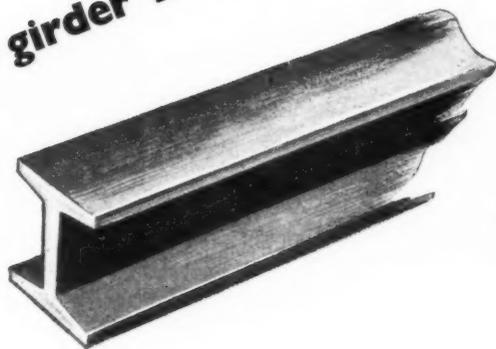
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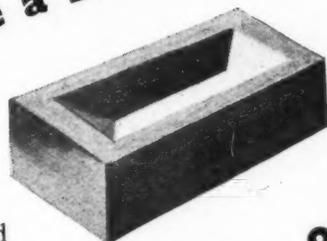
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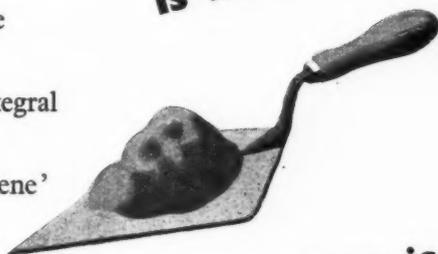


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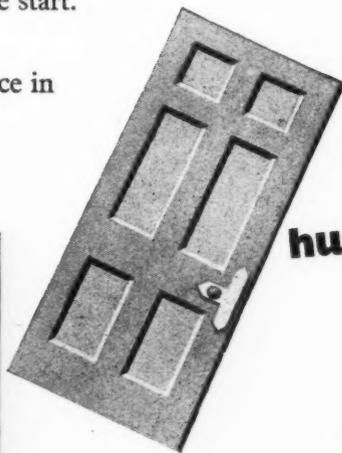
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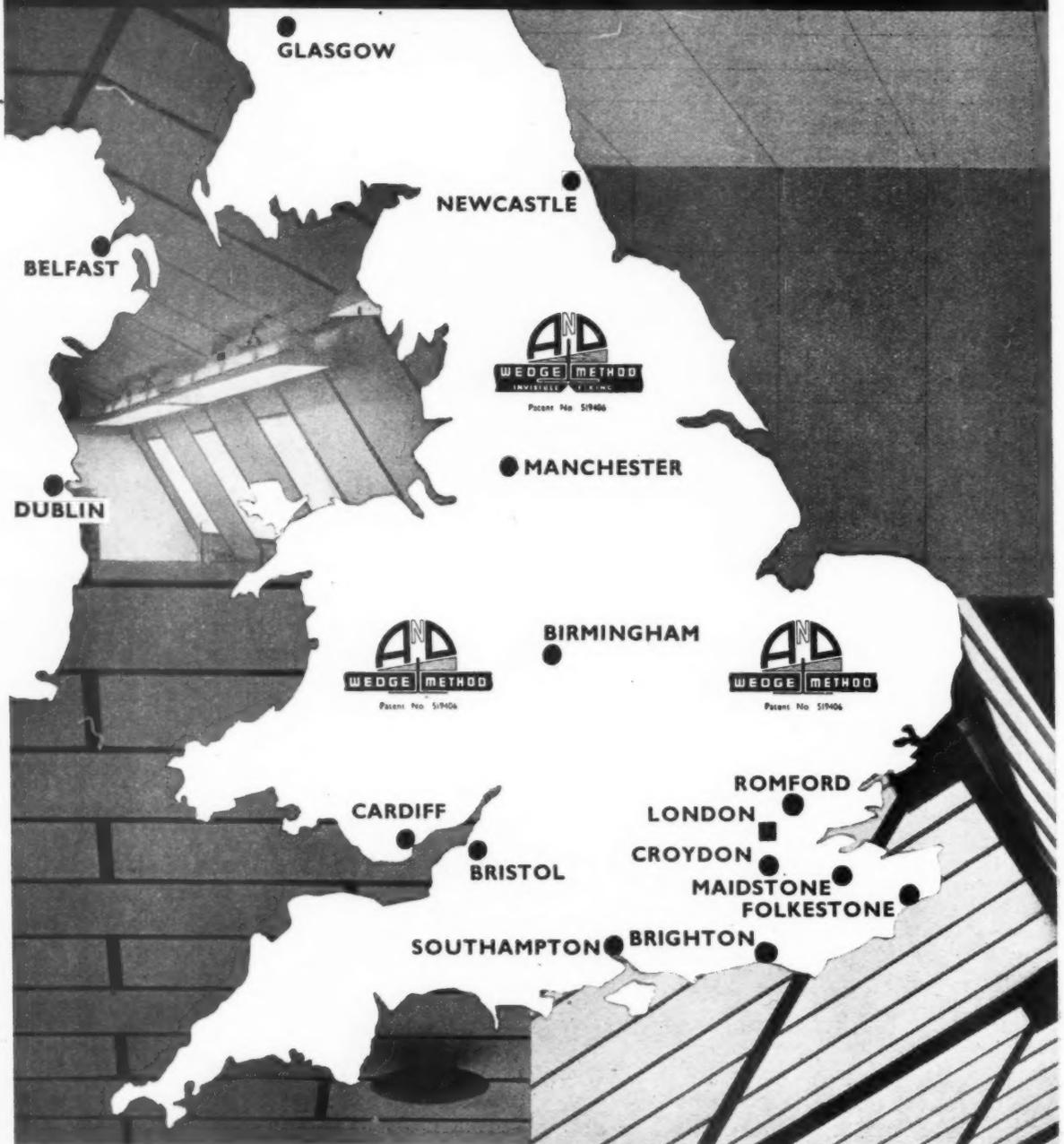
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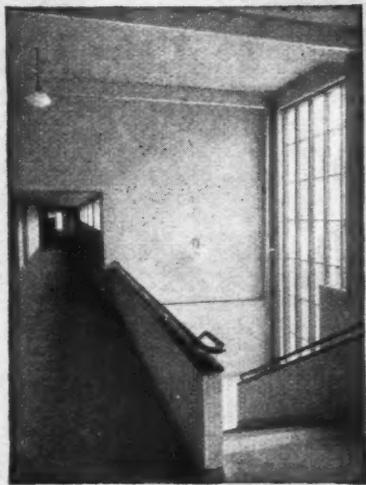
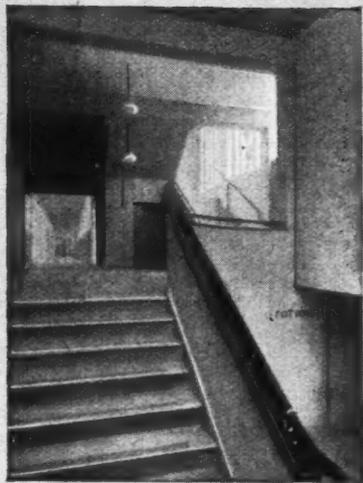
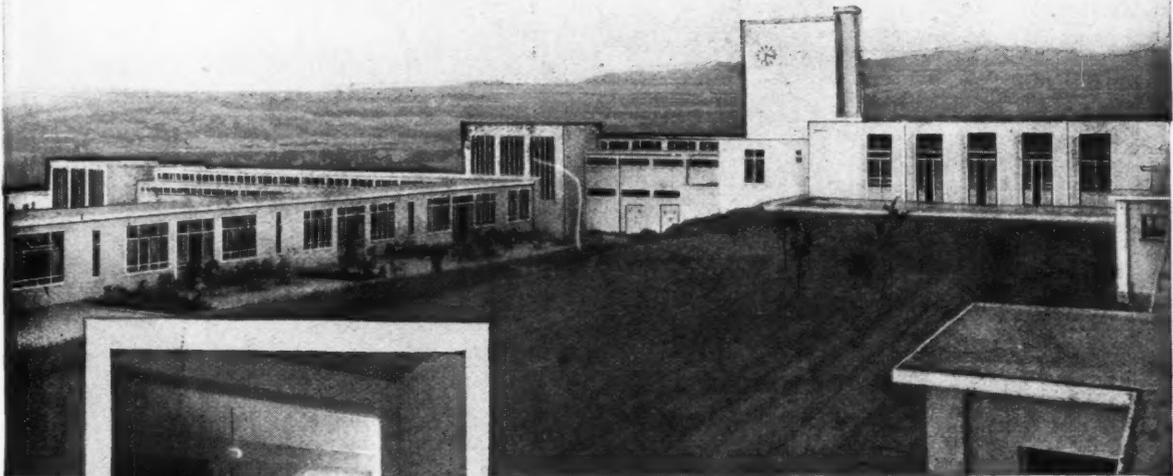
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This new primary school for 840 children near Brighton occupies a site of over 13 acres.

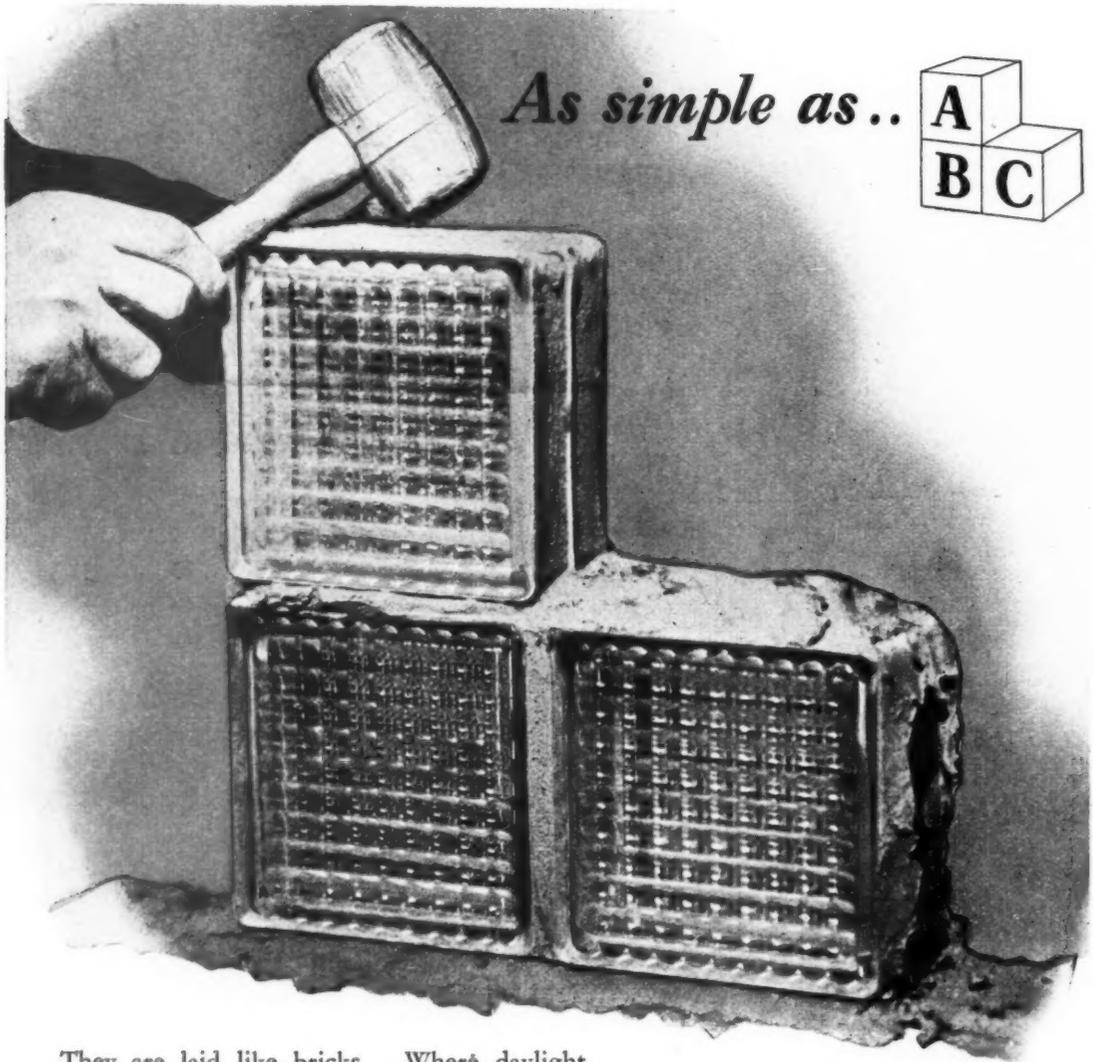
It was designed by D. J. Howe, M.I.C.E., M.I.Mun.E., Borough Engineer and Surveyor, in collaboration with P. Billington, A.R.I.B.A., A.M.T.P.I., School Architect for the Borough of Brighton Education Committee.

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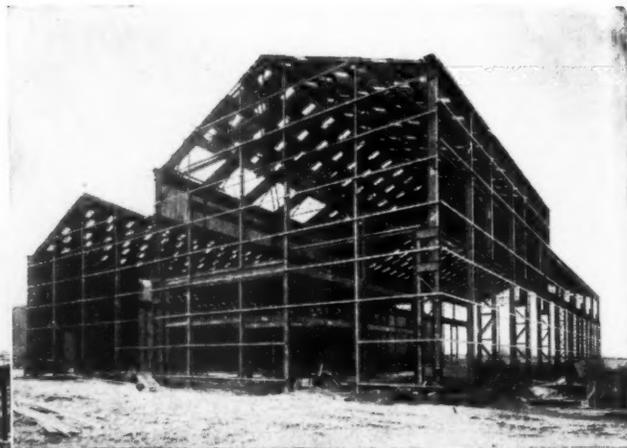
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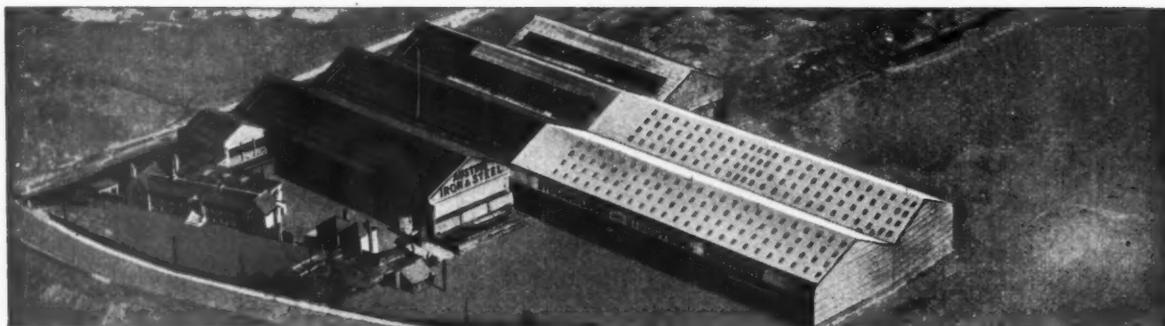
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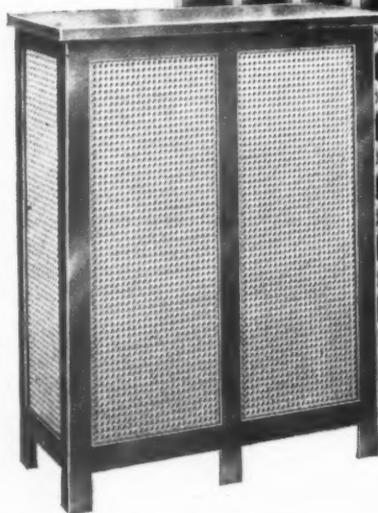


Illustration shows
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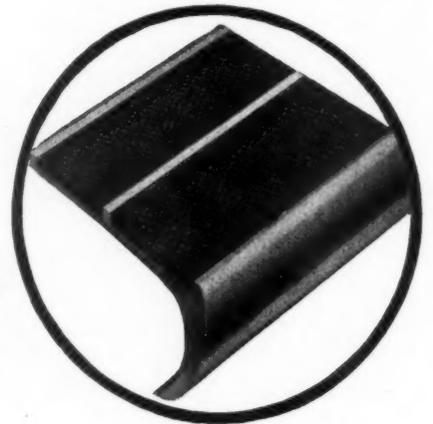
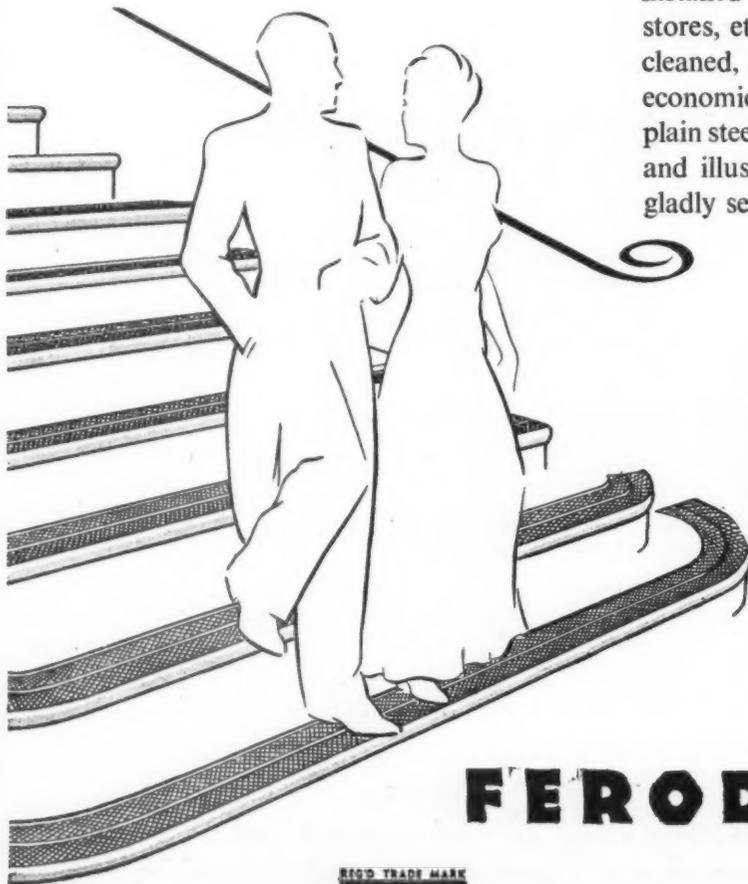
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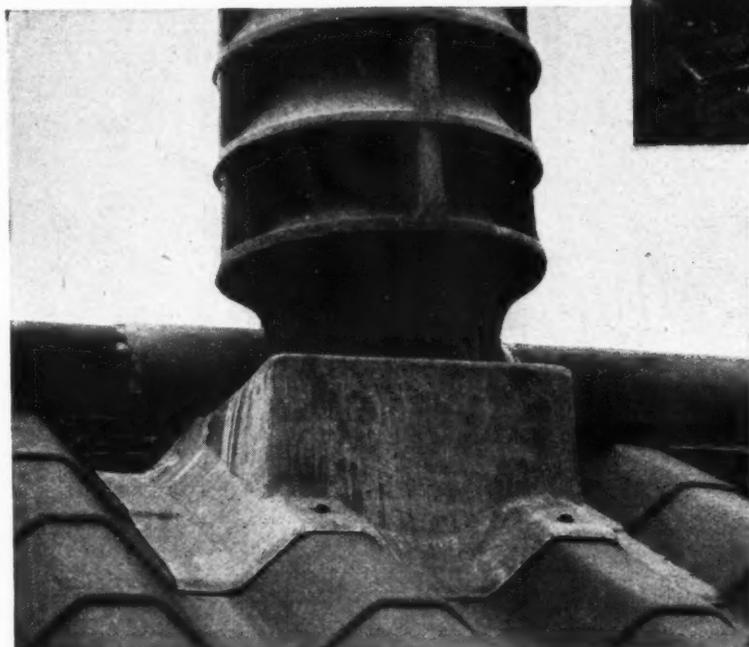
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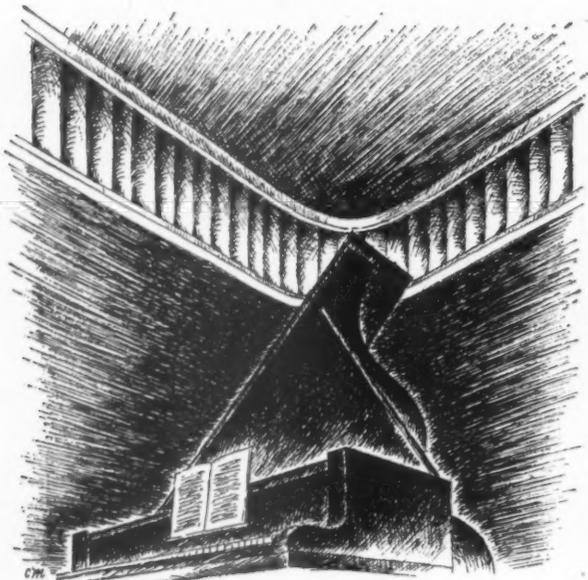
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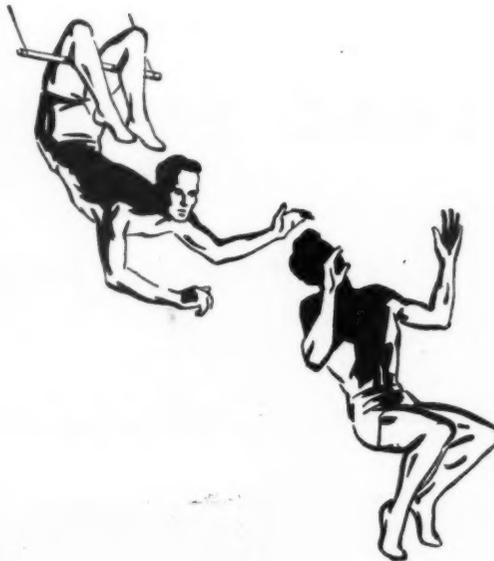
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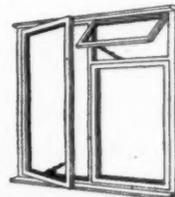
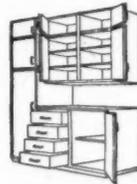
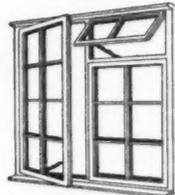
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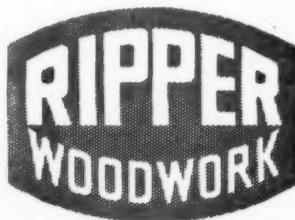


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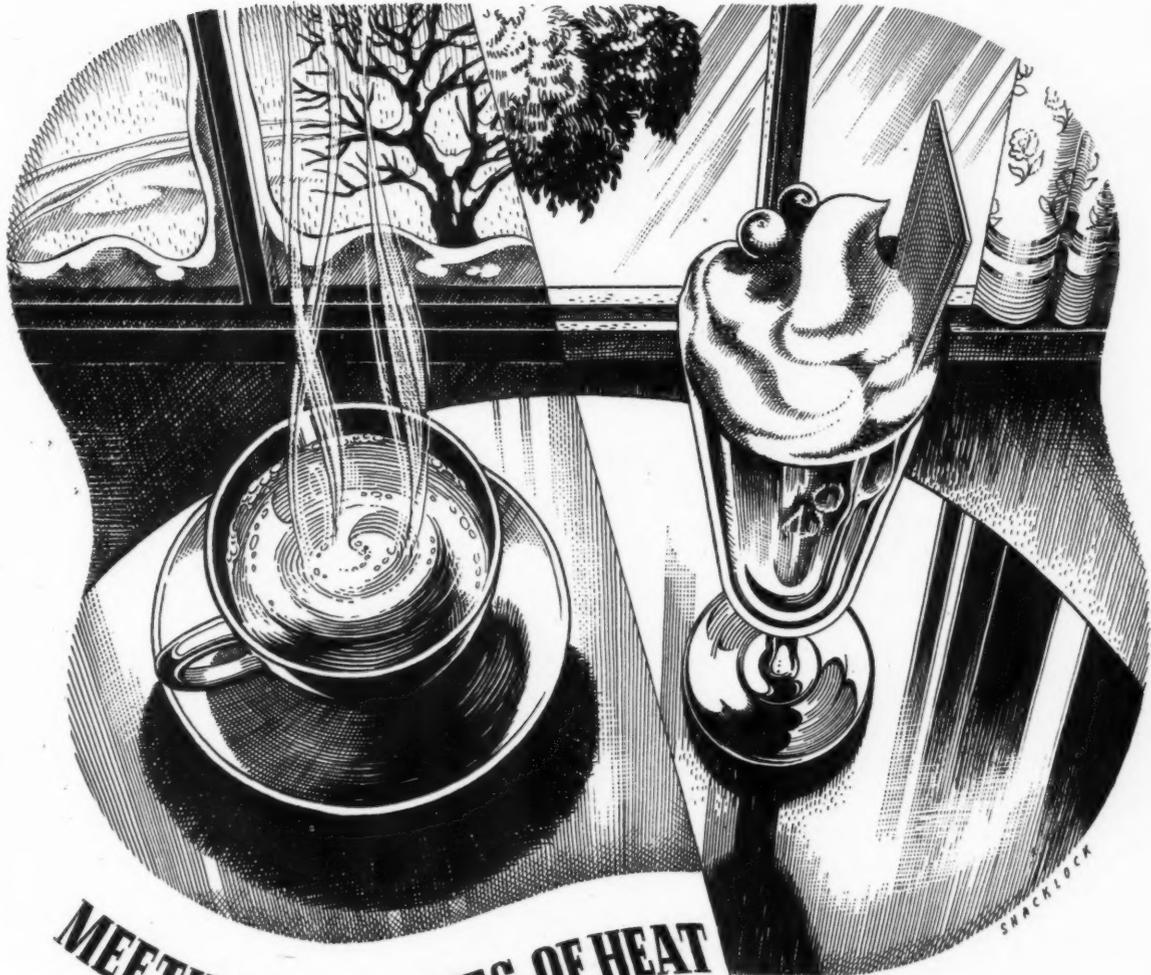
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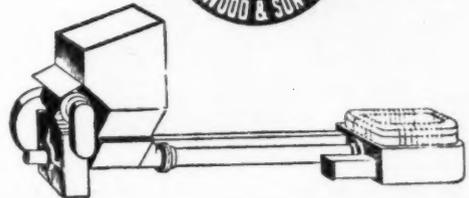


