THE ARCHITECTS' JOURNAL

tandard contents

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

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THE ARCHITECTURAL PRESS
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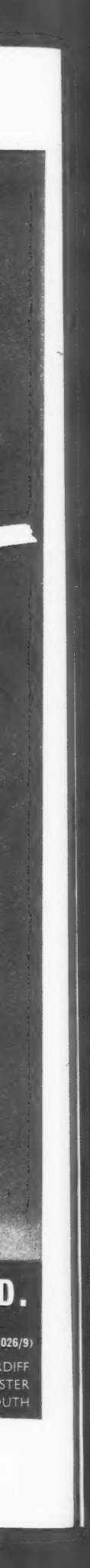
Registered as a Newspaper.

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

IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 75, Eaton Place, S.W.1.	Sloane 3158/1601
IIBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1.	Euston 2450
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Museum 1783
I of Arb	Institute of Arbitrators. 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197/5176
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
IWA	Inland Waterways Association. 14, Great James' Street, W.C.2.	Chancery 7718
LIDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
MARS	Modern Architectural Research Group (English Branch of CIAM) Secretary: Gontran Goulden, Building Centre, 26, Store Street, W.C.1.	Museum 5400
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. 23, Saville Row, W.1.	Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service, 8, St. James' Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94-98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 37, Onslow Gardens, S.W.7.	Kensington 8161
NCBMP	National Council of Building Material Producers, 10, Princes Street, S.W.1.	Abbey5111
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives, Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1.	Langham 4341
NPL	National Physical Laboratory. Head Office, Teddington	Molesey 1380
NSA	National Sawmilling Association. 14, New Bridge Street, E.C.4.	City 1476
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1.	Abbey 1359
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Abbey 4504
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Edinburgh 20396
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George St., S.W.1.	Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8.	Western 1571
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3.	Mansion House 3921
SIA	Structural Insulation Association. 32, Queen Anne Street, W.1.	Langham 7616
SIA	Society of Industrial Artists. 7, Woburn Square, W.C.1.	Langham 1984
SNHTPC	Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen.	
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 21, College Hill, E.C.4.	City 4771
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation. 75, Cannon Street, E.C.4.	City 5051
WDC	War Damage Commission. 6, Carlton House Terrace, S.W.1.	Whitehall 4341
ZDA	Zinc Development Association. Lincoln House. Turl Street, Oxford.	Oxford 47988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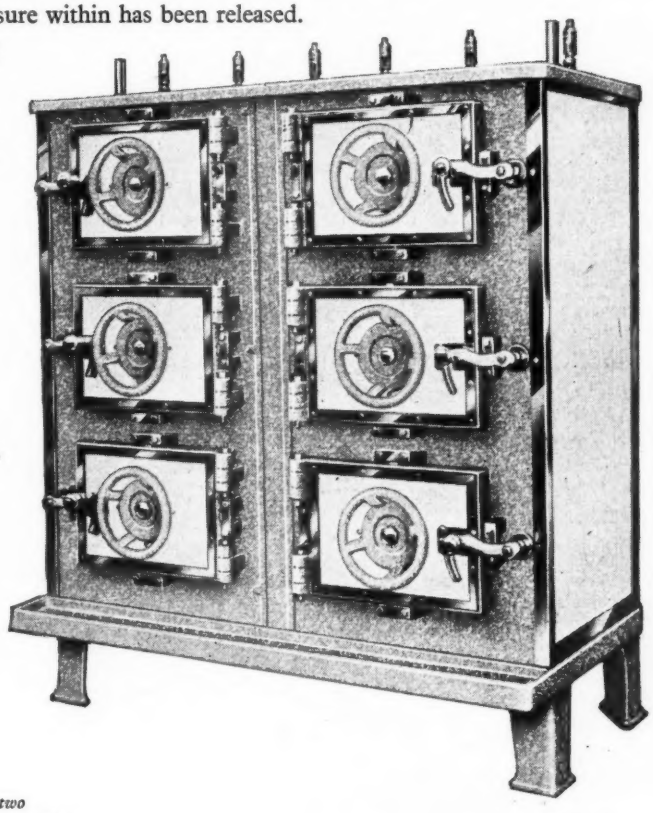
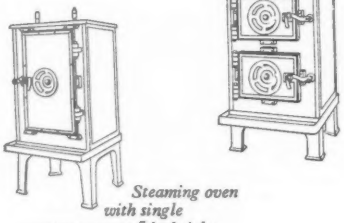
Wet Steaming Oven with six independently controlled steaming compartments

The MAIN Wet Steaming Oven illustrated on the right is of heavy cast-iron construction, and consists of a battery of six compartments, each of which is 18″ wide x 24″ deep x 12″ high (inside dimensions). The battery is enclosed in vitreous-enamelled wrought-steel panelled sides and back which cover all pipework and valves, thus providing plain surfaces for easy cleaning.

Each compartment is independently controlled and is fitted with a safety device to prevent doors being opened until pressure within has been released.

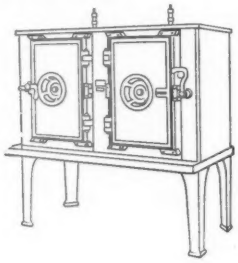
The oven is mounted on a vitreous-enamelled cast-iron stand. Other combinations of 12″ or 18″ high compartments, in single or multiple tiers, can be supplied to suit special requirements. Alternate designs with ovens 30″ high also available.





Battery of 3 compartments.

Steaming oven with single compartment 30″ in height.



Battery with two 30″ high compartments.

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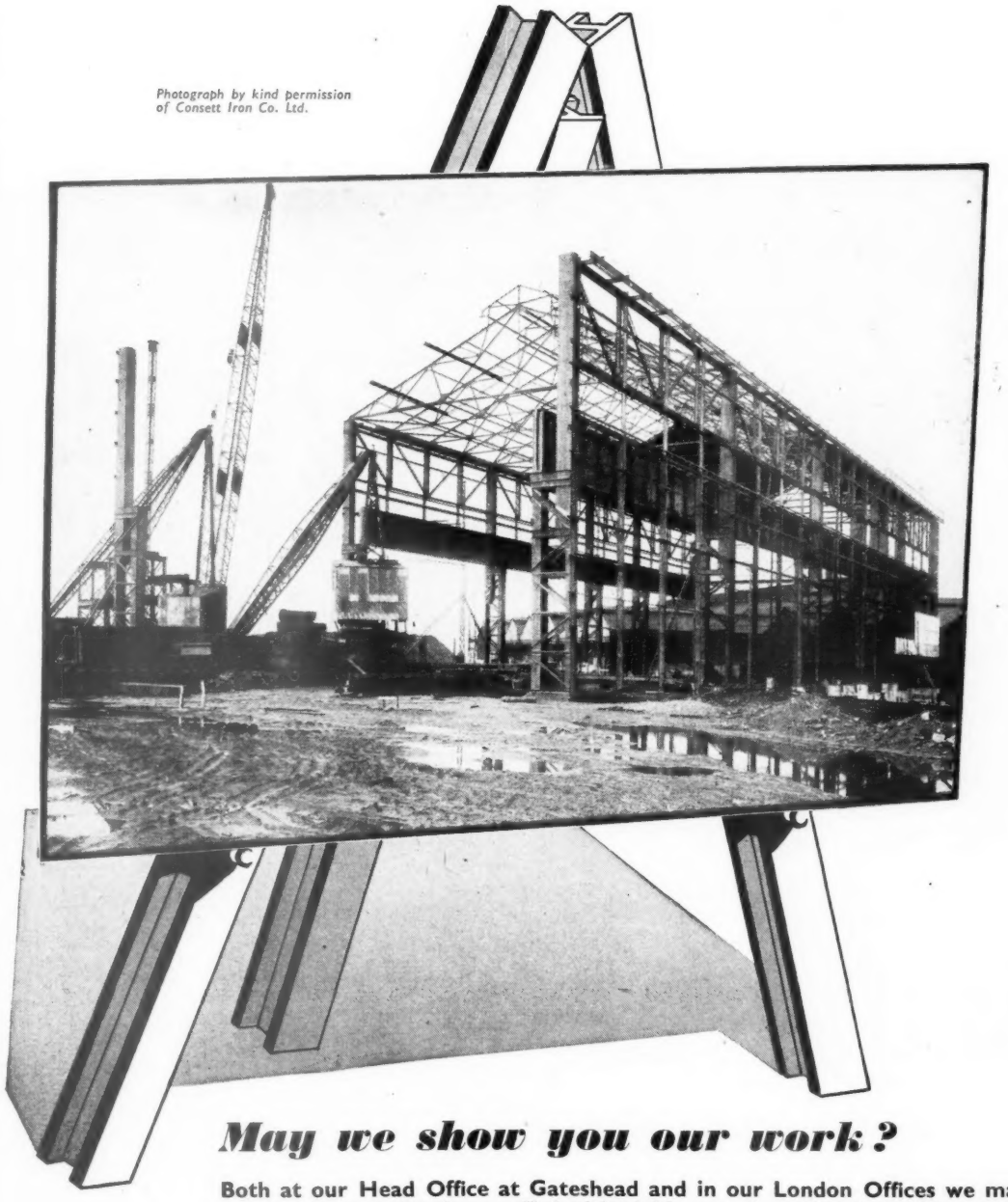

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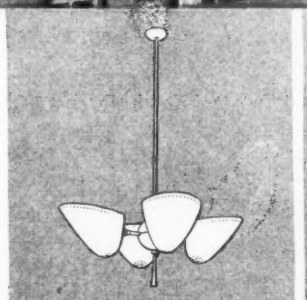
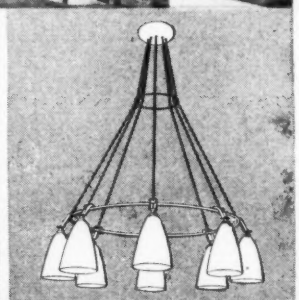
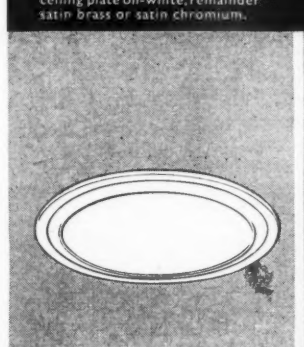


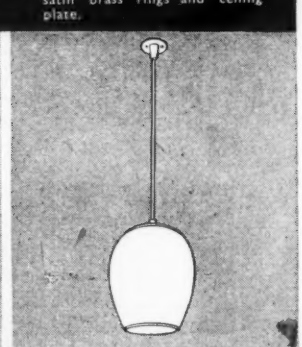
FV.14 R. Four-light pendant with reflectors, centre body and ceiling plate off-white, remainder satin brass or satin chromium.



F.1224. Eight-light ring pendant with off-white reflectors and satin brass rings and ceiling plate.



F.911. Recessed fitting with anodised aluminium reflector with an off-white glass support, taking a rimpled obscured glass.



U.202. Open base pendant with chromium or coinage bronze suspension.

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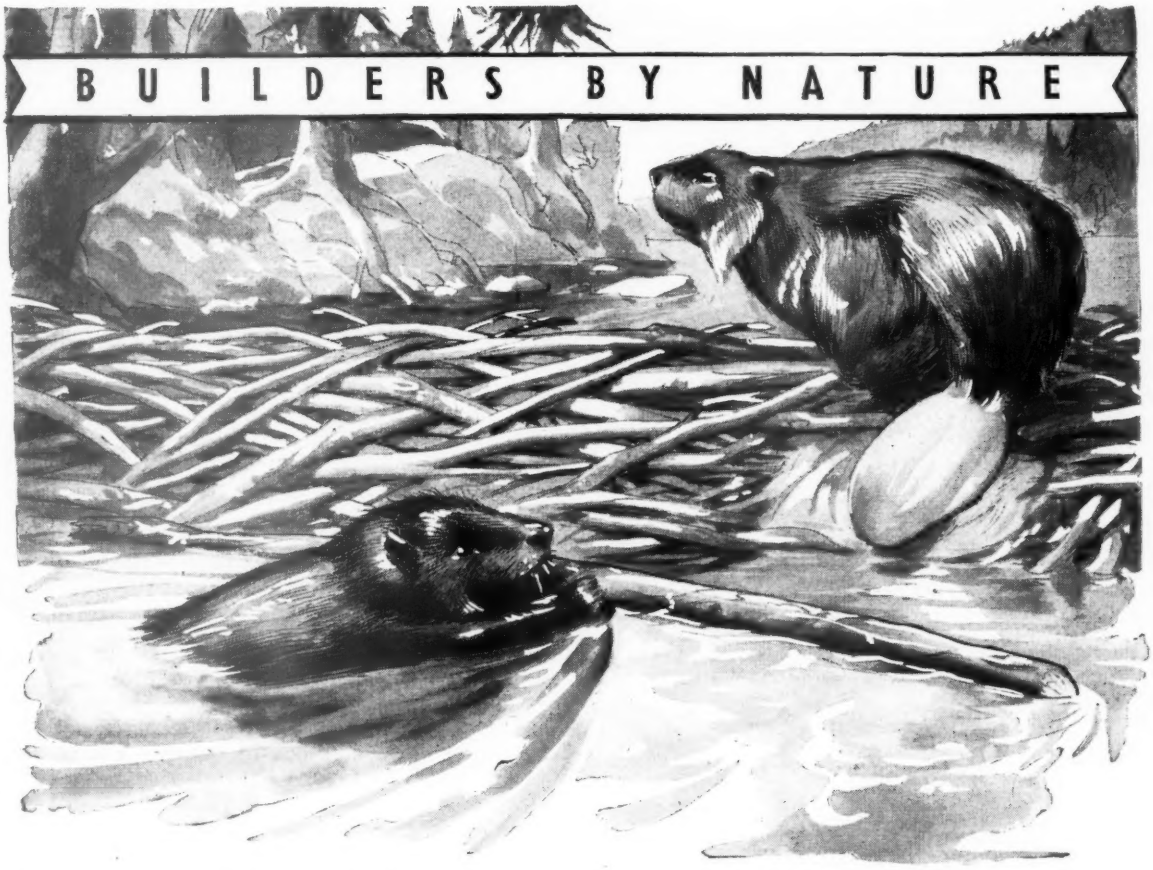


No. 3. THE BEAVER

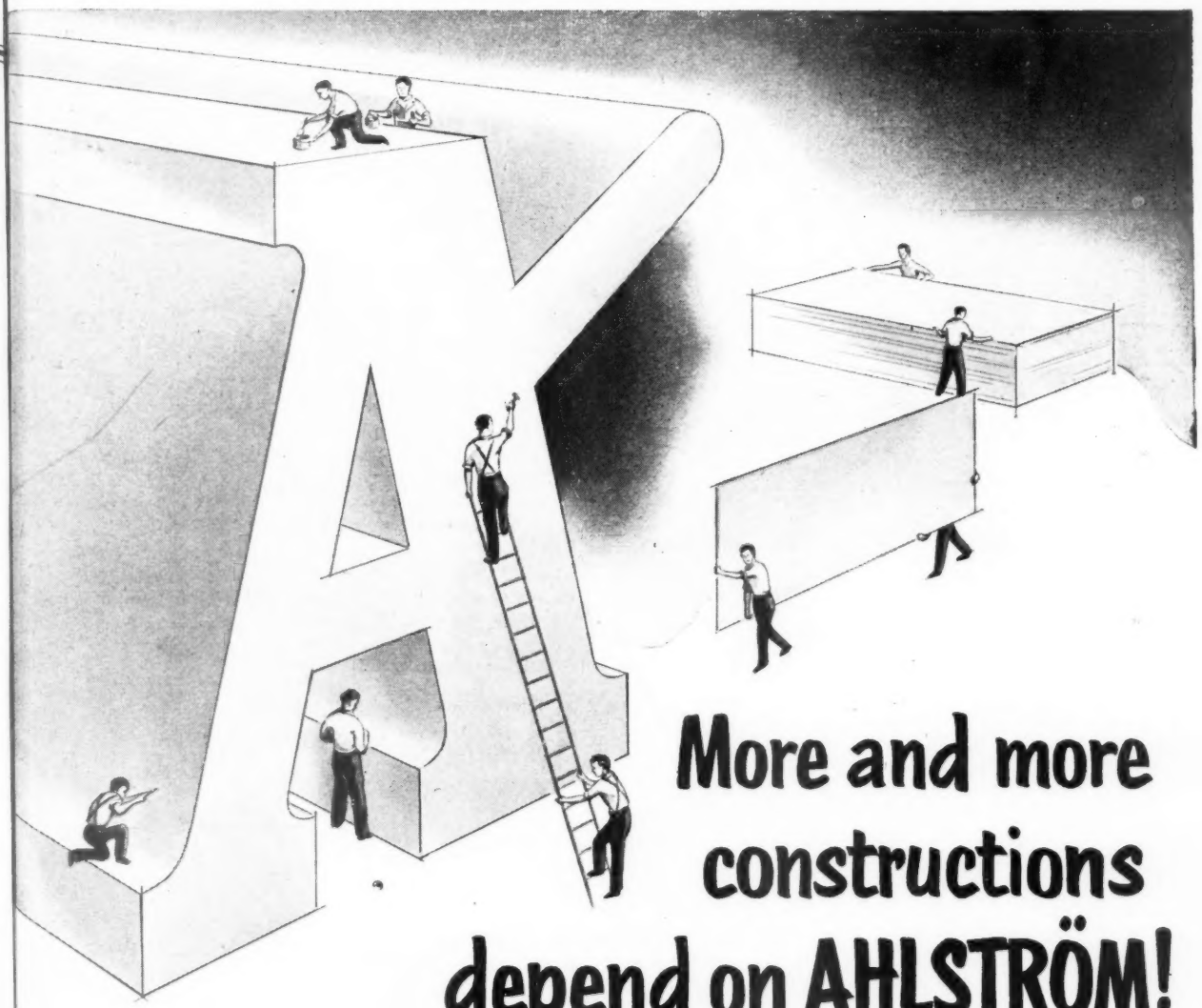
The beaver is a most intelligent and resourceful builder. Its 'lodge' is either burrowed above water-level in the bank of a stream or pond, or built on the tree trunks, branches and twigs which form a huge dam extending far into the water.

The main entrance is always through a tunnel below the surface of the water and therefore below the level of ice. Each lodge has two chambers, waterproofed with mud, one for feeding, the other for sleeping and raising young beavers.

The dams are built in a masterly way to ensure that there is a sufficient depth of water in which to swim and find food beneath the ice. First, the beaver gnaws through tree trunks, sometimes as much as 18in. in diameter, and fells them so that they either fall directly into the stream or near enough to be rolled into the water. Then the trees are stripped of boughs and bark and cut into manageable lengths.

A number of small subsidiary dams are often built, but the main dam, reinforced with stone, earth and mud, frequently measures 150 to 200 yards.

Whole ponds, covering many acres are sometimes converted into woody marshes known as beaver-meadows. In fact, the great city of Toronto is built on very extensive old beaver-meadows.



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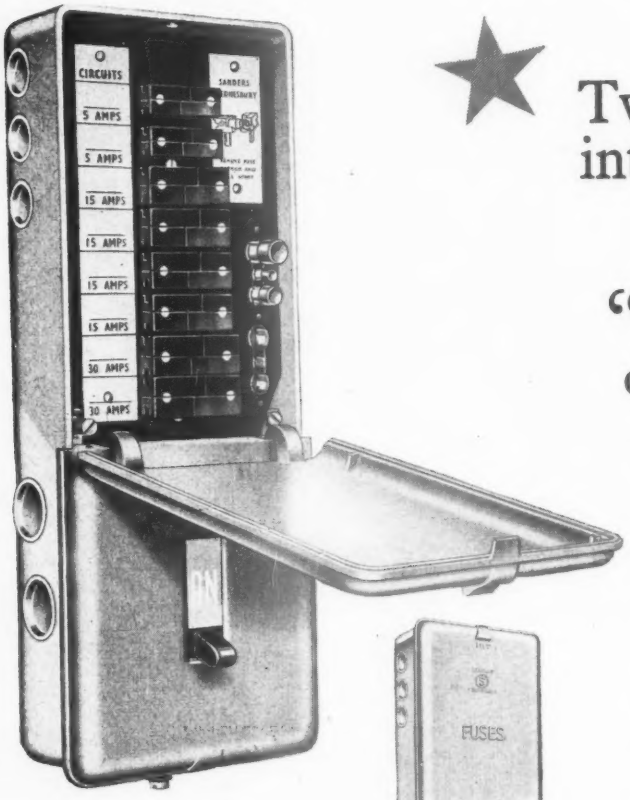

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Dimensions : $14\frac{3}{4}'' \times 5\frac{3}{4}'' \times 3\frac{1}{2}''$.

Weight : $6\frac{1}{2}$ lbs.

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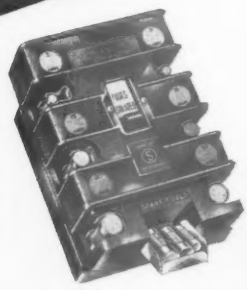

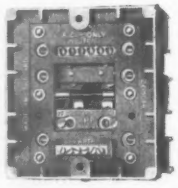

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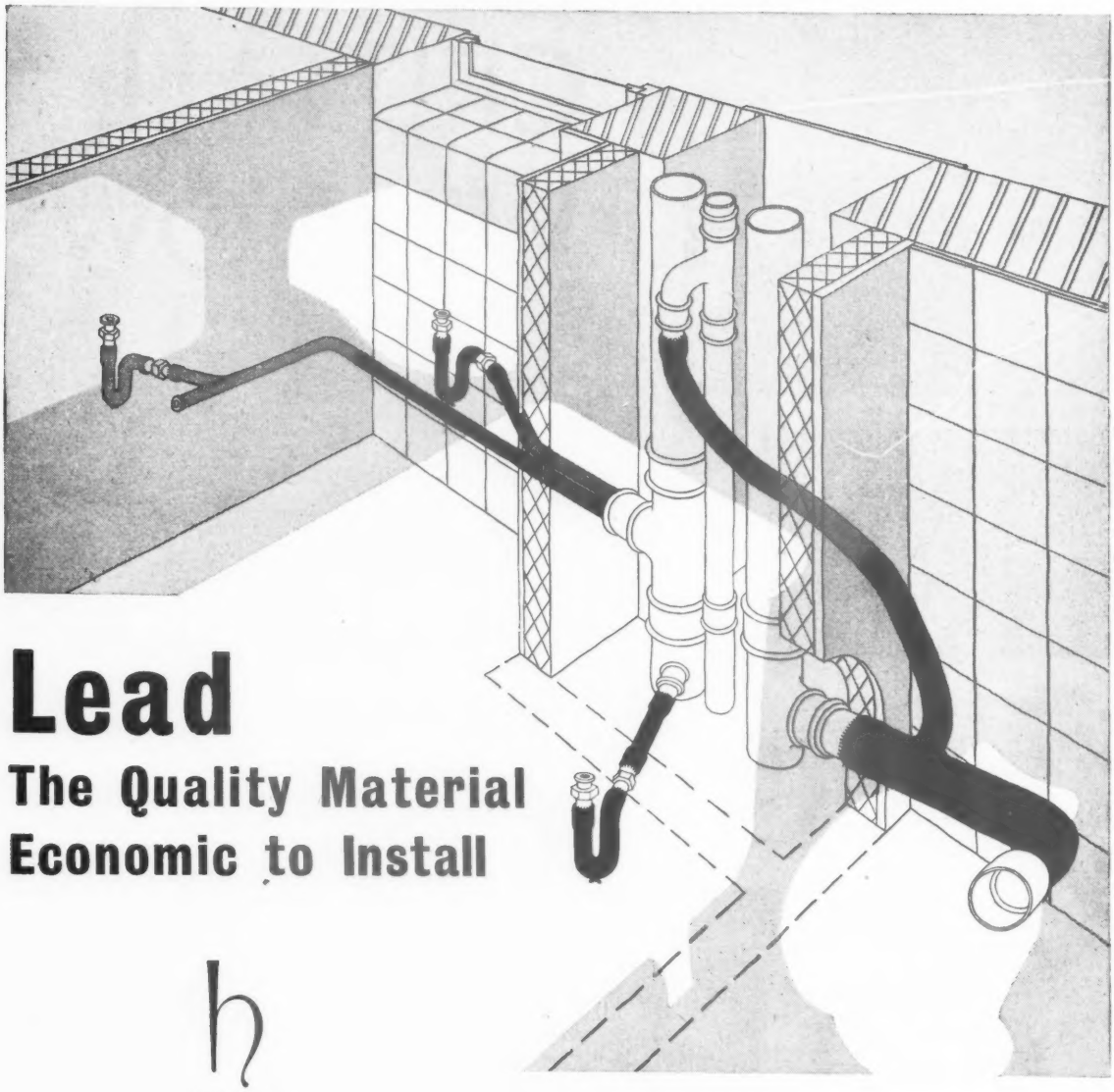

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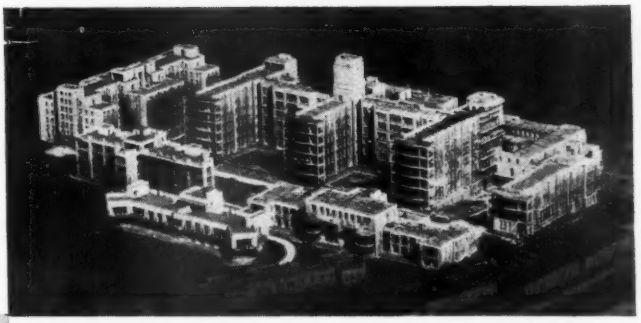
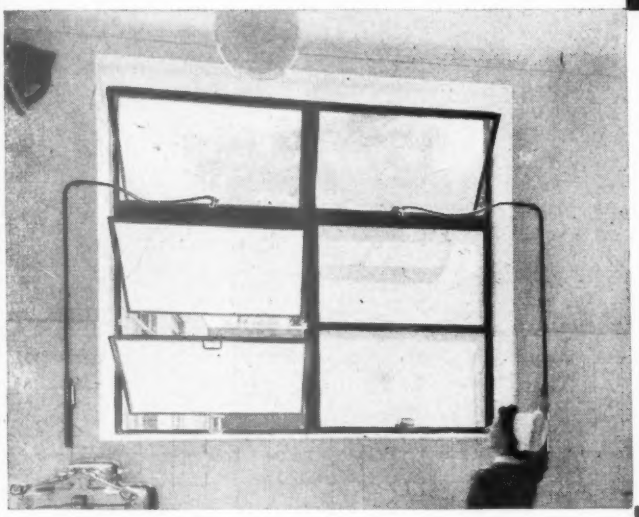


The St. Helier Hospital, Carshalton, Surrey. Over 3,800 Arens controls have been fitted throughout this extensive building.
Architects : Saxon Snell & Phillips.
Arens gear supplied by James Gibbons, Limited, of Wolverhampton.



H.H./S.W. Type I gear fitted in the Bearsted Memorial Hospital, N.16

Architects : Messrs. Joseph.
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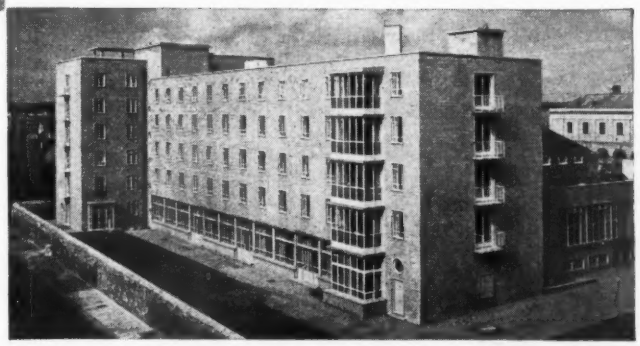

Arens controls are fitted to both the Nurses' Residence and the Maternity Hospital, Jersey, C.I.
Architects : Grayson & Le Sueur, F/A.R.I.B.A., A.A. Diploma.
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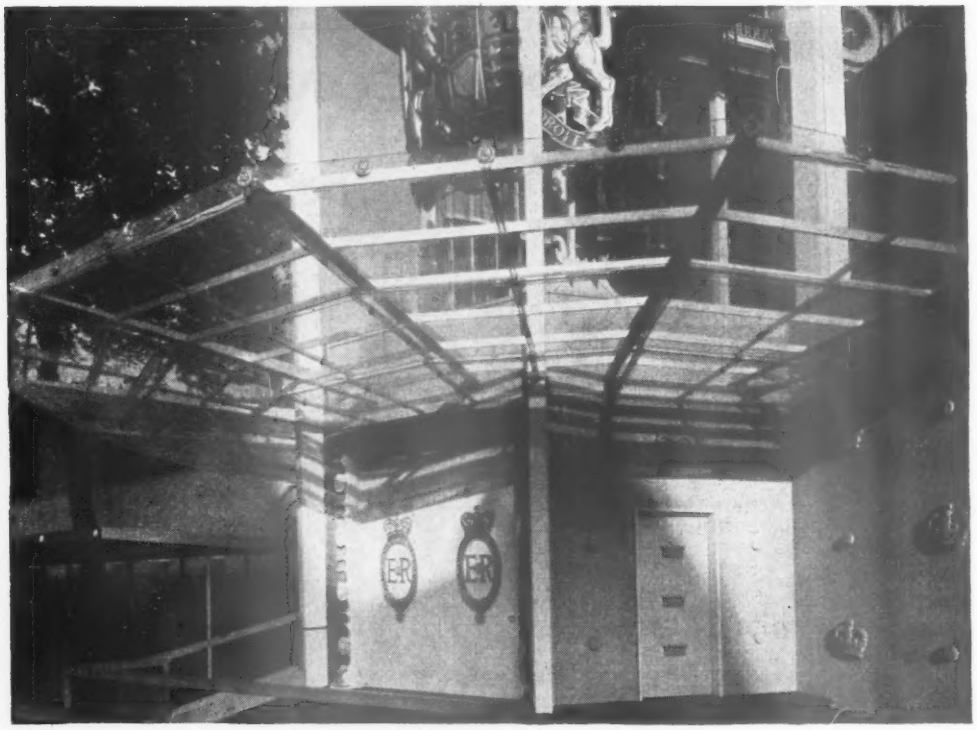

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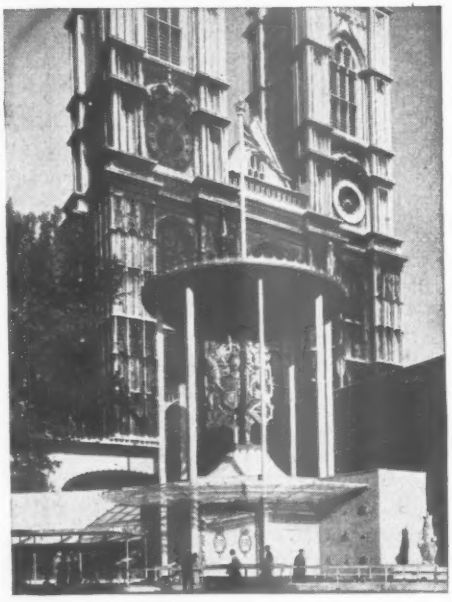

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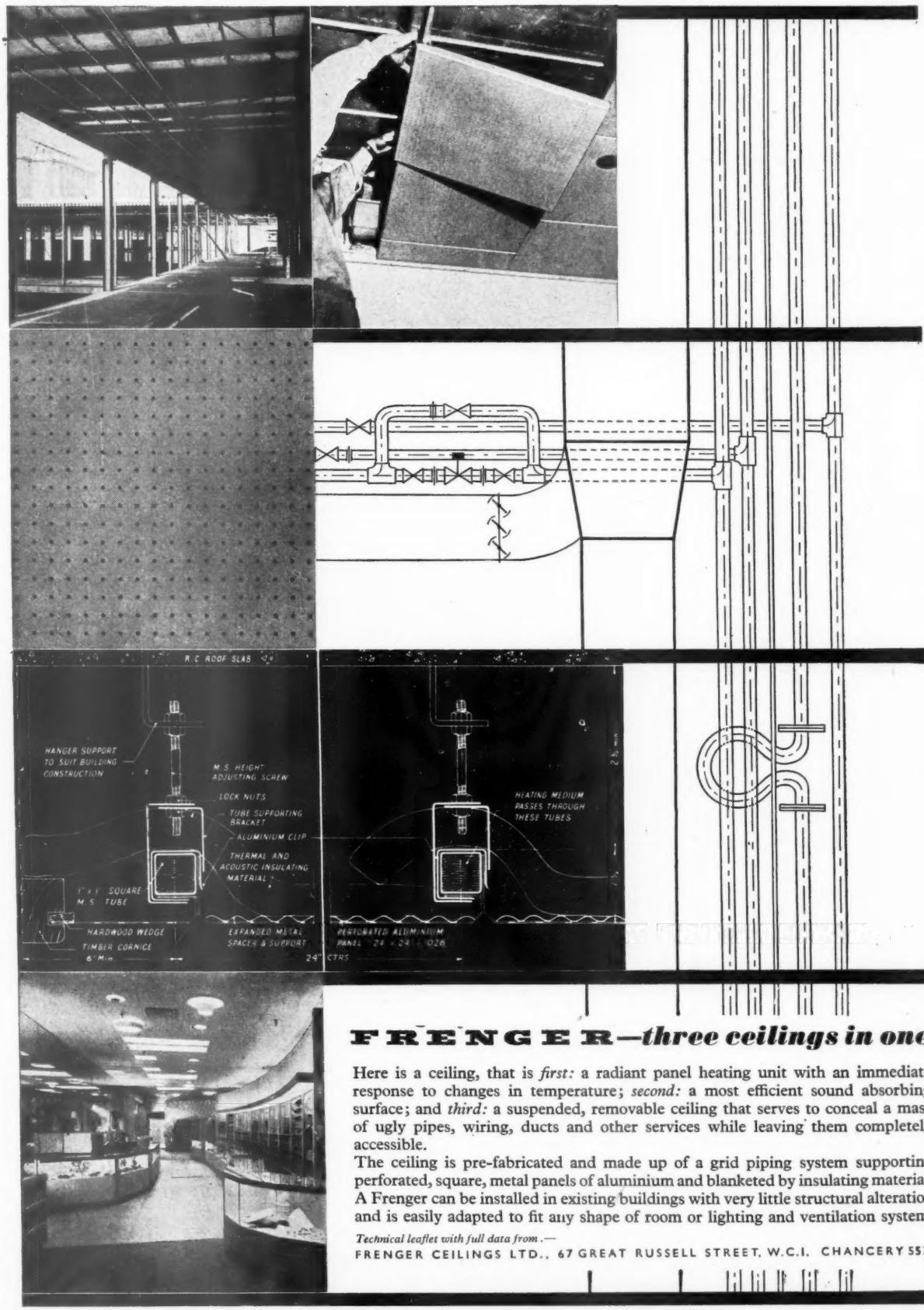

FRENGER—*three ceilings in one*

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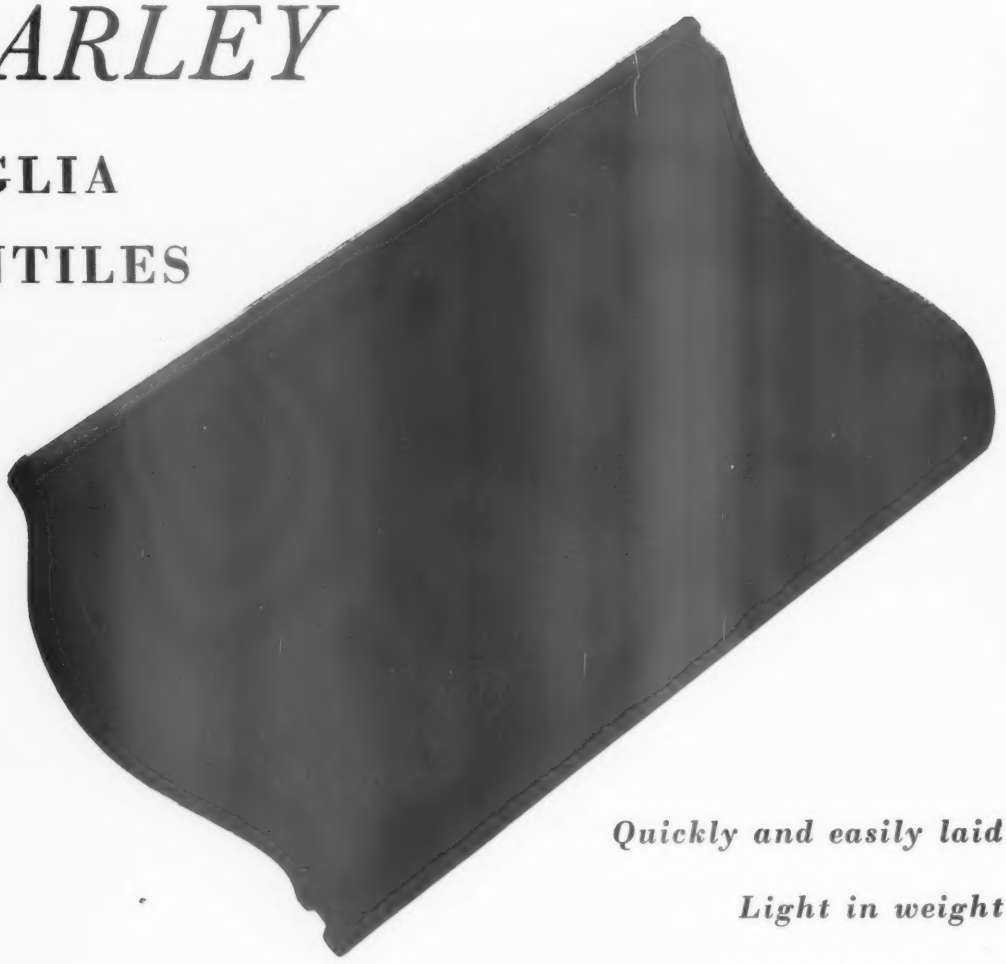

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TECHNICAL DATA

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		per sq.	per sq. yd.	per sq.	per sq. yd.	per sq.	per sq. yd.
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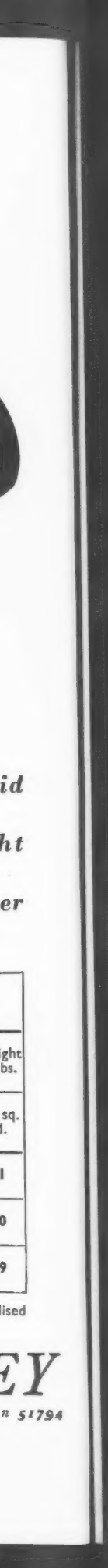

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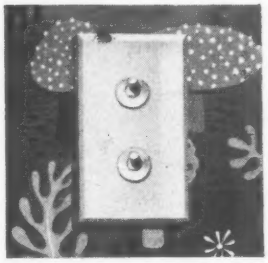

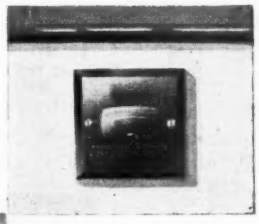

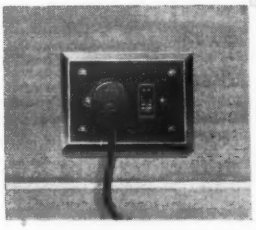

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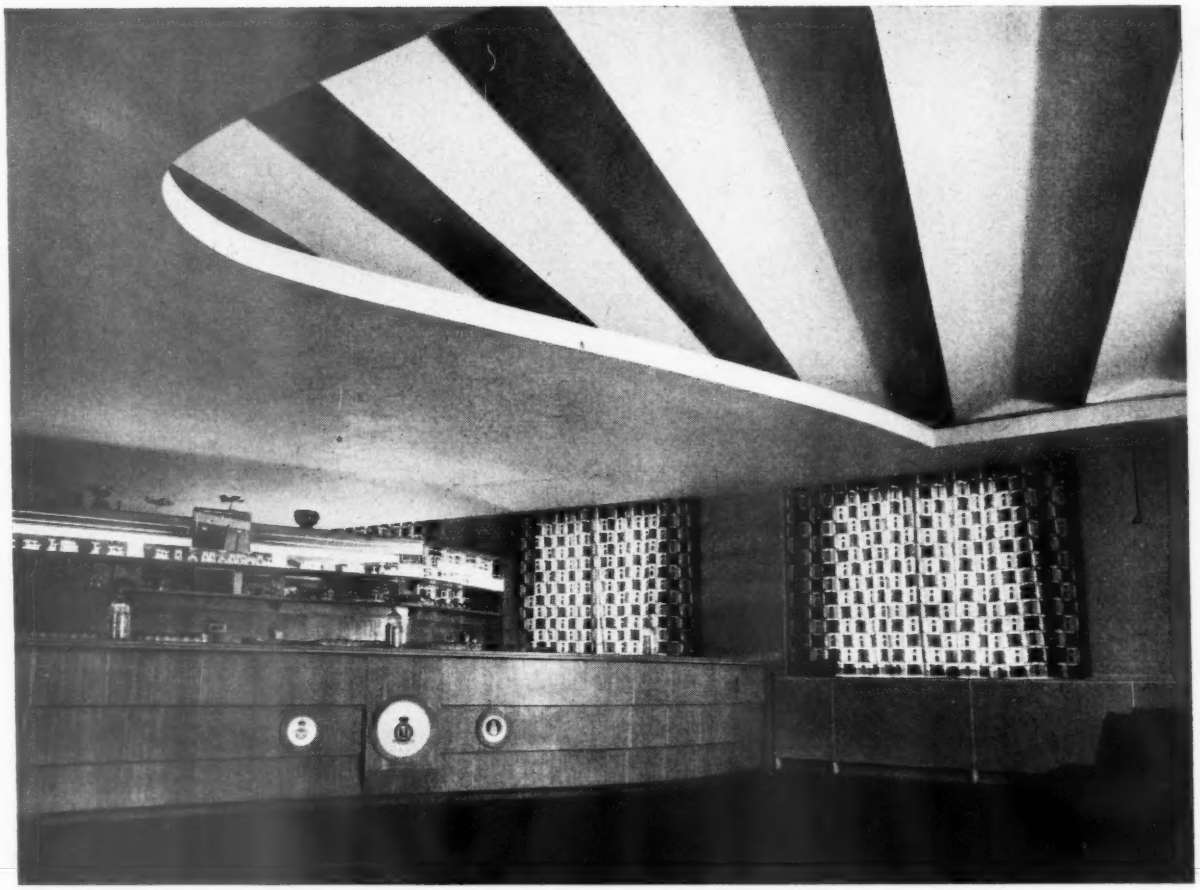

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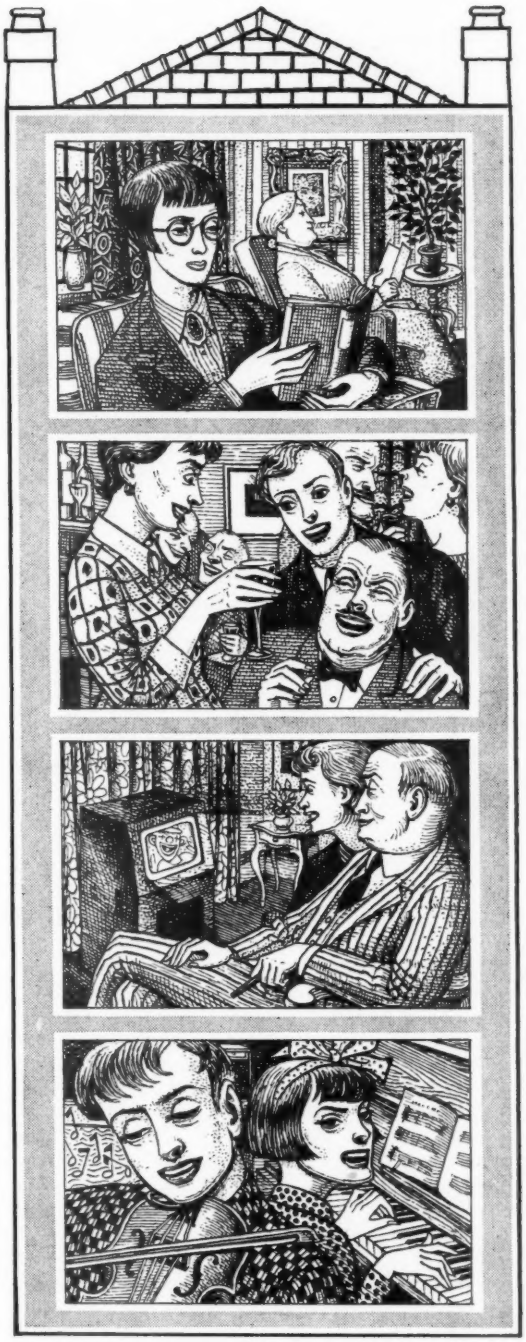

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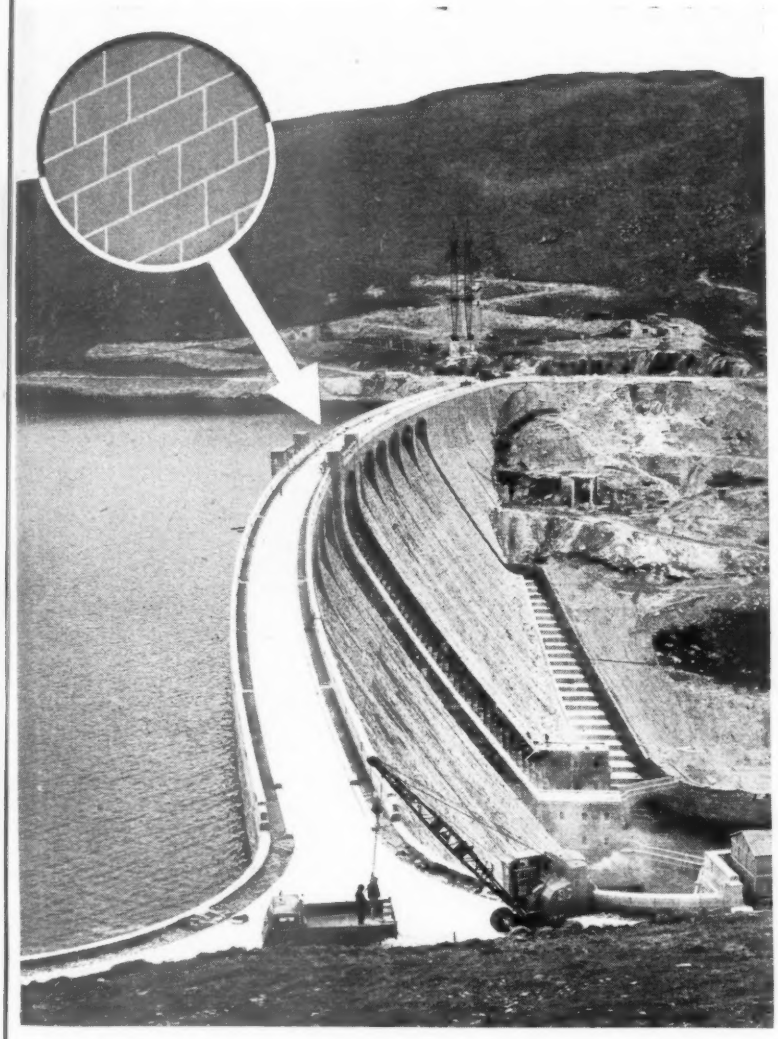

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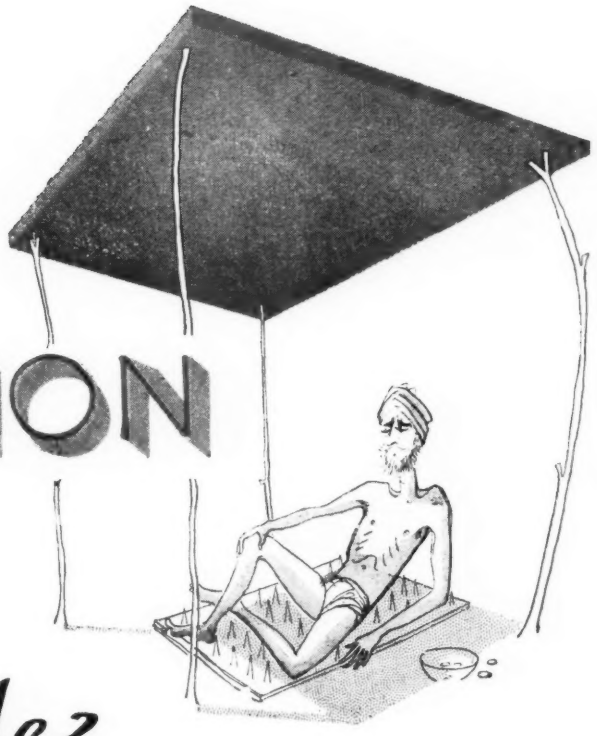

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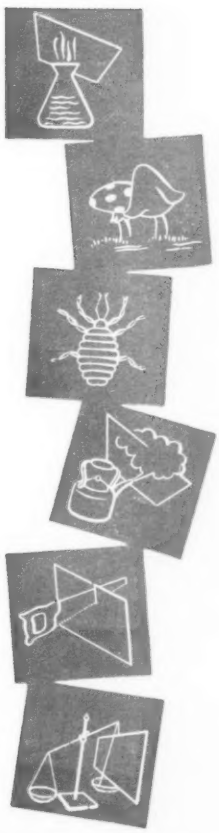

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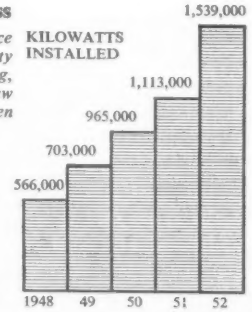

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THE ARCHITECTS' JOURNAL

9, 11 & 13, Queen Anne's Gate, Westminster, London, S.W.1 Whitehall 0611

No. 3052 August 27, 1953 VOL. 118

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DRAUGHTSMANSHIP

Unable to suppress the reflex wincing and hot tears of rage which always affect him when he enters the courtyard of Burlington House and sees what our elders and betters have done to Colen Campbell's serene façade, ASTRAGAL closed his eyes and stumbled blindly up the steps. He endures this agonizing experience about this time every year, as he goes into the Academy to look at the winter exhibition in the Diploma Gallery, but this winter the torture will be repetitive since it is an exhibition which will require several visits.

*

It is the cream from English collections of drawings by old masters, less those which have been shown recently and those which are normally on public view. If this means that Michelangelo, Leonardo and Holbein are more or less absent, there is still plenty to see and marvel at—a flock of Rembrandts which will make your eyes pop, nature studies by Durer and unknown Italian hands which have the cool certainty of a Japanese print, calm and authoritative statements about landscape from Claude and Poussin and our own Alexander Cozens, fragmentary scenes by Rubens and van Dyck which are masterpieces in their own right, Venetian occasions by Guardi and Canaletto as artificial and brilliant as a charity première, a head by Goya which will stick in your mind's eye for a long time. . . .

*

No. You are quite right. Nothing to do with architecture, but it would be a dull and impoverished eye that had not braved that unfortunate forecourt and feasted itself on these wonders of the draughtsman's art.

PUT YOUR MONEY ON GORDON

It is alarming to hear that the *Town Planning Review* may be forced to give up for lack of funds. This would be a tragedy. Begun many years ago in the pioneer days of planning research and legislation by Professors Reilly, Adshead and Abercrombie, this quarterly has printed many important articles by eminent architects, as well as by planners and social scientists.

*

Although not possessing a large circulation (about 1,000) it has an international reputation, and can usually be found in any university library worthy of the name. Yet it is losing money, and a decision must be taken within a few days whether to continue it or not. All those who, like ASTRAGAL, think it should continue, could help by taking out a subscription at once. It will cost you only £1 a year. To our shame it should be said that the United Kingdom subscriptions only account for one-fifth of the total.

MICROCOSMS

Nearly all of us are fascinated by models, but there is still something to marvel at in the single-mindedness of all those enthusiasts who spend several years of spare time in making perfect reproductions of anything from an early paddle steamer to a 3-in. long service rifle. The show at the Horticultural Hall has all these, and a roundabout (Barbara Jones type) with the good old-fashioned steam-organ music and not the bop records of full-size jobs. There are hardly any building models—presumably because there can be no wheels to go round—and far more jet planes and racing cars than there used to be: so much so that the child-carrying trains seem to be losing a lot of patrons. ASTRAGAL, who was brought up in a largely pre-radio age, was duly awestruck by the ten-year-olds who take their radio-controlled motor boats quite for granted and chatter learnedly about microwaves, relays, and similar mysteries.