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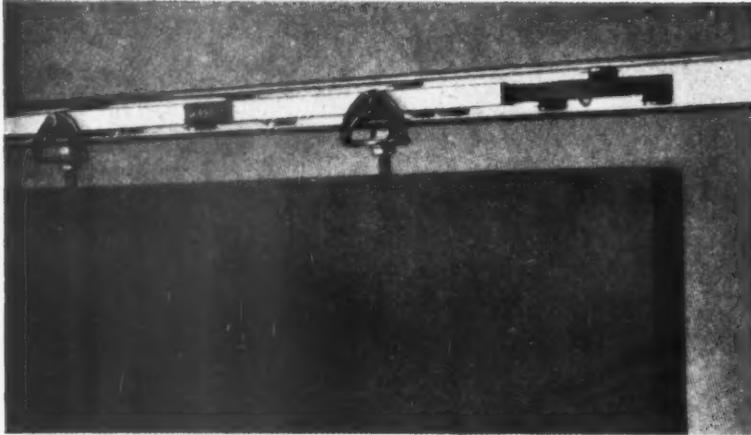
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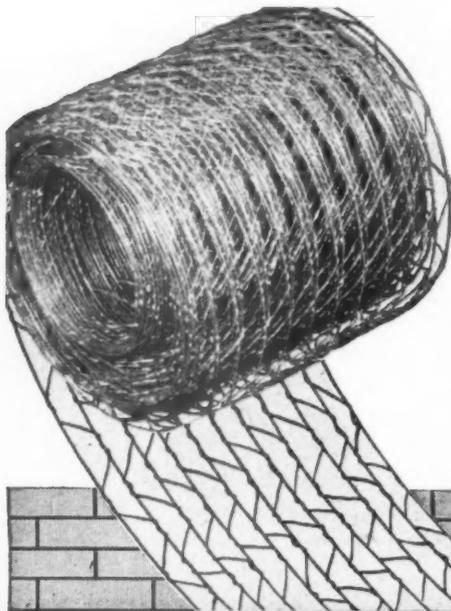
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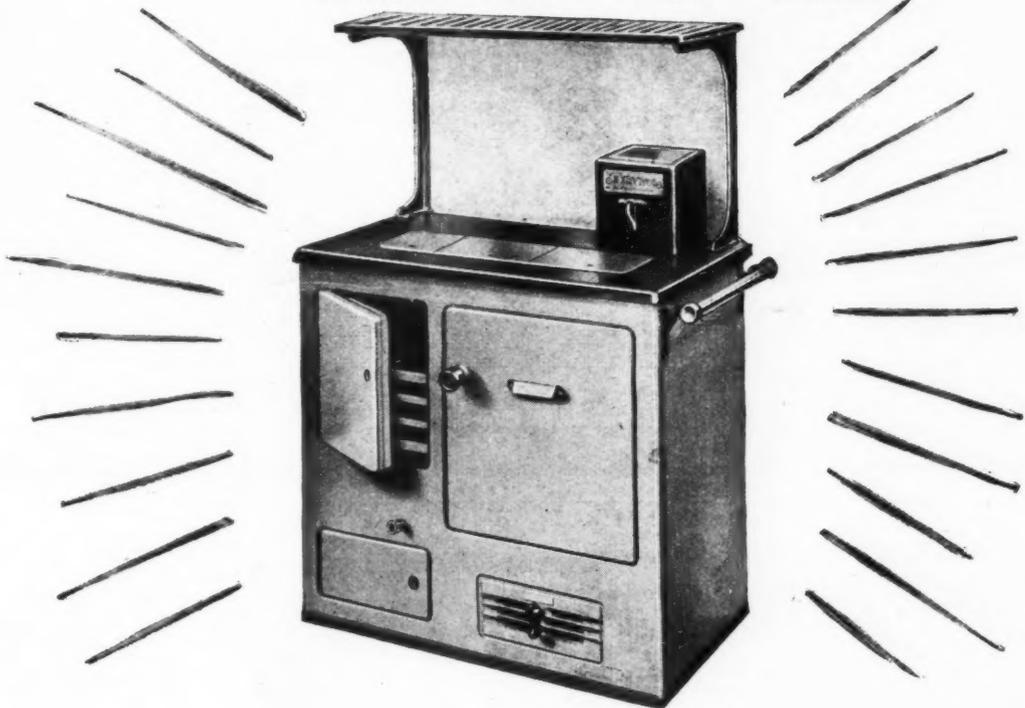
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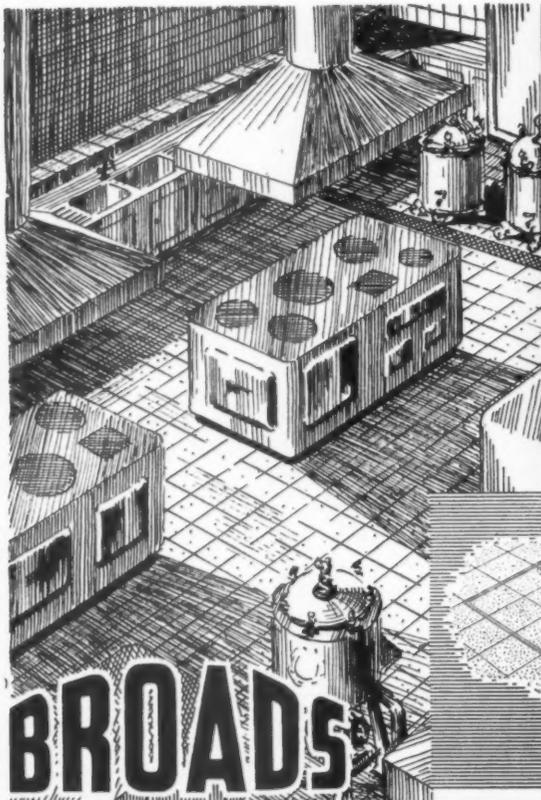
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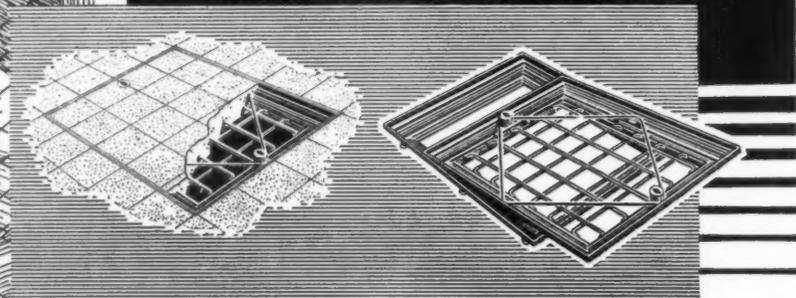
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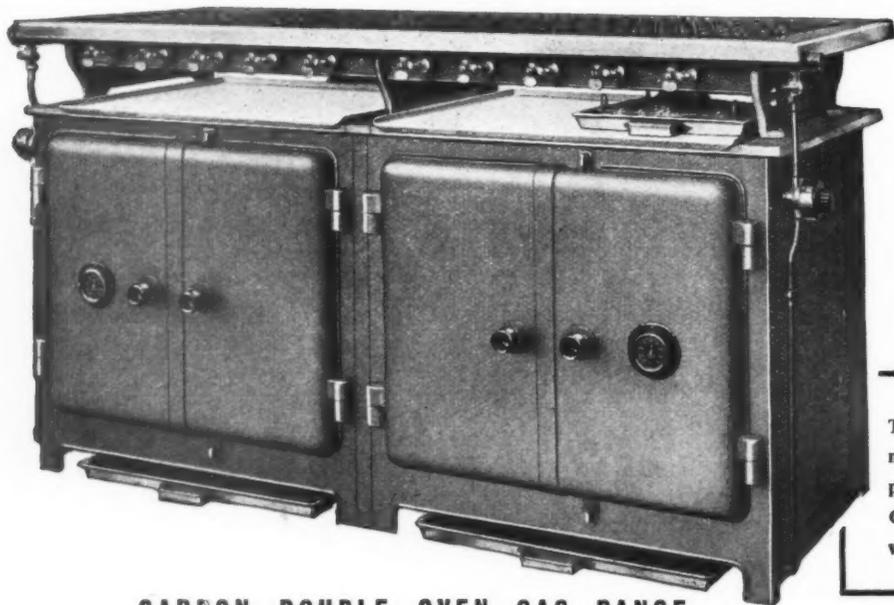
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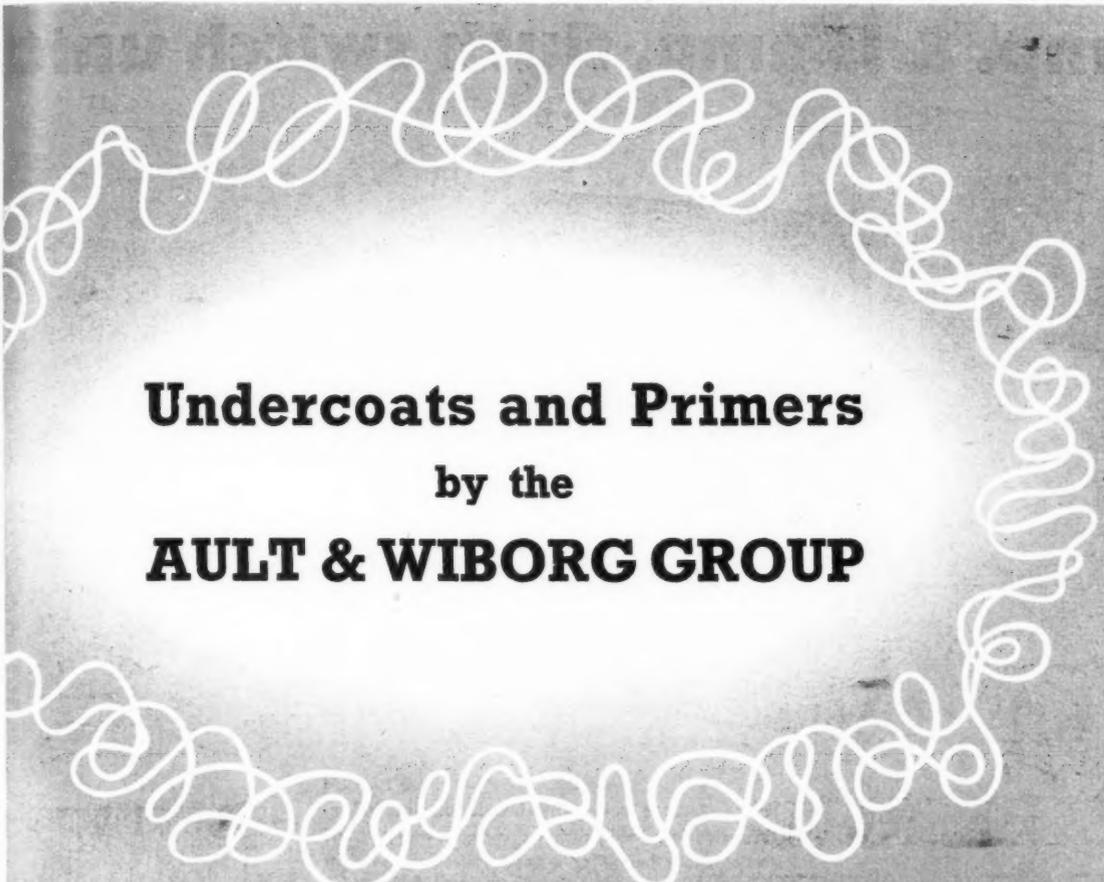
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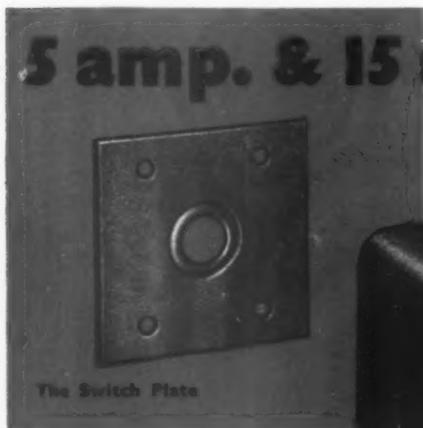
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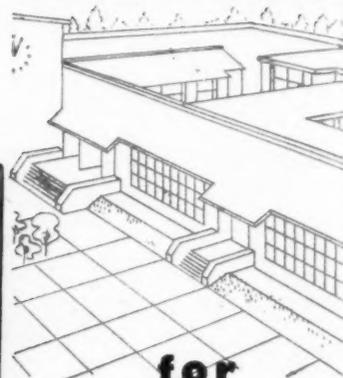
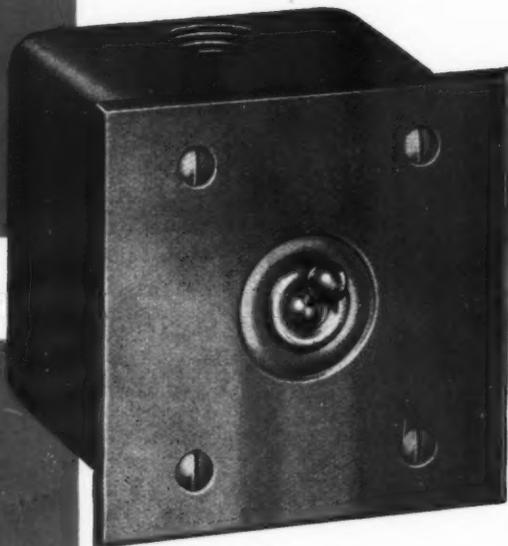
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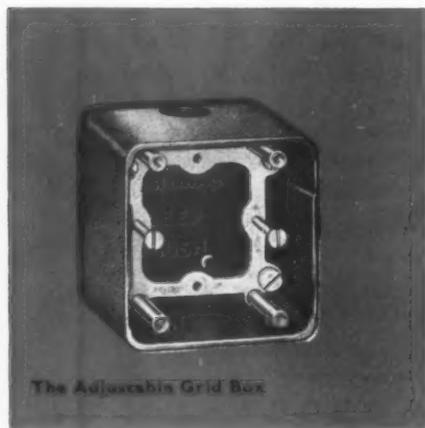
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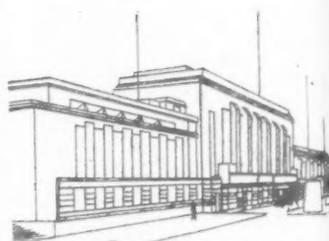
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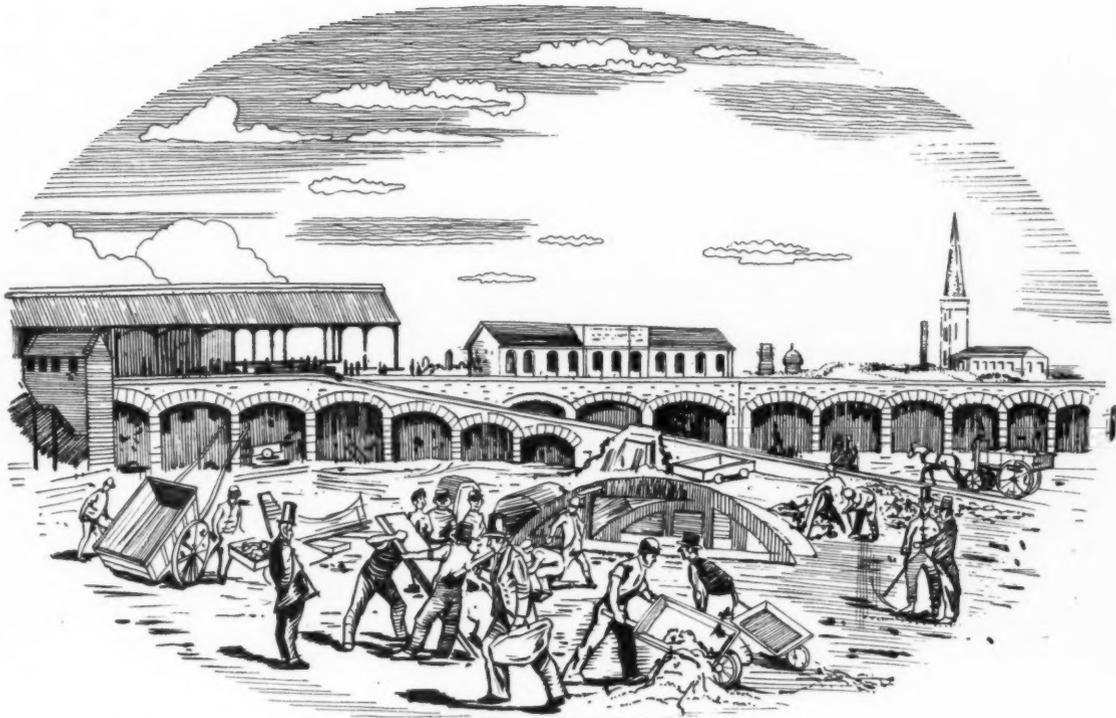
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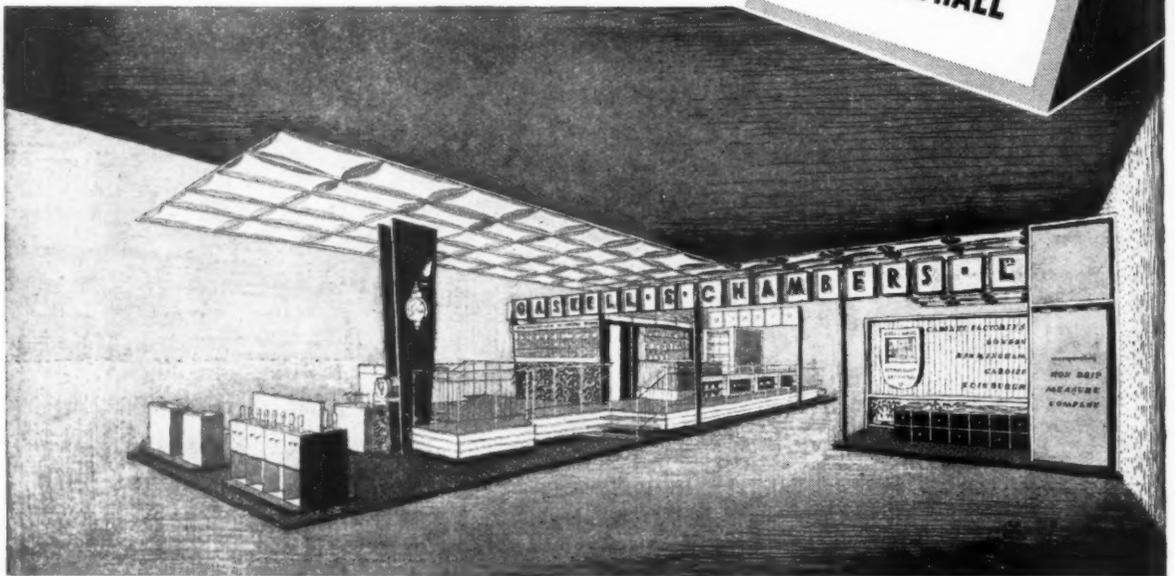
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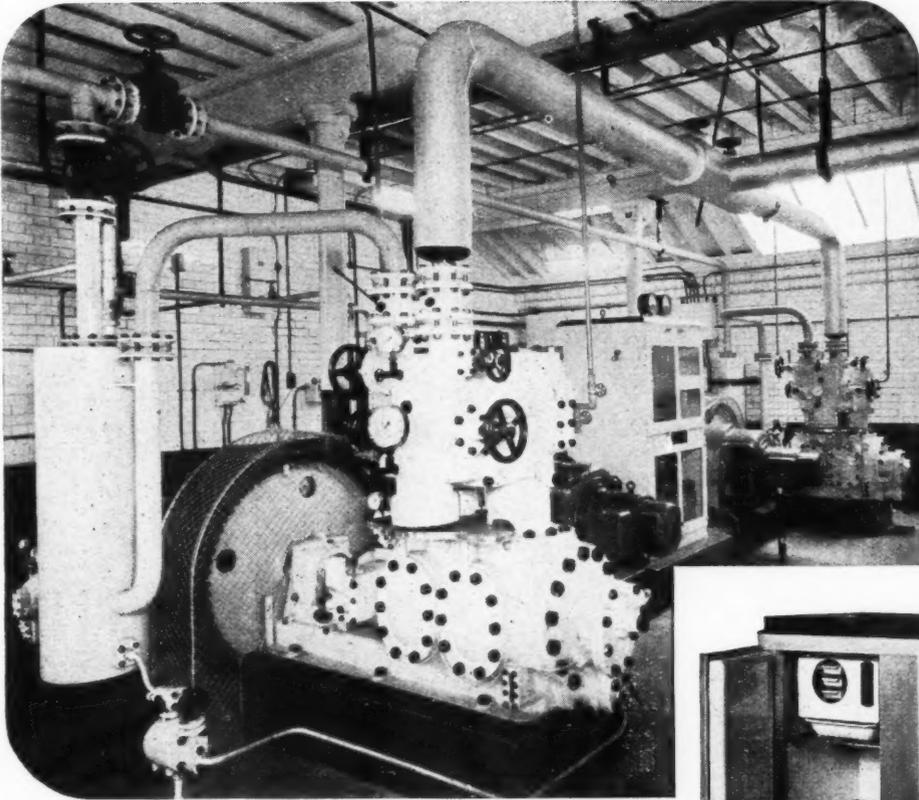
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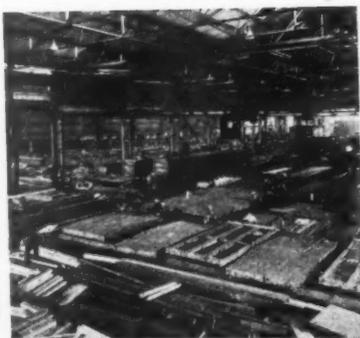
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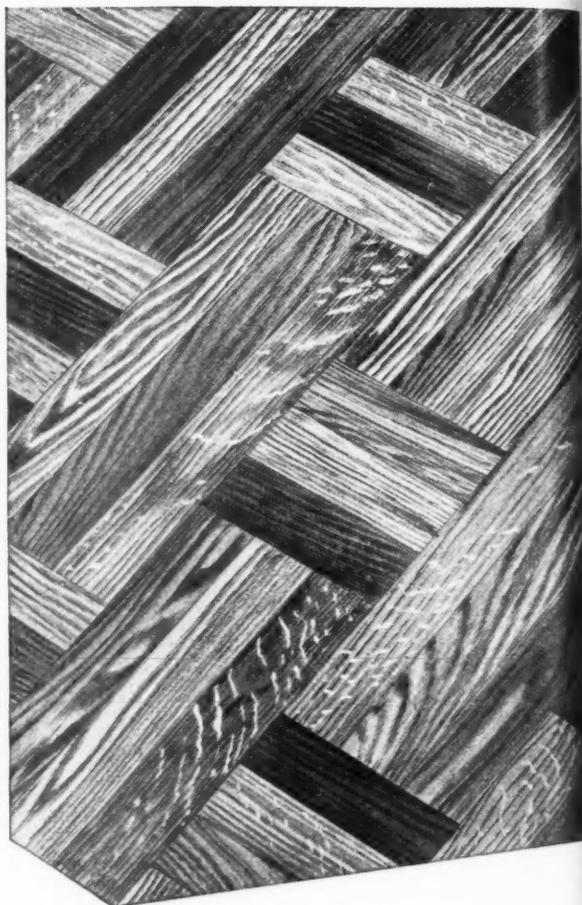
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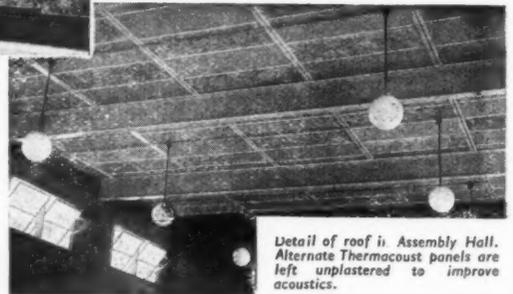
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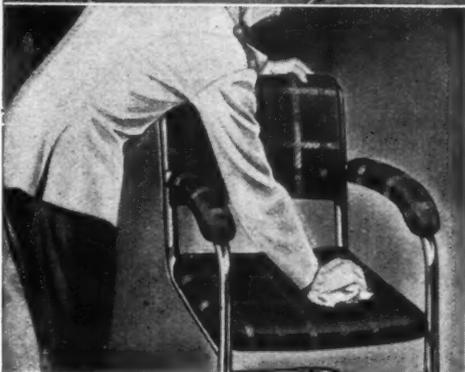


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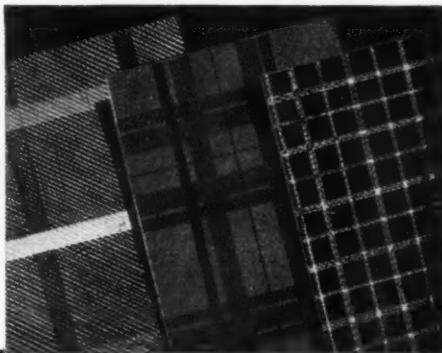
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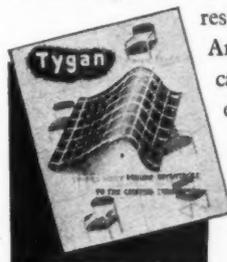
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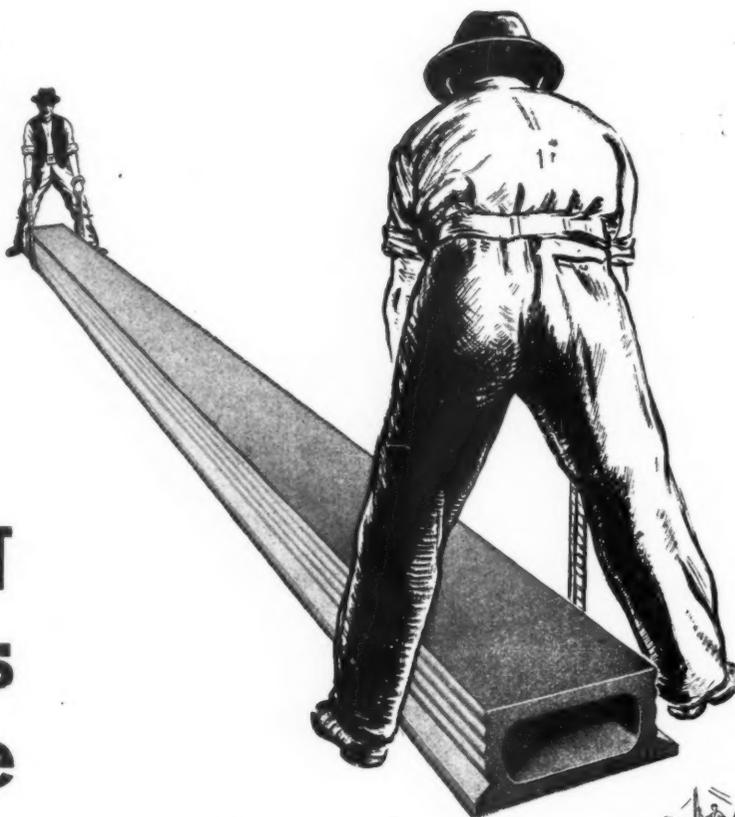
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THE ARCHITECTS' JOURNAL

No 2902 28 Sept. 1950 VOL 112

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A NEW TOWN PROBLEM

I recently heard of a question in connection with London's New Towns to which, I believe, MOTCP have no official answer. We all know that these new towns are to relieve congestion and reduce the sprawl of London and that they are to be prevented from becoming dormitory suburbs by encouraging London industries to move out to them. So, if Hankisons of Hull asked Harlow for factory space they would be refused, but Briggs of Barking would be welcomed with open arms.

So far so good, but if Briggs decided to move out after a time the local estate agents would be able to slap a "For Sale" board on the old works and Hankisons could move in, collecting in the process a large percentage of Briggs' factory operatives. So far so what?

FLOWERY BRUM

It is good to read that the Birmingham Parks Department's scheme for brightening the city centre with "hanging baskets of flowers on lamp standards, gaily floral traffic islands and window boxes" has proved successful. However, it brings to a head a matter which will crop up over and over again as the new towns and housing estates are built. The problem is that of finding enough gardeners for the parks.

Nearly every housing layout I see seems to have a portion devoted to public gardens of some kind, all of which will need considerable care and cultivation if they are not left as hay-fields or planted with thick groves of privet and Betjeman-haunted laurel.

The shortage of skilled gardeners, I am told, is largely due to the disappearance of so many of the large private gardens, which were the old training ground for young men. The Birmingham Parks Committee, with considerable acumen, are considering a scheme in conjunction with the Education Committee for training their own gardeners. It is to be hoped that this scheme is found workable. I, for one, am tired of seeing housing estates surrounded by earth and self-sown weeds and grass. The excuse is nearly always that the Parks Committee are a year or so behind in their schedule.

REVOLUTIONARY FLOWERS

On my bureau lies a long report and a pile of photographs from a Scandinavian spy. In Oslo, he says, he visited the new town hall, which he dismisses ruthlessly as "heavy, pretentious and graceless," and, of course, the yet uncompleted "Plan" of the sculptor Vigeland—"not merely heavy, pretentious and graceless, but brutally and gloomily

orgiastic, out of character with the kindly Norwegians." It was a relief, writes my spy, to come upon a gay, temporary structure standing outside the main railway station—one of the gestures the town has made in honour of its 900th anniversary.

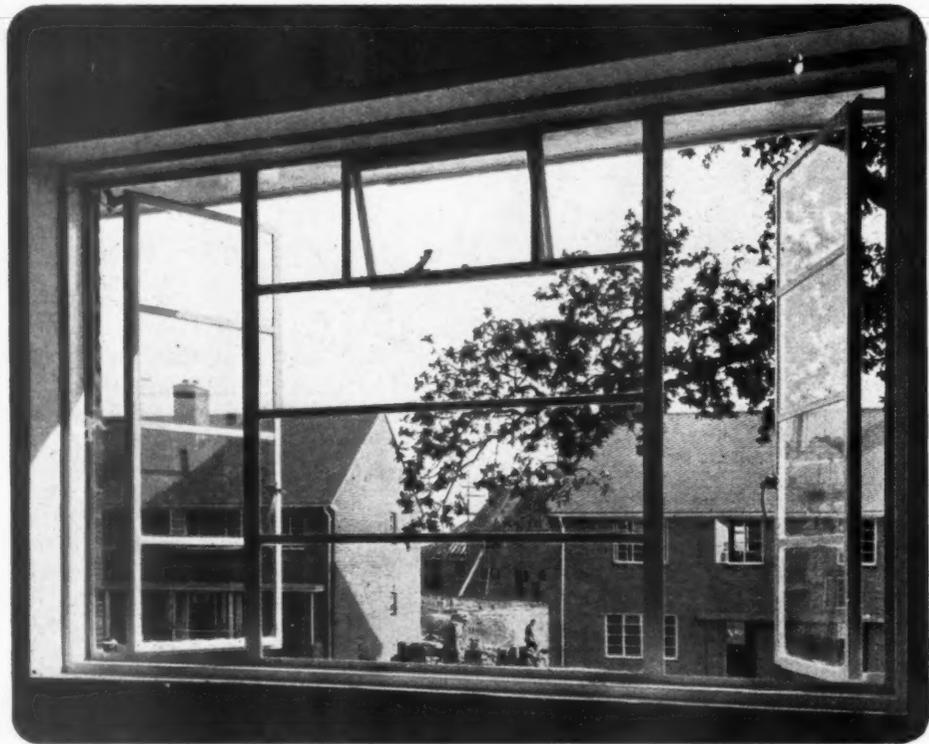
This consists of a large erection of light steelwork, some forty feet high, like a Big Wheel at a fair. The wheel revolves slowly, bearing up, not bodies but spirits, for it takes for a ride a set of swinging baskets planted thickly with foliage and geraniums. A charming innovation in street decoration which should certainly be filed for reference by the 1951 Committee.

ROLLING HOME

Another picking from the Scandinavian report deals with Voss, which lies on the Bergen-Oslo line. After the Germans had captured the main Norwegian centres and further open resistance was out of the question, they systematically bombed this small town for three nights running—just as a gesture, for the place had no military significance. The main street was almost completely gutted, but has now been half rebuilt, mostly of brick, concrete, stucco and rows of gleaming pivot windows.

A few of the original timber buildings survived but their positions were not in accord with the new town plan. They are therefore being moved in their entirety to line up with the new streets. Of course, there is nothing new in this; both Russia and the USA have moved much bigger buildings than these. The Voss case is interesting because of its simplicity.

The photograph shown here is of one example. The building, consisting of



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small shops with dwellings above, which was erected in 1899, is being moved back 10 feet at one end, 6 feet at the other, and then along to its new foundations for about 4 feet. The old foundations have been removed and the walls are resting on temporary RSJ's supported on small ash rollers, which, in their turn, rest on temporary timbers. The motive power comes from three small jacks (made in Birmingham) worked by hand levers, each capable of moving 35 tons. Movement is slow and each time the building has been moved one foot the jacks are released and backed with new packing pieces.

*

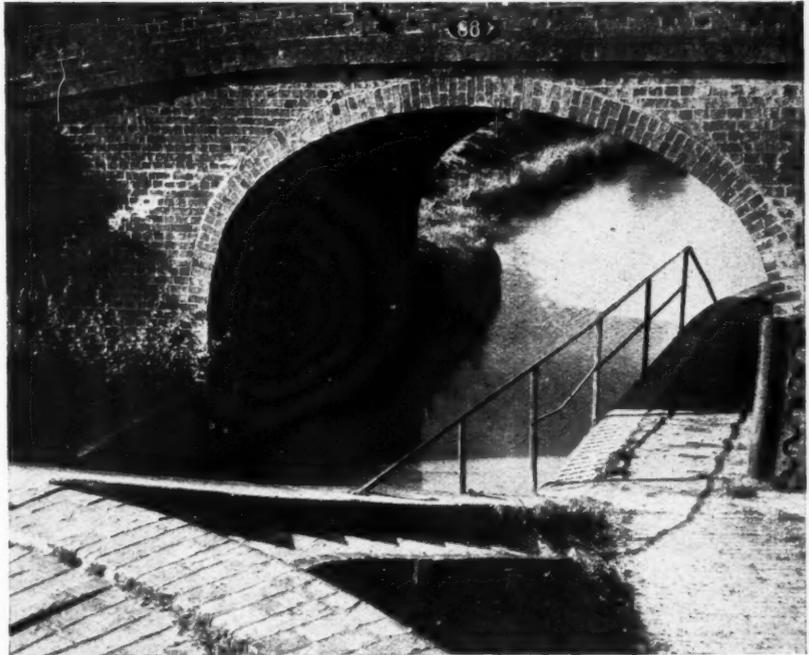
One might think that this preservation of old timber buildings of little architectural merit in a new street is fussy until one realizes that Norway is compelled to be parsimonious. She is not so rich a country as her neighbour, Sweden, and the present supply of labour and materials is even worse there than in England.

DISTURB NOT THEIR DREAMS

With the recent rally of canal-boat owners at Market Harborough, the publication of two recent books* seems to have been particularly well-timed. Eric de Maré's "Canals of England" has his usual excellent photographs and contains a lot of interesting details about canals in general, their buildings and bridges and their boats. Readers will not need to be told that Mr. de Maré is an enthusiast who would like to see further canal developments both for commerce and pleasure. Judging from his arguments and pictures, he's right.

*

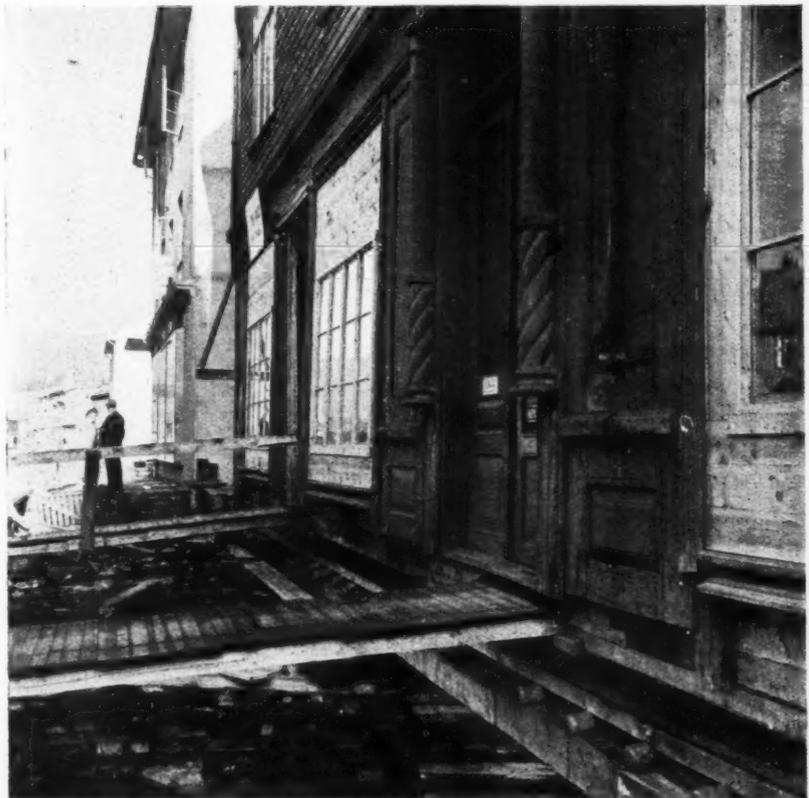
Charles Hadfield, too, is an authority and has produced a factual history rather than a picture book. He traces the complete history of almost every canal in the country and the result is a monumental work which must have involved an immense amount of research. For this reason he is, perhaps, compared with Mr. de Maré, somewhat heavy going, but his book is nonetheless essential for anyone who wants to be really knowledgeable about canal history. I'd always assumed, for



Lock on the Shropshire Union Canal, from The Canals of England, reviewed on this page.

example, that it was only the railways who had behaved so badly by buying up canals and then closing them down, but I learned from Mr. Hadfield that the faults were not all on one side,

and that all too often the railways were welcomed by local interests who looked upon canal proprietors as extortionate monopolists and were only too glad to encourage a little competition.



A novel way of moving house. (See "Rolling Home.")

* "The Canals of England" (Architectural Press, 12s.) and "British Canals," by Charles Hadfield (Phoenix House, Limited, 16s.).



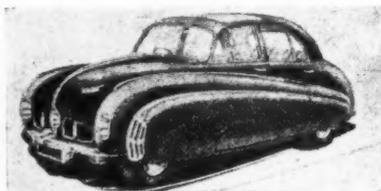
Henry Moore's New Work

This photograph by Henry Moore shows his bronze "Family Group," which was commissioned by the Herts Education Committee for the Barclay Secondary Modern School at Stevenage. Another view of the work, on page 275, shows it in place on the site, where Mr. Moore con-

siders that the horizontal feeling in the group harmonizes with the horizontal lines of the building—a harmony that would be lost if the two were not closely related. There are two copies of the group: one is going to the Tate Gallery and the other to the Museum of Modern Art, New York.

FLYING MERINGUES AGAIN

The Birmingham Post, I see, has just illustrated the winning designs, which I reproduce, of a competition for a car body design (four-door saloon). The winner looks to me, more repellently bulbous than anything I have ever seen on the road so far. Not what I like at all. But then I am getting a shade middle-aged in my car tastes, liking old 4½-litre Bentleys and such, where at least you don't have to hunt round to find out where the water goes in. In these new jobs I am never really certain what I have done; I push a button underneath a fancy grille on the



Top, The Paris, awarded a first prize of £50 in a competition for the design of car bodywork sponsored by the Institute of British Carriage and Automobile Manufacturers, the Worshipful Company of Coach Builders and Coach Harness Makers, and the Society of Motor Manufacturers and Traders. Above, The Shenstone, awarded the third prize of £15.

dashboard, and what comes out is either central heating or the BBC. Perhaps it doesn't really matter which it is, but I feel a little silly.

Now I am on to cars I must tell you of a wonderful Darracq I saw a fortnight ago in Kings Parade: pre-1914, I should say, but perhaps 1919, with a body going up in steps from front to back and lots of lovely polished brass-work, lamps, beadings, door handles and everything. A fine old warhorse I should love to drive about in, though not, to be honest, on a really long journey.

ASTRAGAL

Technical Editor

HOUSING COSTS

IT is becoming ever more apparent that the cost of housing is not merely a question of "labour and materials." The need for a reduction in building costs is one of national economy, and, therefore, when we consider the cost of housing, we must compute the total cost to the nation. It is not sufficient to know that, according to the MOH, houses are costing 24s. 6d. per square foot (£1,225 for the all too familiar 1,000 square feet). At the Housing Centre conference on housing, Richard Costain pointed out that administrative costs (MOH, MOW, local authorities) are frequently overlooked and even "the number of debates on housing policy that have taken place in Parliament must have cost the country a considerable sum of money." Roads, sewers and other services must be included, and, similarly, no house is complete without furniture and innumerable other fittings which are just as great a call on our budget, whether they are provided with the house or purchased by the occupier. Maintenance costs are equally important, and, as we have pointed out before, savings on first costs may be false, if maintenance costs are thereby increased. While economy and savings in building costs are essential if the tempo of housing is ever to be increased, a great deal more detailed information is needed before anyone can say for certain where the axe should fall.

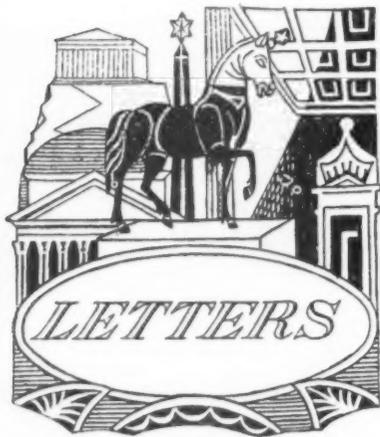
IDEAS FROM A NEW SOURCE

NOT unnaturally, the speculative builder's name is anathema to the British architect: however, in America, there are growing up a number of architect-builder combinations which are succeeding in producing both speedily and economically large numbers of houses at (by American standards) low cost. The architect ensures a good standard of design and quality of construction, while the builder contributes the scale and the organisational and constructional methods which make possible the low cost. Although a similar combination may be neither necessary nor desirable in Britain, there is no doubt that we can learn a great deal from these "production line" builders which could speed up our own house-building programme.

Take, for example, the fabulous Bill Levitt, who describes his organisation as "the General Motors of the building industry" and turns out a house every 16 minutes; with this scale of building the use of a high degree of mechanisation becomes possible: trenching machines which dig the foundations for 30 houses per day and power saws which cut all the timber for a house in under an hour. Levitt has broken down the building of a house into 26 operations and hires 80 sub-contractors to do the building. These operations are further subdivided into simple standardised steps, each carried out by a specially trained team, encouraged by high bonuses, to reach a high

degree of speed and efficiency. These methods, together with the elimination of middlemen by buying materials and products direct from the manufacturers, represent a saving of 1,000 dollars on each 8,000-dollar house.

Levitt's designs and technique are being copied by builders all over the USA; surely there is no reason why the bold and intelligent application of similar methods and ideas could not similarly reduce our building costs, even if it meant welcoming ideas from an unusual source.



S. F. Mill

A Quantity Surveyor

Architectural Group

The Quantity Surveyor

SIR,—It is obvious that the object behind your editorials dated July 27 and August 17, headed "The Quantity Surveyor" and "The Bill of Quantities," respectively, is to encourage investigation into the present system of placing building contracts in this country, in order to see whether it can be improved.

Broadly, of course, such an object is admirable, and undoubtedly requires earnest study of the Simon, Working Party, and Productivity Team Reports, and the preparation of any recommendations based not on "vested interests in things as they are" but on the nation's and the industry's interests at the present time.

Mr. O. A. Davis's criticism of your editorial of July 27—and it applies, I think, again to that of August 17—is surely that it is hardly constructive or logical. In your editorial of July 27 you appear to favour the abandonment of the system of competitive tendering, using as an argument the fact that the bill of quantities does not fulfil functions which it has never been meant to. In your second editorial, five factors affecting bills of quantities are listed. Several of the points are hardly or only partly true:—(1) Labour and material costs may be less stable than they were before the Hitler war, just as they were less stable than before the Kaiser war—many things are!—but they are not subject to such violent fluctuations that tenders

based on bills of quantities are rendered invalid between the date of tender and the completion of the contract. In fact, fluctuations under Clause 25a of the RIBA Form of Contract are unlikely to exceed 5 per cent. of the contract sum for materials or 10 per cent. for labour and materials. It must be remembered, too, that this fluctuations clause is applicable whether quantities form part of the contract or not, and that the need for calculating the materials and labour required must still exist, regardless of any fluctuation in cost.

(2) The bill of quantities does contain a large proportion of PC items today, but this does not mean that the PC items are not subject to competitive tendering and measurement. Estimates are, of course, normally obtained from several firms for specialist work, often based on measured quantities, the most suitable being selected to execute the work. Items normally included as PC's are those which the general contractor would in any case probably sublet, so that the architect is merely ensuring that specialist work is executed by a firm selected by himself rather than by the general contractor, although the latter is given the opportunity for quoting for any PC work in which he is interested, under Clause 21F of the RIBA Form of Contract.

(3) It is true that the bill of quantities, not infrequently today, becomes a priced schedule, the work being subject to re-measurement. This does not imply criticism of the bill of quantities, but rather of the insufficient information from which it has been prepared. In cases where proper preliminary planning is impossible—and it cannot be too strongly stressed that an early start on the site does not mean an early finish—a bill of approximate quantities and schedule of rates can save a great deal of time and fees.

It may be that the standard method of measurement on which bills of quantities are prepared, might well be revised and modified, but to suggest either the abandonment of the bill of quantities as the basis for obtaining competitive tenders and economic building costs (which at present in this country are between 50 per cent. and 80 per cent. lower than in the USA), or of the system of competitive tendering itself, appears to be an unsound conclusion to me, on the grounds put forward in your editorials.

London.

S. F. MILL.

[We should like to make it clear that, in our two leaders to which Mr. Mill refers, we did not say that we "favour the abandonment of the system of competitive tendering," but we are seriously questioning the "present system of competitive tendering as practised in this country," which is a very different thing. It is true that the bill of quantities, as we know it, was never intended to be used for costing and bonus-ing; nevertheless, it has to serve for these purposes today, and a great deal of additional work would be eliminated if the bill of quantities was modified so as to serve these purposes alone and a new means

evolved for selecting the most efficient and economical contractor. PC items, it is agreed, are forming an ever-increasing proportion of the contract but competitive estimates are obtained for these, apparently to the satisfaction of all concerned, without the need for bills of quantities. Widely differing methods of obtaining competitive tenders are used abroad (the fact that building costs in the USA are higher than ours is irrelevant) and recently, the contractor for a school at Leeds was chosen on the basis of a schedule of prices of materials and rates of labour priced by a selected list of firms. It does appear that there are good grounds for advocating the revision of the present system and for Mr. Mill to suggest the contrary is, with the limited data available, being more dogmatic than we should care to be.—ED.]

SIR,—I give the following recipe for a brave new world:—

(1) Do not educate architects to consider each job on the basis of first principles and with a view to producing a masterpiece; reasonably good homes have been produced in the past without the aid of large architectural staffs, consultants and research workers and the country cannot afford to make each building a masterpiece.

(2) Do not encourage research beyond the point at which it can be readily absorbed by practitioners and be economically absorbed by industry; at the present time the information produced is far in advance of the information absorbed.

(3) Frame all legislation and bye-laws, etc., so that rule-of-thumb methods can be applied, even though it may be desirable to have waivers for those who really have got bright ideas.

(4) Cut out bureaucracy as far as possible and discourage the over-cautious attitude, e.g., the automatic checking by government and local authorities of final accounts prepared by qualified surveyors—it is better to have a few mistakes than to spend millions on trying to prevent any.

(5) Do not permit local authorities to produce their own forms of building contracts.

(6) Reduce competition to reasonable proportions (6 contractors for a large job) and ensure genuine competition by stamping out the pernicious system of "taking a cover price."

(7) Do not require architects to obtain numerous competitive tenders for specialist's work and discourage them from considering too many alternative materials and methods for each job.

(8) Ensure pre-contract planning and adherence to the plan by permitting contractors to charge double contract rates for all extras and half contract rates for all omissions.

(9) Get contractors to agree to modify their demands and to accept a much simplified bill of quantities—a compromise between American and English methods.

(10) When (6) and (7) have been carried through, investigate the possibility of modifying the bill of quantities to meet additional needs (costing, etc.).

A QUANTITY SURVEYOR.

London.

Architectural Competitions

SIR,—May we express our complete agreement with ASTRAGAL's suggestion (August 24) for a preliminary eliminating competition in every possible case. The amount of work involved is too great a deterrent; but a preliminary esquisse with sufficiently comprehensive notes would encourage many more architects to submit ideas.

ARCHITECTURAL GROUP.

London.

The EDITORS reserve the right to shorten letters from readers. Whenever possible, however, they are published in full.

HENRY MOORE'S LATEST WORK FOR SCHOOL



FOB

Mobile Exhibition

The mobile exhibition, designed by Richard Levin, which is to visit Manchester, Leeds, Birmingham and Nottingham during the 1951 Festival, will be the world's biggest transportable covered exhibition, according to the FOB authorities.

More than 100 lorries will carry the complete exhibition structure and its collection of about 5,000 exhibits. The exhibition will illustrate the British way of living and British achievements in technology and industrial design.

Collaborating architects, designers and artists are B. Angrave, James Cubitt & Partners, E. Esmond-White, P. Judge, N. Kroll, R. Lavers, Eve Levin, L. Manasseh, B. Mason, J. Pearce, M. Reiss and H. A. Rothhols.

CWMBRAN

New Town Architect Appointed

The Cwmbran Development Corporation has appointed J. C. P. West to be their chief architect. The Development Corporation was set up under the New Towns Act, 1946, to develop a new town in the Cwmbran area.

Mr. West, who takes up his duties on October 2, is 42 years of age and for about four years has been working with Louis de Soissons as a chief architect and town planning assistant. He has been assisting Mr. de Soissons on work in connection with the new town at Welwyn Garden City.

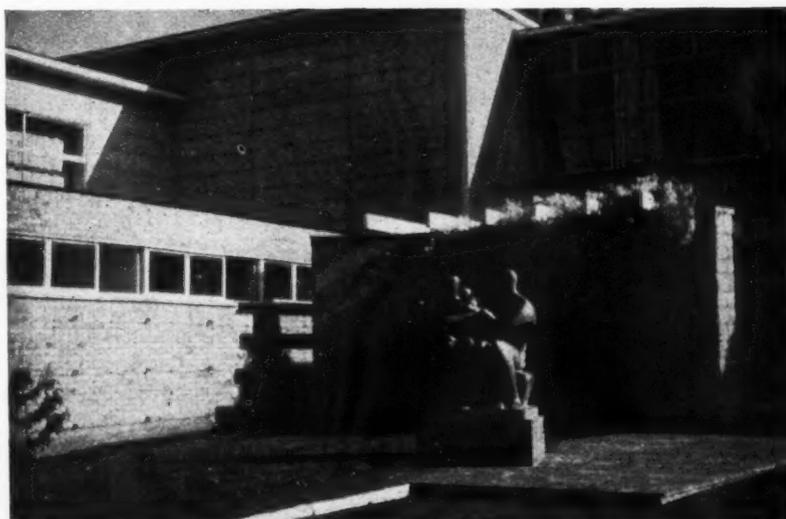
ICI

Appeal for Funds

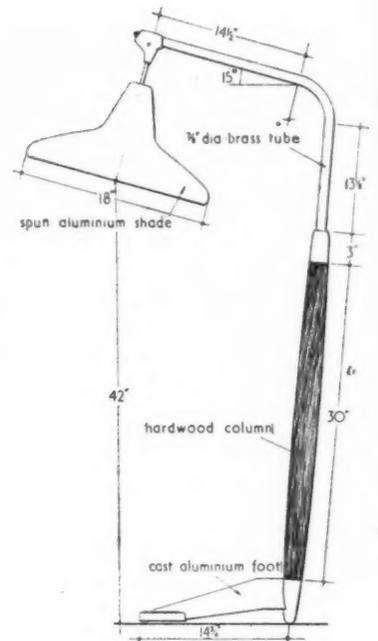
The Institute of Contemporary Arts, which was founded in 1948 with the object of creating a centre in London similar to the Museum of Modern Art in New York, is appealing for funds. The Institute has established itself during the last two years by means of exhibitions, plays and other activities conducted on a non-commercial basis with a view to encouraging the development of modern techniques and new or experimental forms of expression. Public support has led the ICA's organizers to



The siting of this "Family Group" by Henry Moore at the Barclay School, Stevenage (see page 272) is such that it is viewed mainly from two sides only. However, it is planned to set paving stones in a lawn to the right and back of the figures, thus encouraging viewers to obtain a complete picture of the work.

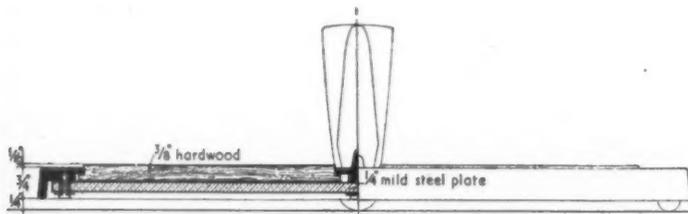


A STANDARD LAMP DESIGNED BY PETER MORO



Side elevation [Scale: 1/4" = 1'0"]

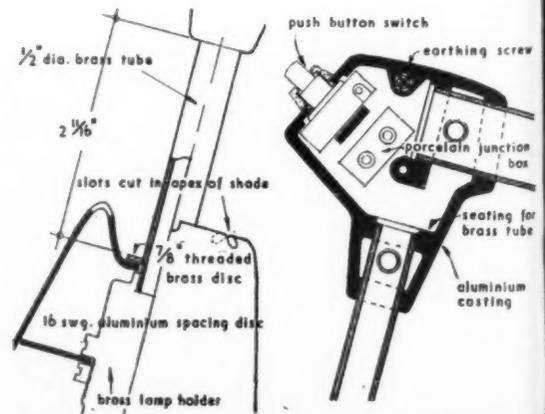
The standard lamp consists of a weighted cast aluminium foot resting on the ground at three points, a hollow hardwood column, two polished and laquered brass tubes, which are held together by a knee joint in which the push button switch is housed and an enamelled spun aluminium shade. The shade is perforated at the top to dissipate the heat given off by the bulb and at the bottom to lessen the glare at the edge of the shade.



Part section part elevation of foot



Long section through foot [Scale: 3/8" = 1'0"]



Part section and elevation through top of shade.

Section through knee joint [Scale: 6" = 1'0"]

A SHOP IN SAUCHIEHALL STREET, GLASGOW

acquire premises at Dover Street, Piccadilly, which will be used for exhibitions, discussions, recitals and lectures, and will contain a members' lounge, a bar, a library and an administrative office. This is the first step towards the aim of making the Institute a large-scale centre. The new facilities will be available to members in November.

An anonymous sympathizer has offered to double all future donations to the Institute up to a total of two thousand pounds. It should be pointed out that the ICA is recognized as a charity and is entitled to receive subscriptions by Deed of Covenant, a system which, at no additional expense to the subscriber, almost doubles the value to the Institute of the sum donated. All donations and requests for further information should be sent to the Director, Institute of Contemporary Arts, 17-18, Dover Street, Piccadilly, W.1.

Competition for ICA Symbol

The ICA is offering a prize of three guineas for a design symbolizing the Institute of Contemporary Arts. This will be used as a distinguishing mark on publications and notices issued by the Institute. Designs, which should be in one colour only, must reach the director at the address given above before October 2 and the envelope should be marked "Symbol Competition."

MOW

New Advisory Leaflet

The latest issue in the MOW Advisory Leaflet series, No. 11, "Preparing Metal Surfaces for Painting," published by HMSO at 2d., describes in non-technical language the treatment needed before painting iron and steel, and recommends the best types of priming paints to use. Similar information is given for non-ferrous metals—aluminium, zinc, lead and copper.

CID

Service for Scottish Industry

A new service for Scottish industry, providing up-to-date references to the best examples of British and overseas design, has been established by the Scottish Committee of the Council of Industrial Design.

A library service of photographs, books and cuttings is now available at the Committee's offices at 95, Bothwell Street, Glasgow. Industrial designers, manufacturers and others concerned with the design of manufactured goods may use this library to keep in touch with design developments in Scotland and elsewhere.

The library, which will be regularly augmented by fresh material, is already equipped with a wide range of technical and non-technical books and a stock of 5,000 photographs supplemented by cuttings from 80 periodicals.

ABT

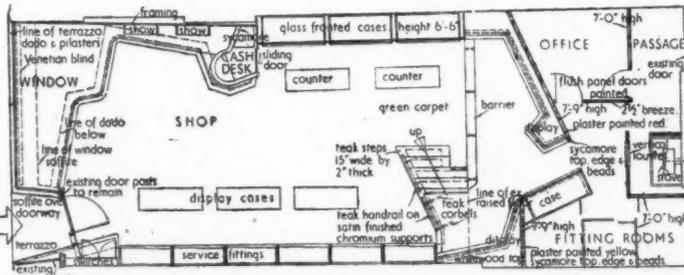
Lowering of Building Standards Deplored

At the 82nd Trades Union Congress held at Brighton recently, the following resolution, moved by Kenneth Campbell, on behalf of the ABT, was carried:—

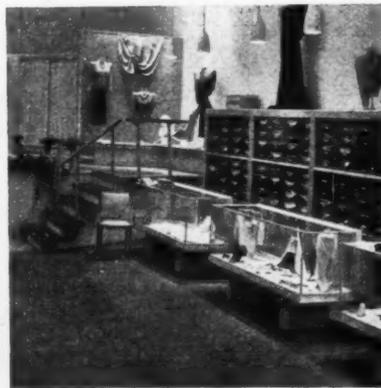
This Congress notes with concern the developing tendency on the part of the Govern-



Gerhard Kallmann, who designed the redecoration for "Penelope," a shop in Sauchiehall Street, Glasgow, is a lecturer at the Chicago Institute of Design. Mr. Kallmann, while in this country, first submitted sketches, which, however, were not sufficient to indicate what the appearance of the finished shop would be. Mr. Kallmann then visited Glasgow and without preliminary drawings or plans built a model of perspex, matches and balsa wood. It took one day to build the model. On the second day of his visit Mr. Kallmann had photos taken of the model. With their aid the shopfitters were instructed to proceed with the work. The designer did not prepare any construction drawings. Above, the exterior. Below left, the cash desk. Below right, counters to the right of the entrance. The general contractors were Archibald Hamilton (Shopfitters) Ltd. Sub-contractors; page 298.



Floor plan [Scale: 1/4" = 1'0"]

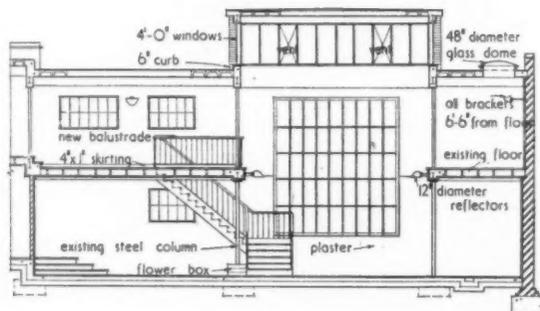


RECONSTRUCTION OF FURNITURE SHOP IN HIGH



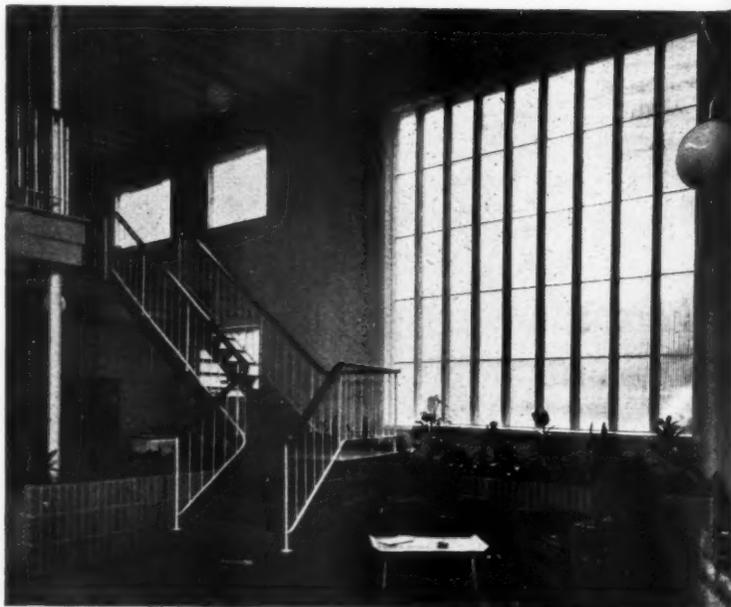
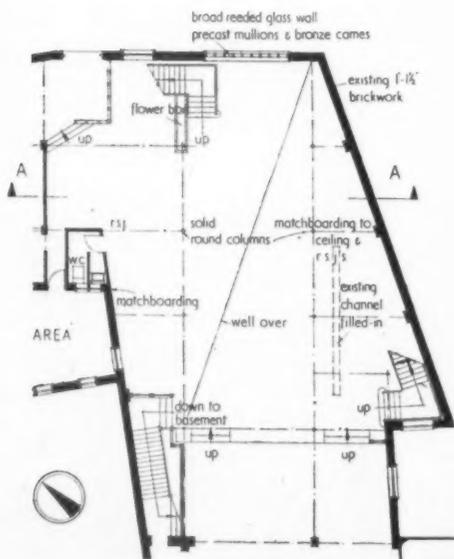
Section (right) of reconstructed showroom

[Scale: $\frac{1}{8}'' = 1'-0''$]

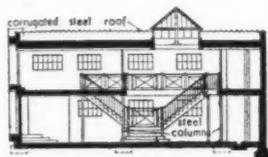


Plan (below) of show-room

[Scale: $\frac{1}{4}'' = 1'-0''$]



STREET, WATFORD



Section through war damaged building

The furniture shop belonging to William Perring and Company, at 33, High Street, Watford, received a direct hit by an oil bomb. The roof over the rear part of the showroom was gutted and the first floor balcony and ground floor were severely damaged. The showroom was redesigned by Brian Peake. The new roof consists of precast reinforced concrete beams supported on a framework of R.S.J.'s. The roof over the wall has been raised to provide clerestory lighting and added ventilation. The window frames are of metal. The two staircases, connecting the ground and first floors, consist of open hardwood treads with inset nonslip strips, secured by aluminium brackets to hardwood strings. Balcony and staircase balusters are prefabricated. The balusters are made of metal tube, the handrail of mahogany. The brick flower boxes are lined with zinc. The 14-ft. by 12-ft. window in the north east wall is surrounded by a projecting concrete frame. The finishes are as follows. Walls: south east wall, panels of blue, primrose, chocolate-brown and grey; north-west wall, grey; adjoining wall, wedgewood blue. Ceilings, soffit, balusters, white. Columns, primrose yellow. Stair treads, European beach. Handrails, wax polished. Wall brackets fitted with opalescent globes provide general artificial lighting. Above left, staircases connecting the ground floor with the balcony. Below, left, the north-east wall. The general contractor was F. W. Clifford Ltd. Sub-contractors; page 298.

ment to cut down standards of space, equipment and planning in housing, schools and other social services. It deplores the reductions in standards already imposed on schools and threatened for housing. It demands that economies that are necessary shall not be made at the expense of standards so recently achieved by the working class. It believes that building costs should be reduced by restrictions of profits and a thorough reorganization of the industry, including Government control of building materials, an enlarged programme of Government research directed towards more complete mechanization of the industry and a greatly extended use of standardized structural systems and components.

ABERDEEN

City Plan Prepared

W. Dobson Chapman & Partners have recently completed a civic survey and advisory plan for the city of Aberdeen. This work was begun early in 1947, but it has been completed to conform as far as possible with the present standards for survey and plan that have been set out by the Department of Health for Scotland.

Copies of the reports of survey and planning proposals, which are in two volumes together containing over 700 pages of typescript and many illustrations and maps, have been supplied to the city councillors, officials and interested outside bodies. A shortened version of the survey and plan will be published for the use of the layman.

In the meantime, the City Council is prepared to consider reproducing full versions of the reports in a single volume, with the typescript printed on both sides of the paper, if there is a sufficiently large demand. Anyone interested should write before December 31, 1950, to the Director of Town Planning at 5, Bon-Accord Crescent, Aberdeen.

WHITEHALL

Progress of Office Extension

Offices on the Embankment frontage of the new Government building known as Whitehall Gardens will be occupied in October by some members of the BOT staff; and the entire first section, providing 270,000 sq. ft. of accommodation, will be taken over next year by the BOT and Air Ministry.

The second section, on land extending from the site of Montagu House to Richmond Terrace, will give 200,000 sq. ft. of office space. It will not be finished until 1955, but recently the MOW has placed the contract for the foundations with Messrs. Trollope and Colls, who did the corresponding work on the first section, including the removal and lowering of King Henry VIII's wine cellar.

During the excavations for these offices the old river wall of Whitehall Palace was found to be so well preserved that it was worth keeping as a monument. As it was in the line of the new buildings the wall is to be re-erected elsewhere. The masons' marks are being recorded, and later the wall will be taken down stone by stone. It has been suggested that it should be rebuilt in the gardens where the statue of General Gordon from Trafalgar Square is to be set up, but this has not yet been decided.

The boiler house in the basement of the new offices is to provide hot water at high pressure for the district heating of Whitehall. At first it will heat about half the offices on the east side—War Office, Royal United Service Institution, Gwydyr House,

Ministry of Agriculture and Fisheries, and Quarter-Master General's offices—but later connections will be made to the remainder of the Whitehall buildings.

DIARY

Salisbury Cathedral Spire Restoration. Exhibition. The Building Centre, 9 Conduit Street, W.1. 10 a.m. to 5 p.m. Saturdays, 10 a.m. to 1 p.m. UNTIL OCT. 7

Building Exhibition. Moysmith Garage, Frederick Street, Cardiff. (Sponsor, MOW.) Daily (except Sunday), 10.30 a.m. to 5.30 p.m. UNTIL OCT. 7

Exhibition of Water Colours and Line Drawings by W. Curtis Green. RIBA, 66, Portland Place, W.1. 10 a.m. to 7 p.m. Saturdays, 10 a.m. to 5 p.m. UNTIL OCT. 28

Paintings and Silver from Woburn Abbey. Lent by the Duke of Bedford. At Royal Academy of Arts, Piccadilly, W.1. Weekdays, 10 a.m. to 7 p.m. Sundays, 2 p.m. to 6 p.m. UNTIL OCT. 31

English Taste: The 17th Century—Taste and Revolution. First of four talks by John Summerson. At Geffrye Museum, Kingsland Road, E.2. 7 p.m. OCT. 3



This feature covers aspects of legislation, parliamentary news or statutory rules and regulations which are of special significance to the architectural profession.

ERNEST WATKINS

The Architect and Current Affairs

The Legal Aid Scheme provided for by the Legal Aid and Advice Act, 1949, comes into force on October 2, and does so with a remarkable absence of the hullabaloo that accompanied the start of the National Health Service. This is a first instalment. As the title to the Act suggests, the full plan is intended to cover both legal aid and legal advice. Legal advice is to wait; its

deferment is presumably an economy measure.

The architect will be interested in various ways. He may find that what the regulations describe as his "disposable income" is small enough to enable him to qualify under the scheme. And as a member of a profession he cannot help but look over his shoulder at another shadow of socialization. If medicine and the law are becoming social services, will all professions follow along the same road?

In outline, the legal aid scheme is this. Under the management of the Law Society, in each convenient area throughout England and Wales a local panel of barristers and solicitors has been set up. Anyone desiring legal aid—that is, assistance in starting or defending legal proceedings in which the applicant is, or will be, a party (one or two classes of case, notably defamation, are excluded)—may apply to this regulating committee for assistance. This committee has two functions. It has to set in motion the machine for determining if the applicant qualifies financially for aid. It also has to vet the applicant's case to see if he has a *prima facie* case to prosecute or defend.

If the applicant surmounts both fences, he or she is sent to a local solicitor on the area panel of solicitors. That solicitor acts for the applicant on a normal solicitor and client basis, but he has this financial safeguard. If his costs are not recovered from the other party, he will receive 85 per cent. of his normal costs for what he has done either wholly from public funds or partly from public funds and partly from the contribution which the applicant will be required to make.

Checking the applicant's means and capacity to pay is done by the National Assistance Board in the area. "Disposable income" means the gross income of the applicant less deductions for income tax, rent, dependents, and so on, and it is estimated that a disposable income of £420 a year, the upper limit for aid, may result from a gross income of as much as £750. "Disposable capital" similarly means the gross capital of the applicant less furniture, tools of his trade, effects and the applicant's interest in his own house. Roughly, if an applicant has a "disposable capital" of more than £500 he will not be eligible for aid. The contribution the applicant may be required to pay towards costs may be as much as all his disposable capital above £75 and half the difference between his disposable income for the year and £156. It is this section of the scheme, this set of enquiries, that may prove to be the most awkward part of the administrative machine to manage and run smoothly.

From the public's point of view, there is one big difference between this scheme and the national health service: this is contributory and is accompanied by a means test. The citizen cannot go on to a solicitor's panel of clients as he can on to a doctor's panel of patients. From the professional point of view there are other differences.

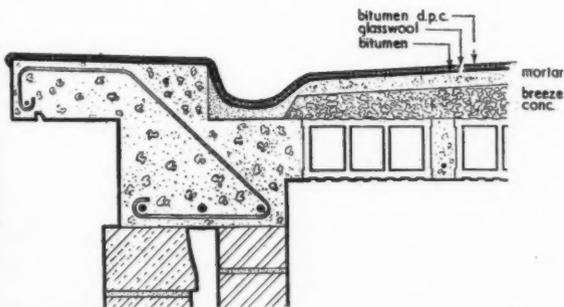
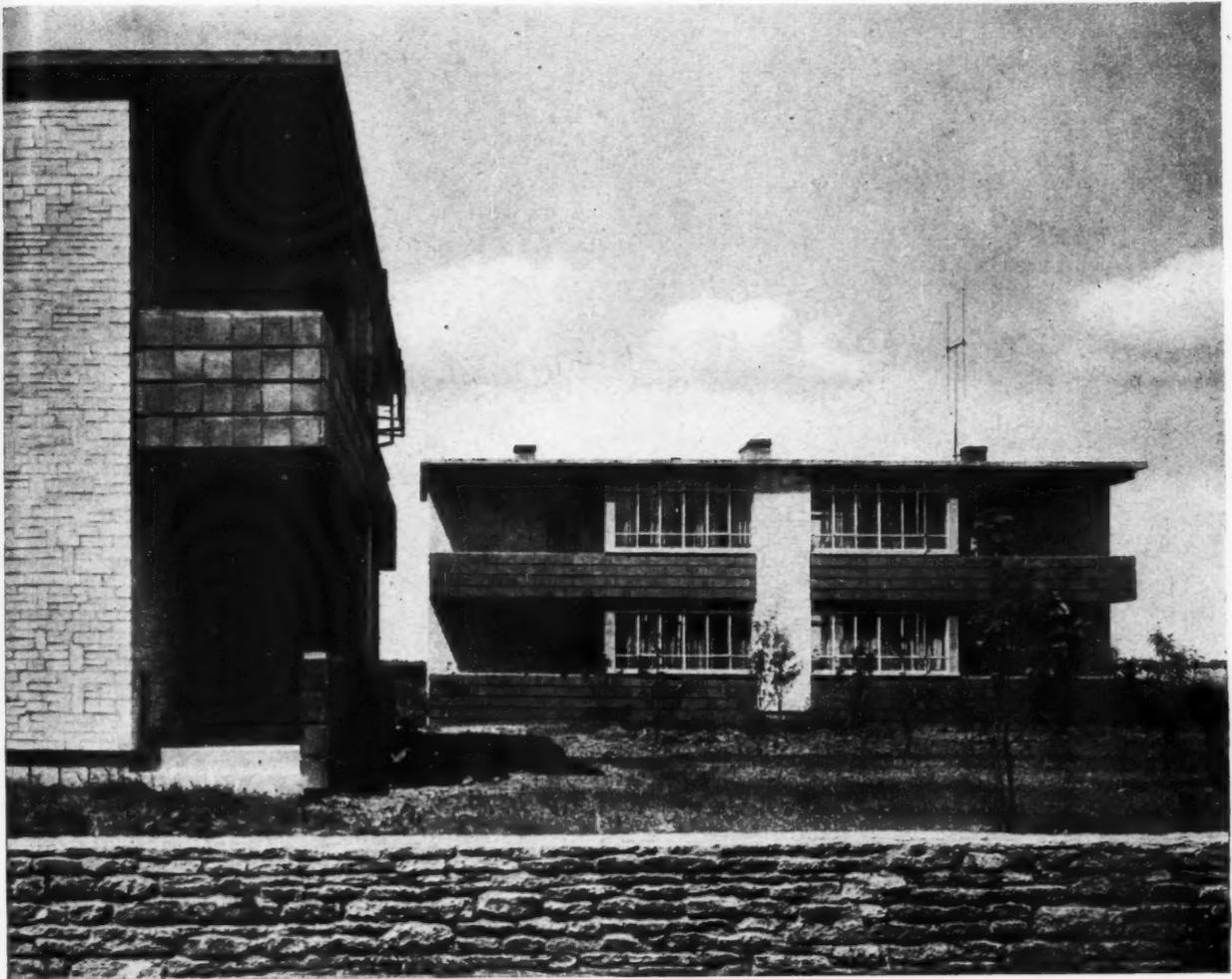
First, there is no body equivalent to the Ministry of Health directly concerned in the operation of the plan. There is a government department in the background, the Lord Chancellor's Department, but the direct responsibility is centred in the Law Society, which is a purely professional body—and, moreover, one with considerable experience in this kind of operation, for it has supervised a Services Divorce Department for almost ten years. The professional man is more free to come in or not, or to resign once he is in. It may be that the "panel" practice may grow, but the scheme applies only to individuals, and a great deal of the remunerative work in the legal profession, as in architecture, is provided by the limited company, not the individual. None the less, it is a start, and it should be remembered that the National Insurance Scheme of 1911 looked very different then from the Health Scheme in operation today.