KEEPING THE NINETEENTH WHOLE

This column's little-known passion for the Royal and Ancient game is not due, as some would have it, to any well-known passion for eccentric clothes,

but to the hours of childish enjoyment to be derived from pushing those delightful little aluminium trolleys which one now uses instead of the old-fashioned caddie. However, it was not the pursuit of sport which led ASTRAGAL to visit three golf-courses in one morning recently, nor is he going to tell you why, but rather to draw attention to the bad state of the club-houses.

*

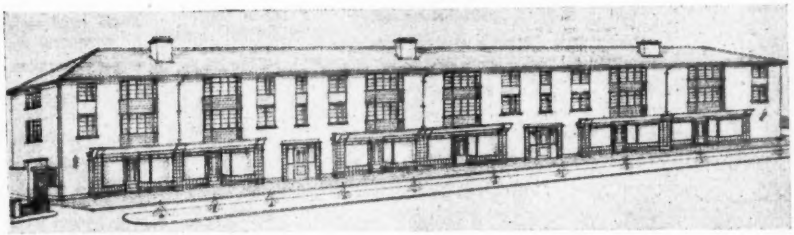
These were not the verandah'd shacks we all know and loathe—in each case the club-house is a quondam (if you will pardon the expression) country house of some merit. In one case, Eltham Lodge, it is a country house of national importance. Historians will correct me if I err in saying that this house is the only intact work of Hugh May which survives, but they will support me in saying that now Coleshill is gone, Eltham Lodge is a unique monument of the mid-seventeenth century domestic design. The interior *was* superb with its great carved staircase, but now its plaster ceilings are propped up with timbers, its outside needs re-pointing and making good, and the wonderful wall-decorations of the hall and stair-well are hanging down in strips.

*

Eltham is a private club, and finance for restoration is probably difficult to find, but Barnhurst and Beckenham Place both belong to public bodies. The former is a Gothic basement with Georgian upper parts and a lunatic Gothic entrance hall—Batty Langley at his Battiest, and well worth seeing, except that the top was knocked off in the war, and is replaced by a nasty corrugated iron lid. Beckenham is an ungracious, but very interesting, piece of eighteenth century classicism, now in a shocking state because the LCC architect's department (of all people) have taken it out of the hands of the parks department on the grounds that it is an ancient monument, and have subsequently done nothing about it. The same fate attends other LCC country house property south of the Thames, one understands—Danson park would no longer be recognized by Capability Brown, and the great Victorian conservatory at Avery Hill continues to moulder in unpleasing decay.

*

Architects, according to a recent statement of the PRIBA in the *Daily Telegraph*, do most of their business on the golf-course, so why don't they do something—just complain, even—about the state of their business premises?



The above sketch, reproduced from the Warwick and Warwickshire Advertiser, *shows the design of the first block of shops to be erected by Warwick Corporation. It has been designed in the Borough Surveyor's Office. It has been sent by a Warwick reader who appeals for* ASTRAGAL *to support his criticism that it is not a good design. What do readers think ? Surely Warwick (population : 15,000) might form an architects department to cope with its official building programme.*

OPPORTUNITY MISSED?

As announced in the JOURNAL of August 13, Signor Olivetti, patron of architecture and manufacturer of beautiful typewriters, who is also president of the Italian Town Planning Institute, has just financed a tour by Italian planners of some of this country's old and new towns. The planners, who were all from Ivrea (where the Olivetti factory is), were, of course, eager to learn about our planning methods in order to see if our techniques of planning could be applied to their own problems

*

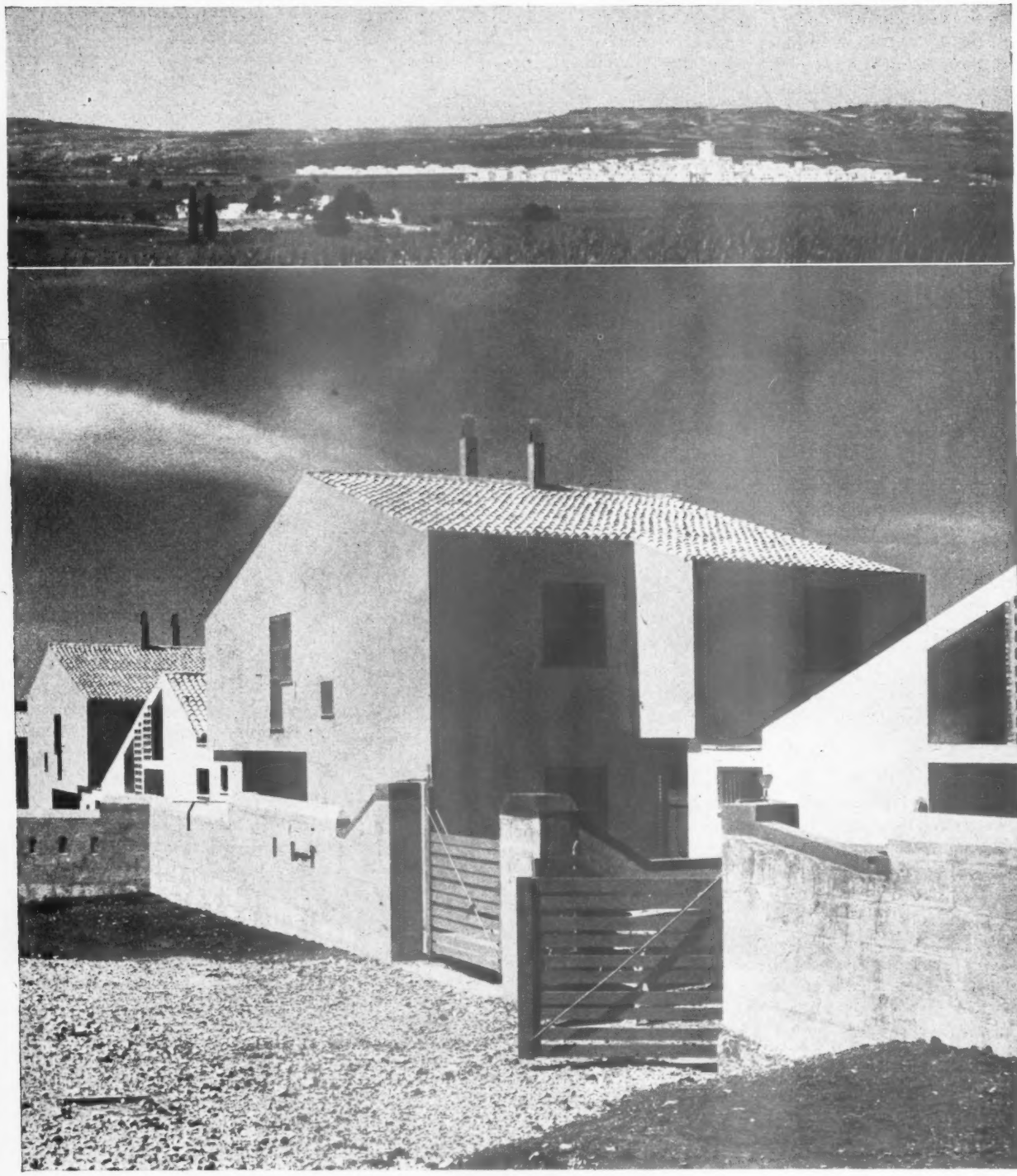
ASTRAGAL has, it is true, been a bit of a rolling stone lately, and no doubt has not gathered all the official moss he should. But he would like to learn what steps were taken by official planning bodies over here to entertain these visitors. Such visits—in reverse of the accepted trend—are surely very rare and should be honoured accordingly.

RUSSIAN VIEWPOINT

ASTRAGAL recently came across a charming article by M. Rudnev, eminent Soviet architect and member of the USSR Academy of Architecture. It is called " Building for Peace " and appears in the review *News*—one of those nostalgic little numbers printed in Russia, full of pain at the blindness of others and poor photographs of fruit pickers on the latest Stalin collective farm. M. Rudnev appears to be one of the team designing the Moscow University and the 32-storey Palace of Culture and Science in Warsaw, and a photograph, with the article, shows him, bearded and modest, standing beside a highly-rendered sketch of the classic-columned main entrance of the former building. The article has a general and rather modest discussion on the purpose and meaning of architecture, and, like most articles by architects, it is full of inconsistencies. M. Rudnev fully accepts Victor Hugo's rather pompous definition of architecture which likens it to a " vast symphony of stone," and then goes on to say, " We are building for man, for his convenience and comfort." He discusses his own two skyscraper jobs and then praises the great geniuses Brunelleschi, Palladio, Michelangelo, Zakharov, Bazhenov, and Rossi. (If the first three names are unfamiliar you may have heard of the last.) So far so good. In fact, just the sort of article architects write in every country.

*

But M. Rudnev goes on to make an attack on Western, mainly American, architecture, particularly the United Nations building, and it is on this point that ASTRAGAL begins to lose the drift of things. The United Nations Secretariat is called a lifeless slab, ugly to the eye. He says that it is flat, which it is, unstable which it certainly isn't, and inexpressive, which is a matter of opinion. (I do not know whether M. Rudnev has actually seen the building or not.) However, the most curious criticism is that the Secretariat, which is intended merely for technical personnel, dominates the Assembly building where cardinal issues of peace are to be settled. Wallace K. Harrison is largely credited or blamed with the building, which is as it may be, and both Lewis Mumford and Frank Lloyd Wright are enlisted in the support of M. Rudnev's views. ASTRAGAL feels that Mumford's criticism was justified,



Town Planning in Italy

The rebuilding problems of Southern Italy are, to understate the matter, unusual—and so are the solutions which are found to them, as Max Lock pointed out in his recent radio talk (see page 254). The township of Matera consisted of peasants and their mules living in narrow streets of mostly subterranean dwellings, only 93 of which, out of some 3,000, were found to achieve minimum hygienic requirements. Now this community has been carefully decanted into a clean new village on the open plain (top), where neat UNRRA-financed houses (above) provide elementary but well-ventilated and, for the first time, separate, accommodation for man and beast. The architectural quality of the new housing is high, and we must ask ourselves whether this is due to the air of adventure which surrounds the project (as it once surrounded our own new towns) or whether it is due to the fact that Italian housing, which is in the hands of large semi-public corporations, lies outside the field of party politics.

in that he seemed largely unconcerned with the visual aspect and wholly concerned with the social and humanist one that people of different nations should be able to mix at one level, and not be stratified and card-indexed.

*

Yet M. Rudnev, with his mild, rather sweet and humanitarian talk, does not appear to be at all concerned with this aspect (and why should he be?—he and his colleagues are obviously in favour of skyscraper buildings). He is mainly concerned with the monumental relationship of one building or another. This is, I suggest, valid criticism, but would seem to be in contradistinction to the thesis which Rudnev propounds, namely, that US architects are indifferent to human comfort while USSR architects are primarily concerned with these things. However, the article has a happy ending; Harrison, Wright, Mumford, Niemeyer, Howard Robertson, and almost everybody else, are brought together by being credited with having one great thing in common, namely, the desire for peace. Perhaps we should see more articles by Russian architects, for one is sometimes left with the impression that there is really little difference in outlook, apart from the usual loose phraseology which architects use. The main difference seems to lie in that whereas we, in the West, often cover our sensitivity with flippancy, the Russians keep their humour for more bucolic occasions.

WORKING OVERSEAS

A Cape Town correspondent asks me whether there is any exchange system (like that which exists for schoolteachers between this country and America) for the staffs of official architects. As far as I know there is not, but I see little reason why there should not be. What with languages and the metric system any exchanges would be best started between English-speaking countries, but it might well be extended later. One minor snag is that the people exchanged would not know much about local materials or bye-laws in the country they visited and might not be much use for the first few months. But it would do them good. Quite a lot of our young men have worked abroad already, and many more would like to do so if they knew they could come back to their old job. Will the LCC be the first to try out this idea?

ASTRAGAL

POINTS FROM THIS ISSUE

The Editors

MODULAR DISCORD

ON pages 265-271 of this issue, we publish a highly controversial article on modular co-ordination by Bruce Martin and another article on the same subject by M. Hartland Thomas, secretary of the Modular Society, which, although less controversial, also expresses a distinctly individual point of view. It is perhaps necessary, therefore, for us to state what is normally taken for granted—that in placing our pages at the disposal of Mr. Martin and Mr. Hartland Thomas we do not associate ourselves with the views they express.

We are, nevertheless, very pleased to be able to provide a "platform" for the discussion of this important topic, although, while we are certain that modular co-ordination should be encouraged (as should anything that represents a move towards the rationalization of the building industry) we should not like to suggest that we know either what form modular co-ordination should now take (for example, whether it should be based on a small or a large module) or exactly how great the savings it could effect might be.

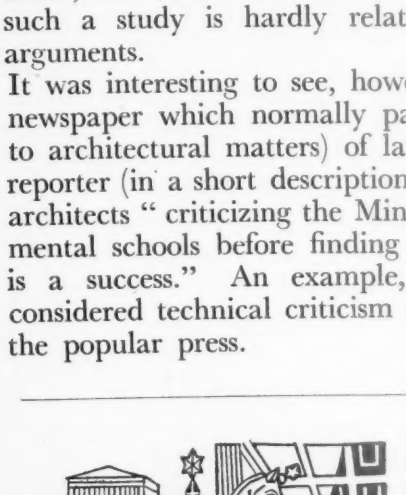
It is hoped that the glossary we published last week (summarized on p. 265 of this issue) will help members of the Modular Society and others to find the answers to these questions. Our "Letters page" is open to all readers who wish to try, and comments on our glossary will also be welcome, for in publishing this glossary it was not our intention that it should never be amended in the light of readers' comments or as a result of future use of the terms.

A LITTLE KNOWLEDGE...

In the *Builder* of July 31 a member of the Kenty County Council attacked the MOE on a number of points. The main arguments were, briefly, that the Ministry wasted nine years after the Education Act came into force before building its first experimental school (Wokingham Secondary School), and that it wasted seven years of school building before realising that new schools were too expensive. "What would have been the savings," asked C. S. F. Witts, "if the 1951 Bulletin had been issued in 1944?" These criticisms may or may not be justified. They also appear to be obvious instances of being "wise after the event." It is certainly hard to recall any loud appeals by architects (or councillors) in the *Builders* of 1944-50 for more development work by the Ministry, or even for less extravagant schools. The remarkable conclusion reached by the perspicaceous

Councillor Witts is that, in view of the above criticisms, the MOE Wokingham School should be examined by "an outside body of experts." In the *Builder* of August 14, the Councillor's plea for an examination is strongly backed by architects. This seems a perfect example of a *non-sequitur*. A study of the school would be very interesting and informative, and might well be carried out, provided it did not interfere unduly with the MOE's development programme. In any event, the MOE will no doubt make its own report. But such a study is hardly related to the Councillor's main arguments.

It was interesting to see, however, in the *Daily Telegraph* (a newspaper which normally pays remarkably little attention to architectural matters) of last Thursday, a reference by a reporter (in a short description of the Wokingham School) to architects "criticizing the Ministry for planning other experimental schools before finding whether the Wokingham one is a success." An example, perhaps, of how easily ill-considered technical criticism can receive undue publicity in the popular press.



County Architect's Department
Ian Chalmers

Salaried Architects

SIR,—With reference to the paragraph in the JOURNAL for July 16, in which it is stated: "If there is enough support for the suggested scale or an amended version of it, a salaried architects' association will be formed for its establishment"; we are of the opinion that such an organization should be based on a similar constitution to that of the British Medical Association. It should be in a position to negotiate with Local Government and other official bodies.

In making this suggestion we feel that we are not omitting the assistant in private offices. We feel that the suggested title would tend to split the profession and perhaps might be more aptly called "The British Architects' Association."

COUNTY ARCHITECT'S DEPARTMENT.
(95 per cent. of staff: names supplied.)

Scottish Tradition

SIR,—In the description of the new St. Andrew's Church, Nairobi, illustrated in your issue for July 23, the plan is said to follow the traditional lines laid down by Scottish Church ritual. This is not so, and in any case it is hardly correct to use the word "ritual," since liturgical forms of worship are not traditional in Scotland.

For genuine examples we must go back to the post-Reformation period where we find a great variety of forms—the most distinctive of which is the rectangular plan with the pulpit and communion table on the long wall and the congregation grouped around, entrance being gained through a tower placed on the opposite wall. This particular form continued into the 18th century classical age and many examples still survive.

While St. Andrew's, Nairobi, undoubtedly has a certain ruggedness commonly associated with the Scottish character, the plan has more in common with the neo-Gothic of the 19th century, admirably suited as it was for liturgical forms.

Many of us regret that Scottish architects have not paid more attention to their own distinctive tradition with its qualities of functional simplicity, good proportion, and quiet dignity.

Edinburgh. IAN CHALMERS.

We are still receiving a large number of letters from readers supporting the proposals for a new scale of pay for salaried architects which were made by a contributor in the JOURNAL for July 16. We understand that this article will be considered by the RIBA's Salaried and Official Architects' Committee in October, at its first meeting after the summer holidays. In the meantime we intend to publish an article on the subject by a local authority architect who disagrees with many of our contributor's views. This will appear shortly.

MOHLG

Model Bye-laws Revised

A new impression of the 1952 Model Bye-laws has been issued by the MOHLG. Six byelaws relating to elevation of sites (bye-law 18) and factory chimneys (byelaws 69 to 73) have been removed to an appendix, as these clauses are infrequently required. A fresh impression of the model has been issued in order to save the work of making considerable modifications to the text as a result of these amendments.

The new BS on Fire Tests on Building Materials and Structures (referred to in bye-laws 1(1), 31, 34 and 37) has replaced the standard published in 1932 and the new Timber Economy Memorandum (byelaw 24) replaces the fifth schedule, which was based on an earlier memorandum. A few alterations in drafting have been made and Table B on floors, in the fourth schedule, has been extended.

Byelaws already made, or already drafted and agreed on the basis of the 1952 edition need not be revoked or withdrawn. Many local authorities have not yet submitted drafts. If their byelaws are to be confirmed by December 31, when all byelaws based on the model of 1937 expire, drafts will have to be submitted within a few weeks. Amendments of, or additions to, the model will require justification by reference to genuinely special local needs.

Particular offices of a local authority who should be responsible for examining plans and dealing with the various notices required by the byelaws are not named in the new impression. The Minister is, however, prepared to continue to confirm byelaws which require these particulars to be sent to the "clerk and architect," "clerk and surveyor," or "clerk and sanitary inspector."

Bucklersbury House Site

Harold Macmillan, the Minister of Housing and Local Government, has informed the City Corporation of London that he can find no grounds for intervention in the plans for a proposed office building, about 150 ft. high, on the site of Bucklersbury House, between Queen Victoria Street and Walbrook, and just over ¼ of a mile from St. Paul's Cathedral. The Minister finds that the building does not conflict with the density proposals suggested by the Corporation's consultants, and the site is outside the area of special control over the placing and height of buildings to safeguard the views of the Cathedral.

Trafalgar Square Signs

Harold Macmillan has announced his decision to allow some of the 12 illuminated

signs on the south side of Trafalgar Square to remain for a limited period as they "are looked upon by many as part of the London scene."

OBITUARY

Sir Banister Fletcher

Sir Banister Fletcher died on August 17, at the age of 87. He was born in London and was the eldest son of Banister Fletcher, Professor of Architecture at King's College, London. After studying at University College, he became articled to his father. Later he studied architectural design at the Royal Academy Schools and then at the AA. Among the prizes he won as a student were the AA medal for design, the Godwin bursary and travelling studentship, the Tite Medal for architectural design and the Essay Medal of the RIBA.

He then worked for M. Fasnacht of the *Ecole des Beaux Arts*, Paris. After working in the architectural department of the Metropolitan Board of Works, under William Henman and Col. R. W. Edis, he became a partner with his father and brother in 1889. Besides houses, flats, factories and warehouses, he designed St. George's Hall and School in the Old Kent Road; St. Aidan's Church, Stratford; he made alterations, additions and designed new laboratories at King's College, London, and also designed King's College School, Wimbledon Common; banks at Harrow, Hythe, Stamford Hill and Maidstone, and the Gillette factory on the Great West Road.

Sir Banister lectured at King's College, London University, the British Museum, and the Central School of Arts and Crafts, and was president of the Polytechnic School of Architecture. As well as his "History of Architecture on the Comparative Method," which was first published in 1896, he wrote books and pamphlets on "Andrea Palladio," "The Influence of Material on Architecture," "The English Home," "Architectural Hygiene" and "Carpentry and Joinery." He travelled extensively over Europe, visiting Greece five times, North Africa, Egypt, Palestine and USA, and joined 19 of the AA sketching tours.

Sir Banister was elected an associate of the RIBA in 1889 and a fellow in 1904, becoming vice-president of the RIBA in 1925 and president from 1929 to 1931. He was knighted in 1919. Nineteen City churches, which it was proposed to destroy, were saved largely due to his efforts and he opposed the construction of a bridge over the Thames opposite St. Paul's. He became chairman of the Greater London Regional Planning Committee at the request of Neville Chamberlain and in 1941 became a member of the RIBA committee which was set up to formulate policy on the subject of post-war reconstruction and planning. The British Academy in Rome made him an honorary member, so did the American Institute of Architects and he was honorary corresponding member of the *Société Centrale des Architects Français*. Sir Banister was also a barrister and surveyor.

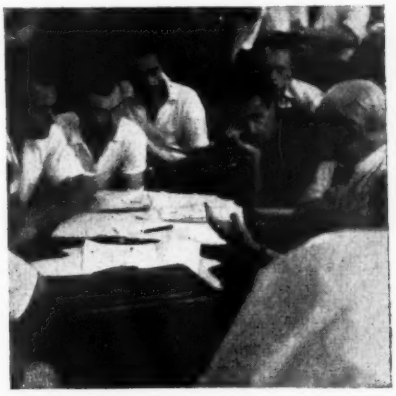
COVENTRY

Cathedral Appeal in Canada

Basil Spence and two other memebers of the Coventry Cathedral reconstruction committee are to leave London for a three-month tour of Canada on September 7, in order to raise money for the construction of the Cathedral. Mr. Spence and the Provost, the Very Rev. R. T. Howard and the Rev. C. E. Ross will speak at meetings and on

CIAM AT AIX-EN-PROVENCE

Further photographs of the CIAM Congress follow ASTRAGAL'S *item of last week. These were all taken in the tree-shaded courtyards of the* Ecole des Arts et Métiers. *Above, the general assembly on the penultimate day. Seated at the table, left to right, Rogers of Milan, Gropius and Sert (past and present professors of architecture at Harvard), Giedion of Zurich, van Eesteren of Amsterdam, Kandilis (a Greek member of one of the French groups), and Emery of Algiers. Below left, Honegger of Geneva addressing the commission on building technique. Below right, Le Corbusier in discussion with Peressutti of Milan in the town planning commission. Bottom, the commission on education; at the table, left to right, are Cadbury-Brown, Khosmo of Norway, and Rogers.*



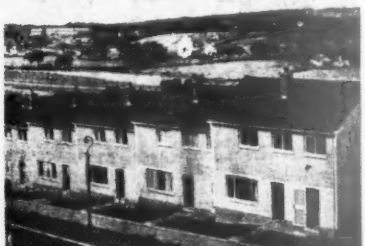
the wireless and television. £10,000 has already been sent for the organ in the new Cathedral by Canadian College of Organists.

SCOTLAND

Awards for Housing

The Saltire Society has made its sixtn annual award for houses and flats in Scotland. Calfhill Court, a four-storey block of flats for single women in Glasgow, designed by A. G. Jury, the city architect, receives one award and houses in the Murray (1st development) of the East Kilbride New Town, designed by Donald Reay receives the other award. Eligibility for the awards is decided by the Saltire Society and the Department of Health for Scotland. The selecting panel of six included the following architects:— Robert Hurd, secretary of the Saltire Society, Alan Riach, Anthony

Flats at Pollock, near Glasgow.



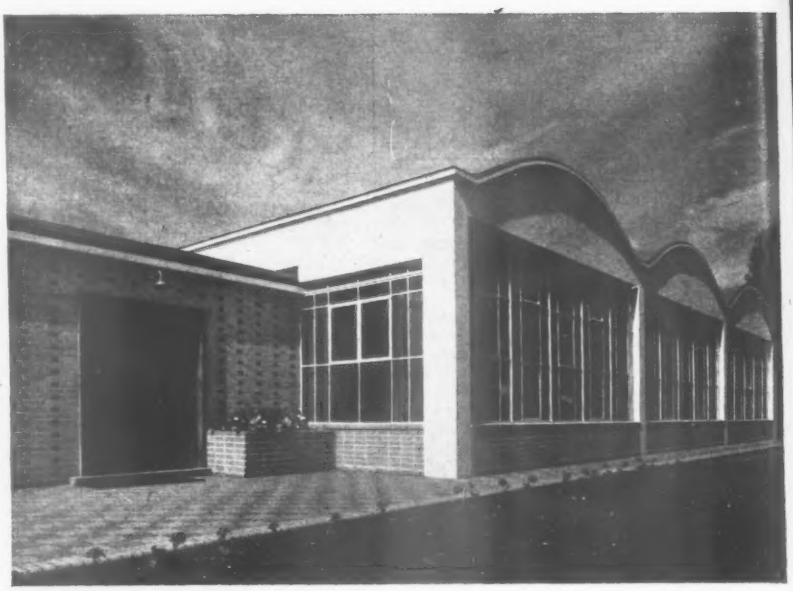
Houses at East Kilbride.

Wheeler and Robert Scott Morton of the Department of Health.

LAW

Minor Changes in Local Government

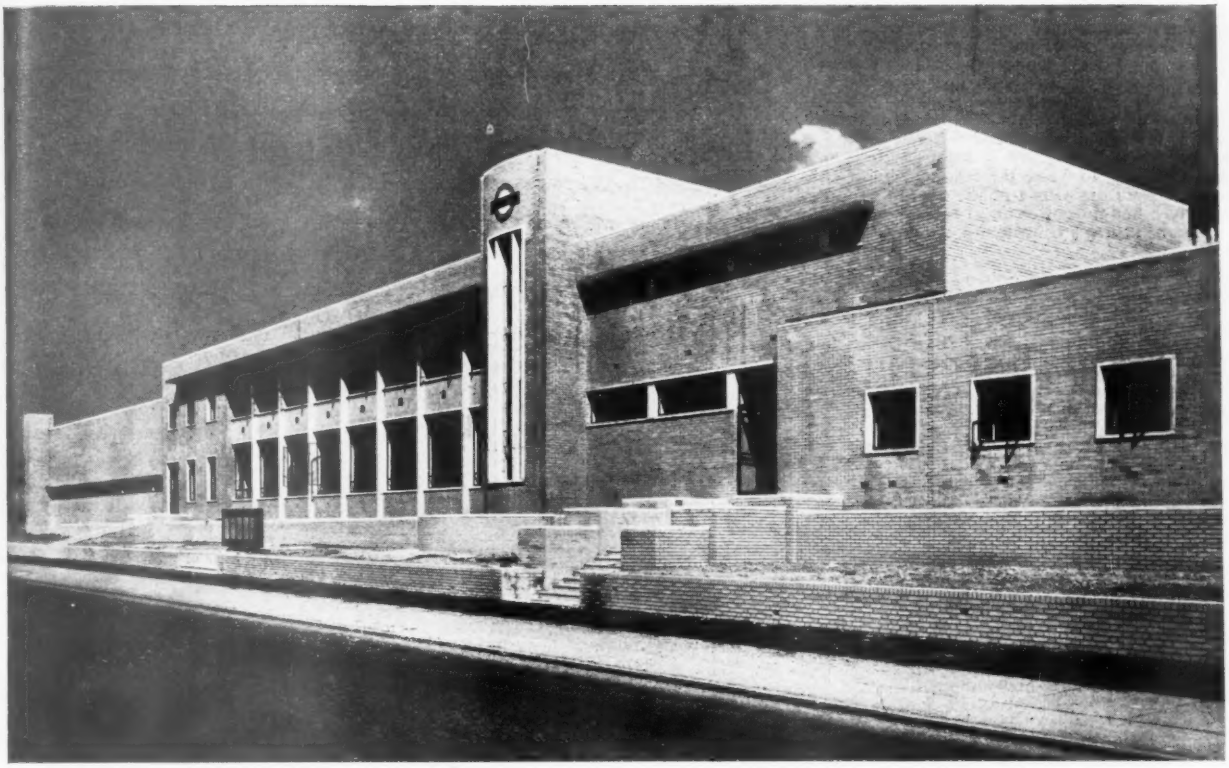
The Local Government (Miscellaneous Provisions) Act, 1953, came into force on August 14. It makes a number of minor changes in the powers and duties of local authorities, of which the following are of interest:—(1) A local authority may now, for the first time, set up a capital fund or a repair and renewals fund, or both. The fund can be built up from the proceeds of sale of property and, with a yearly limit, from its surplus revenues. (Sections 1 to 3.) (2) Any local authority may provide and maintain bus shelters. The previous powers were temporary and came under the Defence Regulations. (Sections 4 to 7.) (3) The limit to the annual fee an authority may charge for supplying dustbins is raised to five shillings. It was previously half a crown (Section 8). (4) The cost of making new streets may now be calculated in advance. Under some local Acts, the authority could not give a firm figure until the houses on the new street are completed (Section 9). (5) An authority may make a closing order in



Prestressed concrete barrel vaults for canteen

This canteen for the Uxbridge Flint Brick Works, at Cowley Lane, Uxbridge, was designed by Frank Scarlett. The dining hall contains seating space for 300. *There is also a clubroom with bar and a room for dances and theatrical productions. The total floor area is allocated as follows :—dining hall,* 3,000 *sq. ft. ; kitchen, stores and servery,* 1,250 *sq. ft. ; clubroom and bar,* 650 *sq. ft. ; cloakroom, circulation,* 586 *sq. ft. The roof is supported on eight columns along the gable walls. The three barrel vaults each span* 44 *ft. long and* 22 *ft.* 6 *in. wide. Stressing is by the Freyssinet system and consists of* 2 *cables of twelve* $\frac{1}{5}$ *in. diameter wires along the side of each vault. The minimum thickness of the shell is* $2\frac{1}{2}$ *in. The total amount of mild steel used in the roof was* 3 *tons* 8 *cwt., and of high tensile steel,* $8\frac{3}{4}$ *cwt. Cost,* £13,000.

BUILDINGS IN THE NEWS



London Transport Garage

Above, the London Transport garage at North Street, Romford, Essex, containing parking space for 115 buses. The total garage area is 36,780 sq. ft., of which 4,800 sq. ft. is used for servicing and 2,700 sq. ft. for pits. 20 per cent. of the roof is glazed. A two-storey wing provides 6,765 sq. ft. of administration area on the ground floor and 5,445 sq. ft. for welfare on the first floor. Architect to the London Transport Executive, Thomas Bilbow ; assistants, C. S. Boughton, E. Taber, S. Hawkins.

Below, four-bedroom houses at Roe Green Lane, Hatfield, designed by Lionel Brett and Kenneth Boyd, which are being sold on a 999 year lease at £3,200 each. The total floor area is 1,500 sq. ft. including garage ; frontage, 44 ft. 6 in. Thirty-six houses will be completed for sale by October, ranging from 900-sq. ft. three-bedroom semi-detached houses at £2,250 to four-bedroom houses with garages at £3,425. The density is about 6 dwellings to the acre. Below left, the living-dining room of one house, furnished by Joan Pattrick for COID.

First houses for Sale in Hatfield

respect of condemned property under the Housing Act, 1936, instead of making a demolition order. Under an earlier High Court decision, it was held that in certain cases only a demolition order could be made. This would be totally inappropriate where, for instance, a house was one of a terrace (Section 10). (6) A local authority is given power to waive the cost of connecting a private drain to a public sewer. Previously it had no power to relieve an owner of payment of his contribution (Section 13).

ITALY

Town Planning

The fresh and experimental approach of the Italians to town planning problems was one of the points emphasized by Max in his Third Programme talk on "Town Planning in Italy" last Thursday. Mr. Lock started by describing town planning in the '30's when, under Mussolini, work consisted mainly of erecting monumental vistas and city centres, which were carved out of the slums, and a large number of fruitless national planning competitions. Today town planning is confined to the design of large neighbourhoods outside the big cities and the rehousing of people living in sub-standard accommodation, with the help of senior government agencies. An example of such rehousing is the village of Matera in Southern Italy, the subject of this week's frontispiece on page 248.

There are four post-war influences within Italy which have affected civic design and modern housing. The first is "Urbanistica," a quarterly town planning review edited by Giovanni Astergo. Secondly there is the Italian Town Planning Institute, of which Adriaso Olivetti is president; he sponsored the recent visit of Italy's town planners to this country. The third influence is that of the faculties of architecture at such universities as Venice and Rome. The fourth is the groups which are forming, consisting of geographers, economists, sociologists as well as architects and engineers, who are making practical investigations into local and regional problems. Although the Italians may draw from our experience in conducting surveys, Mr. Lock said that this country could learn from the way the private consultants and architects are given greater freedom and opportunity in Italy.

The school for the Church of England at Crawley, illustrated on page 222 of the JOURNAL for August 20, was designed by H. G. Coulter of Woodroffe, Buchanan & Coulter. The perspective was painted by C. Malcolm Vine.

DIARY

Town Planning in Italy. Max Lock. BBC repeat talk on Third Programme, 6 p.m.
AUGUST 27

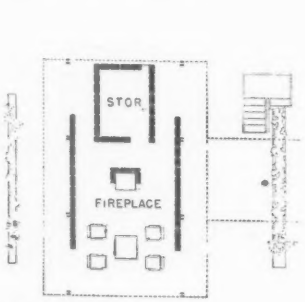
Home and Surroundings. RIBA travelling exhibition at the Art Gallery, Public Library, Dudley Road, Tunbridge Wells, Kent.
SEPTEMBER 2-16

The Adam Style. John Summerson. BBC repeat talk on Third Programme, 6.30 p.m.
SEPTEMBER 3

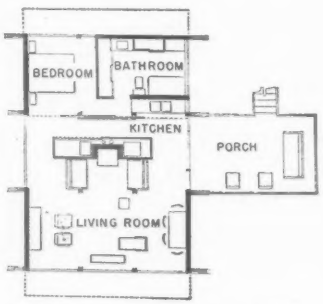
Charles Rennie Mackintosh. Exhibition at the Saltire Society, Gladstone's Land, 483, Lawnmarket, Edinburgh. Weekdays, 10.30 a.m. to 12.30 p.m., 2 p.m. to 5 p.m.; Sundays, 2 p.m. to 5 p.m.
UNTIL SEPTEMBER 12

HOUSE AT SIESTA KEY, FLORIDA, USA

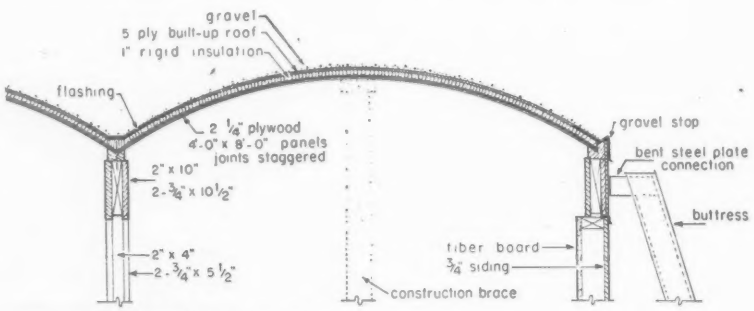
This house in Florida was designed by Paul Rudolph. The living area is on the first floor, which provides increased ventilation. The patio at ground level is used partly for storage and outdoor cooking. The most interesting feature is the barrel vault roof. The plywood sheeting (see section below) was bent over a temporary frame erected under the apex of the vault, then bolted to the built-up girders. Outward thrusts are resolved by 2-in. by built-up timber buttresses. Roof thickness, 2¾ in.; weight, about 8½ lb. per sq. ft.; cost, slightly more than flat roof of 8-in. by 2-in. joists at 16-in. centres with plywood ceiling and usual finishes. Right, the exterior. Below, and below right, the living room. Flues pass through a plastic skylight. Partitions are topped with obscure glass panels where privacy is needed. (Reproduced from House and Home, *USA.*)



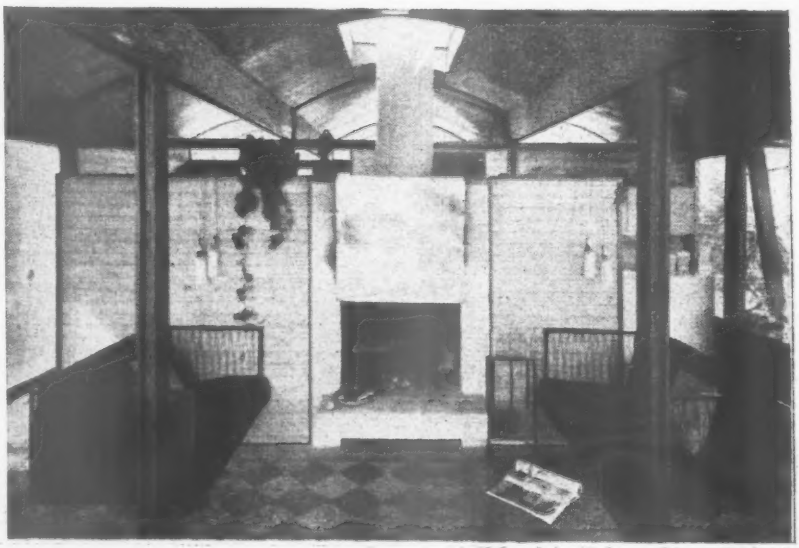
Ground floor plan

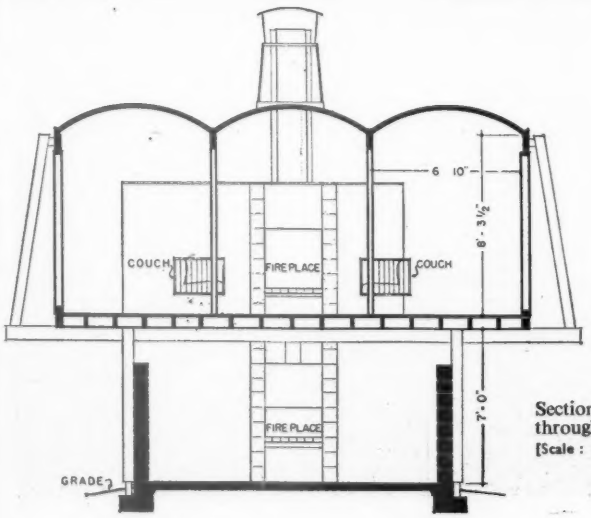


First floor plan [Scale : $\frac{1}{16}$" = 1' 0"]

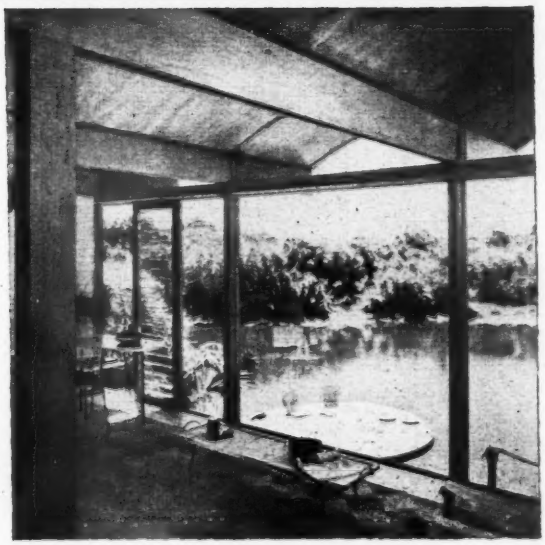


Section through roof [Scale : $\frac{3}{8}$" = 1' 0"]





Section through house
[Scale : ¼" = 1' 0"]



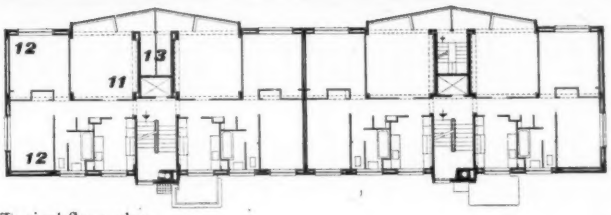
FLATS

on three HOUSING ESTATES in WEST LONDON,
1. in KINGS ROAD, WEST CHELSEA, S.W.10,
designed by EDWARD ARMSTRONG and FREDERICK MacMANUS
assistant-in-charge, D. J. TRICKER,
consulting structural engineers, BYLANDER and WADDELL,
consulting heating engineers, DONALD SMITH, SEYMOUR and ROOLEY,
quantity surveyors, W. C. INMAN and PARTNERS

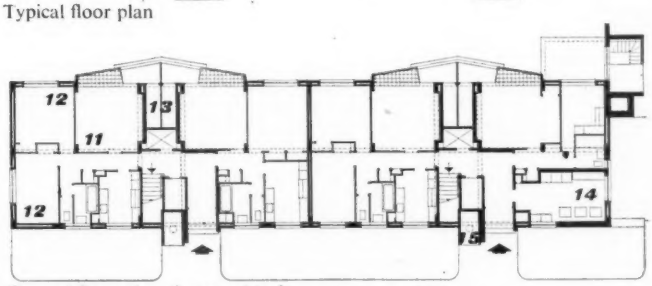
The three housing schemes illustrated on this page and the following eight pages are in West Chelsea, West Kensington and North Kensington. They have certain factors in common: all are designed by the same architects; are situated on previously derelict or bombed sites; include blocks of eight or ten storeys and also low blocks of three or four storeys; and are fairly high-density development. In the case of the estate in North Kensington, the density is about 195 persons per acre.

Eight-storey blocks, seen from the back of shops which face Kings Road.

Above, entrance porch and refuse disposal chamber on rear facade of 8-storey block. Above right, east facade of most easterly 8-storey block. The shop on the left is on an adjoining estate and is designed by the same architects.



Typical floor plan

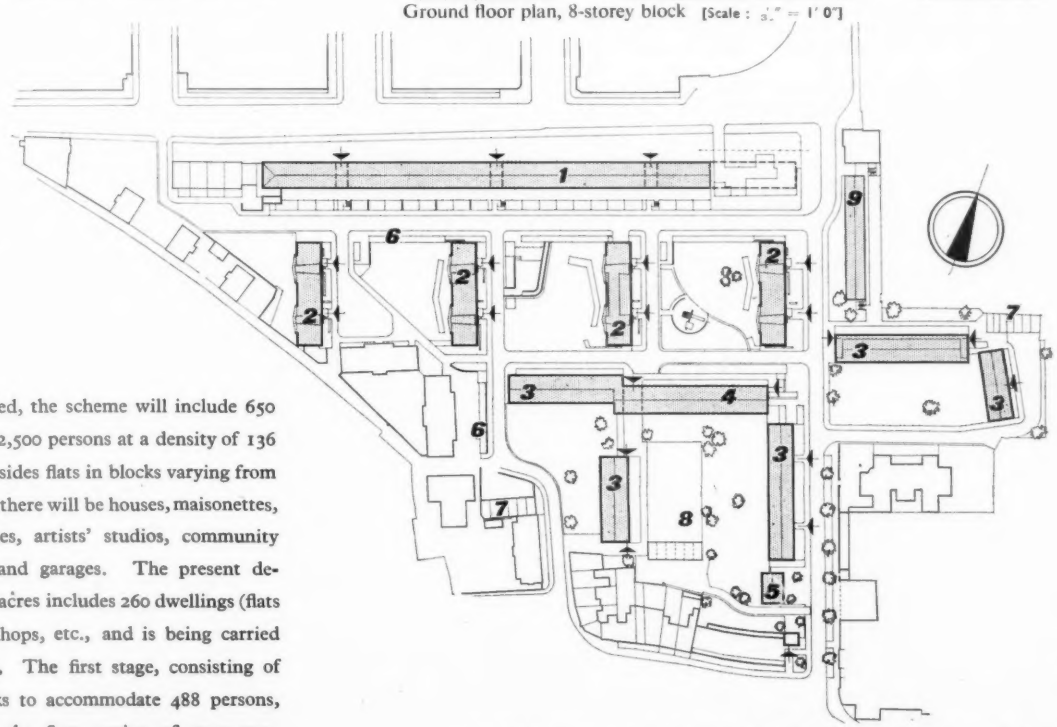


Ground floor plan, 8-storey block [Scale : 3/32" = 1' 0"]

SITE.—The decision to redevelop the area now known as the Cremorne Estate, so called after the Cremorne Gardens pleasure resort of the 1870's, which lay slightly to the west of the site, began before the last war with the compulsory purchase of a small area in Riley Street. After severe bomb damage had taken place, the Council compulsorily purchased further land after the war, making a total of seven acres, and a comprehensive layout has been prepared for a further 14 acres to the west.

KEY

1. Shops, maisonettes over.
2. 8-storey block.
3. 3-storey block.
4. 4-storey block.
5. 1-storey block.
6. Pram stores.
7. Garages.
8. Playground.
9. 2-storey maisonettes.
10. Living room.
11. Bedroom.
12. Store.
13. Utility room.
14. Refuse chamber.



Site plan, stages 1 to 3 of the development. Children's play areas are situated between 8-storey blocks

When fully developed, the scheme will include 650 dwellings for about 2,500 persons at a density of 136 persons per acre. Besides flats in blocks varying from two to eight storeys, there will be houses, maisonettes, shops, public houses, artists' studios, community buildings, schools and garages. The present development of seven acres includes 260 dwellings (flats and maisonettes), shops, etc., and is being carried out in three stages. The first stage, consisting of four 8-storey blocks to accommodate 488 persons, is completed, and the first section of stage two, consisting of 21 lock-up shops, with maisonettes

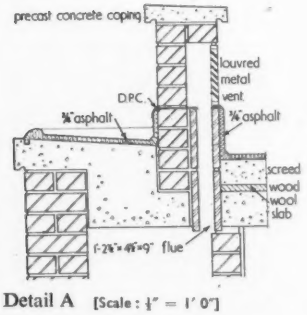
The west facade of a typical 8-storey block. The balconies, which will be illustrated as a Working Detail in a later issue of the JOURNAL, *are faced with egg-shell glazed blue-grey tiles. The recessed concrete surfaces are painted either deep blue or bright yellow.*

FLATS

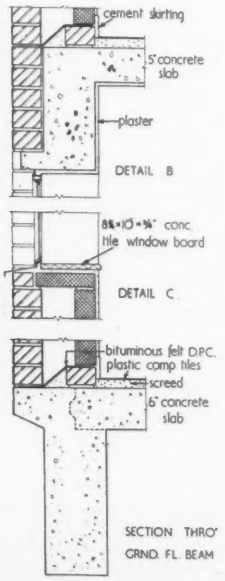
1. in KINGS ROAD, LONDON, S.W.10
designed by EDWARD ARMSTRONG and FREDERICK MACMANUS

over, was completed last November. The third stage, now under construction, consists of 90 flats in 3- and 4-storey blocks, studios and garages.

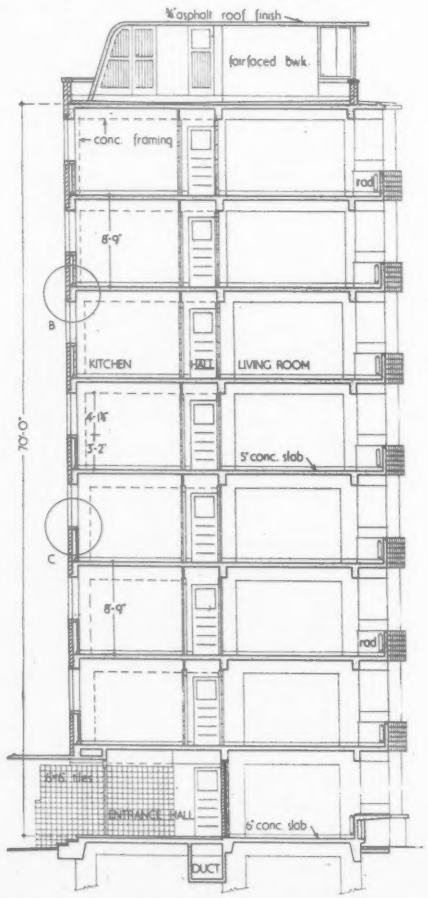
PLAN.—Flats range from one to four rooms, with balcony access to the small flats and staircase access to the larger flats. The 8-storey blocks containing three-room flats, have lifts, and, on the top three floors, secondary fire escape stairs leading on to private balconies.



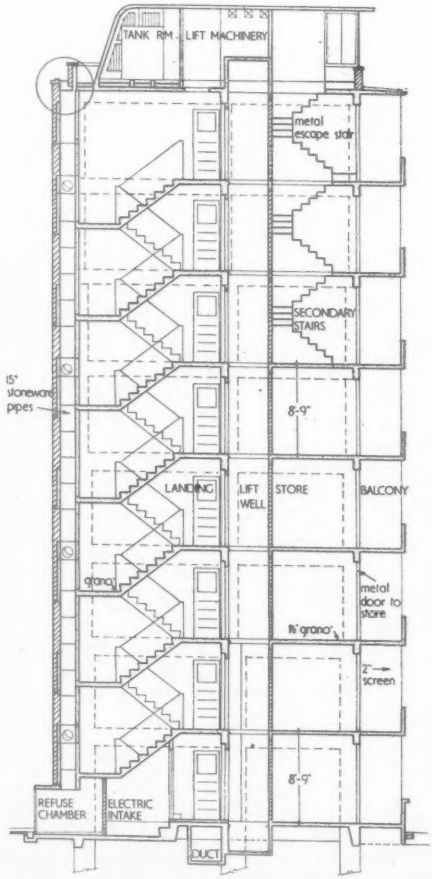
Detail A [Scale : ½" = 1' 0"]



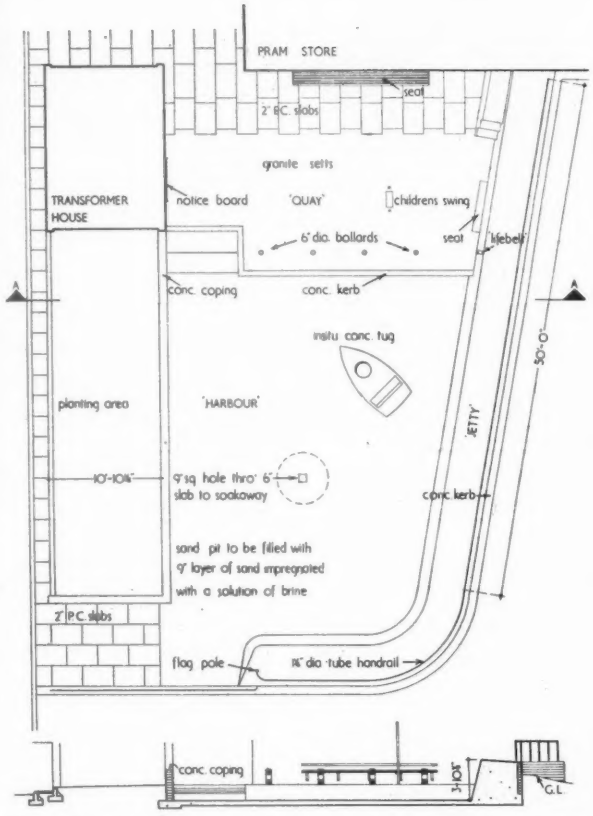
Details B and C



Cross section through kitchen, hall and living room in 8-storey block [Scale : ⅛" = 1' 0"]



Cross section through stairs, lift well and stores. The circle, top left, indicates Detail A



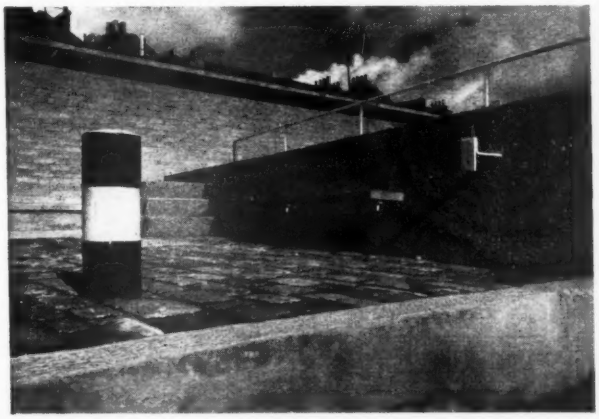
Plan and section A-A of children's play area between the two centre 8-storey blocks [Scale : $\frac{1}{16}$" = 1' 0"]

CONSTRUCTION.—The four 8-storey blocks are of reinforced concrete frame construction, with *in-situ* solid r.c. floors. External panel walls are of cavity construction with a 4½-in. concrete brick outer skin and a 3-in. hollow clinker block inner skin. Party walls between flats are of two 3-in. clinker block skins and partitions are of 2-in. blocks.