TWO PAIRS OF HOUSES AT

In building two pairs of houses (which were originally intended for farm workers) in Church Street, Kidlington, A. Drexler attempted to overcome two of the factors which handicap building progress at present; the shortage of labour and of timber. He dispensed with the services of a general contractor and all building work was carried out under his supervision. The construction was such that mainly unskilled labour could be used. The use of timber was reduced to a minimum. Most of the structure is of reinforced concrete which could be precast for a larger number of similar houses. As the living room in each house runs from front to back, the houses can be orientated either north to south or east to west. All bedrooms have access to balconies. The floor area of each house is 1,000 sq. ft.; the balconies, an extra 250 sq. ft. The height from floor to ceiling on the ground floor is 7 ft. 10 in., and on the first floor 7 ft. 4 in. The houses have reinforced concrete frames, posts being 12 ft. 6 in. apart. It was intended to precast the units, which were, however, cast in situ, allowing posts to be omitted where convenient. The first floor and roof are constructed of 4 in. hollow blocks supported by reinforced concrete ribs. The fall of the roof is provided by the variation in depth of a layer of breeze concrete. Floors in the kitchen and scullery are covered with quarry tiles; living and bedroom floors are covered with rubber tiles or carpet. Window frames and external doors are of aluminium. Internal doors are of wood; these doors and the shuttering required 0.4 standards of timber, which is the total amount used per house. The houses are faced with dressed sandstone, a requirement of the MOTCP because of the proximity of an old church which, like the surrounding houses, is made from the same material. RC balconies are faced with quarry tiles. Below, a living room looking towards the front of the house with the dining recess in the foreground. On the facing page: above, the two pairs of houses; below, bedroom number three. The cost of each house is £1,750, of which £400 was spent on the exterior stone work.



KIDLINGTON, OXFORDSHIRE



Cornice detail [Scale: 1" = 1'0"]



Ground and first floor plan [Scale: 1/4" = 1'0"]

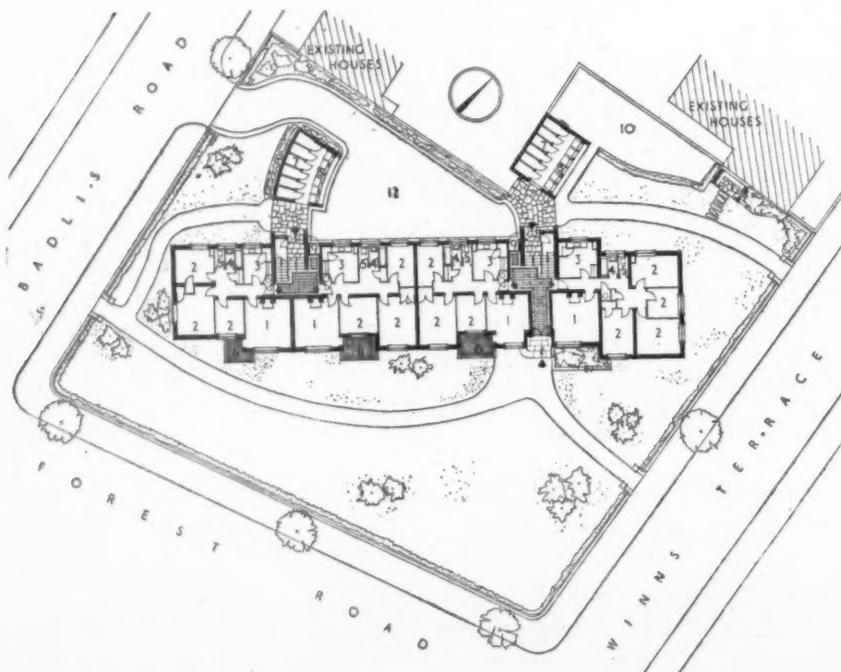


FLATS IN FOREST ROAD, WALTHAMSTOW,



The block of 12 flats seen above from the west and at the bottom of the opposite page from the east, was designed for the Warner Estate Ltd. by Sir John Brown, A. E. Henson and Partners. The site, on which previous houses and flats were demolished by

enemy action, is bounded by a main road on the south and by residential roads on the east and west. No access was allowed from the main road. The rear drive-in entry has been curved to avoid destroying existing trees. There are 4 flats per floor,



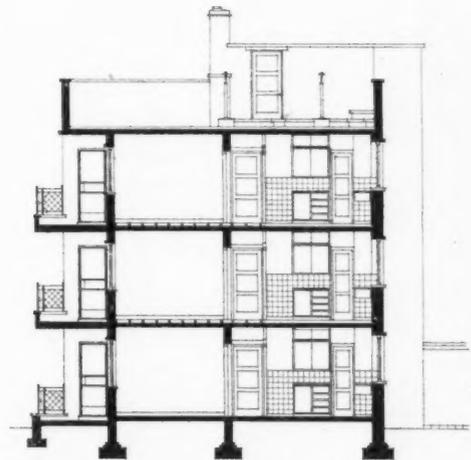
KEY

1. Living Rooms.
2. Bedrooms.
3. Kitchens.
4. Bathrooms.
5. W.C.'s.
6. Balconies.
7. Pram Stores.
8. Coal Bunkers.
9. Refuse Chute.
10. Drying Ground.
11. Garden Shelter.
12. Yard.

Site Plan

L O N D O N , E . 1 7 .

9 containing 3 bedrooms and 3 containing 4 bedrooms, each with a living room, kitchen, bathroom and external pram and cycle store connected by a covered way. All living rooms and 2 bedrooms per flat face south. Eleven of the flats have separate balconies and 2 staircases each serve 6 flats. The flats have load-bearing brick walls, hollow tile floors and flat roofs, with 9-in. internal spine walls and cavity party walls for sound insulation. Buff flint bricks are used for external facings. These contrast with chocolate coloured flint bricks at entrances, balconies and panels between staircase windows. Heads and cills of windows, copings and frames to the front entrance and pram stores are of artificial Portland stone. The front entrance doors, over which is a carving of Sir Edward Warner's coat of arms in Portland stone, are of wood, painted terracotta, with a single glazed panel. Entrance halls and staircases have walls of fair faced buff bricks, kitchens and bathrooms are distempered blue and all other rooms pale ivory. Hot water is supplied by back boilers in the living rooms. Refuse is disposed of by means of a shaft containing a patented dustbin suspension apparatus with access hatches on each staircase landing. Communal clothes drying areas are provided on the roof and at the rear of the flats. The general contractors were Whyatt (Builders) Ltd. For list of sub-contractors see page 298.

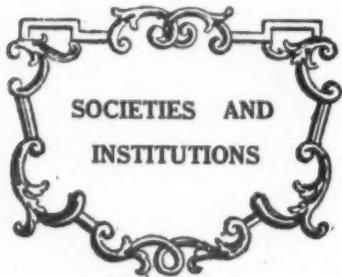


Section A-A.



Typical Flat Plan [Scale: 1/4" = 1'0"]





Speeches and lectures delivered before societies, as well as reports of their activities are dealt with under this title, which includes professional societies, trade associations and government departments. To save space they are represented by their initials—see front cover. Lectures cannot usually be reported in full, but the extracts given are in the speaker's own words.

Sir Patrick Abercrombie

September 12. DISCIPLINE IN CIVIL DESIGN. Paper read at Town and Country Planning Summer School, Nottingham University.

Sir Patrick Abercrombie :

It must never be forgotten that the architectural profession was among the keenest supporters of the introduction of statutory town and country planning: the great RIBA exhibition and conference of 1910 was the outward sign of this belief. Since then it appears to be the official view in the profession that civic design is to be kept out of legislative control.

It is necessary to consider some of the different degrees of discipline lying between the extremes of totalitarian control and perfect freedom, bearing in mind the extreme delicacy of the task shown by the attitudes of the architects. But first it must be remembered that outside this shy æsthetic sphere there are other compelling forces which greatly affect the appearances of building, at the centre especially, and which the most sensitive architects cannot escape from: Zoning for use and bulk (including heights and daylighting control). These masterful factors in discipline which govern the plans of the buildings, hence their general appearance, are fully dealt with in the Ministry's manual on *The Redevelopment of Central Areas*.

Let us try to classify "official restraints" in a descending order of severity, quoting, where possible, actual examples, and including new building and rebuilding:—

(a) Complete control: one man's design imposed by a ground landlord, as in Bedford Square, Bloomsbury, or voluntarily adopted, as for the Royal Crescent, Bath, Ferensway (Hull) and the Headrow (Leeds) are two modern attempts (the Headrow has been exploded).

(b) A sketch plan or model prepared by

an architect as a general indication to "show buildings in block form and provide for such a variety of buildings as is thought to meet developers' needs" (Manual). As individual buildings are submitted they are discussed, but not coerced, in terms of the sketch treatment. New Street at Haifa was carried out on this method. Regent Street (not the Quadrant, which is an example of (a)) was to be based upon a competition design, but this was abandoned; there are faint traces of its influences. Kingsway is more coherent through having the same architect on several buildings. Plymouth is approximately following this method.

(c) Individual buildings, submitted separately for scrutiny, without any coherent scheme and allowing zoning variations for different "specialized buildings." The decision in each case may be a "fair one," but the result, as in St. James's Square, is not always happy. The rebuilding of the City of London appears to be proceeding on these lines. Informal co-operation between architects of neighbouring buildings can do much under this method: e.g., Exeter.

(d) Freedom: "damn braces, bless relaxes." The results may be seen in any town, and vary between charm and chaos, nattering and bellowing.

(e) Hells: not exactly free, but specially designated for the damned. Dante and Milton would both find them more inspiring of great poetry than the pure totalitarian heaven. No gentility here, but plenty of surprise; the rogue architect has found his gallery, and the advertising Barker his pitch. Dante, it will be remembered, put a Pope in his Inferno.

If it is conceded that some discipline should be exercised (otherwise this paper need not have been written) and in varying degrees; and if there is power in the 1947 Act to do so, then some machinery must be devised. There are two phases in the administration of this delicate task: (1) The means of communicating to intending developers the æsthetic views of the planning authority; (2) The direction of appeal in case of disagreement. Though there is no likelihood of varying the normal practice of this country, according to which the final decision is in the hands of the plain man (e.g., a jury in a court of law), control should only be exercisable by law if adequate artistic advice is given. The Act gives no indication of this essential; it could presumably be included in regulations.

MACHINERY FOR DISCIPLINE

The machinery for advice, so that there should be conformity to the degree of discipline decided upon, may lean either to democratic or dictatorial methods. It may be worked by: (a) The planning officer: if he is strong minded he may become the (advisory) dictator to the planning authority. Much will depend upon his judgment. He may, however, be too easy-going or stylistically prejudiced. (b) An outside architect specially appointed: he will have his terms of references and he may be more easily replaced, as his job is strictly *ad hoc*. (c) A panel set up under the joint scheme originated and approved by the RIBA, CPRE and IOB. This is the most democratic method, and its procedure has recently been revised and reissued. It was originally devised for and is still probably most applicable to use in country districts. The method, however, might well be adapted for urban use. Under whichever method it is most desirable that consultation between developer and adviser takes place at an early sketch-plan stage; it is the alteration or rejection of finished working drawings that causes so much irritation.

Appeals against the decision of the planning authority (acting, it is presumed, on artistic advice) under the 1932 Act had to

be either to a Court of Summary Jurisdiction (a wholly unsuitable body) or to a special tribunal set up under the scheme, the architect member of which was appointed by the RIBA. The decisions of the court or tribunal were final, and there was no claim to compensation, even though the approved design cost the developer more money.

Appeals under the 1947 Act lie normally with the Minister. This has the disadvantage that the architectural advice tendered to the Minister is anonymous and that it is not certain whether the Minister acts upon this advice. The Minister may set up a tribunal. The position with regard to compensation under the 1947 Act is much weaker than under the 1932 Act.

The RFAC acts as a sort of advisory Court of Appeal to which the Minister might submit cases of first-class importance. The Commission also advises Government Departments, when they are giving grants for buildings to local authorities and other public bodies. It also on occasion calls for designs, e.g., Coventry Cathedral, and through the weight of its views may cause fundamental revision. It has been used for small objects, especially those entailing frequent repetition (street furnishings).

The devising of machinery itself for guidance, collaboration, control, appeal and possible rejection should not be beyond the skill of the Ministry, acting upon these possible alternative methods.

THE MACHINERY IN ACTION

But how it is to work, what principles to be laid down, is by no means so easy. Except under the totalitarian scheme of a single designer (the Rue de Rivoli) there should be no petty-minded interference with individualistic expression.

The first practical step is, as usual, a survey of existing conditions: (i) in areas where the normal process of piecemeal redevelopment is taking place; (ii) in areas of war damage, where wholesale rebuilding is to take place; (iii) in new areas where development is proposed: with such a survey it should be possible to decide what degree of discipline is to be imposed.

A good deal of the trouble over Mecklenburgh Square might have been avoided if the Foundling group had been scheduled either under discipline (a) or (b). The whole of London, including the City, should be zoned for discipline in architectural treatment, including the provision of several suitably placed local Hells, like Piccadilly Circus; which might be described as a Neon Hell superimposed on a Blomfield Heaven.

The second step is not quite so easy: it is to determine what is the extent of "adequate" artistic advice and how it can best be administered. This is the work of the Ministry.

The third step concerns the last words of the *Manual on External Appearance*: "Finally . . . control of external appearance by the planning authority is complementary to, and can never be a substitute for, the employment of competent architects by individual developers." It is indeed the hardest task of all to decide (by whomsoever the decision is made) who is a competent architect.

In spite of the difficulties with which the subject appears to bristle, I nevertheless proclaim my faith in the possibility during this transitional period of some system being devised for guidance, collaboration and, when necessary, rejection. And I would appeal to the architectural profession to drop allergy, anarchism and Adam Smith and to revive the glorious position which they held in 1910, when they were real pioneers; to produce a workable solution to this peculiarly architectural aspect of environment and not to neglect the general contributions which architects can make to the whole practice of town and country planning.

Recent discussions on the organizations and prospects of the architectural profession in Britain has aroused interest in how things are done abroad. On July 13 we gave a brief survey of foreign practice in Switzerland, Holland and Spain. This week we give details of practice in America, France and Sweden. These were taken from replies to questions which were sent by the AJ to architects or organizations in the countries concerned. The questions were:—(1) How many architects are there in your country? (2) Is entry to the architectural profession controlled by examination and are there any regulations to prevent people calling themselves architects and practising as such? (3) On what basis are architects' fees calculated? (4) What is the mode of training for the profession and are the number of entrants for training limited?

PRACTICE ABROAD

America, France and Sweden

AMERICA

There are 19,320 registered architects in the United States. Not all of these are engaged in active practice.

Practically all States require an architect to be licensed. Permission to practise in one State is no qualification to practise in another. Each State requires the applicant to prove his qualifications to practise. Generally this is done by a direct written examination lasting about three days. Requirements for admission to the licensing examination vary from one State to another, but generally in-

clude graduation from a recognized professional school, followed by three or four years of practical experience. (Most States accept a very long period of experience as a substitute for graduation from an architectural school.)

In some cases, where examples of work in another State, together with good educational background, satisfy the authorities, there is no need for the applicant to be examined.

Most architectural schools have five-year courses. A bachelor's degree from one of the schools is generally a minimum requirement for entrance into the profession. A few people without formal training may enter the profession by acquiring many years of experience in architects' offices.

FRANCE

There are approximately 8,600 architects practising in France. There are no assistant architects. Unless they have acquired the right to practise in the profession, they work as draughtsmen or architects' clerks.

Entry to the profession of architects has been strictly controlled since the passing of the Act of December 31, 1940, which created the Order of Architects. In particular, this Act laid down the conditions of admission to the Order, according to which candidates must: (a) be of French nationality; (b) enjoy civil rights; (c) be the holder of a diploma issued by a School of Architecture recognized by the State; (d) be accepted as a member of the Order by the Grand Committee of the Order of Architects.

Furthermore, the Act of August 30, 1947, renewed the temporary facilities allowing architects who had paid their licences for five years up to 1947, and architects' clerks who had passed a probational examination, to become members of the Order. (The subjects and conditions of this examination have now been elaborated, but not yet definitely fixed.)

In a general way, architects' fees are calculated according to the value of the work performed. Fees for *private contracts* differ from those for *works of reconstruction* or for *Government contracts*. The first are fixed by the Order of Architects and are approved by the Ministry of National Education, the others forming the subject of official decrees.

Architectural studies are done chiefly at the National Art Schools (architectural branch), or at schools approved by the States (e.g., the Ecole Spéciale d'Architecture).

Admission to these schools is by examination. Instruction is provided on a three-year course, but pupils may pass from one year's course to the next only if they have achieved the necessary

awards and marks at the written and oral tests held each year. The diploma is given when the students pass their final examination.

SWEDEN

The number of architects practising in Sweden is difficult to determine, for not all are members of the recognized society, Svenska Arkitekters Riksförbund, which has 750 members. There is no legal obstacle to entry to the profession and no regulations to prevent people from calling themselves architects. A member of the society is entitled to write "Arkitekt SAR" after his name. No one can become a member unless he has passed an examination at the Institute of Technology or has shown, by other means, that he is qualified.

There are two tariffs: (a) Svensk Arkitekttaxa, published by SAR (the above mentioned society) and the National Society of Swedish Engineers and Architects; (b) the regulations of the Government for calculation of fees to architects who are not employed in State service but are applied to for State building.

Swedish architects are trained at the Royal Institute of Technology, in Stockholm, and at Chalmers Institute of Technology, in Gothenburg. To a limited extent training is also carried out at the Royal Academy of Fine Arts, in Stockholm. At the two first mentioned colleges, which are polytechnical institutions, studies are similar and are carried out as follows:—The student usually enters the college between the ages of 19 and 22 and should have 12 years' general schooling behind him, in addition to at least one year's practical training either on a building site or in an architect's office. From approximately 100 applicants, about 30 are taken on each year. (In view of the very great shortage of architects, the number of students is being increased.) Choice is made by selection from examination certificates of high school students and from other examining bodies. But methods are being tried for carrying out tests to improve methods of selection and gauge the student's capacity for taking up architecture. In future, students without the above mentioned schooling will be taken on provided they have good references resulting from practical work.

The studies last four years, and each year is divided into two terms, making eight months in all. The interval between the terms is used for practice on a building site or in an architect's office. Once the course is completed, the successive examinations passed, and the pupil has done good work in the form of producing plans and schemes, he receives a final certificate which entitles him to membership of the SAR and is counted as an architect's licence.

FLATS

in WYVIL ROAD, LAMBETH
designed by G. GREY WORNUM

The site of 8.34 acres in Wyvil Road originally contained several densely built-up roads of terrace housing. These suffered considerable war damage. Planning for redevelopment had to take into account the removal, by stages, of tenants of those houses and shops still remaining on the estate. A large part of the area has been ear-marked for non-domestic building, leaving 6.6 acres for the erection of 250 flats at a density of 137 persons per acre. The four-storey blocks which form the first part of the scheme are illustrated here.

View across Wandsworth Road from the west.



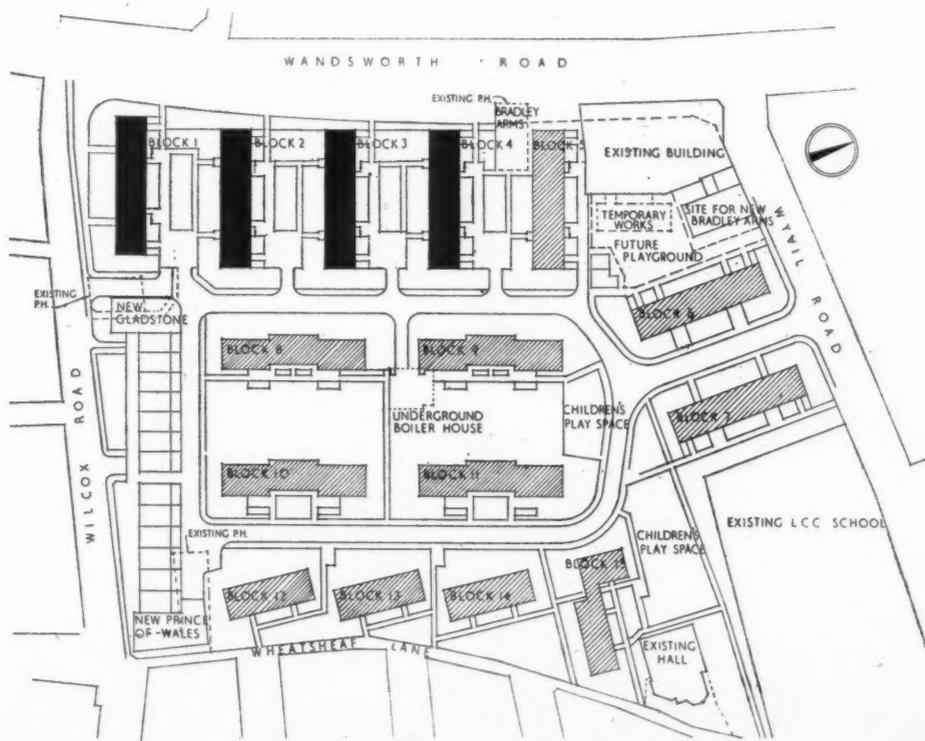
SITE.—It was considered undesirable to provide a direct road approach to the site from the busy Wandsworth Road; therefore access has been arranged from Wyvil Road to a new internal loop road serving the estate. Wilcox Road, originally a narrow and congested market, is to be widened, with a recess for barrows. Shops have a service road at the rear. Wheatsheaf Lane is to remain a pedestrian thoroughfare and three two-storey blocks for old people are to be built along its frontage

PLAN.—Three-bedroom flats have an area of 825 sq. ft., two-bedroom flats 713 sq. ft., with typical room sizes of 166 sq. ft. for the living room, 135 sq. ft. for first bedroom, 113 sq. ft. for second bedroom, 112 sq. ft. third bedroom and 89 sq. ft. for the kitchen. A separate bathroom and w.c. are provided for each flat and 50 per cent. of the flats have pram sheds. The four-storey blocks were designed without clothes drying facilities as it was intended that they should have a mechanised communal laundry, but when this idea was abandoned, one second-floor bedroom was converted for this purpose for eight flats.

CONSTRUCTION.—External walls are of 13½-in. brick, party walls of 11-in. cavity, floors and roofs of 6-in. reinforced concrete cast in situ with metal shuttering and partitions are of 2½-in. breeze blocks.



One of the four-storey blocks from the south-east.



Site plan



The rear facade of one of the blocks, looking north-east.

FLATS

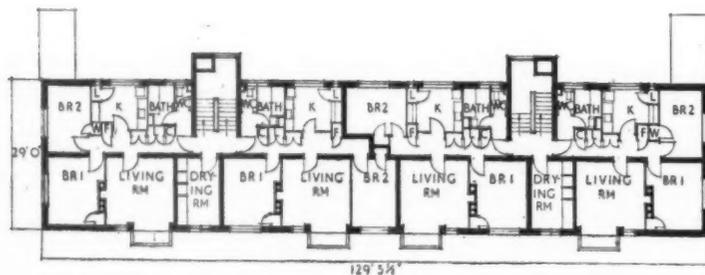
in WYVIL ROAD, LAMBETH
designed by G. GREY WORNUM

FINISHES.—There are artificial stone dressings to entrance doorways and cast stone copings and window cills. The balcony rails are of mild steel with panels of painted, resin-bonded asbestos boards. Windows and balcony doors are wood casements, the former painted cream, the latter light ultramarine. Rear entrance doors and pram sheds are also ultramarine and flat entrance doors are painted buff. Staircase walls are of cement glaze, either blue, grey or pale green, and granolithic paved.

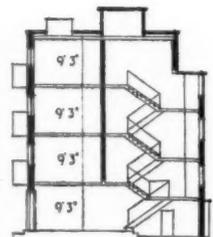
SERVICES.—Living rooms have grates for gas ignited smokeless fuel, with back grilles for heating the adjoining bedrooms. The six-, two- and three-storey blocks will have central heating from an underground boiler house, which will also supply hot water to 26½-gallon calorifiers in each flat. The refuse shoots have a specially designed hopper.

The contract price for the seven four-storey blocks, is £181,330.

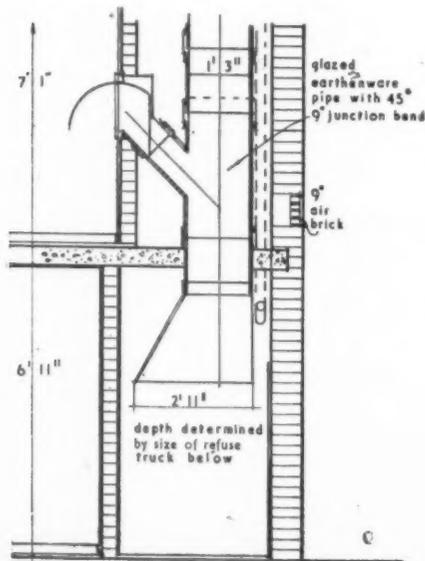
The general contractors are J. Jarvis and Sons Ltd. For list of sub-contractors see page 298.



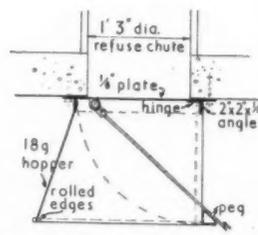
Typical floor plan [Scale: 1/16"=1'0"]



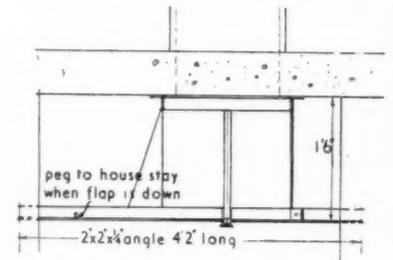
Cross section



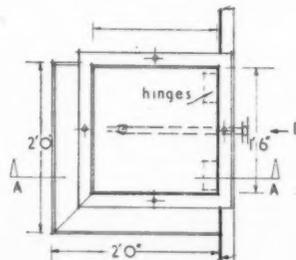
Section through refuse shoot [Scale: 1/4"=1'0"]



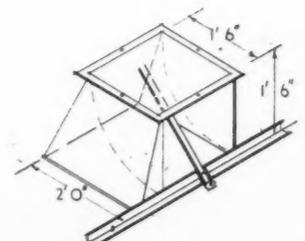
Section A-A [Scale: 1/4"=1'0"]



Elevation at B



Plan of hopper



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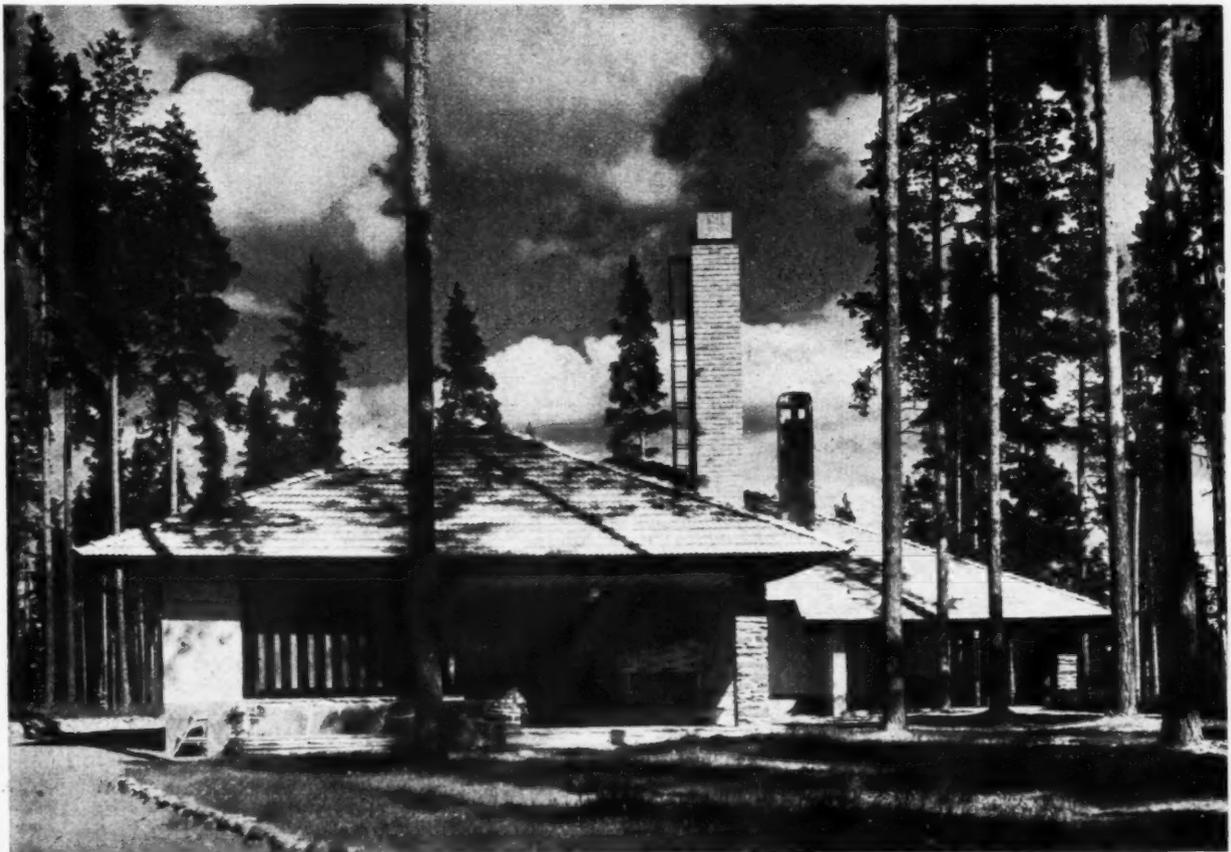
REHABILITATION CENTRE

OF LIPERI, FINLAND

designed by VILJO REWELL

The rehabilitation centre at Liperi has been designed to facilitate the making of those men, who, as a result of the war have contracted tuberculosis but are convalescent, fit for work. The centre is an institution covering schooling, hospital treatment and industrial training and includes administrative offices, living accommodation, catering facilities and recreation rooms.

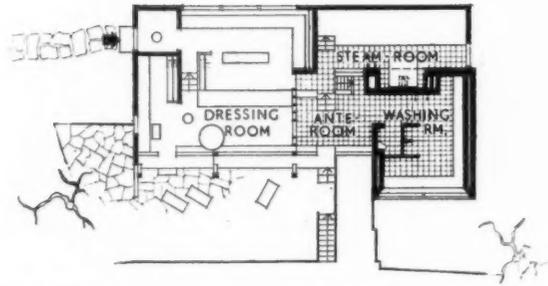
The canteen-hospital block from the south-west



REHABILITATION CENTRE

at LIPERI, FINLAND

designed by VILJO REWELL

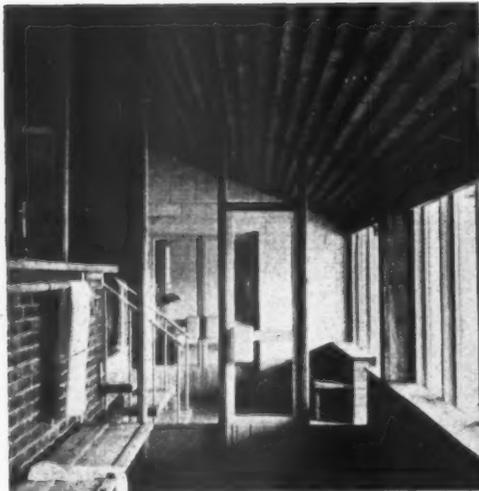


The pupils bath house [Scale: 1/4"=1'0"]

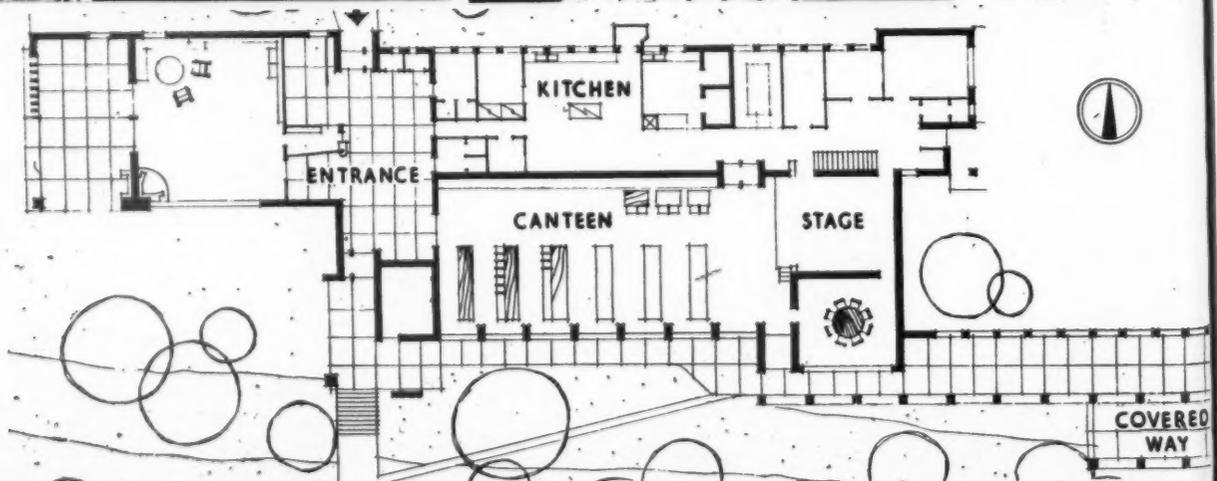
PLAN.—In planning the centre the architect was not able to inspect a prototype, nor was he able to take advantage of experience accumulated by others as it appeared that the planning problem was unique. The aim has been to maintain a close contact with nature, emphasizing the beauty of the landscape and to avoid an institutional atmosphere. The centre comprises two main multi-purpose buildings—a production-administration building with workshops for carpentry, boat building, electrical and metal

work and a smithy; a raw material, timber drying and completed products stores and reading, dressing and wash rooms as well as offices. The other contains a canteen, used also for meetings, recreation rooms, and hospital and living quarters for the resident staff.

CONSTRUCTION.—The building licence, when granted in 1946, permitted only the very minimum use of steel. This factor and the scarcity of skilled



Far left, the dressing room in the pupils' bath house, looking towards the ante room. Left, the exterior.



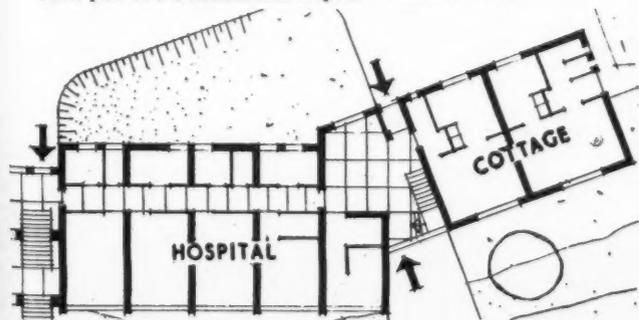


The canteen.

The work rooms
from the south.



Floor plan of the canteen and hospital [Scale: 1/8"=1'0"]

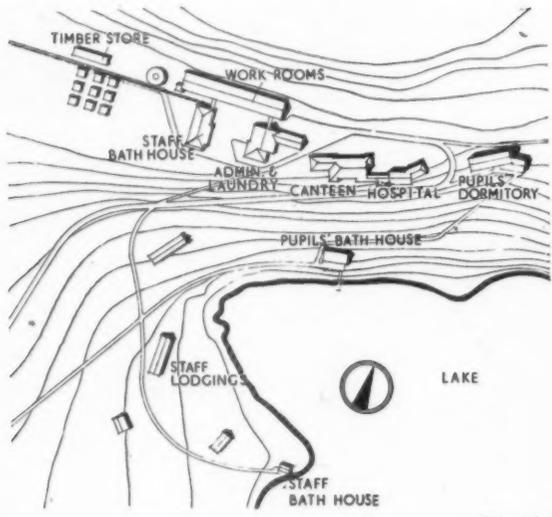


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Site plan

REHABILITATION CENTRE

at LIPERI, FINLAND

designed by VILJO REWELL

The pupils' dormitory from the south.

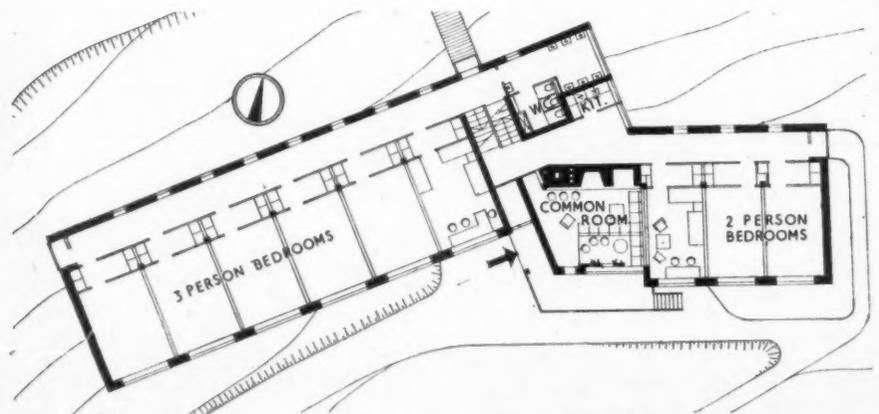


labour (except for the local carpenters) necessitated single-storey construction, except for the dormitory block which was built at a later date, when conditions became better. Foundations are of concrete, cast directly on gravel, without reinforcement and waterproofed with bitumen. Glass wool insulation is used in places. The cavity walls are constructed of concrete blocks cast on the site and composition blocks. Ceiling joists and rafters are of wood. The roofs are covered with grey cement tiles.

SERVICES.—A centrally-placed boiler house provides hot water for a low pressure central heating system in the production-administration building, and canteen block as well as domestic hot water. The dormitory block has a separate boiler. Ventilation is by means of exhaust fans. The kitchen equipment is run by electricity. The power, lighting, telephone and radio installations were in part carried out by patients as part of their training courses in these subjects.



The covered way leading from the hospital to the canteen.



Ground floor plan of pupils' dormitory (Scale: 1/4"=1'0")

INFORMATION CENTRE · INFORMATION SHEETS
 QUESTIONS AND ANSWERS · CURRENT TECHNIQUE
 THE INDUSTRY · PRICES · TECHNICAL ARTICLES

TECHNICAL SECTION

Does Mechanisation concern the Architect? S. F. Eden believes that unless Architects master the technique of designing for mechanised building methods, the design of our buildings may pass into other, less sensitive, hands.

MECHANISATION

by S. F. Eden.

With the slow but steady infiltration of the machine into building, sometimes called the last of the crafts, the architect may well consider his position.

The architect must always remain an artist—does that mean that he must always fight a losing battle against the machine? Some architects seem to hold this view. They say, in effect, that the architect's job in the matter is to prevent the worst excesses of the machine, standing aloof, and merely controlling the results. This is a negative attitude: the architect produces his design and the method of execution is left to the builder. The builder is prevented, by the exercise of controls, from departing from the plan or lowering the quality of the work, otherwise he can use what methods he wishes, and even attempt to use machines.

Most architects realize that such an attitude is unsatisfactory. It assumes that design and execution are two separate functions with no inter-relation, which is not so. The architect's design is based on the crafts, and it is only because building crafts have changed so slowly in the past that it is possible to view the two functions separately. The advent of mechanisation in the building industry has a direct impact on the crafts. It may or may not displace the old crafts by new ones; it will certainly alter the rate at which work can be done, and the sequences of operations.

For all the benefits which mechanisation has produced in other industries, every architect will agree that some results have been horrible. Examples crowd to the mind; the uncontrolled and unplanned past industrial development in our big cities, where all was subjugated to the needs of the moment; some cheap mass-produced furniture, and many others. Can it be denied that these are results of a lack of co-ordination between those who should design and plan in the wider sense, and those who produce? This lack of co-ordination leads to the art of designing passing into the wrong hands. This is the inevitable effect of the designer losing touch with the executor, and is the danger which faces the architectural profession today.

The builder's tools are the architect's axioms. Mechanisation changes these tools, and if the architect adopts a disinterested or "wait and see" attitude to their introduc-

tion, sooner or later his designs will tend to become impractical and the work will pass into other hands. This will be to the detriment of the public, since these other hands may not be able to design buildings in the true sense, and thus will only be concerned in making buildings which can be produced mechanically. What is the alternative? It is for the architect to change his attitude to this subject, to learn the first principles of the way machines work, their limitations and their advantages, the effect their introduction has on organization of work, the effect they have on design. This knowledge must be one of the factors influencing his design while it is being produced, and not something which is considered only when the design is completed. In the same way that his knowledge of the advantages or disadvantages of each system of construction, or each type of material influences the architect from the start in his design, so should he be influenced by his knowledge of the advantages and disadvantages of mechanical processes of all types, in factories and on site, and of particular types of machine.

WHAT THE ARCHITECT MUST KNOW

This does not mean that it is necessary for architects to become engineers. All the architect needs to know about any particular machine is the cost of running it, of moving it about, and the work it will do.

Fortunately for him, the rest of the knowledge he has to acquire is common to all mechanical processes, and arises from the following points concerning the inter-relation between the design of buildings and the use of machines to build them:—

(1) *The work for the machine is created in the architect's design.*

(2) *The simplest operations are easiest to mechanize.*

(3) *There is a minimum rate at which any particular machine can operate economically.* This is usually considerably less than the rate at which the machine is capable of working. In any design, the ratio of the total number of units of work to be done by the machine to the length of time the machine has to be held available to do the work, must not be less than a minimum value, which is determined by the maximum cost which can be allowed per unit of work, and by the total operating cost of the machine per hour.

Hence in designing work to be carried out by machines it is necessary to arrange for the work to be concentrated in as short a duration of time as possible. This does not necessarily mean that the work must be continuous from start to finish, though this would be advantageous, as far as using the machine is concerned.

(4) *The minimum size of job on which any particular and basically economical machine can be effectively employed, depends on the expense involved in getting it to the job, getting it started and taking it away afterwards in relation to the savings it makes while in use.* Whether the job can be done economically is thus bound up with the difficulty in transporting the machine, and the preparations necessary to start it working.

It is not true to say that machines can only be used on large jobs. If the cost of getting the machine started on the work is low, there is no reason why even a large and expensive machine cannot be used on a small job, providing the overall rate at which it works is sufficiently high.

(5) *Machines are not very adaptable.* Generally speaking they only do one job efficiently.

SITE ORGANISATION

The architect's design also has an important bearing on the organization of work on the site. There are a number of inter-related factors which affect all work, whether mechanized or not, but are of particular importance when machines are used. The organization of building work bristles with difficulties and the industry has not given it sufficient attention. It is wrong to suppose that this is no concern of the architect; the design itself can produce organizational problems which are incapable of effective solution.

(6) *The level of organization necessary to carry out work on the site, and within limits the necessary sequence of building operations, are created in the architect's design.*

(7) *The simplest jobs to organize are those with the fewest separate operations.*

(8) *Supervisory problems increase with the number of men employed.* It is generally speaking, much more difficult to keep 100 men happy and efficiently employed than it is to keep 10 men.

(9) *The proportion of non-productive work to productive work in building work is high.* On jobs well organized by current standards, the typical proportion is 1/3rd non-productive to 2/3rds productive (see Production in Building and Civil Engineering, HMSO 1946 and Supplement). The majority of the non-productive time is spent in preparation and in cleaning up. It occurs when jobs are started up and are closed down, and is generally increased when machines are used. On most building work this preparatory work is about 25 per cent. of the whole time, and can be reduced by decreasing the number of times operations are started up or closed down. The architect's design has a considerable effect on this.

It is interesting to note from the above points that, broadly, the factors of design which allow machines to work efficiently are basically the same as those which can lead to the greatest efficiency on the building site, whether the work is mechanical or not. This gives the architectural profession power to guide the progress of mechanization in the industry.

Rather than wait until some engineer has produced a machine before considering, in his design, the possibility of mechanization, the architect can take the lead, and produce designs in which manual work is arranged in a fashion suitable for mechanization, in the knowledge that the efficiency of the building operations will not be impaired if machines are not at present available, and knowing also that he is creating the conditions in which it may be economic for a new machine to be produced. In this way he can, in effect, take an active part in the development of new and useful machines.

EFFECTS ON CURRENT DESIGNS

The above remarks should not be taken to mean that architects should ignore the possibilities of using existing equipment. On the contrary, much existing equipment could be used on current building work with considerably greater effect if drawings were prepared with their use in mind. There should be closer contact between architects, plant manufacturers and builders to determine what could be done. First attention should be given to the unskilled operations because these are the simplest.

Perhaps the most difficult of all present-day designs to mechanize are those of the semi-detached houses which are now built in large numbers.

The building of a single traditional brick house does not offer much chance for effective mechanization. By normal methods it takes some 3,000 man-hours spread over a period of several weeks. There are a large

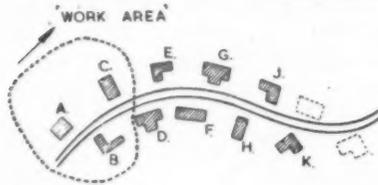


Fig. 1.

number of different operations, and the speed at which they can be carried out is in many instances dependent upon the time required for concrete, mortar and plaster to set. If the building of such a house is to be mechanized, a very considerable simplification of building work, and the abandonment of wet techniques may be required. The number of operations would have to be drastically reduced.

The field is more promising when numbers of houses are built on one site.

Let us next consider the building of a number of houses on one site, shown diagrammatically in Fig. 1. We shall assume that they are of similar construction, about the same size, but of different plan. It is clear that if houses A, B and C are built separately from start to completion in the same period of time by three separate gangs, who then move on to houses D, E and F, the rate at which work is carried out on the site is trebled and the possibilities of mechanizing the work is therefore increased. In practice, however, such an organization would be impossible unless the whole building work was extremely simple, for while a number of different trades are at work, the organization does not allow for a sequence of work for each trade. Moreover, as identical operations are proceeding at once throughout the whole programme, it would probably be difficult to make one machine serve all three gangs.

The way in which the builder normally overcomes these difficulties is to build the houses in sequence A, B, C, D, E, F, G, H, J, K, etc., duplicating only those trade gangs who have most work to do. Thus one concreting gang might proceed slowly round the site pouring foundations, while three or four bricklaying gangs, working on different houses, would follow. There would perhaps be two carpenter's gangs, one tiling gang and one plumber. The number and sizes of these gangs would be arranged so that each was continuously employed. The effect is that there are several houses under construction at once and the rate at which work is done on the site is again increased, and the possibilities of mechanization are much improved.

The consequence is, however, that the area over which work is being done is increased, and increasing demands are made on the mobility of any machines to be used. There is a limit to what can be done in this direction. Bearing in mind the necessity for providing continuous periods of work for any machine used, it is clear that the houses must be designed in groups which provide within themselves a sufficient rate of building and a balanced sequence of work for all trades. The architect's aim must be to keep the "work area" which provides this sequence as small as possible. The larger the number of separate operations or the larger the number of different trades, the more this work area will tend to expand. As it expands, the chances of effective mechanization decrease, and the organization of the work within the area becomes more difficult.

If each trade has to visit each house on a number of different occasions situations like that shown in Fig. 2 may arise in which the work area has expanded and split into two. Such a situation might arise, for example, if an additional bricklaying operation were necessary very late in the normal sequence

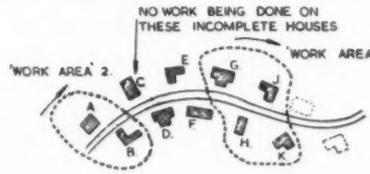


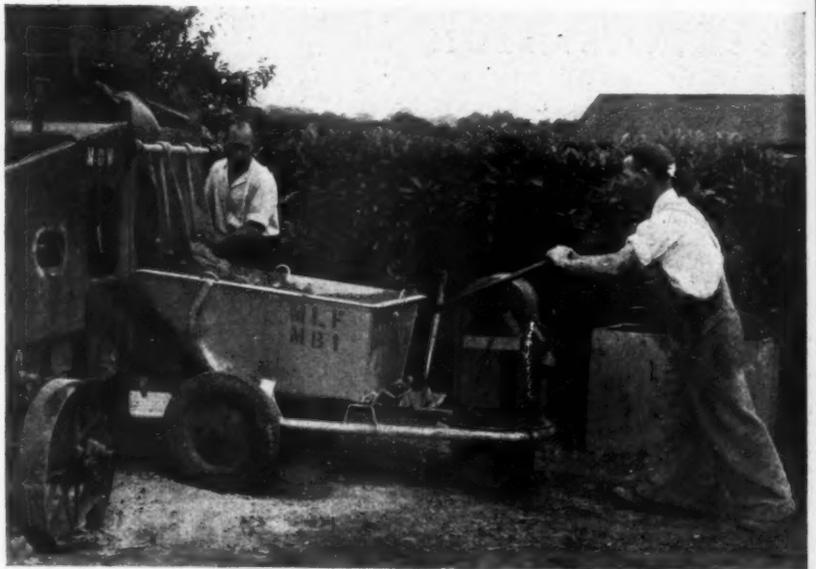
Fig. 2.

of building a brick house, or in the case of a crane built house, if the crane, having completed the shell, and not being required in the erection of the roof, had to return to place the chimney pot in position. The same effect can also be caused by late alterations in design. Such occurrences are to be avoided. The "work area" should be designed, in so far as it is possible.

Consider, for instance, the operation of concreting foundations and ground floors. In the past few years great advances have been made in the design of small concrete transporting machines, which are making very considerable savings in the cost of mixing and placing concrete in small quantities.

(See Machines for the Modern Builder, HMSO, 1950, price 6d., and illustrations, Figs. 3 and 4.) The effectiveness of these machines would be greatly increased if all the concrete for one pair of houses could be placed at the same time. The typical design, Fig. 5, does not allow this; designs in which the foundations and floor are made entirely of concrete can be more suitable. On clay sites, the pile foundation designs prepared by the Building Research Station lend themselves very well to mechanization, both as regards digging and concreting. Trenching work for foundations and drains could often be mechanized with greater success if done at the same time, but this becomes impracticable if the work is let to two different contractors.

Another recent development in handling equipment concerns the supply of bricks and mortar to the bricklayer. There is now on the market a range of hoists, elevators and trolleys specially designed for quick and easy movement from spot to spot. Generally speaking, the economical rate at which they will work is sufficient to supply a dozen or more bricklayers. The fact that they are mobile offers the possibility of using them to supply more than one house throughout



Above, Fig. 3, typical powered concrete barrow; below, Fig. 4, Single rail concrete transporter.



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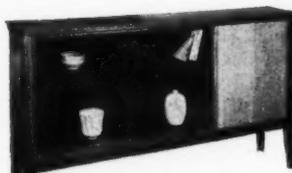
Chest of Drawers 2' 6" wide £16



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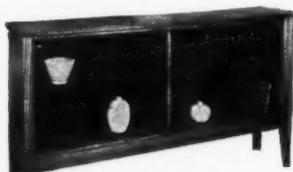
Cupboard 2' 6" wide £16



Bookcase Unit with glass sliding doors and cupboard 5' 0" wide £16
Base unit with legs, extra



Rectangular Dining Table 4' 9" x 2' 8" £12.10



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Base unit with legs, extra

This "unad" range also includes a 3' Wardrobe, Beds and Bedheads, 4' 3" Dressing Table, 4' 3" Dressing Tablecum-Writing Desk, 2' 6" Bureau. Various open Bookshelves and occasional tables.

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A showroom at Hoods Ltd., Birmingham. Architects: Messrs. William Green and Associates.

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In a retail store even the floor surface can affect the sales-curve. Semastic Decorative Tiles, installed for Hoods Ltd., in Birmingham, have a *positive* influence: their colour and appearance set off the merchandise displayed; their outstanding sympathy to the tread is appreciated by shoppers.

Note: The wide range of plain and marbled colours in which the tiles are made allows ample scope for individuality in design and for colour harmony or contrast. Floor colouring and design, carefully selected and properly related to particular architectural and decorative features, can produce almost any desired effect—spaciousness, brightness, warmth, coolness.

Semastic Decorative Tiles cut overheads, too. They can be installed with very little dislocation of normal working. They stand up to extremely hard wear without any loss in attractiveness. They are easy to clean and to maintain and the traffic flow can be provided for in the design.

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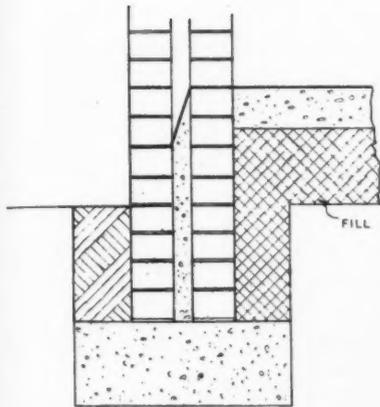
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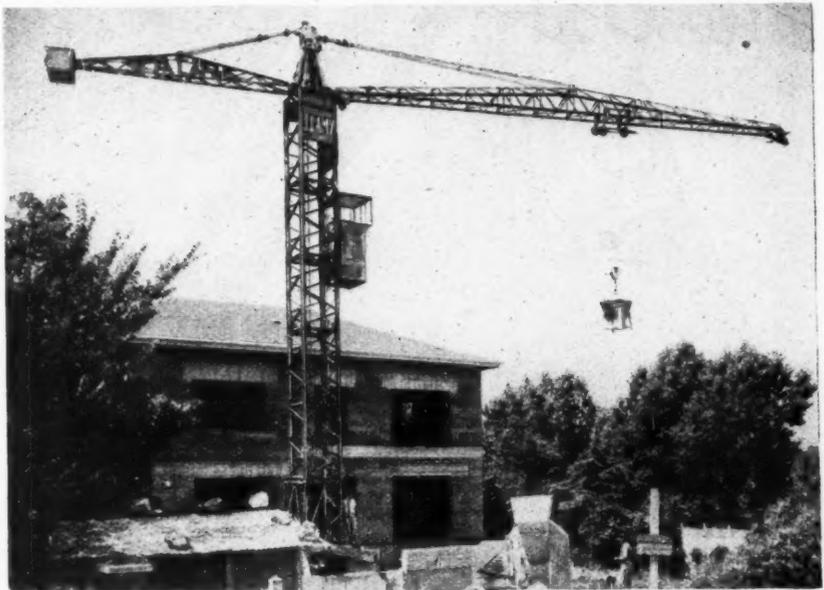
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Above, Fig. 5, typical house foundation ; right, Fig. 6, type of crane widely used in France for flat building, shown here being used for building a pair of houses.



the day, but if the bricklayers become dispersed over too wide an area through having to revisit the same house again and again during the course of its construction, the equipment, however mobile, will not be able to serve them all. These problems are particularly acute in the case of mortar. The cement-lime mixes normally used set too quickly to allow large quantities to be delivered to the bricklayer in advance of his requirements. Lime mortar is not so troublesome in this respect.

It seems possible that in time to come all these handling devices may be largely superseded in the future by new types of crane. The building industry in this country suffers from the fact that most of the cranes available have not been specially designed for building work, although on the Continent examples may be seen of small flats being built with the aid of specially designed long-reach tower cranes (see Fig. 6). Similar developments may be looked for in this country, and for that reason the architect should give attention to the design factors which affect the use of a crane.

The crane is perhaps the most adaptable handling device of all, and is therefore particularly suited to building work where different materials have to be handled. It has a very particular field where prefabricated units are concerned, and most prefabricated and non-traditional systems which have been designed in the past few years rely greatly on its use.

The following example illustrates the

problems which arise when the organizational difficulties in using the machine are not appreciated in the preparation of the design.

Fig 7 shows the crane movements required to build nine pairs of house shells to two different designs. The same crane was used in each case, costing about £30 per week to use.

The houses in type 1 were built of heavy concrete blocks requiring a grouting operation at each course which involved 24 hours delay. In all, five separate crane operations were required to build each pair of shells with an interval of time between each.

The houses in type 2 were designed with the use of the crane in mind, and the shell of each pair could be completed in a single crane operation. The weights of materials in each case were approximately equivalent, also the number of lifts required.

The resulting differences in performance on the two sites were very marked.

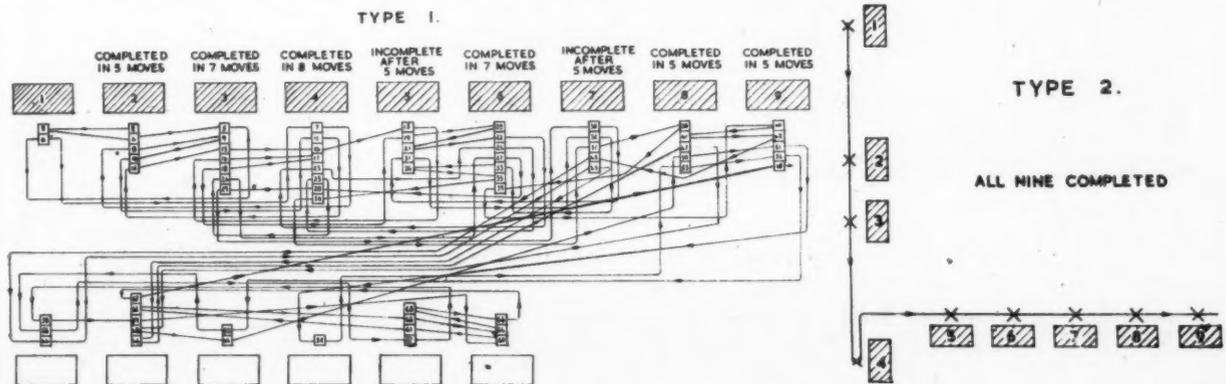
For type 1 the crane took 1,173 hours to build 50 shells and was idle for 410 hours. For type 2, 54 shells were built in 760 machine hours, with only 64 hours of idle time. The plant and labour costs to build the houses of type 1 were 60 per cent. higher than for type 2.

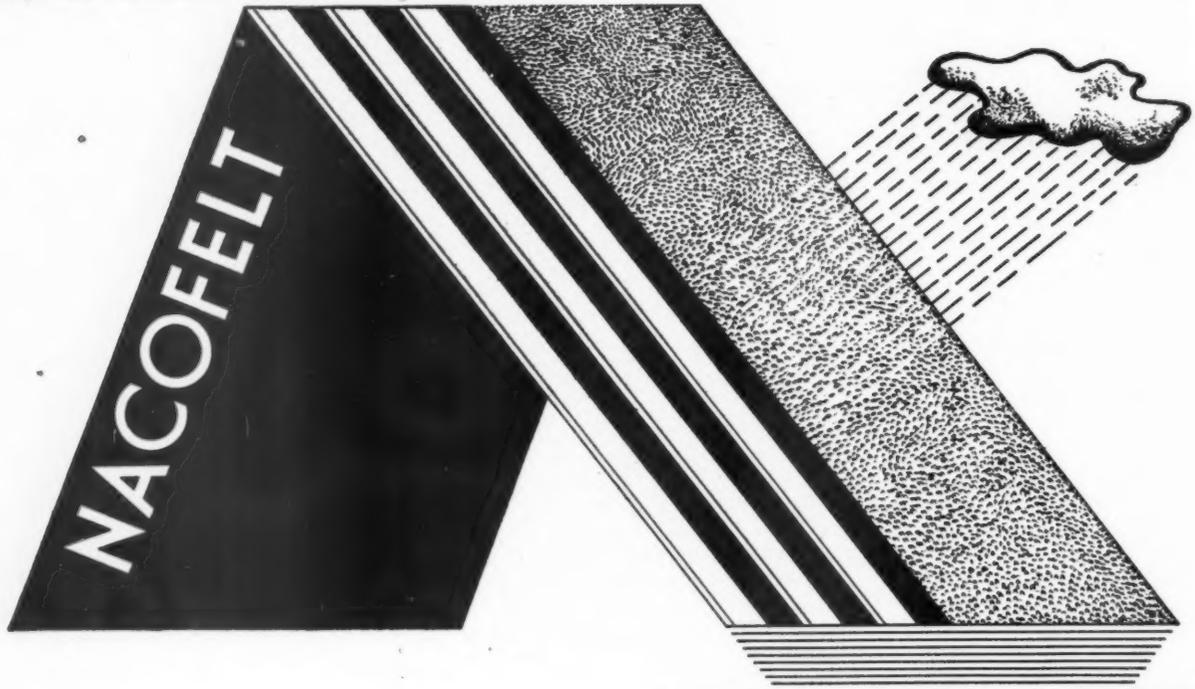
An examination of the sequence of crane movements for the type 1 house also throws light on the difficult organizational problems encountered. Ten pairs were under con-

struction before the first was completed, and in the effort to keep the crane employed the sequence of subsequent operations was thrown out of gear. This in turn meant that some blocks were not ready for the crane, and the crane visited two pairs as many as seven different times. The confusion which arose here was entirely due to the fact that the problems in using the crane had not been considered while the house was being designed, although it was known that a crane would have to be used.

It has often been claimed that the employment of mechanical aids on housing leads to repetition work and identical and uninteresting designs. Perhaps enough has been said to show that this need not be the case if architects insist on taking into consideration the use of machines at the design stage. It is not until building components are made off the site in a factory that identical components become necessary. The problem of whether or not to prefabricate is really a question of whether and where to mechanize. Mechanization in a factory has the advantage of bringing into use machines which are too expensive or too cumbersome to take on to a building site. The disadvantages are that extra transport is involved and that the units have to be identical. The choice of which method to employ lies with the architect, and if houses become stereotyped and uninteresting, this will be an effect of design rather than of machines.

Fig. 7, Houses erected by crane ; crane movements to erect nine blocks.





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This feature covers both the production and marketing of new materials and designs of equipment, as well as the general trend of developments within the Building Industry.

THE INDUSTRY

By Brian Grant

LEEDS BUILDING WEEK

So far as the architect was concerned there was not really a great deal to be seen at Leeds. The show was well laid out, and of considerable general interest, but to anyone who keeps fairly up to date with visits to Olympia every other year, there was little to be found which could be described as new.

In a brief tour, however, there were several interesting details to be found. Insulight, for instance, the sandwich insulating glass produced by Pilkingtons, is now available in sizes up to 100 in. by 80 in., the price per square foot decreasing as the size increases. On the Flush Door Manufacturers' Association stand there was shown a type of core with the internal ribs running vertically: this is claimed to be more efficient than the BS core which has horizontal ribs



Tucking insulating foil packs behind a freshly applied aluminium sheet on the inner wall.

and was designed for timber economy, since shorter lengths are used. On the same stand were also shown finger plates in $\frac{1}{4}$ in. Formica, which are quite cheap and should wear almost indefinitely.

In many ways the open-air plant show was the most interesting part of the exhibition. Some of the equipment seemed a little light to stand up to the very tough treatment inevitable on a building site, but there is now plenty of plant available for smaller builders who wish to take advantage of mechanical aids, the main disadvantage being that the present relatively small number of houses on a given site frequently makes full mechanisation uneconomic.