FINISHES.—The r.c. frame, where exposed, is finished with a white chlorinated rubber paint. Windows and balcony railings are painted white. Entrances and lift lobbies are finished with blue-grey glazed tiles. Internally stairs and landings have a granolithic finish with walls cement rendered and painted grey. Entrance doors to flats are painted red and blue alternately. Floors are covered with dark brown plastic tiles. Walls are plastered and generally distempered white, and bathrooms and kitchens have white gloss paint above white glazed tile dadoes.

SERVICES.—All flats are provided with space heating and hot water from a central boiler house situated under one of the tall blocks. Radiators are designed to heat living rooms to 65° F. and at least one bedroom per flat to 52°.

The general contractors are Holloway Bros. (London) Ltd. For sub-contractors, see page 274.



Right and above right, two views of the children's play area looking north. The old houses seen in the background are being demolished to make way for shops facing Kings Road, on the north boundary of the site.

GENERAL.—Henry Dickens Court, built for the Royal Borough of Kensington, will, when completed, comprise 328 dwellings for 1,226 people, at a density of 35 dwellings and 131 persons per acre.

SITE.—The site of 9½ acres is situated in a congested area of small, cheerless houses, which suggested to the architects the need for open planning and strong contrast in the height of buildings. A very simple layout has been adopted, in which the 10-storey blocks rise from a central open space laid out as a sunken playground.

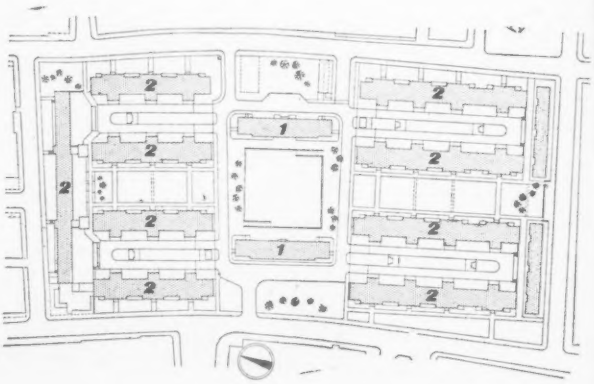
PLAN.—Each of the 10-storey blocks contains forty-seven flats. There are three 3-room and two 2-room flats on each upper floor and two 2-room flats on the ground floor. The main entrances and lift lobbies are situated at the centre of the east facades, between the two ground floor flats. The ground floor area also contains two launderettes, pram, cycle and estate stores, and electrical switch-rooms. Horizontal access to flats is by balconies, terminating in staircases at either end to provide alternative means of escape. Vertical access is by means of two automatic lifts in each block, a pram lift serving all floors and a passenger lift holding 4 persons serving alternate floors only. Flats

Above, from the east. The most westerly of the 10-storey blocks seen across the sunken playground and showing access balconies. Right, another view of the east facades. The 10-storey blocks form the third phase of the development.

FLATS

2. in ST. ANN'S ROAD, WEST KENSINGTON, LONDON, W.11
designed by EDWARD ARMSTRONG and FREDERICK MacMANUS
assistant architect, E. HOWARD SADLER, assistant-in-charge, JOHN SHELDON

KEY
1. 10-storey blocks.
2. 3-storey blocks.



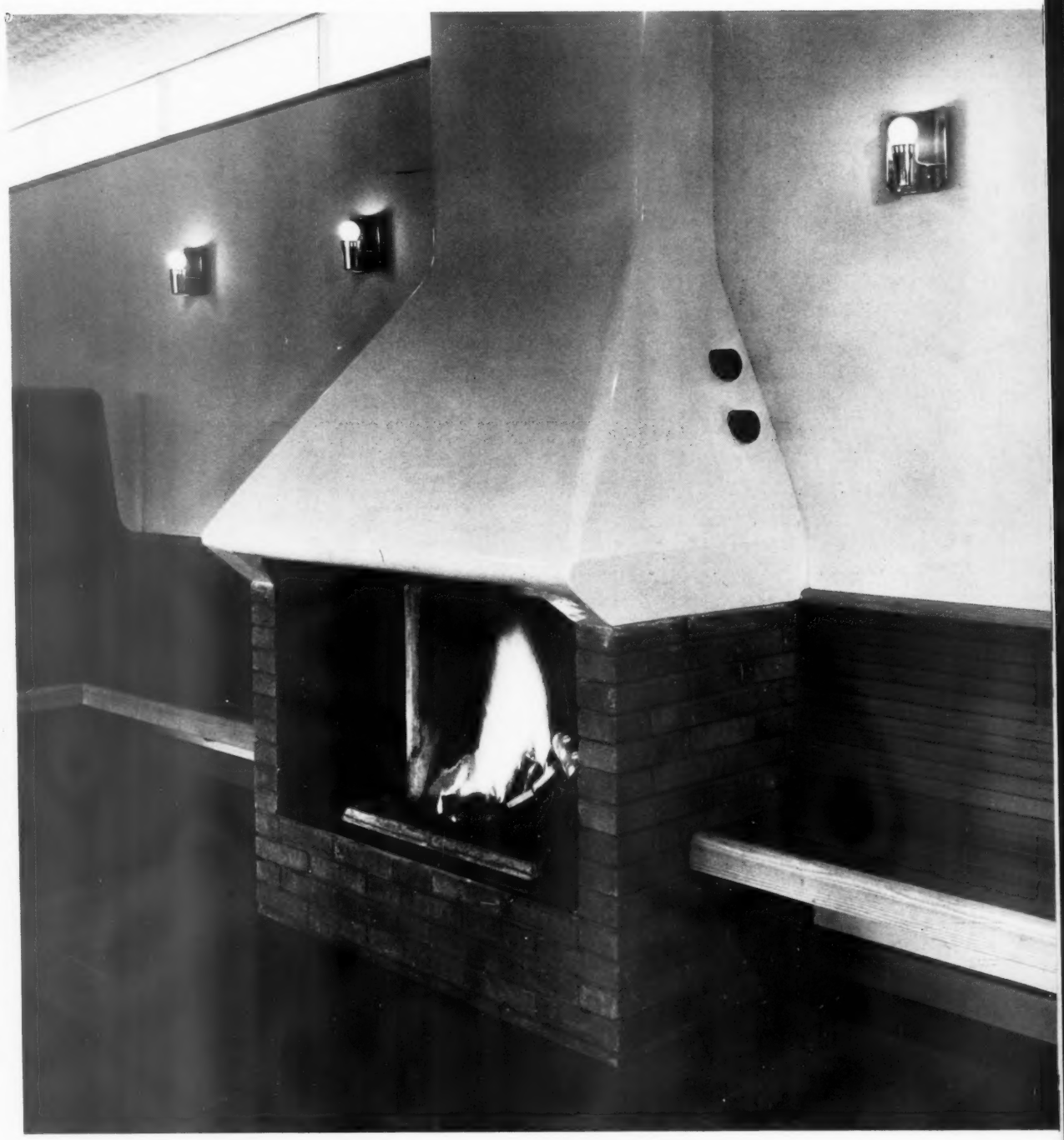
Site plan

LATS
V. II
ANUS
LDON

WORKING DETAIL **HEATING : 10**

FIREPLACE IN PUBLIC BAR: PUBLIC HOUSE AT STEVENAGE

C. Holliday, L. G. Vincent, and O. Carey, architects



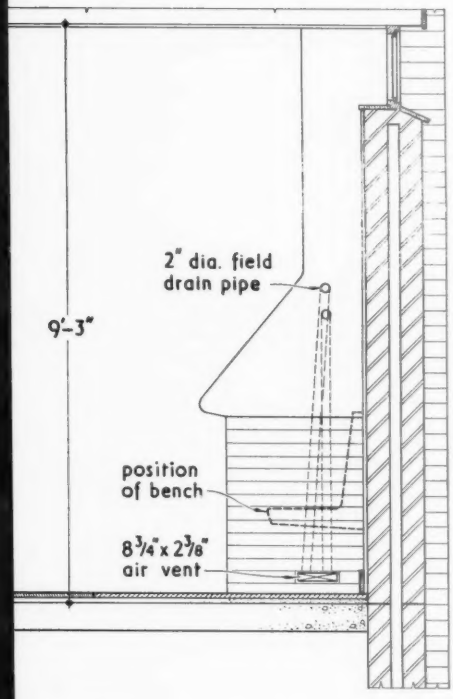
In addition to direct heat from the fire, air is warmed in pipes beside the fireback to provide convection heating.

Architects' Journal 27.8.53

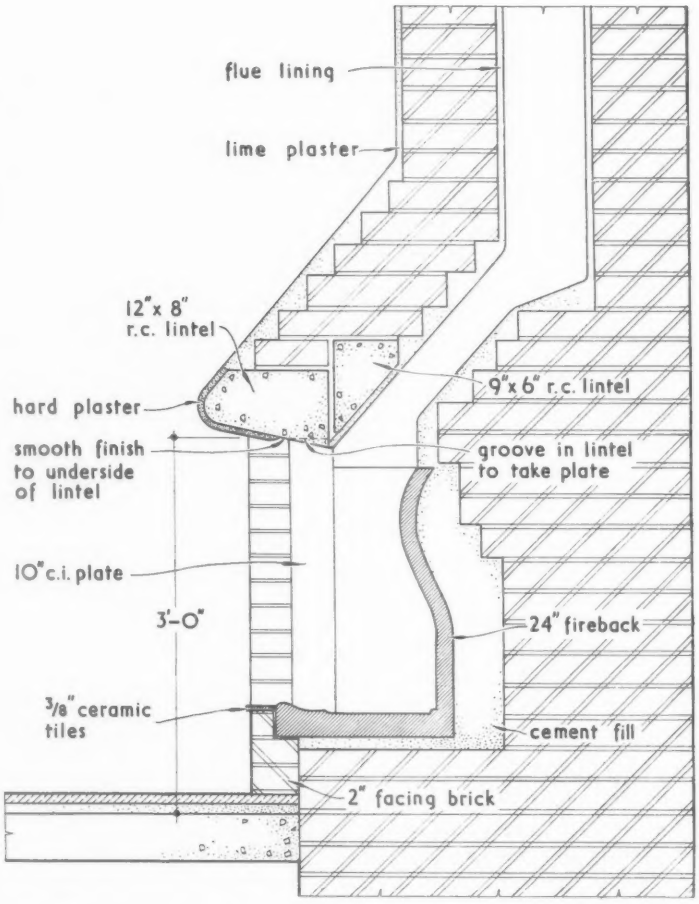
WORKING DETAIL **HEATING : 10**

FIREPLACE IN PUBLIC BAR : PUBLIC HOUSE AT STEVENAGE

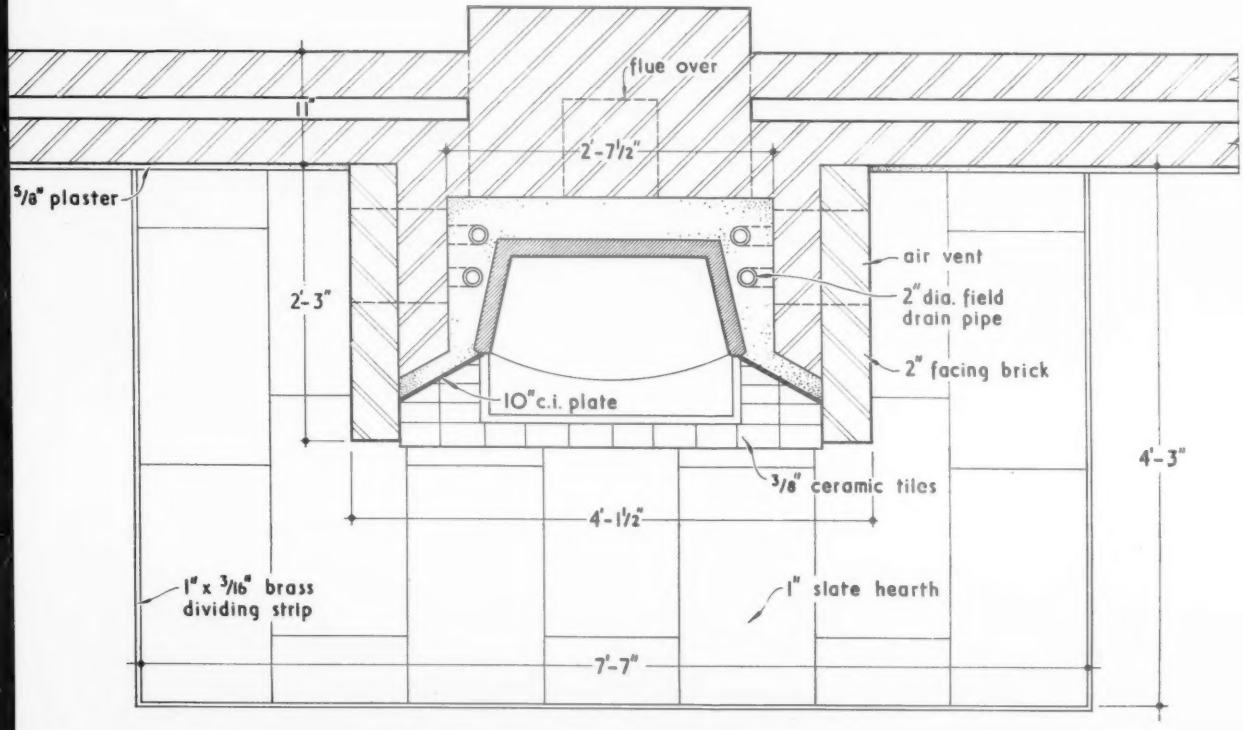
C. Holliday, L. G. Vincent, and O. Carey, architects



ELEVATION. scale ⅜" = 1'-0"



SECTION. scale ¾" = 1'-0"



PLAN OF FIREPLACE. scale ¾" = 1'-0"

WORKING DETAIL

ENTRANCE DOORS: STUDENTS' HOSTEL IN LONDON, W.1

Ralph Tubbs, architect

The panic bolts are unobtrusively placed beside the deep stiles and pass through the top and bottom rails of the doors.

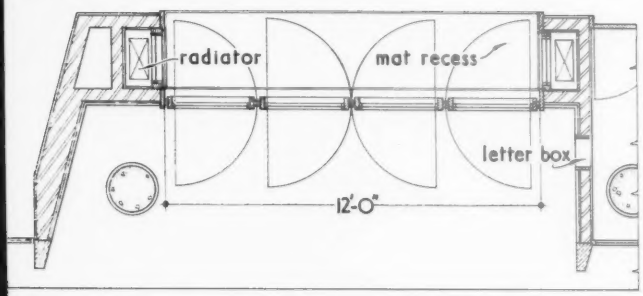
Architects' Journal 27.8.53

WORKING DETAIL

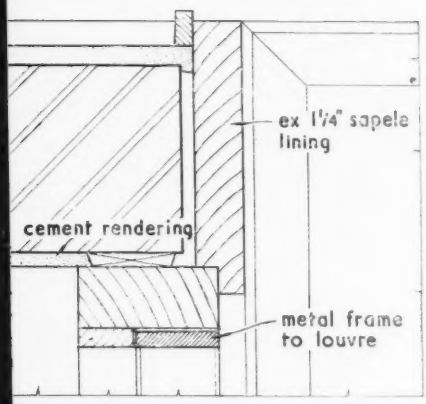
ENTRANCE DOORS: STUDENTS' HOSTEL IN LONDON, W.1

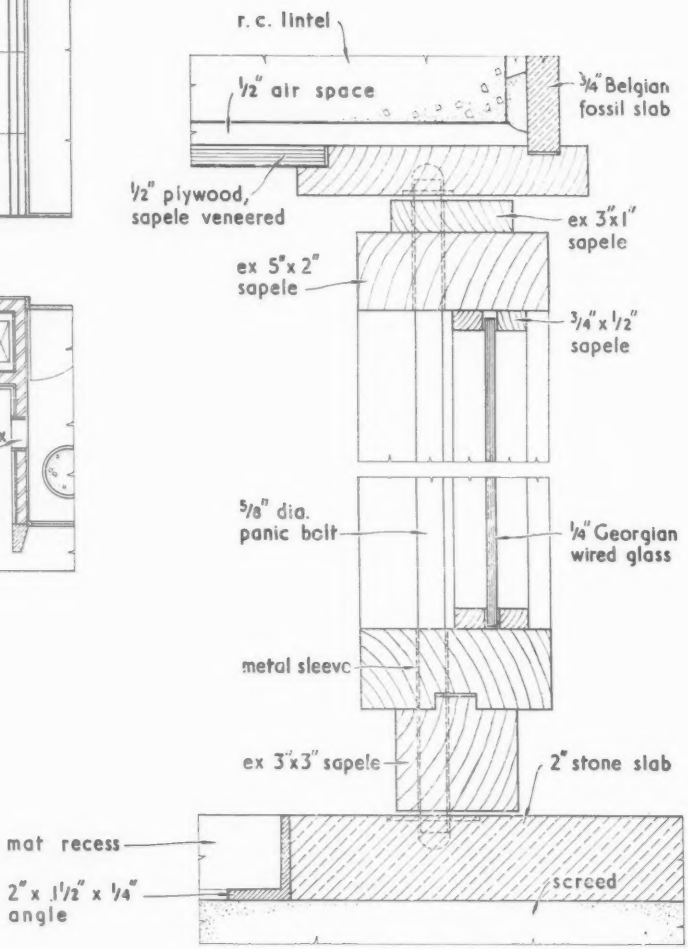
Ralph Tubbs, architect

ELEVATION OF ENTRANCE



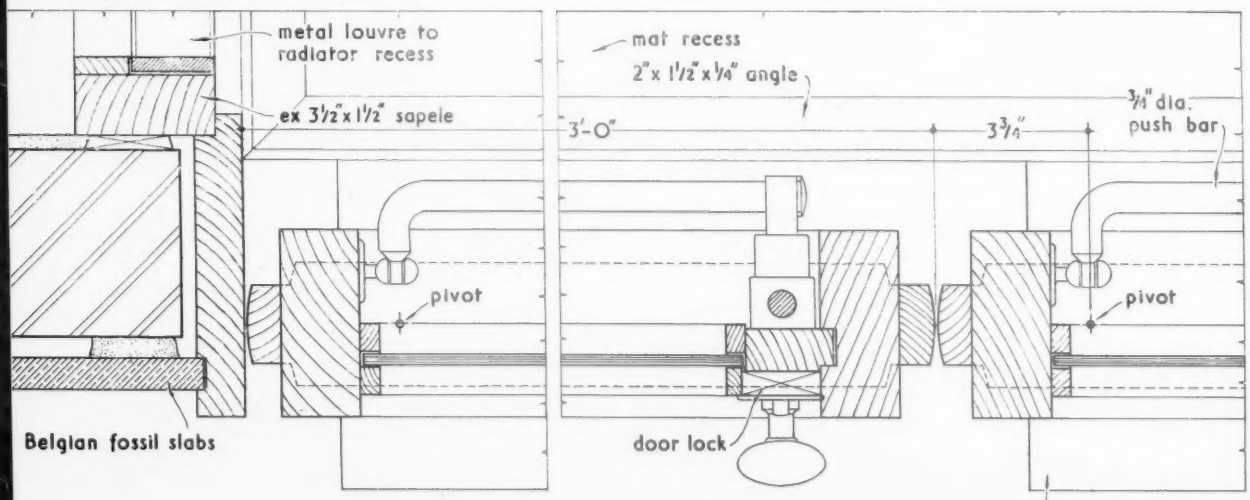
PLAN scale 3/16" = 1'-0"





SECTION THROUGH DOOR

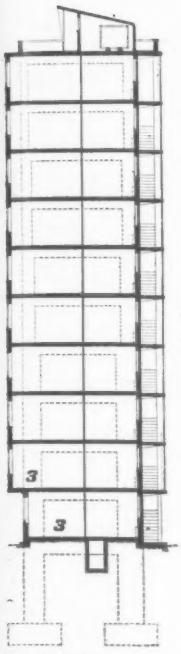
scale ¼ full size



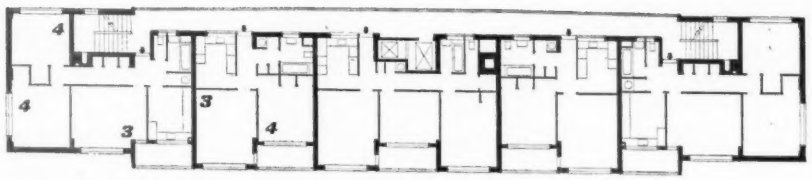
PLAN OF DOOR. scale ¼ full size

Cross se

Below, west, sh of the e On the of the
AJ, *Jan*



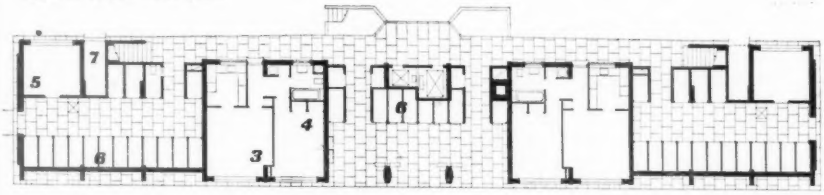
Cross section



Typical upper floor plan

KEY

3. Living room.
4. Bedroom.
5. Launderette.
6. Pram store.
7. Refuse disposal.



Ground floor plan, 10-storey block. [Scale : $\frac{1}{32}$"=1'0"]

FLATS

2. in ST. ANN'S ROAD, LONDON, W.11

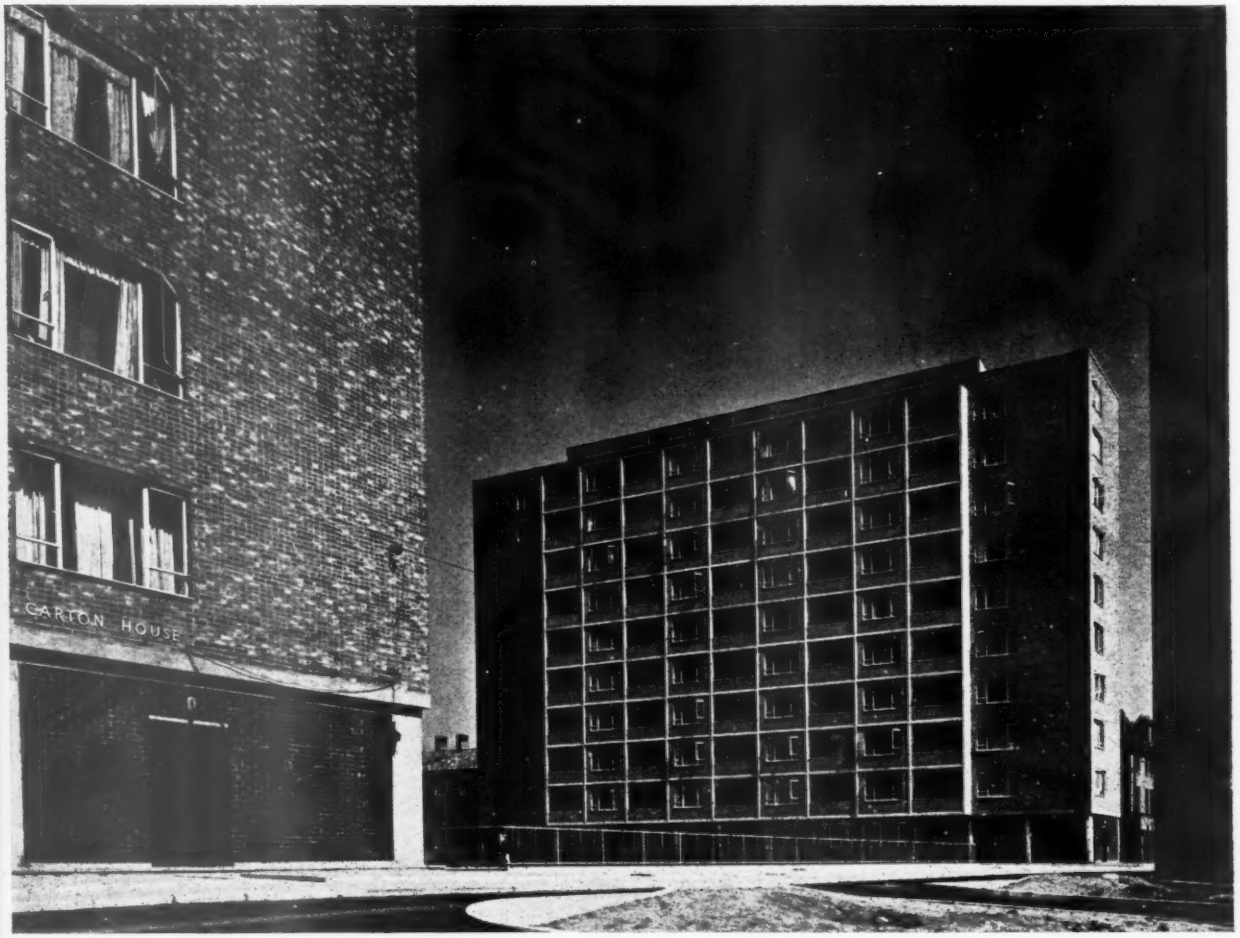
designed by EDWARD ARMSTRONG and FREDERICK MacMANUS

Below, view from the south-west, showing the west facade of the easterly 10-storey block. On the right is a corner of one of the 3-storey blocks (see AJ, Jan. 11, 1951).

are planned with principal rooms facing west, and only kitchens, bathrooms and w.c.'s overlooking access balconies. Private balconies, with access from living rooms are recessed and cannot be overlooked from adjoining flats. The 2-room flats on first and second floors are for elderly people.