As always, there were a number of small hoists on show, and it seems that the new safety regulations, which demand that the hoist platform shall be caged, have produced some difficulties for manufacturers, but several of the designs are both neat and automatic, though the task of preventing men from riding on hoists remains impossible. Scaffolding and shuttering continues to be developed for a number of special purposes such as barrel vaults and columns, and the freestanding unit frame scaffold seems to be more widely used, and a number of firms have developed different designs. One noticed a patent coupler shown by Acrow which allows wooden staircase treads to be clipped to raking tubes in a scaffolding, a very much better system of vertical circulation than the usual lashed ladders.

Among the less mechanical items there was a full display of that very interesting material Pyrok, which is now being used on a large scale for anti-condensation and insulation in ship's holds and in factory roofs. It also seems probable that it will be considerably developed as a fireproof encasement for columns and beams. Not far from Pyrok, Wiggins Sankey showed some further developments in the inflatable Ductube which is now being used for casting hollow floor beams and slabs and also for laying concrete cable ducts in trenches.

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Factron Products are now marketing a rubberized floor paint in nine colours, browns, greens, red and lead grey. A two-coat application will give a new lease of life to concrete, lino and wooden floors, both interior and exterior. The paint is resistant to chemicals and will not only give protection against mild acid and alkali attack but can also be applied direct to new concrete, dispensing with the normal neutralizing treatment. Designed for use in factories, offices, hospitals, schools, and other industrial and domestic buildings, it is washable, easily polished and provides a tough coating

that will withstand heavy foot traffic. Application is by brush or spray, the only precaution necessary being to see that the surface is dry and free from dust or dirt, and that any grease or wax polish has been removed. Covering capacity varies from 800 sq. ft. per gallon on concrete to 900 ft. on linoleum. (Factron Products Ltd., 14, North End Road, London, N.W.11.)

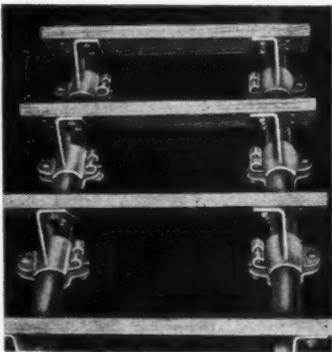
ALUMINIUM ROOFS AND WALLS

Some interesting wall and roof construction was to be seen last week at the opening of Northern Aluminium's new sheet mill at Rogerstone. External walls are 11 in. cavity to a height of 8 ft. the walls above this level, and the roof, being in two skins of corrugated aluminium sheet with a layer of foil insulation between them. The outer sheeting is 20 SWG with ten 3-in. corrugations and the inner is 26 SWG with eight 3-in. corrugations. The laps of the external sheets have been painted with Bitumastic paint, as have the purlins and other steelwork where they are in contact with the aluminium. The sheets are fixed to the purlins by aluminium alloy hook bolts, nuts, and limpet diamond washers, and the seams are fastened by Chobert hollow rivets at 9 in. pitch. Purlin spacing is 4 ft. 6 in. on the roof and 5 ft. 6 in. on the walls.

Ordinary corrugated aluminium sheet has a thermal conductivity of between 1.2 to 1.6 BThU/sq. ft./hr./1° F. temperature difference; although accurate figures are not yet available it is expected that the overall thermal conductivity will be in the region of 0.3 BThU. On this assumption, the thermal requirements for space heating plant are reduced by one third, and the saving in capital cost of the heating plant will pay for 60 per cent. of the cost of insulation. It is further estimated that the saving in fuel and running cost will pay for the balance in about 18 months.

The insulation is applied in packs which were made up on site from 0.001 in. foil. Each pack consists of three separate corrugated sheets, and the three layers are stuck together so that the centre layer has its corrugations at right angles to the two outer layers; this considerably strengthens the pack and makes it easier to handle.

Various methods of fixing the insulation were tried out, but the one finally adopted was, to fix the outer sheeting in the normal way, then to fix the inner sheeting to the underside of the purlins with special hook bolts; this forms an air space in which foil pack is inserted. The inner sheeting is laid in strips from ridge to eaves, and when a strip one sheet wide has been fixed, the foil pack is pushed in from the open side and the next corrugated sheet fixed. (Northern Aluminium Co. Ltd., Banbury, Oxon.)



Two views of the Acrow scaffolding stairway.

Corrections

In our issue for August 3 we stated that Ernst May was working on a town plan for Jinja and Kampala. This was incorrect. Mr. May worked on a preliminary town plan for this town in 1948 and completed a plan for the residential part of Kampala in 1947. At present the town planning in Uganda is being undertaken by Henry Kendall, Government town planner, who was appointed in 1949.

In our issue for August 24 Isaac Berriman was mentioned as general contractor for the canteen at Gateshead, designed by Messrs. Napper and Taylor, instead of Messrs. Thomas Clements & Sons Ltd.

Buildings Illustrated

"Penelope," a shop at 498, Sauchiehall Street, Glasgow. (Page 277.) Designed by Egbert Kallman. General contractor: Archibald Hamilton (Shopfitters) Ltd.; Sub-contractors: Painting, George Gibson; terrazzo work, Oswald Toffolo; electrical work, Palfreman & Ross.

Furniture Shop for William Perring & Co., 33, High Street, Watford, Herts. (Pages 278-279.) Architect: Brian Peake, F.R.I.B.A., A.A., DIP.(HONS.)M.S.L.A. General Contractor: F. W. Clifford Ltd. Electrical Contractor: Charles Mickleburg Ltd. Consulting Structural Engineers: Bylander & Waddell. Quantity Surveyors: Josling & Hamlyn. Sub-contractors: Roof construction, The Trussed Steel Co.; steelwork, T. C. Jones Ltd.; roof finishes, D. Anderson & Son Ltd.; windows, Williams & Williams Ltd.; glasscrete window, J. A. King & Co. Ltd.; paint (ceilings, walls), Fleetwood Paints Ltd.; paint (walls), Murray & Jones Ltd.; flowers, The Westend Flower House Ltd.

Two Houses at Kidlington, Oxfordshire. (Pages 280-281.) Architect: A. Drexler. Sub-contractors: Stonework, A. Waters; plumbing, Robbins Bros. and L. Forster;

decoration, R. J. W. Fisher; aluminium windows, Monks Metal Window Co.

Flats in Forest Road, Walthamstow. (Pages 282-283. Architects: Sir John Brown, A. E. Henson & Partners. Sculpture (coat of arms): P. Danziger. General Contractors: Messrs. Whyatt (Builders) Ltd. Sub-contractors: electrical installation, Giles (Electrical Engineers) Ltd.; plumbing and hot water, W. H. Gascoigne & Co. Ltd.; hollow tile floors, etc., The Kleine Co. Ltd.; artificial stone, Ferro-Concrete (Shepperton) Ltd.; pitchmastic and asphalt, Asphaltic (London) Ltd.; metal windows, The Crittall Manufacturing Co. Ltd.; kitchen fittings, Peerless Built-in Furniture Ltd.; door furniture and ironmongery, Lockerbie & Wilkinson (Birmingham) Ltd.; grano to halls and staircases, Stuarts Granolithic Co. Ltd.; balustrades to balconies and stairs, Grundy Arnatt Ltd.; refuse hoists, Shefflex Ltd.; floor tiling, Langley (London) Ltd.; sanitary fittings and fireplaces, W. N. Froy & Sons Ltd.; facing bricks, The Uxbridge Flint Brick Co. Ltd.; gas service, The Lea Bridge District Gas Co.; doors, Magnet Timber Co. Ltd.; extendable clothes posts, Clark Hunt & Co. Ltd.; fencing, A. J. Binns Ltd.

Flats at Wyvil Road, Lambeth, for Lambeth Borough Council. (Pages 286-288.) Architect: G. Grey Wornum, F.R.I.B.A. Quantity Surveyors: H. W. Langdon & Every. General Contractors: J. Jarvis & Sons Ltd. Sub-contractors: Demolition, Richard Ashton & Sons Ltd.; facing bricks, Wiggins Sankey Ltd.; roofing felt, William Briggs & Sons Ltd.; patent flooring, Semtex Ltd.; central heating, J. H. Nicholson & Co. Ltd.; grates, J. Young & Co.; gasfitting, South Eastern Gas Board; electric wiring, Thorpe & Thorpe Ltd.; plumbing, Z. D. Berry & Sons Ltd.; sanitary fittings, B. Finch & Co.; door furniture, Adrian Stokes Ltd.; metalwork, balustrades and refuse hoppers, Clark Hunt & Co. Ltd.; joinery, Austins of East Ham Ltd.; paint, William Harland & Son Ltd.

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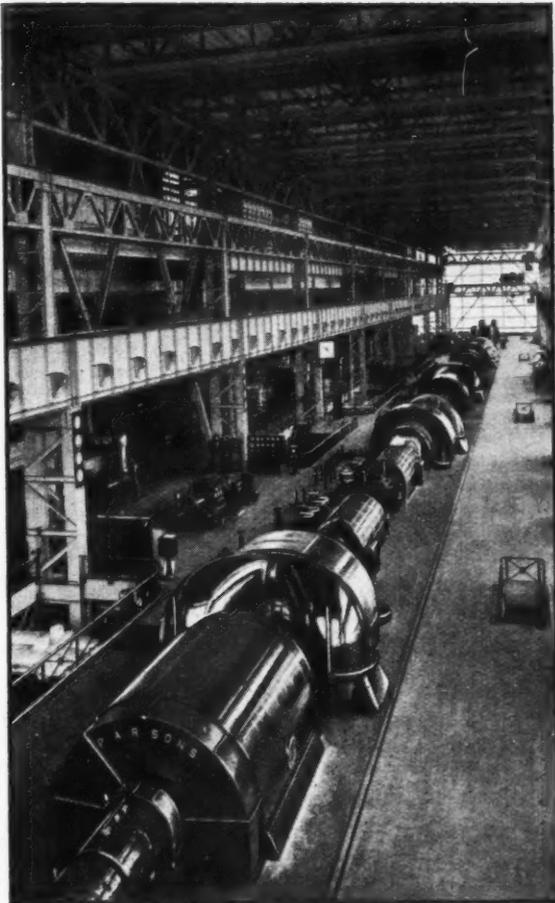
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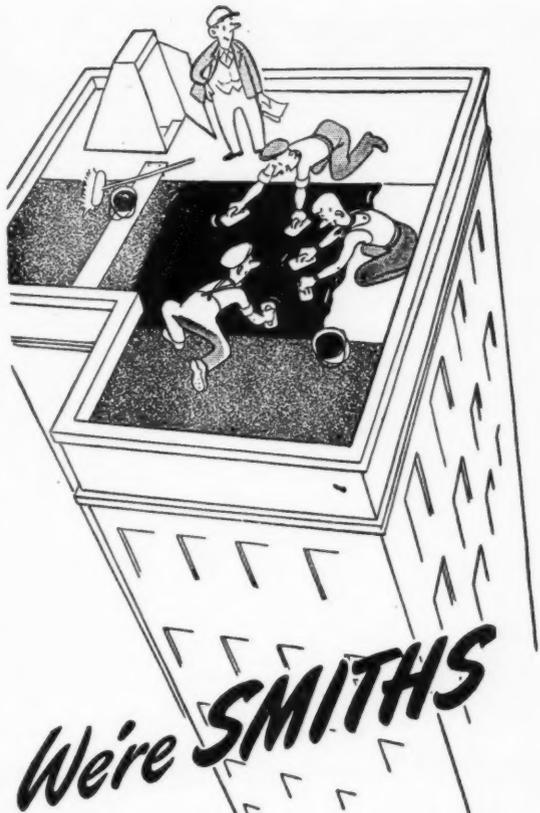
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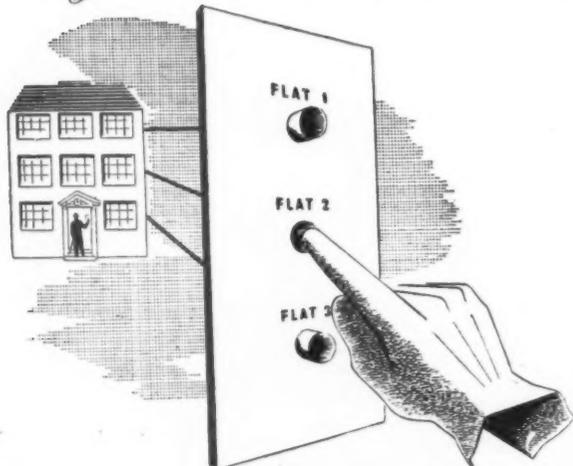
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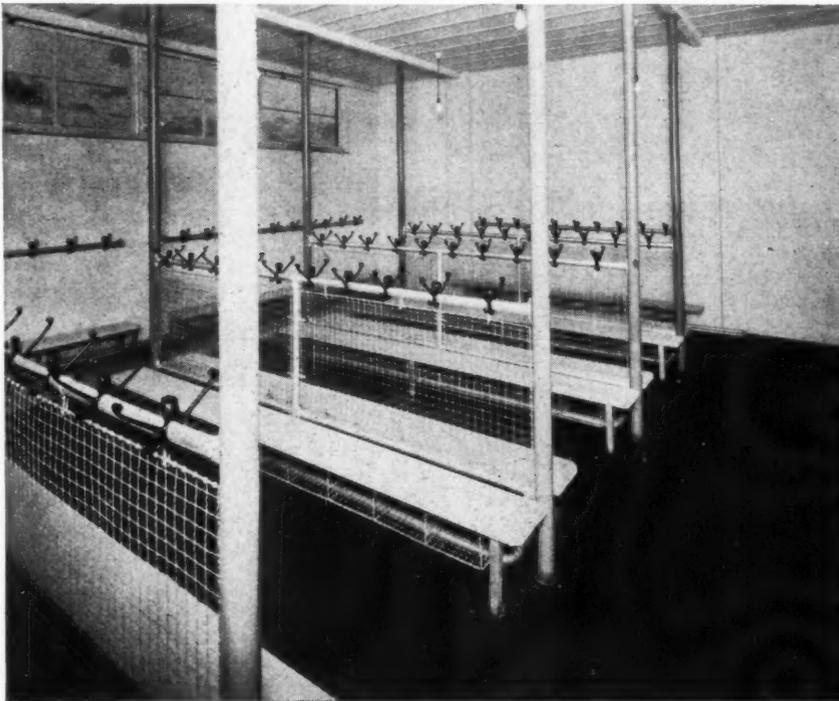
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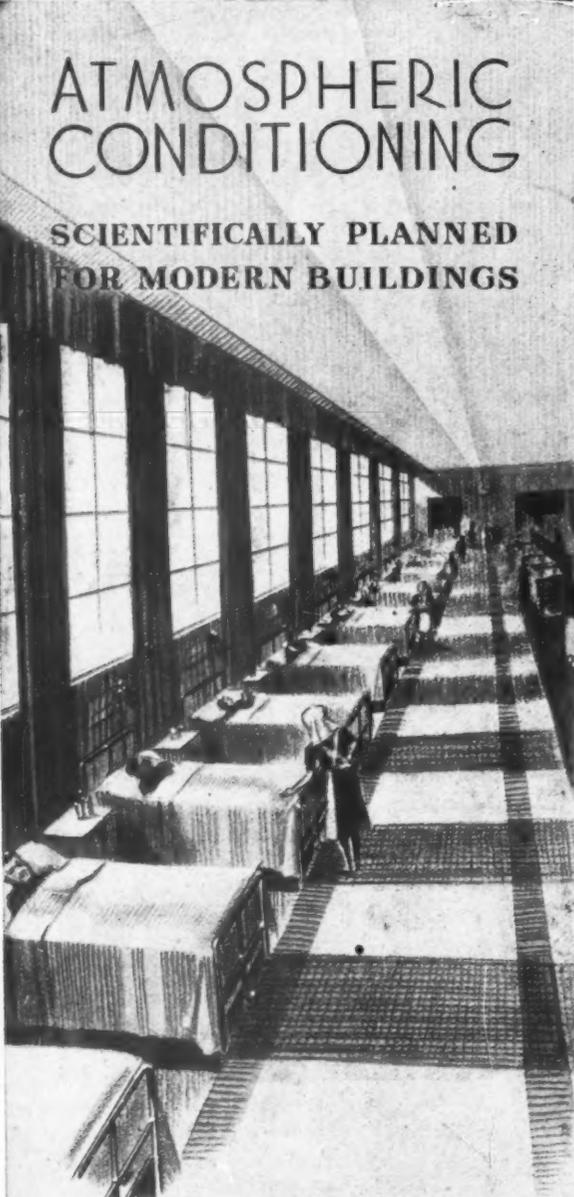
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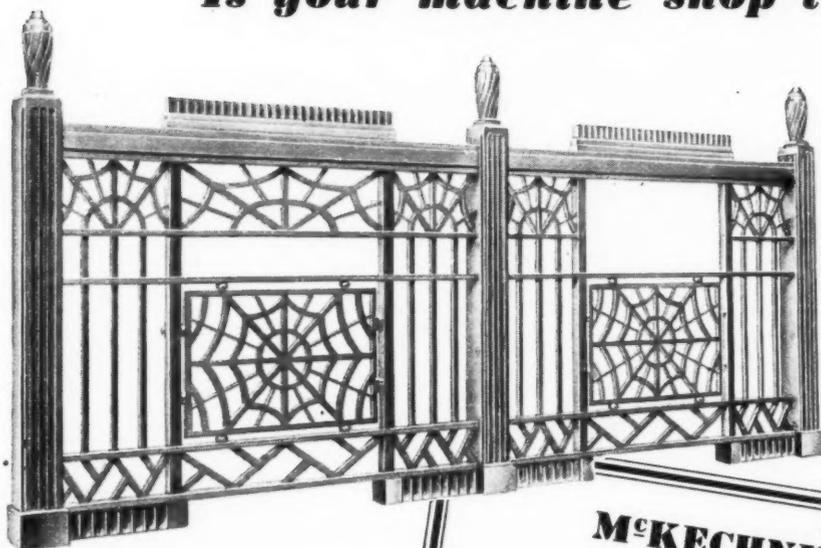
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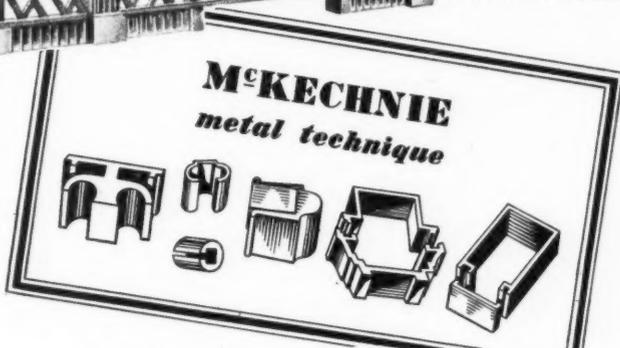
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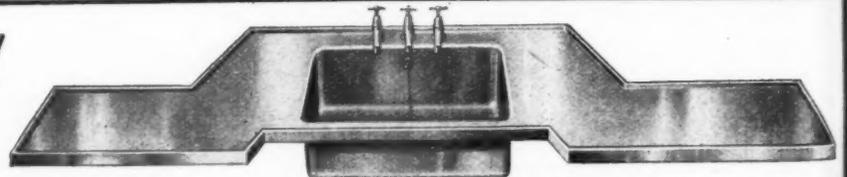
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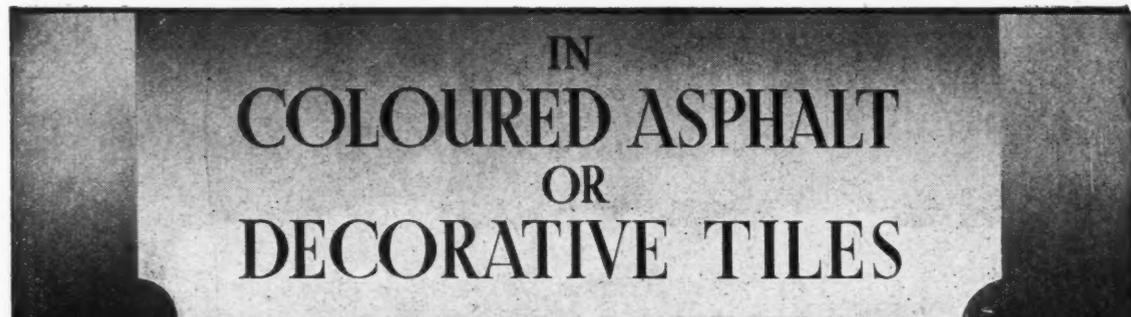
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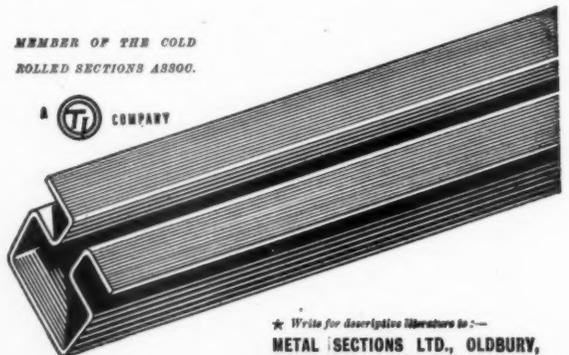
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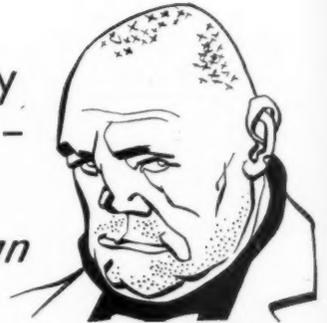
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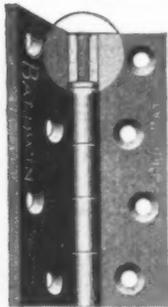


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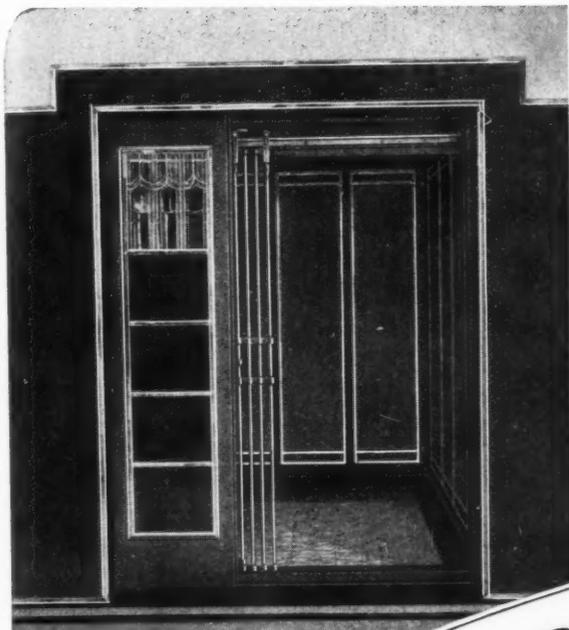
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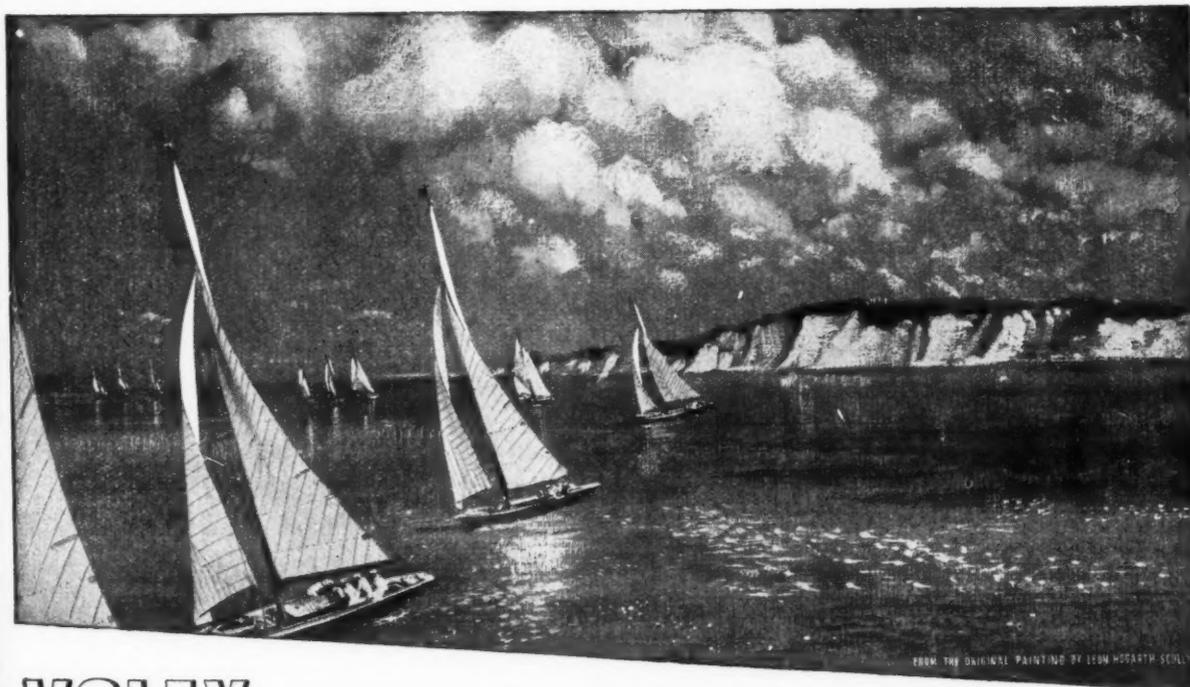
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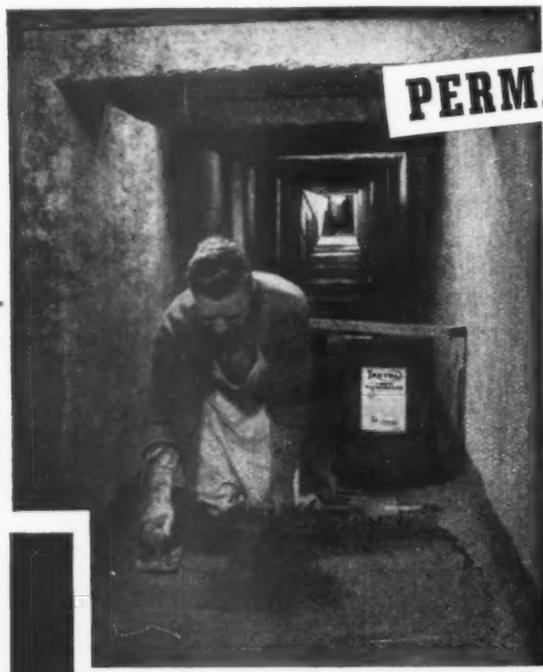
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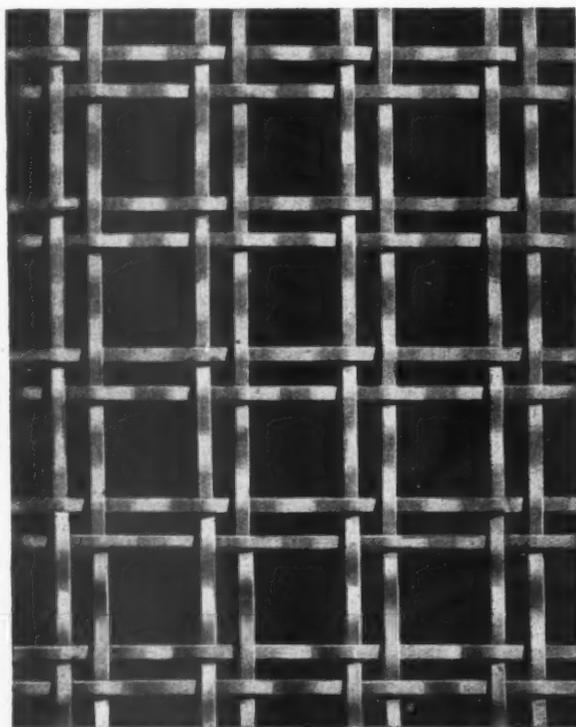
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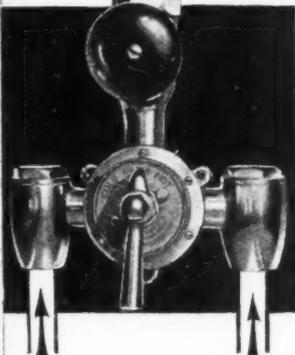
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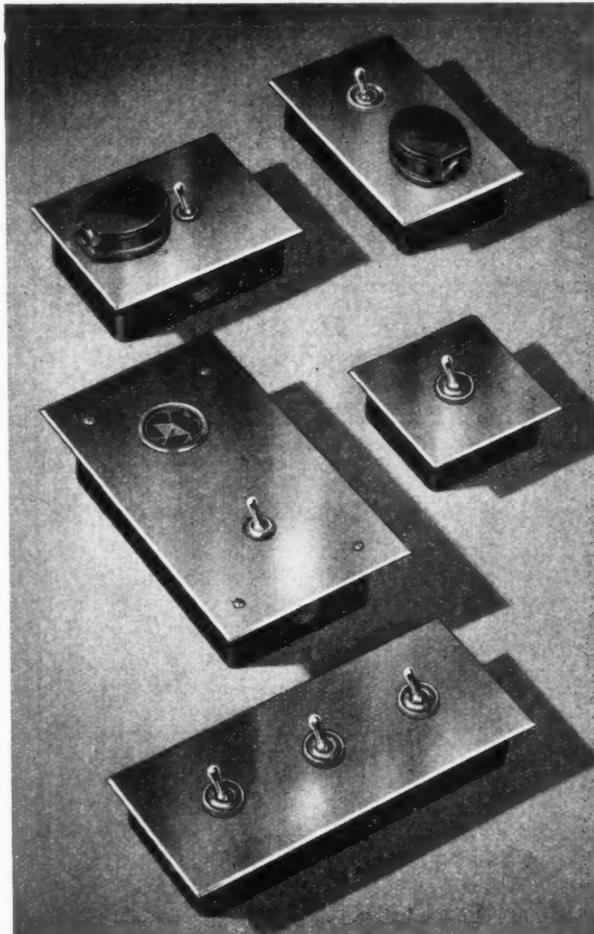
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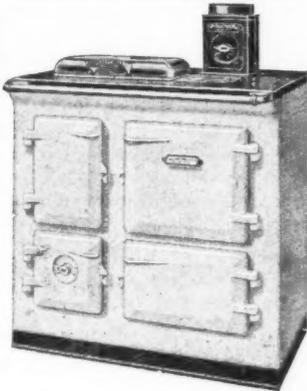
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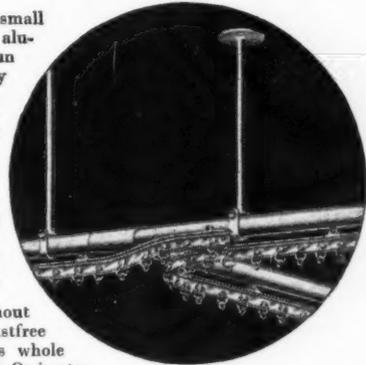
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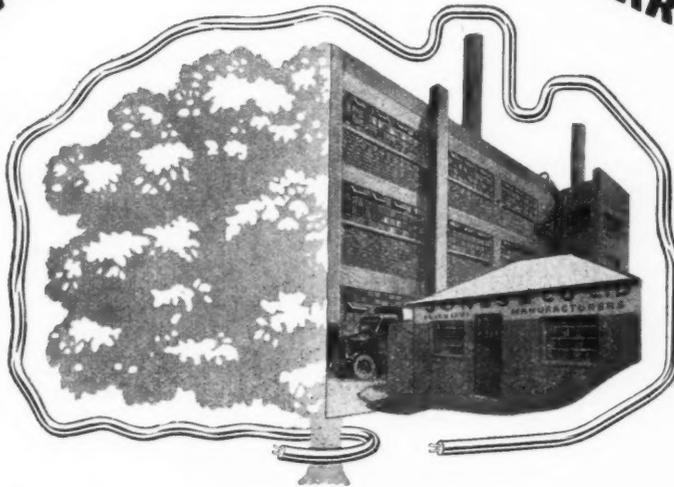
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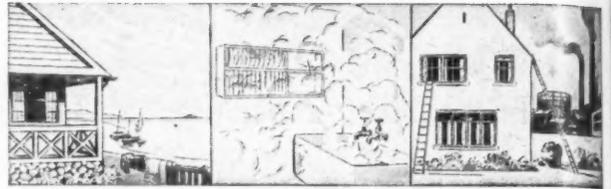
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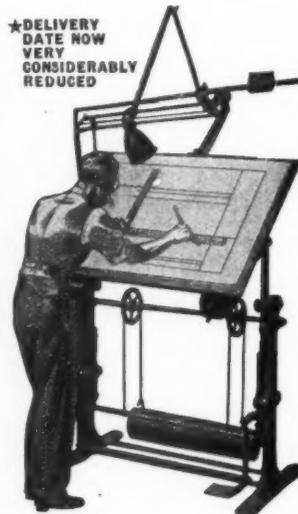
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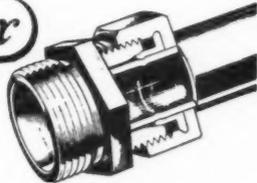
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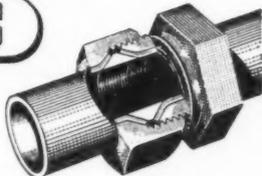
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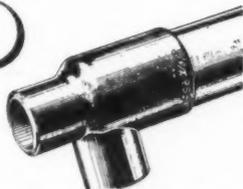
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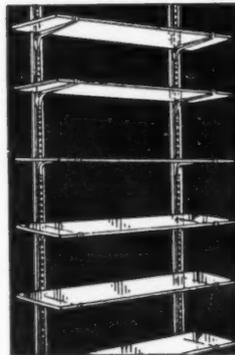


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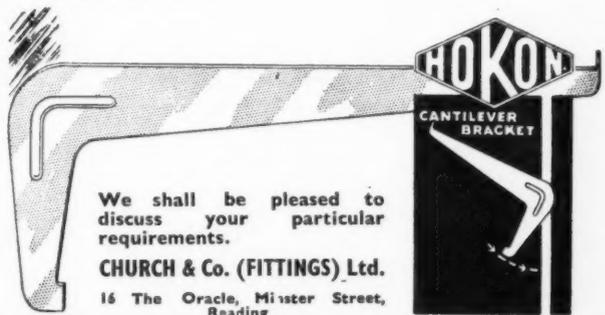


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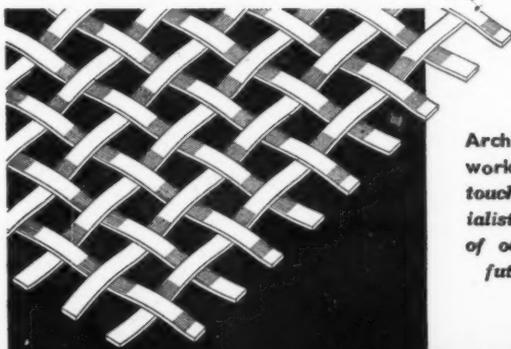


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Town Hall, Hornsey, N.8. 28th August, 1950. 812

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Applications are invited for the permanent appointment of an **ASSISTANT ARCHITECT**, within Grade A.P.T., III, of the National Scales, at a commencing salary of £450 per annum, rising, on satisfactory service, by annual increments of £15 to a maximum of £495 per annum.