CONSTRUCTION.—The 10-storey flats have a reinforced concrete frame on a simple grid, with solid 5-in. r.c. floors and roof slabs. Access balconies are carried on short cantilevers as are the projecting features which contain the private balconies on the west facades. External walls are of cavity construction with an outside skin of brick and an inner skin of cellular clay blocks.

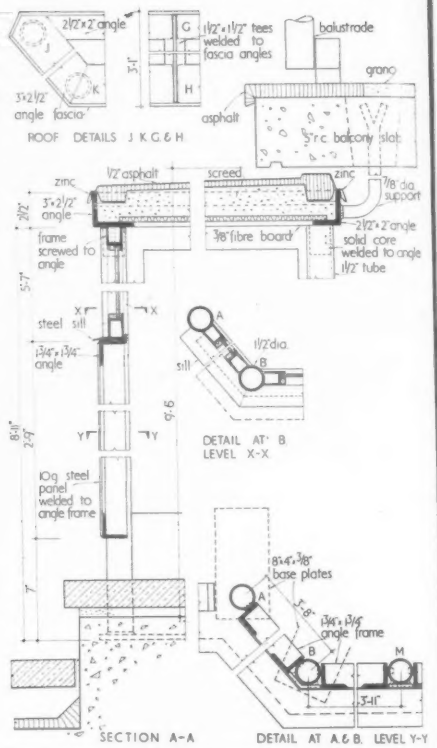
FINISHES.—Exterior facing bricks are Kent dark purple bricks at ground floor level, above this level brown Sussex, with buff coloured bricks on projecting panels between private balconies and



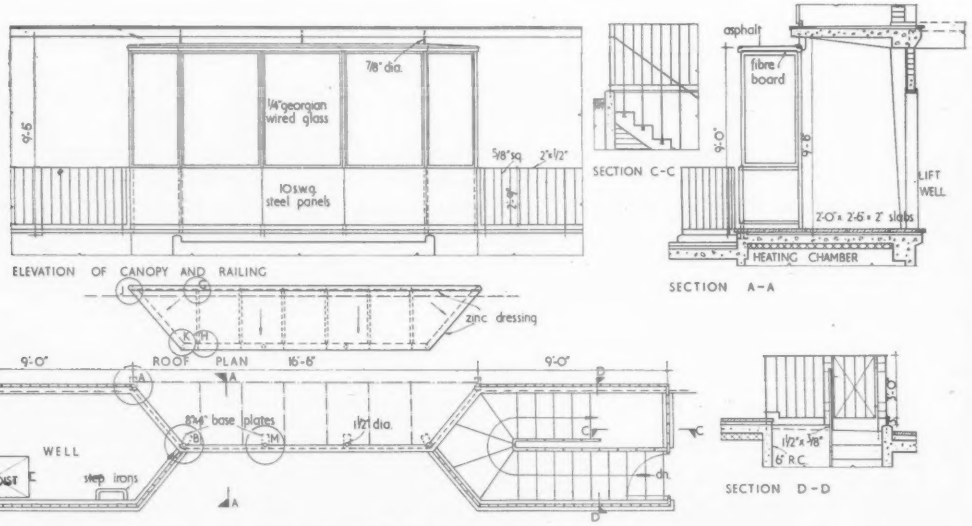
FLATS

2. in ST. ANN'S ROAD, LONDON, W.11
designed by EDWARD ARMSTRONG and FREDERICK MacMANUS

Above, east facade of 10-storey block, showing access balconies and screen to lift entrances. Below right, two of the 3-storey blocks and the westerly 10-storey block from the south-east.



Detail sections and plans [Scale: 1" = 1' 0"]



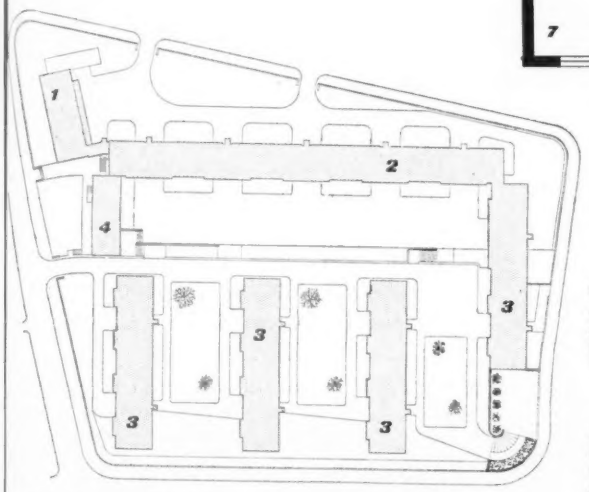
Details of glazed screen to lift entrances and steps to boiler house [Scale: ¼" = 1' 0"]

behind access balconies. Rear walls to private balconies are in concrete, painted light blue. Flat roofs are of asphalt over insulating membrane, with a white spar finish. Balconies and staircases are finished with granolithic. Access balcony balustrading is of wired glass panels in metal framing; the metalwork is painted light grey and handrails red.

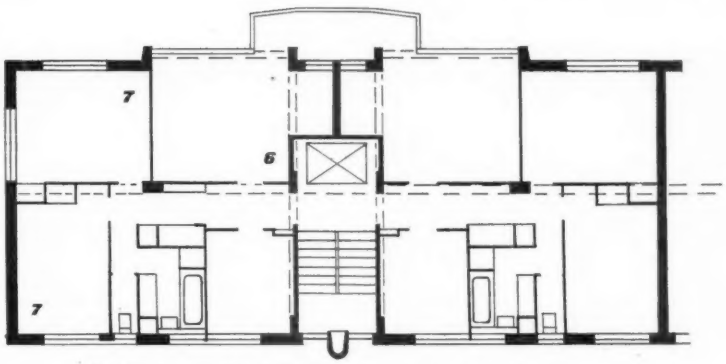
SERVICES.—Solid fuel boilers in the basement of one of the blocks serve low-pressure hot water radiators in the living room and in hall of each flat, and also provide hot water.

The general contractors were Holloway Bros. (London), Ltd. Sub-contractors, page 274.

SITE.—This development for the Royal Borough of Kensington provides accommodation for 680 persons on a site of 3½ acres, at the junction of Westbourne Grove and Portobello Road. The levels are irregular and there is a diagonal fall of about 15 ft. towards the north-west. Originally the site was occupied by dilapidated terrace houses and small shops which had suffered bomb damage.



Site plan (north is at the top of the page)



Typical 3-room flat, 8-storey block [Scale: 1/8" = 1' 0"]

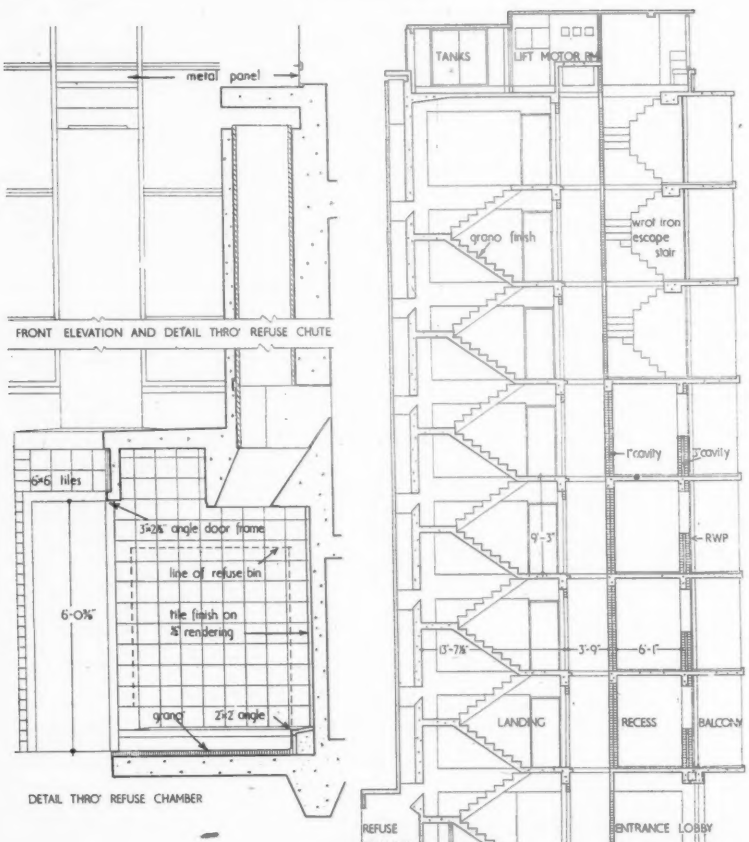
FLATS

3. in PORTOBELLO ROAD, NORTH KENSINGTON, LONDON, W. 11
designed by EDWARD ARMSTRONG (ARMSTRONG and MacMANUS)
assistant architect, E HOWARD SADLER, associate-in-charge, PETER COOKE

KEY
1, 3, 4-storey blocks.
2. 8-storey block.
4. Tenants' club.
6. Living room.
7. Bedroom.

Below, the 8-storey block from the south-west. In the foreground is the club.

PLAN.—The scheme comprises 158 flats in six blocks. The 4- and 5-storey blocks, illustrated in the JOURNAL, January 3, 1952, were the first to be completed and are on a north-south axis. The 8-storey block, illustrated here, contains 80 flats all of three rooms except for the ground floor, where there are ten bed-sitting rooms for elderly people, in



Cross section and refuse disposal details [Scale: $\frac{1}{16}$" & $\frac{1}{4}$" = 1'0"]

FLATS

3. in PORTOBELLO ROAD, LONDON, W.11
designed by EDWARD ARMSTRONG and FREDERICK MacMANUS

addition to pram and cycle stores and electrical switch rooms. Flats are planned with the principal rooms facing south. Living rooms and kitchens adjoin the stair and lift lobbies, while bedrooms and bathrooms are grouped beyond them in the quieter part of the flats. Each flat above ground floor level has a private balcony and above the fifth floor secondary escape staircases are approached from these balconies and have access to the roof. The doors leading to these emergency stairs will be illustrated as a Working Detail in a later issue of the JOURNAL. Bathrooms contain laundry facilities in the form of a gas wash boiler, sink, draining board and gas drying cupboard, as well as a bath and basin. It is said that this arrangement has proved very popular with tenants.

CONSTRUCTION.—The building, which has a r.c. frame with solid 5-in. floor and roof slabs, is divided into three sections by expansion joints to allow for thermal movement. On the south side, balconies and living-room windows are grouped to form five panels, flanked by exposed concrete columns. The ground floor wall on the north elevation is of concrete with thermal insulation as permanent shuttering on the inner face. Internal partitions are of hollow clay blocks and main cross walls are in brickwork.

FINISHES.—External walls are in brown Sussex facing bricks, except for panels of fluted asbestos, painted yellow, between living room windows. Roofs are covered with asphalt on foamed slag screed and further insulated by 2-in. of gravel.

The general contractors were Y. J. Lovell & Sons Ltd. For sub-contractors see page 274.

Below, the 8-storey block from the south-east. Below left, view from the south. On the right is the easterly 4-storey block (see AJ 3.1.52).

"THE ARCHITECTS' JOURNAL" GLOSSARY OF BUILDING TERMS

Building material—material used in building, more or less as it is found in nature, e.g., sand, wood, stone, clay, hardcore, etc.

Building element—a basic, elementary part of a building, generally only one stage removed from raw material usually made from only one material (e.g., timber joists, bricks, RSJs, aluminium extrusions).

Building component—any part of a building too complex to be called an element.

Family of building elements or components—a group of building elements and/or components which serve a common purpose.

Building equipment—things with which a building is equipped, e.g., furniture, all building services, and their correlated elements and components, and mechanical appliances, such as boilers, lifts, fire extinguishers.

Building services—all piping systems in a building, including water, electricity, gas, telephone and mechanical installations, together with their elements and components.

Building system—a method of arranging the elements and components of a building to form a regular and connected whole.

Building module—dimension chosen as a basis for the dimensions of building elements or components, or for the spacing of the lines of a planning grid. A building module may be a small dimension, e.g., 3 in., 4 in., 4½ in., or a large dimension, e.g., 3 ft., 3 ft. 4 in., 4 ft.

Planning grid—a network of lines, usually parallel and one module apart, used as a basis for planning, both horizontally and vertically.

Plan—drawing showing the positions of the various parts of a building (or proposed building)—the building materials, elements and components—and the dimensions of the building.

Grid plan—a plan in which most of the building elements and components are arranged to coincide with the lines of a grid.

Building co-ordination—the bringing of various parts of a building into a proper relationship.

Dimensional co-ordination—the use of a mathematical relationship to determine the dimensions of the various parts of a building.

Modular co-ordination—the relating of the dimensions of building elements and components to a module (usually one horizontal and one vertical module).

Family co-ordination—the relating of the dimensions of an element or component within a family of building elements or components to the dimensions of other elements or components within the family.

Modular system—grid planning with elements and components the dimensions of which have been related to the module on which the planning grid is based.

In the article below, Bruce Martin, with whose collaboration the JOURNAL'S *glossary of building terms (summarized above ; printed in full in last week's issue) was drawn up, explains his present attitude to modular co-ordination and allied topics. Mr. Martin believes that the post-war tendency to use building components, rather than elements and materials, may be comparatively short-lived. He believes, too, that grid planning "destroys architecture." And for these reasons, amongst others, he is against the adoption of the modular system on a national or international scale, in spite of, or perhaps because of, the fact that he has himself used this system in designing schools for Herts. County Council. Mr. Martin now favours what he calls "co-ordination by planning," which, he says, "places the onus of co-ordination where it rightly belongs—on the shoulders of the architect." On page* 269, *M. Hartland Thomas, secretary of the Modular Society, gives* his *views on the subject.*

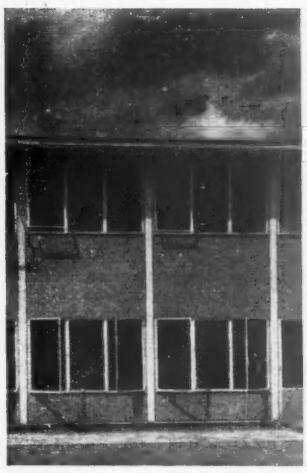
CO-ORDINATION BY PLANNING

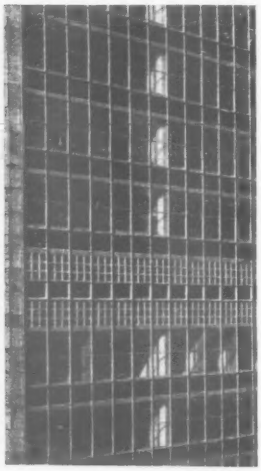
By BRUCE MARTIN (of County Architect's Dept., Herts. County Council)

MOST parts of a building are constructed either of elements or of components; whether, in fact, elements or components predominate determines the nature of the building system. In traditional building, elements are invariably used, *e.g.*, bricks and timber joists. Elements are usually of small dimensions and are usually easy to cut. In non-traditional building, on the other hand, more use is made of components, *e.g.*, metal windows, wall panels, pre-cast floor units, etc., which usually have large dimensions and are not easy to cut, if indeed they can be cut at all.

In traditional building, the use of components, such as standard metal windows (in lieu of components made individually for each job) creates difficulties if the dimensions of the components used are not multiples of the dimensions of the elements used. The difficulties are not insuperable, however, as many elements, bricks, for example, can be cut, and the joints between them can vary in thickness.

It was the development of non-traditional forms of construction composed *entirely* of components (or of elements that cannot be cut) and with no wet joints (a result of post-war shortages of certain building elements and of building labour, and of the need to erect larger numbers of buildings very quickly) that led to the adoption of grid planning, using elements and components the dimensions of which are closely related to the spacing of the lines of the planning grid. This, in turn, has led to a search for a universal





The regularity of facade treatment, with the columns and mullions coming inevitably and invariably on the grid lines, which results from grid planning. Left, an early post-war Herts. C.C. school (Morgan's Road, Hertford: C. H. Aslin, county architect). Right, the UNO Secretariat Building, New York (architect, Wallace K. Harrison).

module and to renewed interest in the idea of modular co-ordination on a national, or even an international, scale.

However, the dictionary definition of "to co-ordinate" is "to bring into a proper relationship" and obviously there can be various conceptions of what constitutes a proper relationship, other than that which we call *modular* co-ordination.

Firstly, there is the mystical and purely æsthetic approach—the belief that for spiritual reasons or in order to "create beauty" the dimensions of a building and its various parts should bear certain mathematical relationships to each other, *e.g.*, the Pyramids or le Corbusier's Unité d'Habitation. The second concept is primarily an economic one — that in order to simplify drawing office work, minimize wastage through cutting, and facilitate, during times of shortage, the substitution of one element or component for another, the dimensions of all building elements and components should be based on a certain module, that buildings should be designed on a grid based on that module, and that the elements and components should all be placed on the grid lines. This is "the modular system," and it is what many people mean when they talk about modular co-ordination. It is, moreover, the system envisaged in BS 1708,* in which it is stated that standard components would be fitted together on the basis of a three-dimensional rectilinear grid.

Above, two interior views of house at Venice, Florida, by Twitchell and Rudolph (plan, AJ. Aug. 20, p. 227). Solid walls (of concrete blocks), light partitions and some of the exterior glazing units are, as in the various plans on the opposite page, placed independently of the grid. The photo below, of another house by Twitchell and Rudolph, shows how elements and components of the structural family and elements and components of the walling family can be arranged so as not to interfere with each other.

There are three objections to this last concept of co-ordination. Firstly, that it is impracticable; secondly, that it hampers rather than encourages the development of new building materials, techniques and æsthetic concepts; thirdly, that it is unnecessary, provided the architect "co-ordinates" in the wider sense of the word as the dictionary defines it.

IT IS IMPRACTICABLE

The first difficulty which arises is in the choice of the module. Although 40 in. has been widely accepted, and it certainly has numerous advantages (for buildings in which the predominant factor is the dimensions of human beings), it is open to doubt whether this figure is suitable for all, or even for the majority of buildings. The predominant factor may often be, not the dimensions of human beings, but the dimensions of machinery, mechanical handling equipment, storage equipment, vehicles, or even animals.

Moreover, it is doubtful whether it is either practical or economical to insist that all building elements and components, no matter of what materials they are composed, should be manufactured with dimensions related to one module.

One of the main difficulties involved in the use of a modular system is "thickness." Since the thickness of, say, wall units made of different materials is bound to vary, the width of the units will also have to vary, if they are to be assembled on the lines of a planning grid. Moreover, the widths of the panels will have to vary according to the dimensions of the columns, which, in turn, are bound to

* Modular Co-ordination (BS 1708: 1951.) (BSI. 1951 2s. 6d.)

vary according to the materials from which they are made.

Hence, in using the modular system, it is necessary to have components not simply of one modular size, but of a number of sizes around the module, and in certain non-traditional systems of construction developed since the war it has been found that, in spite of, or because of, grid planning, an uneconomical number of different components have been required.

The insistance, with the modular system, that the dimensions of all the parts of a building must be multiples of the module is possibly an even more serious drawback in the case of the vertical module. The most economical depth for, say, a floor, as determined by the span and the structural material used, cannot always be used, because it may not coincide with the depth as determined by the module.

IT HAMPERS DEVELOPMENT . . .

The modular concept of co-ordination presupposes that there is an ideal building system and that we have only to solve the various practical problems involved in order to discover this system. Even if this were possible, it would limit the whole future of building. No new development would be considered if it did not fit into the ideal system. It would be, in fact, a "closed" system."

Imperfect closed systems have already been developed and have been found extremely useful *for certain types of building*, but no one who has had anything to do with these building systems would suggest that they should be used for *all* buildings of that type, let alone that they should be used for all buildings *of any type*.

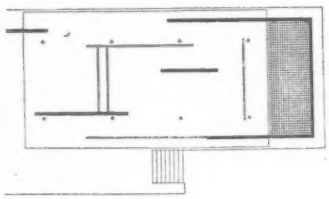
The closed system does not only restrict technical developments; it also permanently limits the architect's design vocabulary, so that it becomes virtually impossible for him to avoid the deadly sin of monotony.

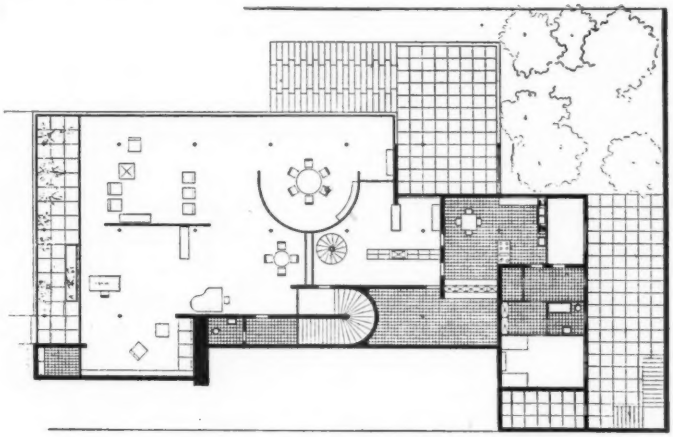
Placing all components on the grid lines to a large extent perpetuates the "row of boxes" conception of building—in which the walls become more important than the space they enclose. (Traditional brick buildings are, in a sense, designed with grid plans—the dimensions of the grid being based on a small module, the 4½-in. of the half brick.)

Modern sheet materials, and structural materials that can be used for long unsupported spans, make possible a new conception of space enclosure. To restrict building design to methods of splitting space into rectilinear divisions is to restrict the whole of building to a form no longer necessary.

Invariably to place walls, partitions, etc., on the grid lines is as illogical as invariably placing roads and national frontiers on lines of latitude and longitude. To allow the grid—the reference system—the aid to planning—to *determine* the plan is to allow the cart to pull the horse.

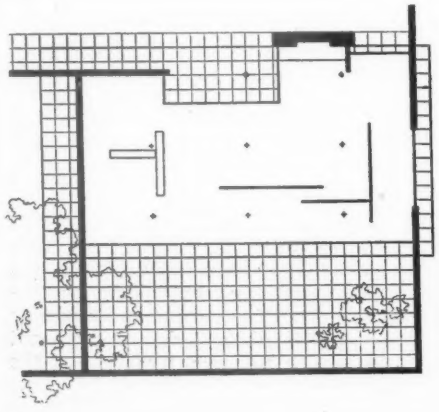
But, in opposing grid planning, one does not oppose the use of a planning grid (to do so would be to throw the baby out with the bath water). On the contrary, just as the meteorologist would be lost without lines of latitude and longitude, even though the lines of his isobars and isotherms never coincide with them, so the modern architect can hardly expect to work efficiently without using a planning grid, although, like Frank Lloyd Wright (see plan below), he may seldom place his elements and components on the grid lines.

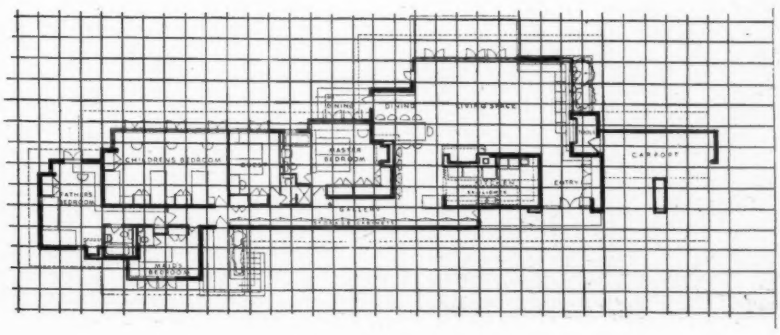


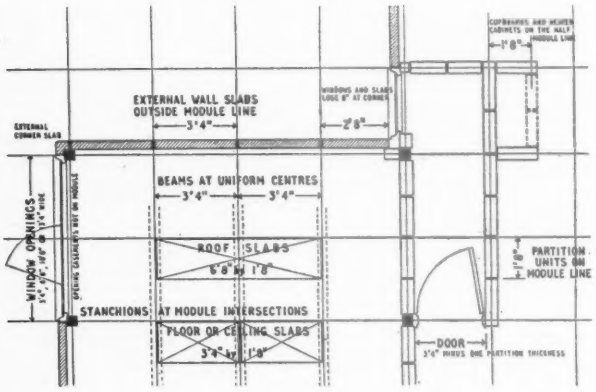


Above, right and below, three plans by Mies van der Rohe: respectively, part of the Barcelona Pavilion, 1929: the Tugendhat house, 1930: and one of a group of "courthouses" (a project), 1938. Although there is no grid shown on the drawings, a grid is implied by the regular spacing of the structural supports. But, as can be seen clearly in these plans, van der Rohe places his walls and partitions, etc. quite independently of the structural grid.

Below, plan of house at Kalamazoo, Michigan, by Frank Lloyd Wright. Like most of his plans, this is drawn on a grid (in this case, a rectilinear grid on a 4-ft. module), but F. L. W. does not allow his grids to dictate to him where he should place the various parts of his buildings. The dimensions of the concrete block walls, for example, are determined by the dimensions, not of the grid, but of the concrete blocks themselves.





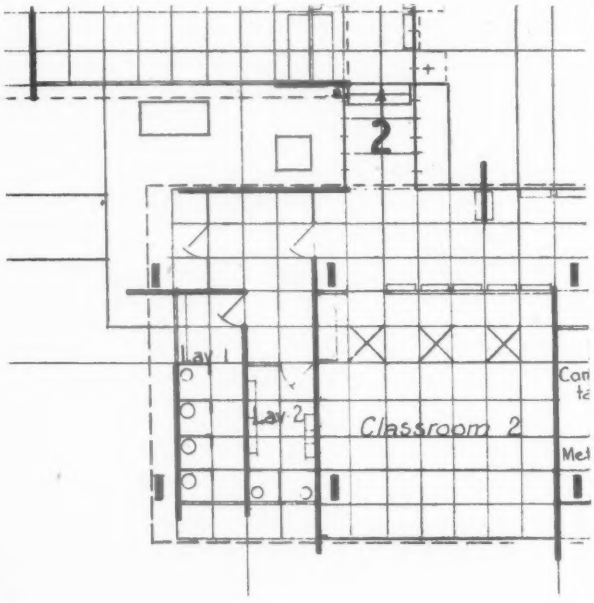


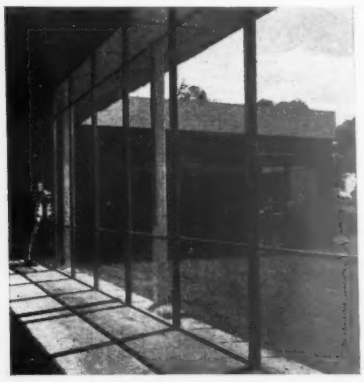
Grid planning on a 40-in. rectilinear grid—MOE development work. The centre lines of all stanchions and partitions coincide with the grid lines. All external wall slabs are placed 2 in. (i.e. half the thickness of the stanchions) away from the grid lines.

The great advantage of using a planning grid is that it vastly simplifies the architect's work in preparing the drawings and the operative's work in interpreting these drawings. After using a planning grid for a while, both the architect and the operative will know that, for a particular series of buildings, the inner face of 9-in. brickwork always comes, say, 2 in. from the grid line; that the centre line of metal windows always comes, say, 8¼ in. from the grid line; that plaster partition panels are always, say, 1 ft. 1½ in. from the grid line and the centre of R.W.P'S always, say, 1 in. from the grid line.

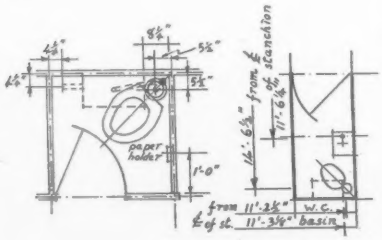
This is how some school architects now use a planning grid (see sketches below), in contrast to the strict grid planning sometimes used in the past and that used by the MOE architects at Wokingham (see drawing on left).

The Summerswood Junior School, Boreham Wood (Herts. County Council), below, represents a stage in the movement away from grid planning. The stanchions are clear of the glass panels, but the dimensions of the panels are still multiples of the module on which the planning grid is based. Right, part of the plan of a Herts. County Council secondary school now under construction: a planning grid is still used, but the walls need no longer terminate at the grid intersections.





Below, sketch showing how the Herts. County Council schools architects use a planning grid as a reference system. On detail drawings, components are dimensioned to the grid lines or to the centre lines of the stanchions.

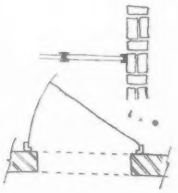


IT IS UNNECESSARY . . .

The present tendency towards using components rather than elements or materials may prove to be a short-lived phase. It was largely the result of certain freak post-war conditions. Modular co-ordination as envisaged by the BSI committee and certain members of the Modular Society would perpetuate this tendency long after the conditions responsible for it had ceased to operate.

Certain users of closed systems of building, including several manufacturers of prefabricated buildings, are now in the process of modifying their systems in order to make use of elements and even materials as well as components (partly because they are cheaper). Fluid materials, or easily cut elements, make it possible to link up parts of a building constructed of different families of components or even to use within the same part of the building components which are not dimensionally co-ordinated. In particular, window glass—a cheap and easily cut building element—can provide an excellent link between components of different families.

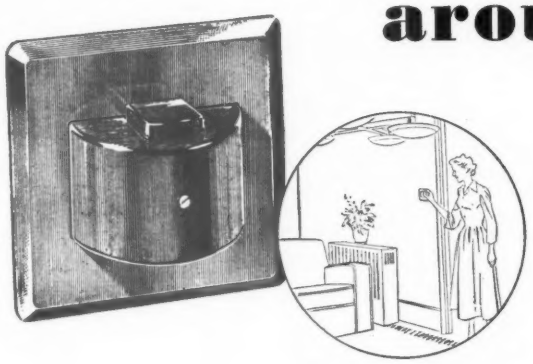
Moreover, new fixing materials, such as the various synthetic glues, make possible joints between elements and/or components, of any material, at any point. Hence, a partition need no longer coincide with the joints in a wall, and the dimensions of a window or door components need no longer equal those of the opening in the wall (see sketches below).



Is there any reason why the components of the electrical system should be made to the same dimensions as, say, the ceiling panels, if the building is designed so that they are clear of the ceiling panels? Is there any reason why the dimensions of cladding panels should be related to those of the structural columns if they are kept independent of each other? Is there any reason why floor tiling should fit between walls when it can be continued underneath them?

If the various families of components are arranged so that there is the minimum of interference between them and if connections between different structural or cladding systems are made by means of *in situ* materials or easily-cut elements, it becomes necessary, at the

SWITCHING around the house



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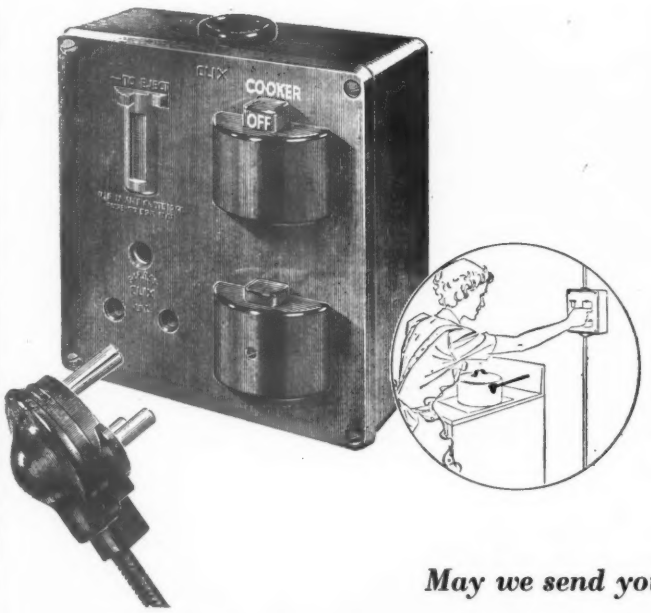

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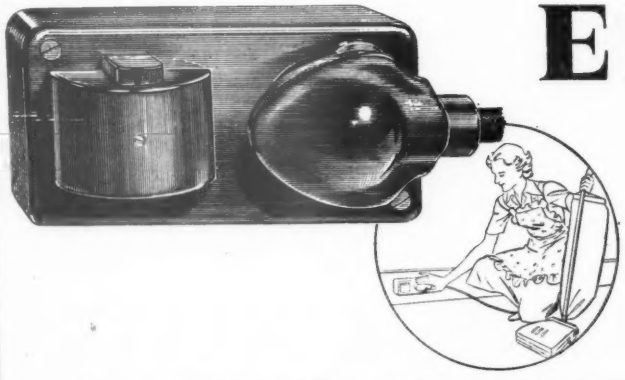

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most, to co-ordinate the dimensions only of the components *within each family*.

I advocate a truly *architectural* concept of co-ordination, *i.e.*, co-ordination by *planning*, not by forcing manufacturers to alter the dimensions of their products to " co-ordinate " with an, as far as they are concerned, arbitrarily chosen module, even when this is difficult or uneconomical. (For example, by increasing the width of a wall panel by a few inches, it may become necessary to increase its thickness and therefore its weight so that it can no longer be carried by one man; or, by insisting that beams must span a multiple of a module of, say, 4 ft., it becomes impossible to use a beam of a certain material for a certain load at its optimum span of, say, 14 ft.)

Unlike *modular* co-ordination, co-ordination by *planning*, which is, in fact, the traditional concept of the architect's job (see definition of *plan* in glossary), takes into account the differences between the requirements of different buildings and between the performance standards of and the manufacturing processes used for different elements and components. It places the onus of co-ordination where it rightly belongs—on the shoulders of the co-ordinator of building—the architect.

In the following article, M. Hartland Thomas criticizes the JOURNAL *for having presented its Glossary of Terms not simply as a prelude to an article on Modular Co-ordination, but for general use. The co-ordination of elements and components, and the design of buildings (i.e., the use of the elements and components) are, he says, two different operations—which is why, in the* JOURNAL'S *glossary, " modular co-ordination " and " modular system " (the latter being one of many ways of designing buildings) are defined separately. On p. 270, the Editors reply to some of Mr. Hartland Thomas's criticisms and explain further some of their definitions.*

MODULAR CO-ORDINATION

By M. HARTLAND THOMAS

Amateur dictionary-writing can be very misleading if it is taken too seriously. Sometimes it is unconsciously funny, and so harmless; for example, if *Family Co-ordination* is something to do with building elements what is *Family Planning?* Is it planning a building with families of components, or is the Eugenics Society permitted to go on using the term in quite a different sense? I am reminded of a discussion that took place in the drafting of the report of one of the Anglo-American productivity teams. I had headed one paragraph " Technicians in Administration," to which one member of the team objected on the ground that some committee or other in the electrical industry had ruled that " technician " meant one particular grade of craftsman or engineer. I contended that no committee had rights over the English language to dictate how we should use it and that I should continue to employ the word in a general sense, as is the accepted usage. Lexicography is the art of conscientiously recording the usage of words—how in fact they are used, not laying down how they should be used—though the one follows from the other if a person hopes to be understood.

Last week's definitions did not limit themselves to recording the present situation in the usage of terms; they were highly tendentious—seeking to elevate one special brand of modular co-ordination into general rules that we all should follow—where they were not over-simplified or merely confused. An example of over-simplification is the statement that different building systems give rise to the styles of building, such as the Gothic, neglecting altogether the effects of social, economic and emotional factors.

We are told not to confuse " planning grid " with " grid plan," but the authors go on to confuse us by saying that " it does not follow that because a planning grid is used, the various parts of the building will be placed on or adjacent to the lines of the grid," whilst when a grid plan is used, " the dimensions of building components . . . must be closely related to the dimensional grid." After that, is such a finely-drawn distinction in terms really of value as an offering for general adoption?

Now, it is entirely justifiable for the author of a paper to begin by giving his definitions of the terms that he proposes to use in his paper. If, when he has read his paper, the concepts and methods that he advocates win the approval of his audience, some of his definitions may pass into common parlance. But it is not acceptable for him to lay down the law for the world in general on the use of terms; still less for him, under the guise of definitions, to prescribe certain methods of operation. I am quite prepared for the purposes of a particular discussion to accept, for example, the definition of " elements," but that does not mean that the use of the same word in a different sense in the MOE's *Building Bulletin No.* 4, *Cost Study*, is a wrong use. Arrogance reaches its peak in the definition of " Dimensional Co-ordination," which we are ordered henceforth only to use in reference to " ideal proportions . . . determined solely by æsthetic considerations."

If the definitions had been presented as what in fact they are—merely the prelude to a piece of special pleading for one particular method of designing buildings—I should have had little quarrel with them, accepting them for their limited purpose in assisting the presentation of some very interesting ideas. But, for general consumption, ideas and practices come first; out of these grows the usage of terms and, last of all, definitions based on usage. Otherwise terminology, instead of assisting the development of the art, confines and distorts it into particular channels.

Take the key definition of " module." This is perhaps the only definition that is really worth discussing. To say that there are two types of module, small and large, is correct enough as a record of current usage, but to crystallise this as a definition is an impediment to the development of a more precise usage which is emerging from the practice and discussions that are now taking place.

Whilst I am quite prepared to get along with people who use the word " module " loosely (though it is a pity that the loosest definition offered to us is also the most important), I would submit that it is more convenient and productive of clearer ideas, if " module " is taken to mean the smallest increment in dimension that is recognized in a system of modular co-ordination. This has both etymology and ancient usage on its side. *Modulus* is in Latin the diminutive form of *modus*; it is a *small* unit of measurement. This accords with its classical use as the half-diameter of the column at its base for setting out the proportions of an Order. If we say that the module is 4 in. and any component whose overall dimensions are properly related to a multiple of 4 in. is accepted as modular, then we avoid the confusions caused by arbitrary sub-divisions of a larger unit.

We also avoid the difficulties caused by saying that the lines of a planning grid are " usually . . . one module apart "; saying instead that they are

often conveniently a whole multiple of the module apart. Then, in laying down a module for the co-ordination of the dimensions of components, we are not faced at the same time with the impossible and quite unnecessary task of prescribing one particular unit of size for the planning grids of all kinds of buildings. Indeed, we do not even stipulate that there need necessarily be a planning grid at all, in order to make use of modular components. Then the "Choice of the Module" ceases to be something of critical importance to architects (as likely to have a formative influence upon their designs), but takes its place as something much lower down in the scale of things—a colourless unit of measurement for components, which awaits multiplication in the hands of the skilled designer to achieve subtleties of proportion and scale appropriate to particular compositions. The choice of the module, in the pedestrian sense in which I am using the word here, seems already to be a Hobson's Choice, for some multiple of 4 in. is most frequently used in modular co-ordination and planning in this country; it is the basis of the well-established American system and its near-equivalent, 10 cm., is widely accepted in metric countries.

Let us call a truce to definitions and try to get some ideas straight first. The terminology will then come out in the wash. There are two different operations which should be kept distinct and separate in our thinking—the co-ordination of elements and components, as distinct from the design of buildings. I am one of those who believe that the co-ordination of building components will be most economical and convenient for everyone, if it is done on a modular basis, but this should be done in a manner that presupposes no particular technique of design when it comes to assembling them into buildings. Modular co-ordination is thus limited to the modest, even servile, task of collating and classifying the stock of available modular components and presenting this as information to architects to use in whatever way they choose. How they use it is the other half of the subject, which will provide us with a lifetime's discussion and experiment on an altogether higher plane. The two operations will of course have an influence upon each other, but if they are confused, neither will be able to develop properly. Rules for controlling the dimensions of components will be inflated into eternal principles of design that all architects should follow, or, conversely, a single brilliant designer's personal technique will claim to reverse technical history of the last 300 years and to dictate a method of co-ordination useless to everyone but himself.

THE JOURNAL'S GLOSSARY

The Editors Reply

Granted the urgent need for a glossary of terms, expressed (and revealed) at meetings of the Modular Society, it was impossible for us to "record accepted usage," for as far as these terms are concerned there is no accepted usage, which is precisely why a glossary was needed. The important thing is not so much how the terms have been defined, but the fact that they *have* been defined; or, rather, it is not so important what we call the various parts of a building and the various ways of fitting them together, but that everybody should use the same terms when referring to the same things. Mr. Hartland Thomas may think "family of building elements and components" an amusing term, but the word *family* expresses vividly the fact that the elements and components are *related*. The term is, we believe, a logical one, and, more important, in future when the term is used everyone who has seen the JOURNAL'S glossary will know what is meant.

In so far as we could be guided by past usage, we have. In particular, our definitions of "module" and "modular co-ordination" agree with the way these terms were used by the BSI committee on Modular Co-ordination in its first report.* The Committee defined a module as "a unit to be used in the design of buildings and as a basis for the co-ordination of design and construction and of standard building materials (*i.e.*, elements—ED.) and components." Incidentally, the Committee used the single word *module*, as we have, to mean both large and small modules, although it suggested (not very wisely, we believe) that large modules might be called "over-modules."

Incredible as it may seem, the BSI Committee did not specifically define Modular Co-ordination. But its definition is implied partly in the above quotation and partly in this further amplification—"manufacturers of the materials and components will . . . supply goods . . . to dimensions which, *when the goods are installed* (our italics), will permit a building, as a whole, to conform to a modular layout." For *modular layout* read *grid plan* (a more "popular" term) and these quotations show that by *modular co-ordination*, the BSI Committee meant simply the co-ordination of the dimensions of building elements and components (by relating them to a module)—which is what our definition says.

With regard to "installing the goods" (or what we call "arranging the parts"), the BSI Committe said "the module would be the basis of a 3-dimensional-grid which . . . would ensure that standard (that is modularly co-ordinated—ED.) materials and components could be used together and would, in turn, fit into general design layout." This conception of building the BSI Committee did not give a name—we call it the *modular system*, although our definition, while it has the same meaning as the one quoted above, is, we contend, simpler and clearer.

We cannot possibly agree with Mr. Hartland Thomas when he says that between our definitions of planning grid and grid plan there is only "a finely drawn distinction." The two terms are completely different. A planning grid is simply a network of lines used as an aid to planning. A grid plan is a plan—of a particular kind (one in which most of the various parts are placed so as to coincide with the lines of the planning grid on which it is drawn). (The planning grid may be compared with lines of longitude and latitude, while the plan may be compared with the map which is superimposed on the lines of longitude and latitude.) The "finely drawn distinction" might arise in deciding whether a plan is or is not a grid plan (one may argue as to what constitutes "most"), but there should be no confusion between plan and grid (or planning grid and grid plan).

Our definition of dimensional co-ordination may seem a little strange at first, particularly since this term has often been used synonymously with the term modular co-ordination. But modular co-ordination is not the *only* concept of co-ordination, which, according to the dictionary, is simply "bringing parts into a proper relationship." It is logical, therefore, to define dimensional co-ordination as bringing the *dimensions* of a building into what the architect considers a proper relationship. The functional requirements of a building may determine that its length should be approximately X ft. and its height approximately Y ft. If modularly co-ordinated elements and components are to be used, these figures will be adjusted so that they are multiples of the module on which the dimensions of the elements and components are based. It is not necessarily a criticism of modular co-ordination to say that many architects prefer to do what has usually been done in the past, *i.e.*, to adjust the dimensions determined by the functional requirements according to purely æsthetic considerations, so that the resulting shapes and massing should be pleasing to the eye.

* *Modular Co-Ordination* BS 1708 : 1951. (BSI. 1951. 2s. 6d).

INFORMATION CENTRE

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

2.129 planning : general

PLANNING PHILOSOPHY

Planning System in a Democracy. Wilfred Burns. (The Surveyor and Municipal and County Engineer, June 27, 1953, pp. 435-436, and July 4, 1953, pp. 451-452.)

Stimulating study of how professional planners, with different philosophies, can disagree in their interpretation of a given set of facts, particularly facts concerning aspects of planning which the public is really interested in, *e.g.*, the rights of the individual developer.

4.75 planning: urban and rural

URBAN RE-DEVELOPMENT

The Future of Cities and Urban Re-development. Edited by Coleman Woodbury. (University of Chicago Press. UK agents, Cambridge University Press. 67s. 6d. 1953.)

This book is the product of "Urban Redevelopment Study," a study group sponsored by an American trust which has investigated, analysed and discussed the future of American cities. 764 pp., short index, no illustrations.

The book was written by a number of authors, including Catherine Bauer and Holmes Perkins, and is divided into the following parts: Essays on Re-development—Goals, Design and Strategy; Industrial Location and Urban Re-development; Urban Re-development and the Urbanite; Local Government Organization in Metropolitan Areas—its Relation to Urban Re-development in the USA. To readers of the JOURNAL the first and last parts are likely to be the most interesting.

Catherine Bauer opens with a withering account of the difficulties in post-war USA, and of the impasse reached in attempts to establish some form of controlled de-centralization and its complement—re-development of central areas. (At a time of acute housing shortage, planned re-development is still looked upon as a cure.) By comparison, the task of slum clearance, etc., in this country seems almost to be simple; in fact, part of the value of this book is the perspective it provides on our own problems.

4.76 planning: urban and rural

CENTRAL AREAS

The Most Difficult Part of the Housing Problem. (Some Aspects of Central Area Redevelopment.) Ronald Bradbury. (Planning Outlook, Vol. II, No. 4, 1952, pp. 35-42.)

Study of the techniques of peripheral expansion and of the difficulty of re-developing old, outworn residential areas, and plea for attempt to tackle both kinds of development simultaneously.

Mr. Bradbury gives us a salutary reminder that "byelaw development" was, in its day, a very creditable effort. He then describes the causes of one formidable aspect of the re-development problem—that of deciding *where* to re-house the people for whom there is no room in an area after it has been re-developed at modern standards. Mr. Bradbury gives some interesting figures comparing old and new densities, etc.

The other aspect of the problem which the author deals with is the very complicated procedure and programming entailed in re-developing central areas, which is one of the reasons why this is slower and more expensive than building a new suburban estate. If any progress is to be made in this work, a selection of areas to be re-developed, however piecemeal, must be made, although in the long run, such a method is sure to prove less satisfactory and much more costly than large-scale re-development.

4.77 planning: urban and rural

SLUM CLEARANCE

Slum Clearance and Re-housing in Liverpool. Ronald Bradbury. (Journal TPI, June, 1953, pp. 157-160.)

Liverpool is one of the few places where slum clearance in central areas has now been resumed. In this article Mr. Bradbury writes from current experience as city architect of a department that has been responsible for building 2,000 post-war flats and cottages in central areas.

Mr. Bradbury describes the background to the planning work—the use of a "master map," showing progress from the initial survey stage, when an area or block is classified as insanitary, etc., to the stage of letting a building contract, and, of course, the more detailed progress drawings required for each section of slum clearance or re-development.

The 2,000 dwellings mentioned above have, it appears, been built on a "pool" of sites cleared before the war and on blitzed sites, but the city council recognized that it must also resume the job of slum clearance, because as soon as these sites are filled there will be nowhere to re-house the people now in slum houses when the latter are demolished. The remainder of the article describes the housing allocation for the cleared areas. The corporation hopes to demolish about 750 obsolete and insanitary dwellings annually.

6.42 planning: social and recreational

OLD HOUSES

The Problem of Old Houses. C. H. Kitchen. (The Surveyor and Municipal and County Engineer, April 18, 1953, pp. 267-268.)

The author, a former regional director of MOW, compares post-war housing output to national needs, and gives an estimate of the scale of the problem of what to do with out-of-date houses which will have to be lived in for the, at least, next 20 to 30 years.

There are two aspects of this problem: firstly, to keep in repair those old houses in danger of becoming uninhabitable; secondly, to bring up to a state of normal twentieth-century amenity those houses structurally sound enough to merit improvement. The problem of keeping houses in repair concerns, in practice, mainly privately-owned houses. It appears insoluble, unless an all-party agreement is reached on how to tackle the problem, which has arisen mainly through the disparity between rents and maintenance costs.

The 1949 Housing Act offered inducements to both public and private landlords to improve the amenities of dwellings, provided a 30-year life could be ensured. So far, little has been done and many authorities and owners are awaiting a more determined lead from Whitehall.

The immediate need is an accurate assessment of the full extent of wastage through the decay of old houses. How accurate, for example, is Aneuran Bevan's figure of 200,000 houses per year? Meanwhile, architects should be trying to develop new ways of improving or converting old houses.

14.63 materials: concrete

AIR-ENTRAINED CONCRETE

Entrained Air in Concrete. P. J. F. Wright. (ICE Paper No. 5915, May, 1953.)

Incorporating a quantity of air, in the form of microscopic bubbles, in concrete improves its "workability" and greatly increases its frost resistance. It may, however, reduce strength, and skilful control is needed.

The author deals with the subject in some detail. He does not consider air-entrainment an asset in high-quality road-making in Great Britain, but considers it might improve the quality of estate roads. Its use in structural work may be limited by the greater degree of control needed, but it may be useful for small work where high strength is not required. It appears to be useful for precast concrete units, such as kerbs, where high frost resistance is needed, together with a smooth finish. This is difficult to get with ordinary concrete.

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THE INDUSTRY

From the Industry this week, Brian Grant reports on the bulk delivery of cement, a booklet on time control, a new refrigerator and a new type of water mixer.

CEMENT DELIVERY IN BULK

F. Shepherd & Son, building contractors of York, have for some years been interested in the bulk delivery of cement to comparatively small sites and the savings which this can effect. On larger civil engineering jobs, the bulk delivery of cement is now almost standard practice and the entire job of making concrete is as fully mechanized as possible, but techniques of this kind are not usually economical on smaller jobs. Cement delivered in bulk is cheaper in first cost, due to the fact that no bags are needed and site handling costs are also reduced. If gravity feed to the concrete mixer hopper can be arranged it is also possible to dispense with the cement man in the mixer gang.

The photograph below shows the system which Messrs. Shepherd & Son are now using, after two or three years of experiment. The spherical aluminium alloy containers on the lorry each hold 3½ tons of cement, and delivery is by compressed air through a hose to the top of the silo. The use of light alloy keeps the unladen weight below 3 tons so that the lorry comes into the 30 m.p.h. limit class of vehicle. The silo holds 10 tons of cement and is made of resin bonded plywood. It has an automatic weigher (adjustable to the concrete mix) at its foot. The silo is light enough (11 cwt.) to be easily transportable and needs as a foundation only reasonably level and firm ground.