Applicants must have passed the R.I.B.A. Intermediate Examination or its equivalent, and must give details of experience in housing, municipal building design and general building construction, and state age, marital state, qualifications, technical training, present and previous appointments with dates, together with the names of two architects to whom reference can be made, and disclose whether, to their knowledge, they are related to any member or senior officer of the Council.

The appointment will be subject to (i) the provisions of the Local Government Superannuation Act, 1937; (ii) the National Scheme of Conditions of Service; (iii) the satisfactory passing of a medical examination by the successful applicant, and (iv) termination by one month's notice on either side.

Applications in sealed envelopes, endorsed "Assistant Architect, Grade A.P.T., III," must reach the undersigned not later than noon on Monday, 9th October, 1950.

The Borough Council is unable to assist the successful candidate with housing accommodation.

Canvassing, directly or indirectly, will disqualify.

NORMAN T. BERRY, Town Clerk.

Town Hall, Slough. 8th September, 1950. 813

BRACKNELL DEVELOPMENT CORPORATION, FARLEY HALL, BINFIELD, BERKSHIRE.

This Authority would be pleased to receive trade literature in duplicate.

E. A. FERRIBY, Chief Architect. 783

CITY AND COUNTY OF NEWCASTLE-UPON-TYNE.

CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the under-mentioned appointments:—

(a) **SENIOR ASSISTANT ARCHITECT**. Salary £635 per annum, rising to £710 per annum (A.P.T., Grade VII).

(b) **SENIOR ASSISTANT ARCHITECTS**. Salary £595 per annum, rising to £660 per annum (A.P.T., Grade VI).

(c) **ASSISTANT ARCHITECTS**. Salary £490 per annum, rising to £525 per annum (A.P.T., Grade IV).

Applicants for appointments (a) and (b) should be Associates of the Royal Institute of British Architects, and must have had experience in General Architectural work and/or Educational buildings.

Applicants for appointment (c) should have passed the Intermediate Examination of the Royal Institute of British Architects.

The appointments will be subject to the National Conditions of Service as adopted by the City Council; to the provisions of the Local Government Superannuation Act, 1937, and to one month's notice on either side. The successful candidates will be required to pass a medical examination.

Applications, stating age, particulars of training, qualifications, experience, present and previous appointments, together with copies of two recent testimonials and the names and addresses of two persons to whom reference may be made, should be addressed to the City Architect, 18, Cloth Market, Newcastle-upon-Tyne, 1.

JOHN ATKINSON, Town Clerk.

Town Hall, Newcastle-upon-Tyne, 1. 23rd August, 1950. 788

WARWICKSHIRE COUNTY COUNCIL. COUNTY PLANNING DEPARTMENT.

Applications are invited for the following appointments:—

(a) **PLANNING ASSISTANT (Architectural)**. A.P.T., Grade Va (£550 to £610 per annum).

(b) **PLANNING ASSISTANT**. A.P.T., Grade V (£520 to £570 per annum).

The persons appointed will be stationed at Warwick and will be engaged on the County Development Plan.

For post (a) applications will be welcomed from persons who have had an architectural training and hold an appropriate qualification.

For post (b) applicants must have had a good general planning experience.

The appointments are subject to the provisions of the Local Government Superannuation Act, 1937, and the successful applicants will be required to pass a medical examination. They will also be required to provide and maintain a motor car, for which travelling and subsistence allowances will be paid in accordance with the Council's scale.

Applications, together with the names and addresses of two persons to whom reference may be made, should be forwarded to J. J. Brooks, M.I.Mun.E., M.T.P.I., County Planning Officer, Northgate, Warwick, not later than Thursday, 12th October, 1950.

Canvassing, directly or indirectly, will be a disqualification.

L. EDGAR STEPHENS, Clerk of the Council.

Shire Hall, Warwick. 17th September, 1950. 875

NORTH RIDING EDUCATION COMMITTEE.

Applications are invited for the following permanent appointments:—

(a) **ARCHITECTURAL ASSISTANT (Grade A.P.T., III and IV)**. Salary £450×£215—£525.

(b) **JUNIOR ASSISTANT QUANTITY SURVEYOR (Grade A.P.T., I)**. Salary £390×£115—£435.

Previous experience will be taken into account in fixing the commencing salaries.

The posts are subject to the Local Government Superannuation Act, and the successful applicants will be required to pass medical examination by the County Medical Officer. For further particulars and application form send stamped addressed envelope. Completed applications required by Saturday, the 14th October, 1950. Canvassing disqualifies.

F. BARBACLOUGH, Secretary for Education.

Education Offices, County Hall, Northallerton. 899

COUNTY BOROUGH OF CROYDON. BOROUGH ENGINEER'S DEPARTMENT.

CHIEF QUANTITY SURVEYING ASSISTANT.

Applications are invited for this appointment at salary A.P.T., VIII, £685×£25 to £760 p.a., plus London weighting. Preference will be given to Chartered Quantity Surveyors.

If the successful candidate is unable to obtain reasonable living accommodation the Corporation will endeavour to assist him.

The appointment is pensionable, subject to medical examination.

Form of application may be obtained from the Borough Engineer, Town Hall, Croydon, and should be returned to him within 14 days after this advertisement is published.

Canvassing will disqualify.

E. TABERNER, Town Clerk. 896

15th September, 1950.

CAMBRIDGESHIRE COUNTY COUNCIL. COUNTY PLANNING DEPARTMENT.

Applications are invited for the appointment of a **Planning Assistant**, on Grade A.P.T., V, of the National Joint Council's Scales (salary £520-£570 per annum).

The successful candidate will be initially engaged on control of development. Applicants should have previous experience in this work and have passed the Intermediate Examination of the Town Planning Institute or similar qualification.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, the Council's Conditions of Service, and to the successful candidate satisfactorily passing a medical examination.

Applications, stating age, past and present appointments (with dates), experience, qualifications, present salary, and the names of two referees, should be received by the undersigned not later than 9th October, 1950.

CHARLES PHYTHIAN, Clerk of the County Council.

Shire Hall, Castle Hill, Cambridge. 836

METROPOLITAN BOROUGH OF POPLAR. APPOINTMENT OF CHIEF ARCHITECTURAL ASSISTANT (GRADE A.P.T., VI).

Applications are invited from suitably qualified persons for the permanent appointment of **CHIEF ARCHITECTURAL ASSISTANT** in the Architect's Section of the Borough Engineer and Surveyor's Department. The salary payable will be in accordance with Grade A.P.T., VI of the National Salary Scales, i.e.; £595-£660 per annum, plus London "weighting."

Applicants should have had experience of housing and multi-storey flats, and have a good knowledge of building construction and specification writing, and must be able to supervise a team of assistants.

Several schemes, including interesting constructional and detailing problems, are in hand or under construction, and the applicant appointed will be engaged on these projects.

Preference will be given to applicants who are Associate Members of the Royal Institute of British Architects.

Full details of the appointment and forms on which application must be made, may be obtained from the Borough Engineer and Surveyor, Poplar Town Hall, Bow Road, E.3, to whom completed applications must be delivered not later than first post on Monday, 16th October, 1950.

Poplar Town Hall, Bow Road, E.3. 917

21st September, 1950.

RHYMNEY URBAN DISTRICT COUNCIL. APPOINTMENT OF ARCHITECT.

Applications are invited for the permanent appointment of an Architect to the above Council. The salary will be Grade V of the A.P.T. scales, but commencing at £550 per annum.

Applicants will be expected to prepare plans, specifications, bills of quantities, etc., for the Council's Housing Schemes, and supervise the housing contracts.

Applicants should preferably be Members of the Royal Institute of British Architects.

The appointment is subject to the passing of a medical examination and to the provisions of the Local Government Superannuation Act, 1937.

Applications, stating age, qualifications, experience, etc., with the names of two persons to whom reference may be made, should reach the undersigned not later than Monday, the 2nd October, 1950.

R. T. LEWIS, Clerk of the Council.

Council Offices, Rhymney, Mon. 11th September, 1950. 793

BOROUGH OF ROYAL TUNBRIDGE WELLS.

The Council invite applications for the appointment of the following:—
(a) **ENGINEERING ASSISTANT, Grade II.** Applicants must have completed a definite period of training under a Chartered Civil Engineer or at a University.
Salary in accordance with the National Scale, A.P.T., II (£420-£465).

(b) **TEMPORARY ARCHITECTURAL ASSISTANT, Grade IV.**
Salary in accordance with the National Scale, A.P.T., IV (£480-£525).

The appointments will be subject to the provisions of the Local Government and Other Officers' Superannuation Act, and to the selected candidate passing a satisfactory medical examination.
Applicants should state whether to their knowledge they are related to any member or senior officer of the Council.

Applications, stating experience and qualifications, together with the names of two persons to whom reference may be made, to be submitted to the Borough Surveyor and Water Engineer not later than 10 a.m. on Friday, 13th October, 1950.
JOHN WHITEHEAD,
Town Clerk.

Town Hall, Tunbridge Wells. 913

CUMBERLAND COUNTY COUNCIL.

Applications are invited for the appointment of TWO **BUILDING INSPECTORS**, on the permanent establishment of the County Architect's Department, at a salary in accordance with A.P.T., Grade IV (£480 to £525 per annum).
One appointment is for the Whitehaven district, and the other for the Workington district, and the successful candidates will be required to live in or near these towns.

Applicants must have had practical experience of buildings, supervision of building work, and maintenance of property, and should be able to prepare reports. Previous experience with a Local Authority is desirable. The persons appointed will be required to provide motor cars, and a car allowance will be payable for County Council duties, in accordance with the Council's scale.

Forms of applications, together with further particulars and conditions of appointment, may be obtained from John H. Haughan, F.R.I.B.A., County Architect, 15, Portland Square, Carlisle, not later than Wednesday, 4th October, 1950.
G. C. SWIFT,
Clerk of the County Council.

September, 1950. 853

MINISTRY OF EDUCATION. ARCHITECTS.

Applications are invited for posts of Architect in the Architects' and Building Branch of the Ministry of Education. The appointments will be temporary in the first instance, but a competition for establishment will be held later.

The salary is on the scale £750 × £25—£1,000 p.a. (men), £650 × £25—£850 p.a. (women).
The work is at present of two kinds, and there are vacancies on both. The first consists mainly in consulting with architects engaged in the design of educational building projects for Local Education Authorities and in advising the Ministry on the suitability of these projects. The second consists of the study in principle and detail of the design and construction of educational buildings and of their services, fittings and furniture.

Applicants should state on which work they would prefer to be engaged in the first place; but it should be noted that work of the first kind is expected to diminish and that those engaged on it will be increasingly concerned with the second.

Candidates should preferably be between the ages of 30 and 40, and should have had experience in the design and supervision of educational buildings in the office either of a Local Authority or of an Architect in private practice.

QUANTITY SURVEYOR.

Applications are also invited for the post of Quantity Surveyor: £750 × £25—£1,000 p.a. (men), £650 × £25—£850 p.a. (women).

The appointment will be temporary in the first instance, but a competition for establishment will be held later.

The work at present comprises the preparation of cost data and detailed cost analyses for educational building projects and advice to the Ministry on the costs of structures in new and established techniques. It is anticipated that the duties will include the preparation of quantities for new development in various types of educational building.

Candidates should be Chartered Quantity Surveyors, preferably between the ages of 30 and 40, and should have had experience of educational building in the office either of a Local Authority or of a Quantity Surveyor in private practice.

Application forms obtainable from Ministry of Labour and National Service, Technical and Scientific Register (K), York House, Kingsway, W.C.2, quoting J210/50A (Architects), or J211/50A (Quantity Surveyor), should be returned not later than one week after the appearance of this advertisement. 719

ARMAGH COUNTY COUNCIL. ARCHITECT-PLANNER

required temporarily for a period of at least three months from 1st November, 1950. Candidate should hold Associate-ship R.I.B.A. and, preferably, A.M.T.P.I. Salary to be in general accordance with National Salary Scale, and commensurate with qualifications and experience. Full particulars, with photograph, drawings, and three testimonials, to:
J. D. GORDON, B.Sc., A.R.I.B.A., M.T.P.I., M.I.Mun.E.,
County Planning Officer.

10, Abbey Street, Armagh, Northern Ireland. 834

BUCKS COUNTY COUNCIL.

The County Architect invites applications from qualified ASSISTANT ARCHITECTS who possess a keen and energetic enthusiasm for their profession. Candidates should preferably have been trained at a recognised School of Architecture. Salary Grade V, £520-£570 per annum.
Further particulars and form of application may be obtained from the County Architect, County Offices, Aylesbury, to whom they must be delivered by 9th October, 1950. 827

GOVERNMENT OF NORTHERN IRELAND. MINISTRY OF FINANCE.

Applications are invited for the following unestablished appointments in the Ministry of Finance:—

(a) **QUANTITY SURVEYING ASSISTANT.** Grade B. £300-£500 per annum.
(b) **SURVEYOR'S CLERK.** £200-£420 per annum.

The commencing salaries of selected candidates will be fixed according to experience within the ranges quoted.

Qualifications:—
Candidates for the first mentioned post must possess either:—

(i) the National Building Certificate; or
(ii) the Licentiate Diploma of the Institute of Builders;

or proof of professional study to an equivalent standard. In addition, they must have five years' training and experience in quantity surveying in a Quantity Surveyor's or Contractor's office, Government Department, or Local Authority.

Candidates for Surveyor's Clerk posts must have at least three years' technical experience with a Quantity Surveyor or Building Contractor, or a lesser period if coupled with an approved course of training at a recognised school.

Preference will be given to suitably qualified persons who have served with H.M. Forces during the 1914-1918 or 1939-1945 War, provided the Ministry is satisfied that such candidates can or within a reasonable time will be able to discharge the duties efficiently.

Closing Date:—
Applications containing full particulars of education, qualifications and experience, and accompanied by copies of two recent testimonials, should be sent to the Director of Establishments, Ministry of Finance, Stormont, so as to reach him not later than 11th October, 1950. 863

EASTERN GAS BOARD. BUILDING SURVEYOR.

Applications are invited for the appointment of Building Surveyor, to take charge of property maintenance. Applicants should be qualified, capable of drawing up specifications, supervising decorations and repairs to showrooms, offices and dwelling houses. Salary Grade A.P.T., X, £600-£700 per annum. Applications, stating age, qualifications and particulars of training and experience, should be addressed to the Divisional Engineer, Eastern Gas Board, Watford Division, Radiant House, Clarendon Road, Watford, Herts. 843

CITY OF BIRMINGHAM EDUCATION COMMITTEE.

APPOINTMENT OF STAFF TO ARCHITECT'S BRANCH.

Applications are invited for the following appointments in the Architect's Branch of the Birmingham Education Department (Architect to the Committee: Mr. Alex. Steele, A.R.I.B.A.):
(a) **Grade IX ARCHITECT.** Salary: A.P.T., IX (£750 × £50—£900).
The successful candidate should have wide knowledge and experience of the design and erection of prefabricated school buildings. Applicants should be registered or chartered architects, having good experience in the control of major contracts.

(b) **SENIOR ASSISTANT ARCHITECTS.** Salary: A.P.T., VIII (£685 × £25—£760).
Applicants must be registered or chartered architects, and must offer evidence of high ability and initiative in design.

(c) **SENIOR ASSISTANT ARCHITECT.** Salary: A.P.T., VII (£635 × £25—£710).

(d) **SENIOR ASSISTANT ARCHITECTS.** Salary: A.P.T., VI (£595-£660).

(e) **ASSISTANT ARCHITECTS.** Salary: A.P.T., V (£520-£570).

Applicants for posts (c), (d) and (e) must be registered or chartered architects, and should have had good general experience in the preparation of schemes and working drawings for educational buildings.

(f) **ARCHITECTURAL ASSISTANTS.** Salary: A.P.T., IV (£480-£525).
Applicants should have reached the R.I.B.A. Intermediate standard and should be capable of preparing working details for major contracts.

(g) **ARCHITECTURAL ASSISTANTS.** Salary: A.P.T., III (£450-£495).

Applicants should have reached the R.I.B.A. Intermediate standard and will be expected to prepare working drawings and details under supervision.

(h) **DRAUGHTSMEN.** Salary: Miscellaneous, Grade IV (£360 × £15—£420).
Applicants should have had good experience as architectural or fittings draughtsmen, and will be required to prepare working drawings for major contracts of this type under supervision.

Application forms, which may be obtained from the undersigned on receipt of a stamped, addressed envelope, must be returned not later than 7th October, 1950.

E. L. RUSSELL,
Chief Education Officer.
Education Office, Margaret Street, Birmingham, 3. 866

BOROUGH OF SOUTHALL.

Appointment of:—
(a) **ARCHITECTURAL ASSISTANT.**
(b) **JUNIOR ARCHITECTURAL ASSISTANT.**
Applications are invited for these permanent appointments on the staff of the Corporation. Salary for appointment (a) in accordance with Grade A.P.T., III, of the National Scheme (£450 × £15—£495), and for appointment (b) in accordance with Grade A.P.T., II, of the National Scheme (£420 × £15—£465). Appropriate London weighting is payable in both cases.

Candidates for appointment (a) should have passed the Intermediate Examination of the R.I.B.A. and have had previous Local Government experience.

Candidates for appointment (b) should be at least second year students for the Intermediate Examination of the R.I.B.A. and have had Local Government experience.

The posts are subject to one month's notice on either side, and to the provisions of the Local Government Superannuation Act, 1937, and the successful candidates, will be required to pass a medical examination.

Applications, on forms to be obtained from the Borough Engineer, Town Hall, Southall, must be returned to him not later than Monday, 16th October, 1950.

J. S. SYRETT,
Town Clerk.
Town Clerk's Offices, South Road, Southall, Middx. 874

August, 1950.

CITY OF BATH. CITY PLANNING DEPARTMENT.

Applications are invited for the appointment of a **SENIOR PLANNING ASSISTANT, Grade V** (£520-£570), or **Grade VI** (£595-£660), according to qualifications and experience. Preference will be given to candidates who possess a recognised Town Planning qualification. The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and to the successful candidate passing a medical examination.

Applications, stating age, qualifications and experience, together with the names of three referees, should be forwarded to the City Planning Officer, 2, Princes Buildings, Bath, not later than 13th October, 1950. 882

CITY OF PLYMOUTH. CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments on the established staff, subject to the Conditions of Service of the National Joint Council for Local Authorities, Administrative, Professional, Technical and Clerical Services, the Local Government Superannuation Act, 1937, and one month's notice on either side for termination:
(a) **ONE PRINCIPAL ASSISTANT ARCHITECT (Housing).** Grade VIII (£685 to £760).
Applicants for this appointment must be experienced in the design and construction of Municipal Housing and Flats, administration, and capable of supervising the staff of the Housing Section.

(b) **SENIOR ASSISTANT ARCHITECTS.** Grade VII (£635 to £710).

(c) **SENIOR ASSISTANT ARCHITECTS.** Grade VI (£595 to £660).

(d) **ASSISTANT ARCHITECT.** Grade III (£450 to £495).

(e) **ASSISTANT ARCHITECT.** Grade I (£390 to £435).

Candidates for appointments in (b), (c) and (d) should be experienced in the design and construction of schools and municipal housing.

(f) **SENIOR QUANTITY SURVEYOR.** Grade V (£520 to £570).

(g) **QUANTITY SURVEYOR.** Grade III (£450 to £495).

(h) **QUANTITY SURVEYOR.** Grade II (£420 to £465).

Candidates for appointments (a), (b) and (c) must be Registered Architects, and preference will be given to Members of the R.I.B.A.

In the case of appointment (d) preference will be given to candidates who have passed the Intermediate Examination of the R.I.B.A.

For the appointment (f) preference will be given to candidates who are Corporate Members of the Royal Institution of Chartered Surveyors (Sub Division III, Quantities), and for appointment (g) preference will be given to candidates who have passed the Intermediate Examination of the Royal Institution of Chartered Surveyors.

Successful candidates will be required to pass a medical examination.

Applications on forms obtainable from the undersigned, accompanied by copies of not more than three recent testimonials or names of persons to whom reference may be made, should be received at my office not later than 13th October, 1950.

The Corporation may make housing accommodation available to the successful married candidates if required.

E. G. CATCHPOLE, A.R.I.B.A., City Architect.
Seymour Road, Plymouth. 726

BOROUGH OF WALTHAMSTOW. BOROUGH ARCHITECT'S DEPARTMENT.

ASSISTANT ARCHITECT.

Applications are invited for an Assistant Architect (Grades I/V, £420-£600), commencing salary according to qualifications and experience.

Applications, with names of two persons for references, should be received by the undersigned not later than 9th October, 1950.

G. A. BLAKELEY,
Town Clerk.
Town Hall, Walthamstow, E.17. 872

DENBIGHSHIRE COUNTY COUNCIL.

COUNTY PLANNING DEPARTMENT.

The above Council invite applications from suitably qualified persons for the following appointments to the Staff of the County Planning Department:—

(a) **SENIOR COUNTY PLANNING ASSISTANT**, for the East Area Office at Wrexham. Consolidated salary in accordance with A.P.T., Grade V, £520-£570 per annum. Applicants must have obtained previous experience in Town and County Planning, and should be Associate Members of the Town Planning Institute.

(b) **COUNTY PLANNING ASSISTANT** (Development Control), for the East Area Office at Wrexham.

(c) **COUNTY PLANNING ASSISTANT**, for the East Area Office at Wrexham.

Consolidated salary for each of the appointments (b) and (c) above, in accordance with A.P.T., Grade III, £450-£495 per annum. Applicants should have passed the Intermediate Examination of the Town Planning Institute.

(d) **SURVEYOR AND DRAUGHTSMAN**, for the Headquarters Office at Ruthin.

Consolidated salary in accordance with A.P.T., Grade II, £420-£465 per annum. Applicants must be competent surveyors and expert draughtsmen. Previous experience in Ordnance survey work is essential.

The appointments will be subject to the terms and conditions of service applying to the administrative, technical and clerical officers of the County Council, and will be terminable at the end of any month by one month's notice in writing on either side. The successful applicants will be required to pass a medical examination and will be subject to the Local Government Superannuation Act, 1937. Applicants should indicate the appointment applied for and should state whether they wish to be considered for more than one appointment. Applications, stating age, whether married or single, qualifications, present position and salary, previous positions and full details of experience obtained, accompanied by copies of not less than two recent testimonials, must be sent to me, the undersigned, suitably endorsed, by not later than the 31st October, 1950.

W. E. BUFTON,

Clerk of the County Council.

County Offices, Ruthin, Denbighshire. 915

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.
CLERKS OF WORKS FOR HOUSING DIVISION.

Clerks of Works (salary £550) required immediately for housing work in the Architect's Department. Candidates should have a wide experience in supervising large building works.

Application forms from Architect to the Council (AR/EK/HCW), County Hall, S.E.1, enclosing stamped addressed foolscap envelope. Canvassing disqualifies. (1205) 855

COUNTY BOROUGH OF WOLVERHAMPTON.
ARCHITECTURAL ASSISTANT (GRADE III, A.P.T.).

Applications are invited for the appointment of an Architectural Assistant—salary A.P.T. Division, Grade III (£450-£515 to £495) per annum—on the staff of the Borough Engineer's Department.

The appointment, terminable by one month's notice on either side, is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

The Conditions of Service will be those of the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services.

Applications, stating age, qualifications, present position and full details of experience, together with copies of three recent testimonials, should be delivered to the undersigned not later than Friday, 13th October, 1950, in an envelope endorsed "Architectural Assistant."

J. BROCK ALLON,

Town Clerk.

Town Hall, Wolverhampton. 897

NEWMARKET RURAL DISTRICT COUNCIL.
APPOINTMENT OF ARCHITECT.

Applications are invited for the above whole-time appointment at a salary in accordance with Grade VII of the A.P.T. Division of the National Scale.

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

Applicants should be Associate Members of the Royal Institute of British Architects.

The person appointed will be requested to carry out all architectural duties in connection with the Council's housing schemes and all other similar duties that may be assigned to him from time to time by the Council. He will also be required to provide and maintain a car for the purpose of his duties, for which a travelling allowance will be paid in accordance with the National Scale.

Applications, stating age, qualifications and experience, together with names of three referees, must be submitted to the undersigned not later than 14th October, 1950.

Housing accommodation is available.

H. W. EVANS,

Clerk to the Council.

Council Offices, Park Lane, Newmarket. 909

BOROUGH OF BEXLEY.

APPOINTMENT OF ASSISTANT ARCHITECT.

Applications are invited for the appointment of Assistant Architect (General), in the Borough Engineer's department, at a salary within Grade A.P.T., V (a) (£550-£610), plus £30 per annum London "weighting."

Form of application with conditions of appointment may be obtained from the Borough Engineer and Surveyor, West Lodge, Broadway, Bexleyheath, to whom completed applications must be returned by noon on the 14th October, 1950.

Canvassing, directly or indirectly, will disqualify.

W. WOODWARD,

Town Clerk.

Council Offices, Bexleyheath, Kent. 873

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.
TOWN PLANNING STAFF.

Applications are invited for positions of TECHNICAL ASSISTANT (scales: (a) £440-£500; (b) 55s-167s. 6d.) in the Planning Division of the Architect's Department. Candidates should be trained draughtsmen experienced in lettering and in the preparation and colouring of plans. Application forms from the Architect (AR/EK/P), The County Hall, Westminster Bridge, S.E.1, enclosing stamped addressed foolscap envelope. Canvassing disqualifies. (1193) 864

METROPOLITAN BOROUGH OF LEWISHAM.
APPOINTMENT OF DEPUTY BOROUGH ARCHITECT.

Applications are invited from qualified and experienced architects for the appointment of Deputy Borough Architect on the Council's permanent establishment.

The salary scale applicable to the appointment will be £900 per annum, rising by annual increments of £50 to £1,060 per annum inclusive.

Preference will be given to persons who have had experience in the design and construction of Municipal flats, housing schemes and public buildings.

The appointment will be subject to the rules and regulations of the Council from time to time in force relating to officers; to the National Scheme of Conditions of Service; to the provisions of the Local Government Superannuation Act, 1937; to termination by one month's notice on either side, and to the successful candidate passing satisfactorily a medical examination by the Council's Medical Officer of Health.

The person appointed will be required to devote his whole time to the duties of the office and will not be permitted to engage in private practice.

Forms of application may be obtained from me, and should be returned accompanied by copies of not more than three testimonials, addressed to me in an envelope endorsed "Deputy Borough Architect," so as to be received not later than Saturday, the 21st October, 1950.

Canvassing, either directly or indirectly, will be a disqualification.

ALAN MILNER SMITH,

Town Clerk.

Lewisham Town Hall, Catford, S.E.5. 907

STEVENAGE NEW TOWN.

Applications are invited for the post of DEPUTY CHIEF ARCHITECT in the Department of Architecture and Planning. Candidates must be fully qualified Architects. The successful applicant will be required to work under the direction of the Chief Architect and Planner, Clifford Holiday, M.Arch., F.R.I.B.A., M.T.P.I., and he will be responsible for the execution of the building programme for the New Town of Stevenage and for the general administration of the Department. Applicants must have had first hand experience in the organisation and execution of large-scale building contracts and wide executive experience in office administration.

The salary offered is on a range of £1,250 to £1,500 p.a., the initial salary to be decided according to experience. The selected candidate will be required to contribute to a Local Government Superannuation Fund or an Assurance Scheme.

The Corporation anticipate that, if so desired, it will be able in the near future to offer the successful candidate the tenancy of a Corporation house.

Canvassing, either directly or indirectly, will disqualify.

Forms of application may be obtained from the Chief Administrative Officer, Stevenage Development Corporation, Aston House, near Stevenage, Herts., and should be returned, completed by applicants, not later than 14th October, 1950. 906

TENDRING RURAL DISTRICT COUNCIL.
ARCHITECTURAL ASSISTANT.

Applications are invited for the above appointment in the Engineer and Surveyor's Department, on Grade A.P.T., V (£590-£570).

Preference will be given to Registered Architects who have had experience in the Department of an Engineer and Surveyor to a local authority. The appointment will be subject to (i) the National Scheme of Conditions of Service, and (ii) the successful candidate passing a medical examination.

Applications, giving full details of age, appointments held Architectural and other experience, accompanied by the names of two persons as to whom reference may be made, should reach the undersigned not later than Monday, the 16th October, 1950.

S. W. COLEMAN,

Clerk to the Council.

Council Offices, Weeley, Clacton-on-Sea. 894

BOROUGH OF WILLESDEN.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

The Council invite applications for the appointment of an Architectural Assistant on the Permanent Staff of the Borough Engineer and Surveyor's Department.

The salary attaching to the post will be Administrative, Professional and Technical, Grade VI of the National Whitley Council's Scale for the London Area, namely £596 per annum, rising by two annual increments of £20 per annum and one of £25 per annum to £660 per annum, plus London weighting of £30 per annum.

Candidates must be Associates of the Royal Institute of British Architects or hold an equivalent qualification, and preferably have general knowledge and experience of architectural work in the service of a local authority.

The appointment will be terminable by one month's notice on either side, is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

Applications, giving age, experience, etc., accompanied by copies of not more than three testimonials, should be addressed to the undersigned, endorsed "Architectural Assistant," not later than 10 a.m. on Monday, 23rd October, 1950.

It will be necessary for the successful candidate to provide his own housing accommodation as the Council is not in a position to assist.

Canvassing, directly or indirectly, will be deemed a disqualification.

(Sgd.) R. S. FORSTER,

Town Clerk.

Town Hall, Dyne Road, Kilburn, N.W.5. 893

METROPOLITAN BOROUGH OF HAMPSTEAD.

APPOINTMENT OF TECHNICAL OFFICER (MAINTENANCE).

Applications are invited for the permanent appointment of a Technical Officer (Maintenance) on the Housing Architect's Staff in the Borough Engineer's Department; Grade V of A.P.T. Division (£520-£570 per annum), plus London area weighting of £30 per annum.

Candidates for the appointment should have a good knowledge of all aspects of building work, be able to prepare specifications, estimates and reports for all maintenance works to requisitioned and Council dwellings, and be able to supervise works in progress and certify final accounts, and should have ability to supervise assistant technical staff. Preference will be given to members of a professional Institution.

The appointment is subject to one month's notice on either side and to the provisions of the Local Government Superannuation Act, 1937; the successful applicant will be required to pass a medical examination.

Applications, giving details as follows:—(a) age, (b) qualifications, (c) present and past appointments, (d) particulars of training and experience, and accompanied by three recent testimonials, must be delivered to me in a sealed envelope endorsed "Technical Officer (Maintenance)," not later than Thursday, 5th October, 1950.

Applicants must disclose in writing whether they are, to their knowledge, related to any member or senior officer of the Council.

The Council are unable to provide housing accommodation.

Canvassing will disqualify.

P. H. HARROLD,

Town Clerk.

Town Hall, Haverstock Hill, N.W.3. 844

BOROUGH OF TOTTENHAM.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the following established posts:—

ARCHITECTURAL SECTION:
(a) SENIOR ARCHITECT. A.P.T., VIII, £685-£760.

(b) ARCHITECT. A.P.T., VII, £635-£710.

TOWN PLANNING AND BUILDING SECTION:
(c) TOWN PLANNING ASSISTANT. Grades A.P.T. II/IV, £420-£525.

London weighting allowance payable in addition.

Qualifications Required—
Posts (a) and (b): Applicants must hold an appropriate Final professional qualification and have had at least five years' practical experience (including the period spent on theoretical training).

Post (c): The terms of the decisions of the National Joint Council for Local Authorities' Professional Services, dated 26th July, 1949, will apply, particulars of which will be forwarded with the application form.

The appointments will be subject to the provisions of the Scheme of Conditions of Service for Local Authorities' Administrative, Professional, Technical and Clerical Services; to the provisions of the Local Government Superannuation Act, 1937; and the successful candidates will be required to pass a medical examination.

The Council are unable to offer housing accommodation.

Forms of application may be obtained from the Borough Engineer, Town Hall, Tottenham, N.15, to whom they should be returned not later than Monday, 9th October, 1950.

M. LINDSAY TAYLOR,

Town Clerk.

Town Hall, N.15. 885

BIRKENHEAD EDUCATION COMMITTEE.
NEW BIRKENHEAD TECHNICAL AND COMMERCIAL COLLEGE.

(Estimated cost, £600,000).
Required **CLERK OF WORKS** to supervise the erection of the new Birkenhead Technical and Commercial College which will take approximately three years to complete.

The salary will be £660 a year.
Applicants should have had experience as a Clerk of Works and have a thorough knowledge and practical experience of Building Construction, Reinforced Concrete and Steel School Construction, be able to supervise all trades, be capable of setting out all works, and have a thorough knowledge of working to Bills of Quantities and Drawings.

Form of application, which must be returned by the 7th October, 1950, can be obtained by sending a stamped-addressed envelope to the Director of Education, 63, Hamilton Square, Birkenhead.

DONALD P. HEATH.
Town Clerk.

Birkenhead. 856

LIVERPOOL REGIONAL HOSPITAL BOARD.
Applications are invited for the following permanent appointments in the Regional Architect's Department, on the Headquarters Staff of the Board:—

ASSISTANT ARCHITECTS, at a salary in accordance with A.P.T., Grade VI, £595-£660 per annum, and A.P.T., Grade IV, £480-£525 per annum.

Applicants should be Associates of the Royal Institute of British Architects for the former appointment, and have passed the Intermediate Examination for the latter appointment. Applicants must have a good general experience and ability in design and construction.

The above appointments will be subject to the National Health Service (Superannuation) Regulations, 1947/9, and the successful candidates may be required to pass a medical examination.

Applications, stating age, education, qualifications, experience, present and previous appointments, salary, war service, and clearly stating the post applied for, together with the names and addresses of three referees, should be sent to the undersigned at 19, James Street, Liverpool, 2, not later than 18th October, 1950.

VINCENT COLLINGE.
Secretary to the Board.

ROTHWELL URBAN DISTRICT COUNCIL (YORKS).

APPOINTMENT OF TEMPORARY ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of temporary ARCHITECTURAL ASSISTANT, in A.P.T., Grade III, of the National Scale of Salaries (£450-£515-£495). Preference will be given to applicants who have had practical experience in housing and general architectural work and who are at present studying for the qualifying examinations of the Royal Institute of British Architects.

Applications, stating age, present and previous appointments, qualifications and experience, together with copies of three recent testimonials, must reach the undersigned not later than Saturday, 21st October, 1950.

ALLEN T. S. ROBERTSON.
Clerk of the Council.

Civic Buildings, Rothwell, Leeds. 892

GOVERNMENT OF PAKISTAN.

Applications are invited for appointment as **TOWN PLANNER** with the Government of Pakistan, whose duties will be to prepare detailed lay-out plans for the improvement and expansion of the City of Karachi, according to the master-plan of "Greater Karachi" (particularly the Federal Capital area), and to supervise the execution of those plans. The post will be on contract for three years in the first instance, which tenure may be extended at the Government's discretion.

Qualifications:—M. or A.M.T.P.I., with at least 5 years' subsequent experience on large schemes of city development, satellite towns, improvement of built-up areas, etc.; also F.A.R.I.B.A. and/or M./A.M.Inst.C.E. and/or M./A.M.I.Mun.E.

Pay Rs.2,000 p.m., or will be fixed according to qualifications and experience. Free passage, leave, etc., for appointee of non-Asiatic domicile.

Application, on the form to be obtained on request, should be made to the Office of the High Commissioner for Pakistan, 35, Lowndes Square, London, S.W.1. Closing date for the receipt of applications, 16th October, 1950. 868

WEST SUSSEX COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of an ASSISTANT ARCHITECT at a salary in accordance with Grade IV, A.P.T. Division (£480 to £525 per annum) of the Consolidated National Scales.

Applicants should be fully trained Architects, experienced in the preparation of designs, working drawings, details and specifications and be capable of preparing approximate estimates and making surveys and levelling. Preference will be given to applicants who have passed the whole or part of the examinations of the R.I.B.A.

Further particulars should be obtained immediately from the County Architect, County Hall, Chichester, to whom detailed applications must be submitted not later than the 18th October, 1950.

T. C. HAYWARD.
Clerk of the County Council.

County Hall, Chichester. 914

DERBYSHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the under-mentioned appointments on the permanent staff. Conditions of service and salaries are in accordance with the National Joint Council Scheme for Local Authorities, as adopted by the County Council.

SENIOR ASSISTANT ARCHITECTS.

Grade VII, £635-£710 per annum.
Applicants must be fully qualified by examination, and preference will be given to those who have had experience in the design and construction of School buildings.

The appointments will be terminable by one month's notice on either side, and subject to the provisions of the Local Government Superannuation Acts, and the successful candidates will be required to pass a medical examination.

Canvassing members of the Council, directly or indirectly, will be a disqualification for appointment.

The County Council is not in a position to assist successful applicants with housing accommodation.

Applications to be made on a form to be obtained from the undersigned, to whom it must be returned, accompanied by copies of three recent testimonials, not later than 10th October, 1950.

Envelopes and applications must be endorsed, stating clearly the vacancy for which the application is made.

F. HAMER CROSSLEY, Dipl.Arch.(L'pool), F.R.I.B.A.,
County Architect.

St. Mary's Gate, Derby. 870

COUNTY BOROUGH OF SOUTHAMPTON.
BOROUGH ARCHITECT'S DEPARTMENT.

Applications are invited for the following positions:—

- (a) SENIOR ASSISTANT ARCHITECTS. Grade VI (£595-£660).
- (b) ASSISTANT ARCHITECTS. Grade V (£520-£570).
- (c) ARCHITECTURAL ASSISTANTS. Grade II (£420-£465).
- (d) QUANTITY SURVEYOR. Grade VI (£595-£660).
- (e) ASSISTANT QUANTITY SURVEYOR. Grade V (£520-£570).

Housing accommodation may be made available for appointments (a), (b), (d) and (e).
Applications, on forms obtainable from L. Berger, Dip.Arch., A.R.I.B.A., Borough Architect, Civic Centre, Southampton, must be returned not later than 9th October, 1950.

R. RONALD H. MEGGESON.
Town Clerk.

Civic Centre, Southampton. 884

NATIONAL COAL BOARD.
ARCHITECTURAL STAFF.

Applications are invited for the following vacancies in the Architect's Department of the Durham and Northern (N. and C.) Divisional Coal Boards, situated at Ashfield Tower, Gosforth, Newcastle-upon-Tyne, 3.

- ARCHITECTS, Grade II. £450-£25 to £700. Should be A.R.I.B.A.
- ARCHITECTURAL ASSISTANTS, Grade I. £410-£20 to £550. Should be Student R.I.B.A.
- ARCHITECTURAL ASSISTANTS, Grade II. £300-£20 to £440. Should be Probationer R.I.B.A.

The posts are permanent and superannuable. Appointments will be made within the scales at levels in accordance with experience and qualifications.

Applications, stating age, education, qualifications, appointments held and salaries, to be addressed within 14 days to the Establishments Officer, Northern (N. and C.) Division, N.C.B., Ellison Buildings, Ellison Place, Newcastle-upon-Tyne, 1. 908

The London County Council invites applications from ARCHITECTS in private practice for inclusion on a panel to act in a professional capacity on the preparation of schemes for repairs and reconstruction of war damaged buildings and construction of new buildings in the Council's Parks and Open Spaces. Applications to the Chief Officer of the Parks Department, Old County Hall, Spring Gardens, S.W.1, not later than 27th October, 1950, accompanied by a stamped addressed envelope and brief particulars of qualifications and experience in this work. (1226) 898

CITY OF WESTMINSTER.

HOUSING DEPARTMENT.

SECOND ARCHITECTURAL ASSISTANT (Permanent). A.P.T., Grade V (£520-£570-£570 per annum), plus London weighting, maximum £30 per annum.

Applicants for this position should be Registered Architects and have wide experience. The appointment is subject to a satisfactory medical report and to the Council's Standing Orders, General Regulations and Superannuation Scheme. Canvassing will disqualify.

Applications (marked "Second Architectural Assistant"), stating full name, address, age, war service, qualifications, present and past appointments and experience, whether related to any member or chief officer of the Council, with copies of three recent testimonials, must be received by 9 a.m. on 10th October, 1950.

PARKER MORRIS.
Town Clerk.

Westminster City Hall, Charing Cross Road, London, W.C.2. 969

KENT COUNTY COUNCIL.

Applications are invited for the appointment in the Buildings Department of an ASSISTANT ARCHITECT, at a salary within A.P.T., Grades V(a)/VI (£550-£660).

Applicants, who must be Members of the Royal Institute of British Architects, should for preference have completed a full-time course at a recognised school of architecture and be conversant with methods of research. In addition, they should have good experience in the design and supervision of both large and small building schemes, and be capable of taking charge of such schemes.

Previous experience with a local authority is not essential, but experience on school buildings will be an advantage.

The post is superannuable and the successful candidate will be required to pass a medical examination.

Applications, on forms obtainable from the County Architect, Springfield, Maidstone, should be delivered to him not later than 14 days after the appearance of this advertisement.

W. L. PLATTS.
Clerk of the County Council.

County Hall, Maidstone. 883

BURGH OF KILMARNOCK.
BURGH ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointment:—

SENIOR ASSISTANT ARCHITECT.
Salary: Grade A.P.T., VI, £595-£20-£20-£25 to £660.

Applicants must be Registered Architects, preferably with a professional qualification and previous Municipal and housing experience. Applicants must not exceed 45 years of age unless they are already contributory employees under the Local Government Superannuation (Scotland) Act, 1937, but those who have been on war service may, if necessary, deduct the period of such service from their present age to satisfy the condition as to age limit. The person selected for appointment will require to pass a medical examination and on satisfying this condition will become a contributory employee under that Act.

Applications, accompanied by one copy of each of three testimonials and giving full details of age, qualifications, experience and previous appointments held, should be lodged with N. S. Sutherland, Esq., Burgh Architect and Town Planning Officer, 64a, Bank Street, Kilmarnock, not later than Monday, the 16th October, 1950.

W. L. WALKER.
Town Clerk.

Council Chambers, Kilmarnock. 916

CAMBRIDGESHIRE COUNTY COUNCIL.
COUNTY PLANNING DEPARTMENT.

Applications are invited for the appointment of a CHIEF DRAUGHTSMAN, on Grade A.P.T., V, of the National Joint Council's Scales (salary £520-£570 per annum).

Candidates must be capable surveyors and levellers, and have considerable knowledge and experience of the preparation of Town Planning maps of all kinds, including mapping from air photography, map reproduction by photorelief methods, and map and plan filing systems, and will be required to supervise staff in these and other duties.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, the Council's Conditions of Service, and to the successful candidate satisfactorily passing a medical examination.

Applications, stating age, past and present appointments (with dates), experience, qualifications, present salary, and the names of two referees, should be received by the undersigned not later than 9th October, 1950.

CHARLES PHYTHIAN,
Clerk to the County Council.

Shire Hall, Castle Hill, Cambridge. 837

Architectural Appointments Vacant

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

YOUNG ASSISTANT, interested in Ecclesiastical work required in private East Midlands office; student considered. Full particulars to Box 4167.

SENIOR ARCHITECTURAL ASSISTANT required by United Dairies, Ltd. Applicants to state age and experience in the preparation of surveys, sketch plans and working drawings, and be able to supervise work in progress. Apply in writing, stating qualifications and salary required, to Chief Architect, 31, St. Petersburg Place, London, W.2. 674

ARCHITECTURAL AND SURVEYING ASSISTANT required by Chartered Architect and Surveyor, London, W.C.1, on Good draughtsman, with experience of specification writing, and capable of taking complete charge of moderate sized contracts. State age, experience, and salary required. 912

ARCHITECTURAL DRAUGHTSMAN required with an experience of factory design. Applications to be sent, together with full details of experience and salary required, to Box A.J. 273, at 191, Gresham House, E.C.2. 900

RONALD WARD & PARTNERS require TWO ARCHITECTURAL ASSISTANTS (Intermediate standard). Apply 17, Lowndes Street, S.W.1. Telephone Sloane 8291. 821

CO-OPERATIVE WHOLESALE SOCIETY, LTD., ARCHITECT'S DEPARTMENT, LONDON.

APPPLICATIONS are invited for the following—
ASSISTANT ARCHITECTS. Salary £490-£555 per annum. Applicants should have a sound knowledge of building construction and Architectural design, capable of preparing working drawings and details under supervision. Experience in shopping premises and light industrial work would be an advantage.

The appointments are permanent and offer prospects of up-grading. Successful candidates will be required to undergo medical examination for a compulsory Superannuation Scheme.

Applications, stating age, experience and qualifications, to the Chief Architect, Co-operative Wholesale Society, Ltd., 99, Leman Street, London, E.1. 831

ARCHITECTURAL ASSISTANTS, with experience in steel framed buildings, required to work on large Government Office building. Senior and lower graded assistants will be selected on ability and experience rather than salary required. Write, stating age, experience, and salary, to Louis de Soissons, A.R.C.A., & Partners, 3, Park Square Mews, London, N.W.1. 797

EXPERIENCED SENIOR ASSISTANTS required by Architect to London Brewery; must be practical draughtsmen, with good knowledge of construction; commencing salary £550-£600. Apply in writing, stating age, training and experience, to Box 822.

ARCHITECTURAL ASSISTANT required; Inter. standard or above; E. London Office engaged in a variety of Industrial Commercial Projects in and around London. Also **QUANTITY SURVEYOR**, to work with Architect's Department on the above projects; experienced in the preparation of specifications and builders' quantities. Box 803.

JUNIOR ARCHITECTURAL ASSISTANT required, up to R.I.B.A. Intermediate standard, for London office, capable of executing working drawings, etc., to start immediately. Interesting work and scope for applicant showing initiative. Apply in writing, stating age, training, experience, and salary required, to Elie Mayorcas, F.R.I.B.A., 13, David Mews, Baker Street, W.1. 818

ASSISTANTS required in Architect's Department in London. Permanency offered to men from 25/35 years of age. Preference given to Associates R.I.B.A. for the senior posts. Previous experience in design, supervision, specifications and maintenance of good class buildings essential. Suitable applicants will be eligible for allowance following retirement. Write, giving age and details of past work, Box 851.

ASSISTANT required between Intermediate and Final standard; willing to take interest and responsibility in small practice in London area. Box 910.

SLOUGH ESTATES, LTD. require an **ARCHITECTURAL ASSISTANT**, capable of preparing working drawings of factories and estate layouts with the minimum of supervision. Brief particulars please of age, experience, and salary required, to the Architect, Slough Estates, Ltd., Trading Estate, Slough. 911

ARCHITECTURAL ASSISTANT required by professional firm. R.I.B.A. Final standard. Knowledge of construction, preparation of working drawings, and details in respect of industrial buildings is desirable. Work is in London. Salary according to experience, between £450 and £650. Apply Box 903.

ARCHITECTURAL DRAUGHTSMAN required for a factory in Essex producing Pre-cast Concrete Products. Good prospects for right man. Position will probably entail a transfer to London offices at a later date. Apply in writing, giving details of age, experience, salary required, etc., to Personnel Director, Richard Costain, Ltd., Dolphin Square, London, S.W.1. 877

SENIOR ARCHITECTURAL ASSISTANTS required: interesting and varied work. Apply, stating age, experience and salary required, to Farmer and Dark, Chartered Architects, Terminal House, Grosvenor Gardens, London, S.W.1. 902

ARCHITECTURAL ASSISTANT (temporary) wanted for Railway Civil Engineer's Office in Glasgow. Good general practice experience. State age, qualifications and experience. Box 905.

ARCHITECT'S ASSISTANTS required for Liverpool and London West End office on Industrial and Residential work and overseas projects. Reply, stating age, experience, etc. Salary according to experience and qualifications. Box 904.

TWO SENIOR ARCHITECTURAL ASSISTANTS wanted for new department store work of advanced design. Salary £500-£600, according to qualifications and experience. Apply Rolf Hellberg, F.R.I.B.A., 13, Queen Victoria Road, Coventry. 888

JUNIOR ASSISTANT required in Architect's Department of London Company. Applicants to be neat draughtsmen, with a fair knowledge of building construction. Write, stating age and experience. Salary according to ability. Five-day week. Box 881.

ARCHITECTURAL ASSISTANT required by Major Industrial Organisation, with head office in the West End of London. Applicants, not necessarily qualified, should be aged under 35, and experienced in the preparation of surveys, sketch plans, working drawings, in connection with industrial buildings; also able to supervise work in progress and prepare reports. This post carries a good salary. Apply in writing, stating age, qualifications and experience, to Dept. M.77, Box C4955, A.K. Advertising, 212a, Shaftesbury Avenue, W.C.2. 880

CLIFFORD TEE & GALE, Architects, of 153, Moorgate, London, E.C.3, Central 6683, require **Male ARCHITECTURAL ASSISTANTS**, Inter. standard. 879

SENIOR ASSISTANT wanted in busy Country practice, 60 miles from London. Partnership considered after 12 months. Salary £450-£500. Box 878.

Architectural Appointments Wanted

ARCHITECTURAL ASSISTANT (29) seeks appointment in progressive Provincial office; 9 years' office experience; capable of preparing working drawings, surveys, detailing, site supervision, etc.; experience includes factories, schools, agricultural buildings, hotels, etc., and housing; studying for Special Final Exam. R.I.B.A. Box 586.

ARCHITECTURAL DRAUGHTSMAN (age 22), probationer R.I.B.A., with over 4 years' office experience, wishes to obtain a progressive position in London Architect's office. Box 587.

CHARTERED ARCHITECT, of considerable experience in industrial and commercial work, desires position. Used to taking complete charge of contracts and controlling staff. School trained. Box 596.

SENIOR ASSISTANT (32), 10 years' experience hospitals, factories, etc., requires position in London office. Box 595.

R.I.B.A. (Female) requires change of responsible position in London office, on contemporary work. Box 890.

ARCHITECTURAL ASSISTANT, Intermediate standard, requires post in West End. Preference for domestic work. Box 594.

ASSISTANT (36), Registered, desires position in Surrey, Sussex or South-West England, with private Architect or commercial undertaking; capable of taking complete charge of all general provincial work, surveys, etc.; minimum salary £250. Box 592.

DIP. ARCH., ex-Service, just qualified, 2 years' office experience, requires position with private Architect. Any district considered. Box 593.

Other Appointments Vacant

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

ARCHITECTURAL Metalworkers require a **DESIGNER-DRAUGHTSMAN** of considerable merit; top salaried position for skilled man. Apply The Morris Singer Company, Hope House, Gt. Peter Street, Westminster, S.W.1. 3564

INTELLIGENT and enthusiastic young man, with some knowledge of building construction and materials, wanted for unusually interesting selling job, mainly in London (full-time). Write, with full particulars of age, training, experience, salary required, to Box 366.

ARCHITECTURAL METALWORK DETAILING DRAUGHTSMAN wanted; good wages and ideal working conditions. Apply: The Morris Singer Co., Ltd., Ferry Lane, Forest Road, Walthamstow, E.17. 3524

CHIEF ESTIMATOR/SURVEYOR required by old-established engineering and building contractors in the Essex/London area, engaged mainly on factory construction, extension, and maintenance. Experience is required in estimating for civil engineering as well as building work, but management of contracts is not one of the duties. Salary approximately £900 per annum, depending on experience and ability. The appointment is pensionable. Applicants should write, giving details of their age, education, qualifications and experience, to Box 876.

BUILDING ESTIMATOR required, thoroughly conversant with building estimating and quantities for industrial buildings. Write, stating age, education, experience, salary required, to E.M.A., Cadbury Brothers, Ltd., Bourneville. 867

Services Offered

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

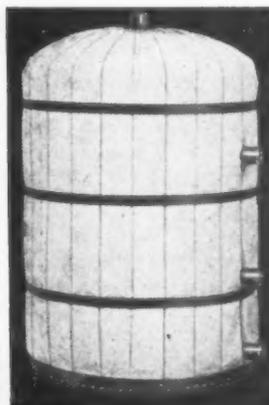
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R.I.B.A. Calculation of Simple Structural Members and Theory of Structures, Intensive postal tuition. Apply "Structures," 22, Oakwell Mount, Leeds, 8. 4791

FREE-LANCE Surveyor offers Services to Architects requiring accurate surveys of land and buildings, levelling, contouring, etc.; own car and complete equipment. 2772

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- Low initial cost

Patent No. 328472.

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TO ARCHITECTS.—Reliable services at reasonable charges offered to Architects needing temporary assistance in the preparation of Designs, Working Drawings, Details, etc. Perspectives in line and colour. "ARCHITAIDE," 22, Ladbroke Square, London, W.1. 891

For Sale or Wanted

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

PLAN CABINETS and all types of Office Furniture and Canteen Tables, manufactured by A. Brodie, 104A, Scawfell Street, London, E.2. Telephone Shoreditch 6719. Trade enquiries invited. 796

SUPERB Architect's Drawing Cabinet; beech panelled sides and front doors; height 4 ft., width 3 ft. 10 in.; 11 drawers, 4½ in. by 30 in. 9/2½ in. deep, 2/6 in. deep; £55. Wimbledon 2532. 887

Miscellaneous

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

A. J. BINNS, LTD., Specialists in the supply and fixing of all types of fencing, guard rail, factory partitions and gates. Harvest Works, 99-107, St. Pauls Road, N.1. Canonbury 2061.

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ARCHITECT'S Smocks made from high grade Irish linen: Zip front, 37s. 6d., including purchase tax. Cash with order. E. Ashcroft, 167, Oldham Road, New Cross, Manchester, 4. 848

ALL BOOKS of interest to Architects, published in this country and in America, are obtainable from Stobart & Son, Ltd., 9, Victoria Street, London, S.W.1. Ask to receive regularly our free lists giving contents-summaries of new books. 1445

SITE CLEARANCE, TIMBER FELLING AND EARTH MOVING.—Experienced men and modern equipment available now. Distance no object. Apply H. Gulliver & Sons, Plough Hill, Cuffley, Herts. Phone Cuffley 2687. 901

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R. I. B. A. EXAMS.—Mr. L. Stuart Stanley, F.R.I.B.A., F.R.I.B.A., M.T.P.I., Dist. in T.P. (Tutor in the Sch. of Arch. Lond. Univ.), prepares Students by correspondence tuition. 15, North Road, N.6. MOU. 8104.

NORTHERN POLYTECHNIC HOLLOWAY, LONDON, N.7.

Principal: T. J. DRAKELEY, D.Sc., Ph.D.(London), F.R.I.C., F.I.R.I.

Head of Department of Architecture: T. E. SCOTT, F.R.I.B.A.

DAY SCHOOL OF ARCHITECTURE

The Five Years' Course qualifies for exemption from the Final Examination for Associateship of the R.I.B.A. and for registration under the Architects (Registration) Acts, 1931-1938. Students who complete satisfactorily the first Three Years of the course are granted exemption from the Intermediate Examination of the R.I.B.A.

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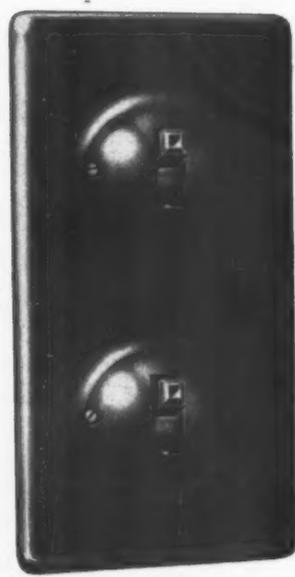
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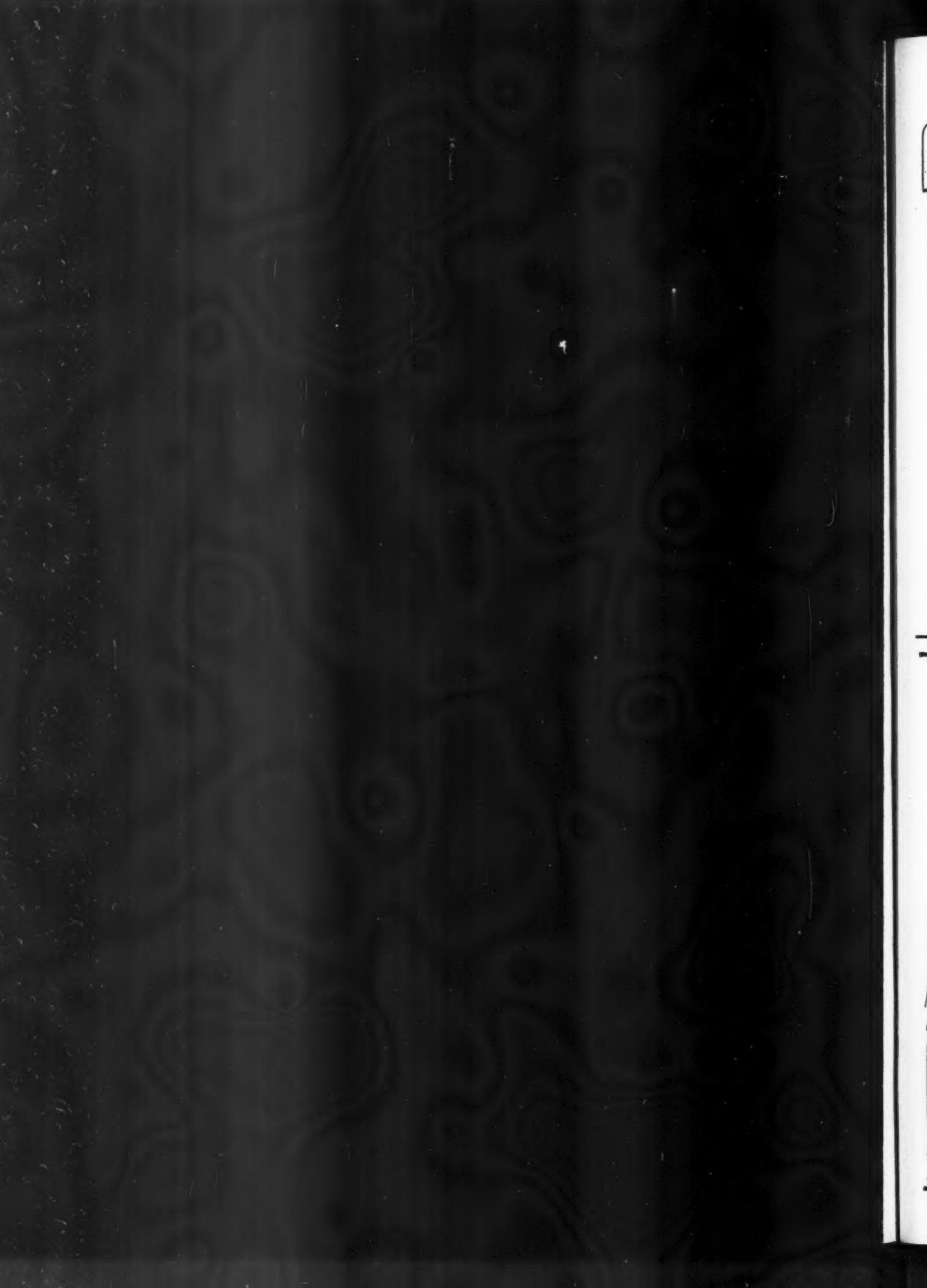
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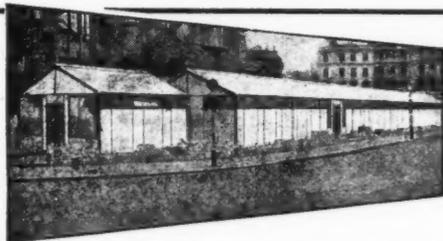
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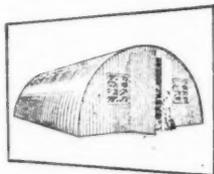


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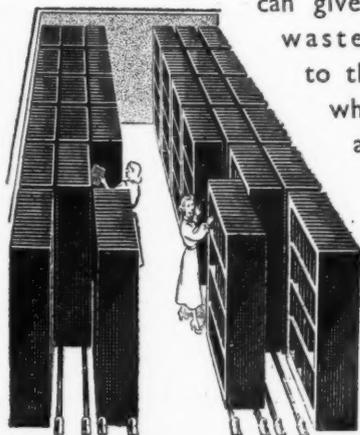
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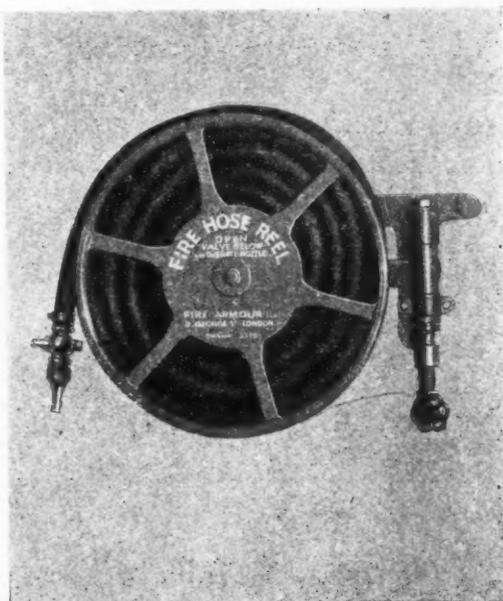
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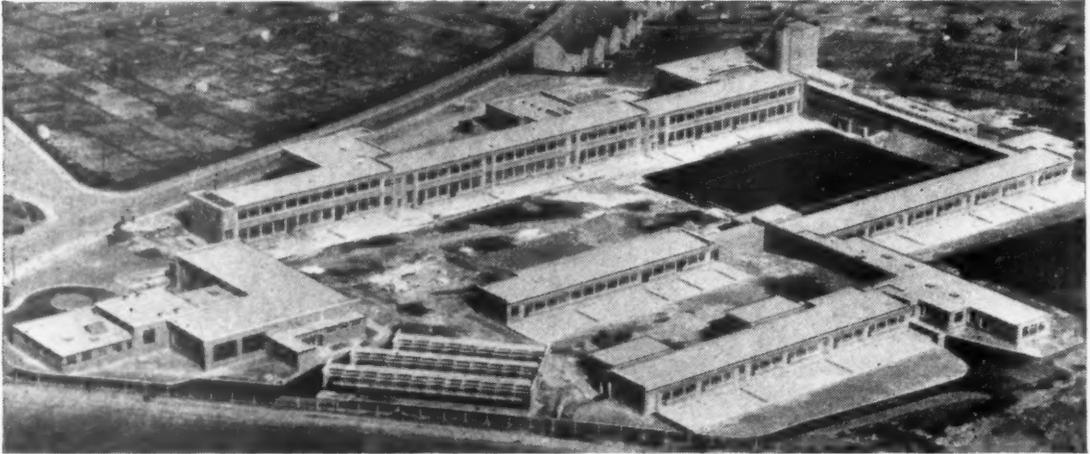
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