The advantages of the system are numerous: The cement, being delivered to the top of the silo, is automatically used in the order in which it is delivered, and at the same time is protected from the weather. The gravity feed and automatic weighing hopper reduces the mixer gang by one man and, as the delivery of the cement to the silo is done by the lorry driver, there is no need for the mixer gang to stop work and unload bags, with the resultant hold up for the concreting gang. Messrs. Shepherd & Son say that on a normal site the savings would equal about 22s. per ton of cement used. It is now up to the cement companies to produce some tank wagons for supplying to firms who cannot manage more than the cost of the silo and who haven't enough work to keep a 7½-ton tanker going full time. (*Portasilo (Portasilo) Ltd., Blue Bridge Lane, York.*)

OIL FOR HEATING

As one might expect, the Shell-B.P. organization takes its own medicine and heats Shell-Mex house with oil fuel. The photograph below gives a good idea of the well laid out boiler house. With over 8 million cu. ft. to heat, as well as domestic hot water for lavatories and kitchens, the installation has six large boilers, each giving 8,400 lb. of steam per hr., and several larger calorifiers. Oil is supplied from two tanks, each holding 70 tons. (*Shell Mex & B.P. Ltd., Shell-Mex House, Strand, London, W.C.2.*)

SMALL REFRIGERATORS

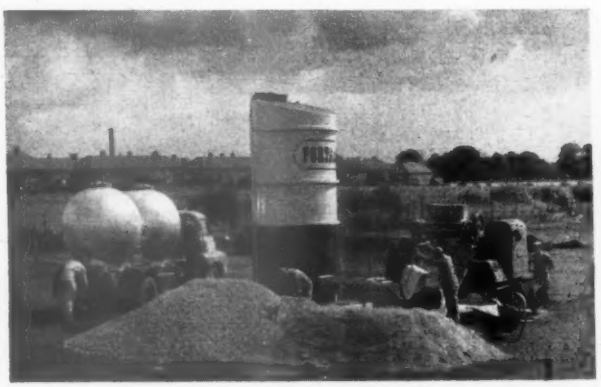
The photograph top right shows the new 2 cu. ft. "Easiclene," absorption-type refrigerator, which can be used with electricity, gas (mains or bottled) or paraffin. The other model produced by this firm has a capacity of 4½ cu. ft., but this new one is a useful size for the average household. The table top is of plastic and the rest of the casing is enamelled, with a porcelain enamel interior. The ice tray makes 16 cubes and the refrigeration system is guaranteed for five years. Price is £67 10s. for the electric and gas models, £57 13s. 8d. for the paraffin type, both prices including purchase tax. (*Easiclene Porcelain-Enamel (1938) Ltd., Darlaston, South Staffs.*)

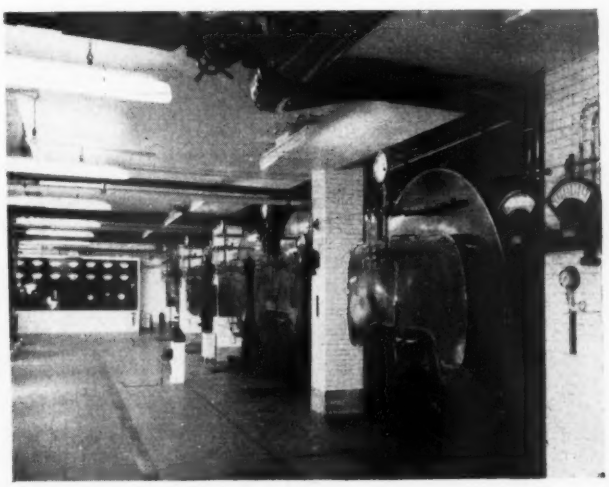
PLUMBING FIXTURES

In the JOURNAL'S report of the RIF (May 7, 1953) it was mentioned that one or two firms were showing nozzle fittings in which the hot and cold water did not mix until they reached the discharge nozzle, thus overcoming the difficulty caused by water authorities who forbid mixer fittings where the cold water is taken direct from the mains. One of these fittings is shown above. The nozzle clearance allows easy bucket filling and the taps are inclined forwards at 15 deg. to give clearance at the back of the sink or wall. The pillar type shown has the taps at 7-in. centres to suit sinks to BS 1244 and BS 1206, but other models are produced with bends and with backplates for wall fixing, with exposed or concealed plumbing. (*Peglers Ltd., Prestex House, Marshalsea Road, London, S.E.1.*)

Above, the new 2-cu. ft. "Easiclene" refrigerator available for gas, electric or paraffin operation. Below, nozzle fitting for mixing hot and cold water after it has passed through the taps.

Below, a 10-ton silo for holding bulk-delivered cement: in the background is a special lorry carrying two 3½-ton spherical aluminium containers in which the cement is delivered. Right, view of boiler house at Shell-Mex House, showing five of the six large oil-burning boilers.





Buildings Illustrated

Flats and shops on the Cremorne Estate, West Chelsea, London, S.W.10. (Pages 256-259.) Architects: Edward Armstrong and Frederick MacManus, F./F.R.I.B.A.; Assistant-in-charge, D. J. Tricker. Consulting Structural Engineers, Bylander & Waddell. Consulting Heating Engineers, Donald Smith, Seymour & Rooley. Quantity Surveyors, W. C. Inman & Partners. General Contractors: Holloway Bros. (London) Ltd. Sub-contractors: Crittall Manufacturing Co. Ltd.; wood windows, Rippers Ltd.; refuse chute doors, Tomo Trading Co. Ltd.; heating and hot water installation, Matthew Hall & Co. Ltd., Ellis (Kensington) Ltd.; electrical installation, Matthew Hall & Co. Ltd., Phoenix Electrical Co. (London) Ltd.; gas installation, North Thames Gas Board; lift installation, Express Lift Co. Ltd.; facing bricks, Dunbrik Ltd., R. Y. Ames; external wall tiles, Carter & Co. (London) Ltd.; glass lenses for boiler house, Pilkington Bros. Ltd.; coal hoppers, Broads Manufacturing Co. Ltd.; sanitary fittings, B. Finch & Co. Ltd.; floor finishes (Accotile flooring), Armstrong Cork Co. Ltd., Hollis Bros. Ltd.; pressed metal door frames, Crittall Mfg. Co. Ltd., Joseph Sankey & Sons Ltd.; metalwork, Light Steelwork (1925) Ltd.; extract fans, Aerex Ltd.; doors, John Sadd & Sons Ltd.; ironmongery, Nettlefold & Moser Ltd.; kitchen fittings, Built-in Fixtures Ltd.; precast concrete copings, Stuarts Granolithic Co. Ltd.; wireless installation, British Relay Wireless Ltd.; laundry equipment, Electrolux Ltd.; pavement lights, J. A. King & Co. Ltd.; lettering, The Lettering Centre; roofing tiles, Eastwoods Ltd., J. H. Sankey Ltd.; patent roofing material, Alphamin; playground equipment, Paul & Marjorie Abbatt Ltd.; asphalt roofing, Rock Asphalte Co. Ltd.

Flats at Henry Dickens Court, St. Ann's Road, West Kensington, London, W.11. (Pages 260-262.) Architects: Edward Armstrong & Frederick MacManus, F./F.R.I.B.A.; Assistant architect, E. Howard Sadler, A.R.I.B.A., A.M.I.STRUCT.E.; Assistant-in-charge, John Sheldon, A.R.I.B.A. General contractors: Holloway Bros. (London) Ltd. Sub-contractors: asphalt, Excel Asphalte Co. Ltd.; asphalt roofing, Durable Asphalte Co. Ltd.; ash hoists, George Johnson Ltd.; aerated roof screed, Premier Plastering & Granolithic; composition flooring (Accotile), Armstrong Cork Co. Ltd.; gas installation, North Thames Gas Board; gas water heaters, Ascot Gas Water Heaters Ltd.; gas drying cabinets, C. Barralet & Co. Ltd.; electrical installation, Berkeley Electrical Engineering Co. Ltd.; glass brick panels, J. A. King & Co. Ltd.; refuse chute hoppers, Haywards Ltd.; metal windows, Crittall Manufacturing Co. Ltd.; heating and hot water installation, G. N. Haden & Sons Ltd.; flush doors, kitchen fittings, Jayanbee Joinery Ltd.; standard doors, Linden Doors Ltd.; sanitary fittings, Shanks & Co. Ltd.; ironmongery, Nettlefold & Moser Ltd.; laundry equipment, Electrolux Ltd.; lettering and name plates, William Pickford Ltd.; facing bricks, R. Y. Ames, Henfield Brick Co., Henry J. Greenham (1929) Ltd.; metalwork, screen, staircase balusters, boundary railings, etc., Light Steelwork (1925) Ltd.

Flats at Portobello Court, North Kensington, London, W.11. (Pages 263-264.) Architects: Edward Armstrong & Frederick MacManus, F./F.R.I.B.A.; Assistant architect, E. Howard Sadler, A.R.I.B.A., A.M.I.STRUCT.E.; Assistant, Peter Cooke. Consulting structural engineers: Bylander & Waddell. Quantity surveyor: W. C. Inman & Partners. General contractors: Y. J. Lovell & Sons Ltd. Sub-contractors: asphalt, roofing felt, Permanite Ltd.; artificial stone, Joseph Mears Ltd., Marley Tile Co. Ltd.; partitions, Broad & Co. Ltd.; glass, Aygee Ltd.; patent flooring, Whitney-Fairchild; central heating, Young, Austen & Young Ltd.; gas fires, Radiation Ltd.; gas installation, North Thames Gas Board; electrical installation, light fixtures, Berkeley Electrical Engineering Co. Ltd.; electric fires, Bratt Colbran Ltd. (supplied by Berkeley Electrical Engineering Co. Ltd.); plumbing, Richard J. Audrey; sanitary fittings, John Bolding & Sons Ltd.; door furniture, Nettlefold & Moser Ltd.; metal casements and door frames, Crittall Manufacturing Co. Ltd.; escape staircases, balustrading and site railings, St. Peter's Metal Works; plaster, W. A. Telling Ltd.; internal and external decorations, South London Decorators Ltd.; balcony railings, S. W. Farmer & Son Ltd.; standard doors, Montague L. Meyer Ltd.; carved stonework, James Walker; bricks, Henfield Brick; dust chute hoppers, Haywards Ltd.; tiling, Carter & Kernaham Ltd.; grassed areas and tree planting, Garden Landscapes (London) Ltd.; kitchen fittings, W. Crosby Ltd.; lifts, Express Lift Co. Ltd.; lettering and signwriting, Buckleys; fluted asbestos balcony fronts, Dalton Ballard & Co. Ltd.; television and wireless installation, British Relay Wireless Ltd.

Announcements

Messrs. J. R. Wetherell & Lamb have opened a new main office at 42 Victoria Road, Darlington (Tel.: Darlington 6610).

Robert J. Cole, L.R.I.B.A., of the office of G. A. Jellicoe, F.R.I.B.A., M.T.P.I., has commenced practice at 21, High Street, Camberley, Surrey, where he will be pleased to receive trade catalogues, etc.

Dara R. Variava, A.R.I.B.A., has resigned his post as senior assistant architect (redevelopment) to the City Architect & Director of Housing, Liverpool and is now assistant government town planner for Ceylon. His address is c/o Town and Country Planning Department, McCallum Road, Colombo, 10, Ceylon.

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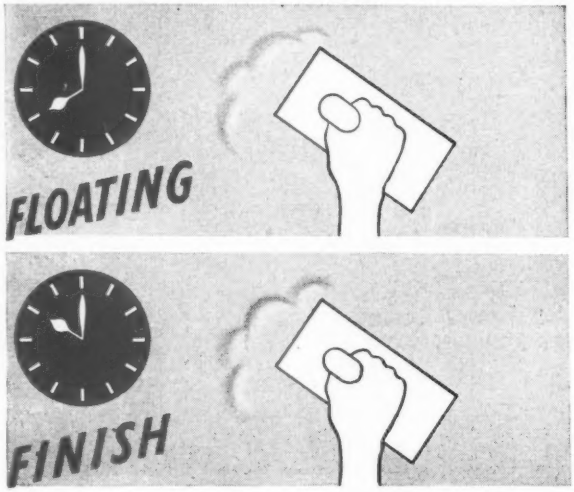

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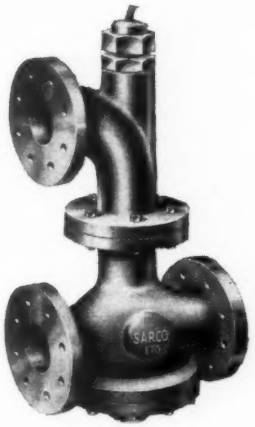

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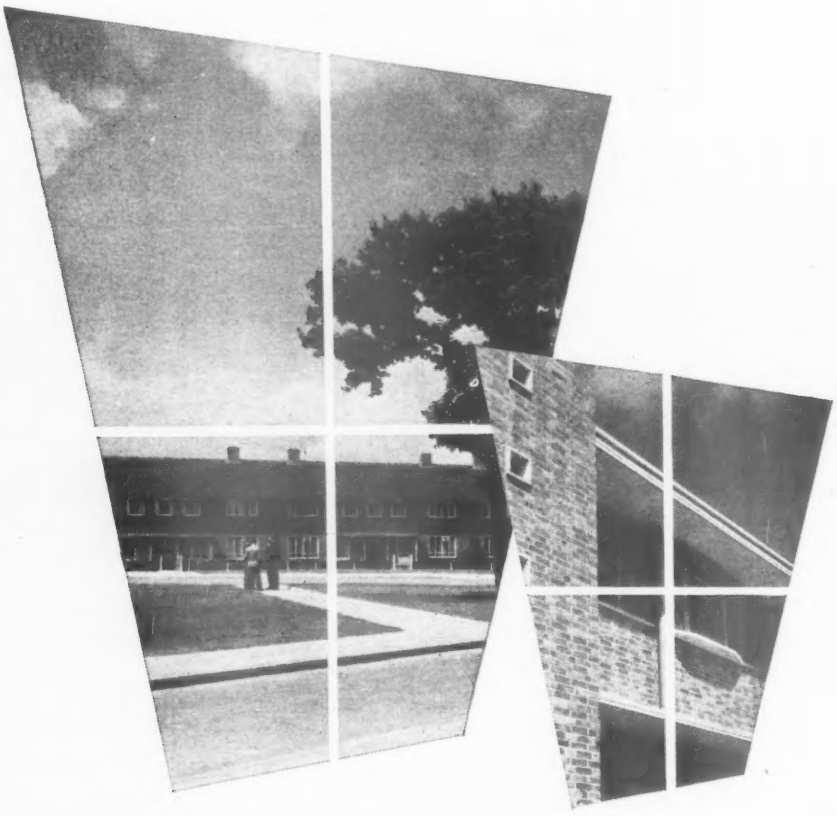

Crawley: Williams & Williams are doing most of the windows

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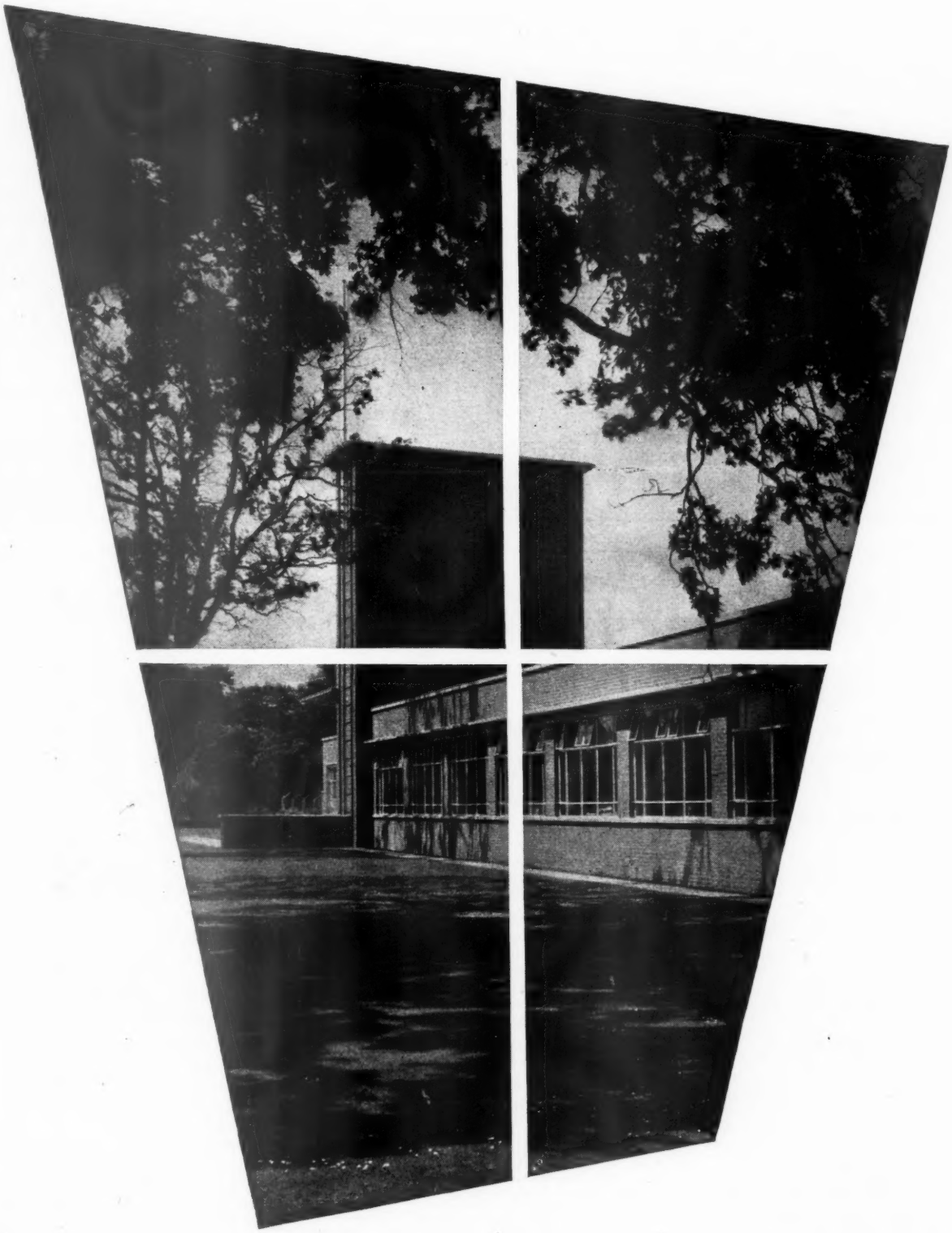

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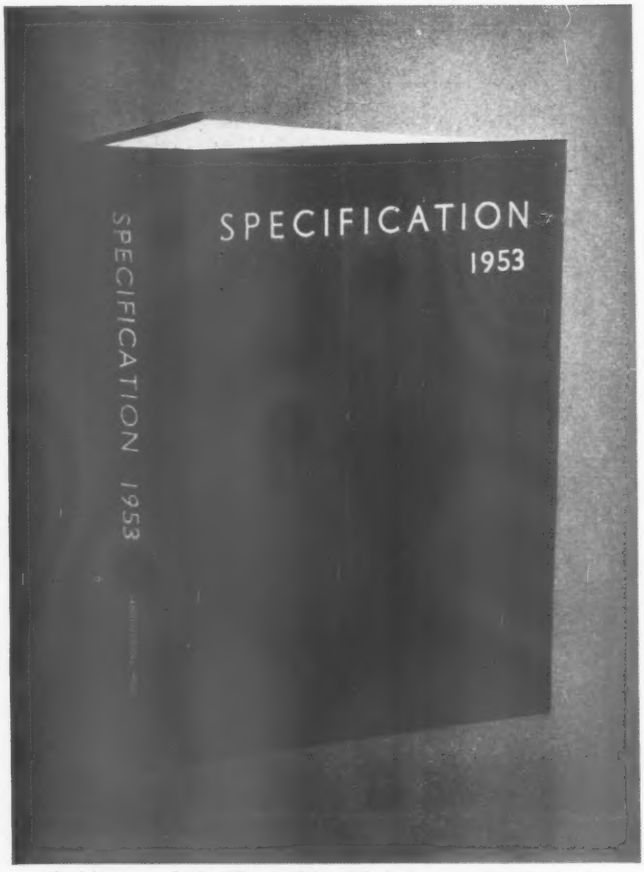

A miniature reproduction. The actual size of the book is 13 ins. by 8¾ ins. by 2 ins.

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The size of *SPECIFICATION* increases every year. The number of pages in the 1952 edition was 1142. In the 1953 edition it is 1176.

During recent years the demand for copies has been so great that each edition has been absorbed immediately on publication. Intending purchasers are therefore urged to place their orders *now* for the 1953 edition. The price is 30s. Postage 2s. [3s. abroad.]

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APPOINTMENT OF TEMPORARY ARCHITECTURAL ASSISTANT.

Applications are invited for the above appointment in the Borough Engineer and Surveyor's Department, at a salary in accordance with Grade A.P.T., V (£625-£675 per annum). Commencing salary according to experience. The inclusive salary is reduced by £10 per annum in the case of persons 25 years of age or under. Candidates should preferably be Associates of the R.I.B.A.

Applications, stating age, present and previous appointments, professional training, qualifications, etc., together with names of three referees, must be delivered to the Borough Engineer and Surveyor, Town Hall, London, N.8, not later than Friday, 11th September, 1953.

Canvassing is prohibited, and candidates must disclose in writing whether, to their knowledge, they are related to any member or officer of the Council.

H. BEDALE,
Town Clerk.
9350

BRECONSHIRE COUNTY COUNCIL.
PLANNING DEPARTMENT.

Applications are invited for the permanent appointment of CHIEF ASSISTANT in the County Planning Department. Candidates should have passed or obtained exemption from the final examination of the Town Planning Institute. A qualification in Architecture will be an advantage. The salary payable will be in accordance with A.P. & T., Grade VI, of the National Joint Council's scale, *viz.*, £670 per annum, rising by annual increments to £735 per annum. The appointment will be subject to (i) the National Scheme of Conditions of Service, (ii) the provisions of the Local Government Superannuation Act, 1937, (iii) the passing satisfactorily of a medical examination, (iv) one month's written notice on either side. Applications, stating age, qualifications and experience, with names and addresses of three referees, must reach the undersigned not later than 19th September, 1953. Canvassing, directly or indirectly, will definitely disqualify the candidate for the appointment.

C. M. S. WELLS,
Clerk of the County Council.
County Hall, Brecon. 9354

CITY OF BIRMINGHAM.
DEPUTY CITY ARCHITECT.

Applications are invited from suitably qualified Architects for the appointment of Deputy City Architect, at a salary of £2,066 13s. 4d. per annum, rising by annual increments of £100 to a maximum of £2,566 13s. 4d. per annum.

A memorandum giving details about the scope of the appointment and general conditions may be obtained from the undersigned.

Applications must be received by me not later than 19th September, 1953.

Canvassing disqualifies.

J. F. GREGG,
Town Clerk.
Council House, Birmingham, 1. 9363

COUNTY OF KENT.
APPOINTMENT OF COUNTY ARCHITECT.

Applications are invited for the above-mentioned appointment from Fellows or Associate Members of the Royal Institute of British Architects, at a salary within the scale of £2,200, rising by annual increments of £100 to £2,700 a year.

The post will become vacant upon the retirement of the present holder in April, 1954.

The appointment is pensionable, and the successful candidate will be required to pass a medical examination.

Further particulars and form of application may be obtained from the undersigned, to whom applications should be delivered by not later than the 30th September, 1953.

Canvassing, either directly or indirectly, will operate as a disqualification.

W. L. PLATTS,
Clerk of the County Council.
County Hall, Maidstone.
27th July, 1953. 9293

BRITISH ELECTRICITY AUTHORITY.
EAST MIDLANDS DIVISION.

Applications are invited for the following positions within the Division:—

CIVIL ENGINEERING DRAUGHTSMEN, CONSTRUCTION DEPARTMENT.
Vacancy No. 22/53

Candidates should have experience in design and detail of reinforced concrete structures, piled and slab foundations for heavy plant, culverts, cable subways, etc., for general building construction drainage and sanitation schemes, associated with office and administrative buildings.

The salary will be in accordance with Grade 5 (£567—£671 per annum) or Grade 6 (£433—£567 per annum) of Schedule D of the National Joint Board Agreement.

ENGINEERING DRAUGHTSMEN (MECHANICAL) CONSTRUCTION DEPARTMENT
Vacancy No. 44/53

Senior Draughtsmen are required in the Mechanical Section of the Construction Department at North Wilford Power Station. Candidates should have experience in one or more of the following:—

(i) Design and layout of Power Station equipment, including Turbo-alternators, boiler plant, coal and ash plant, and General Station Auxiliaries.

(ii) H.P. and L.P. steam and feed pipework. Condensing plant and feed heating systems.

(iii) Conveyor plant, coal handling systems and material handling of station auxiliary equipment.

Salary and conditions of service will be in accordance with the National Joint Board Agreement Grade 5 (£567—£671 per annum) and Grade 6 (£433—£567 per annum) of Schedule D according to experience.

ENGINEERING DRAUGHTSMEN (ELECTRICAL) CONSTRUCTION DEPARTMENT
Vacancy No. 61/53

Candidates should have experience in the preparation of layouts and diagrams for the installation of E.H.T. and L.T. Switchgear, transformers, E.H.T. and L.T. cables; knowledge of protective gear systems would be an advantage.

The salary will be in accordance with Grade 5 (£567—£671 per annum) or Grade 6 (£433—£567 per annum) of Schedule D of the National Joint Board Agreement.

The above positions will be pensionable within the provisions of the British Electricity Authority and Area Boards Superannuation Scheme.

Applications should be submitted on the official form which may be obtained from the Divisional Establishments Officer, British Electricity Authority, Barker Gate, Nottingham, and should be returned to the undersigned by the dates stated. Please Quote Vacancy Number.

L. F. JEFFREY,
Divisional Controller.
9388

COUNCIL OF THE COUNTY OF ABERDEEN.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of ARCHITECTURAL ASSISTANT, Grade IV-Va (£550-£690) in the Department of the County Architect.

Candidates must be registered Architects, preferably holding the qualification A.R.I.B.A. and should have experience in Local Authority educational work.

The appointment is subject to the Local Government Superannuation (Scotland) Act, 1937, and the successful candidate will require to pass a medical examination.

Conditions of appointment and forms of application are obtainable from the undersigned and should be returned not later than 12th September, 1953.

Canvassing of members of the Council directly or indirectly in connection with this appointment shall disqualify the candidate.

CHAS. HORNAL,
County Clerk.
County Buildings,
22, Union Terrace,
Aberdeen.
18th August, 1953. 9403

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD.

ASSISTANT ARCHITECTS (2). Salary scale £600-£865 plus London Weighting (£10-£30). Commencing salary according to age and experience. Applicants must be registered Architects having passed the requisite examinations. Experience of hospital planning and construction an advantage.

ARCHITECTURAL ASSISTANT. Salary scale £440-£625 plus London Weighting. Commencing salary according to age and experience but not exceeding £525 per annum plus Weighting. Intermediate examination R.I.B.A. essential.

Written applications, with two referees, for the above mentioned appointments should reach the Secretary, North West Metropolitan Regional Hospital Board, 11a, Portland Place, W.1, not later than 7th September. 9404

COUNTY BOROUGH OF WEST BROMWICH.

Applications are invited for:—

(*a*) ARCHITECTURAL ASSISTANT, Grade A.P.T. V (£670-£735).

(*b*) ARCHITECTURAL ASSISTANT, Grade A.P.T. V (£595-£645).

N.J.C. conditions of services, qualifications as set out for grading of special classes of officers.

Applications, with copies of three testimonials, to Borough Surveyor, Town Hall, West Bromwich, by 11th September, 1953. 9412

CITY OF BRADFORD.
SENIOR TOWN PLANNING ASSISTANT, GRADE A.P.T. VI.

Applications are invited for the appointment of Senior Town Planning Assistant (Post No. 13) in the City Engineer and Surveyor's Office, at a salary in accordance with Grade A.P.T. VI of the National Scales, i.e., £670—£735 per annum.

Applicants should preferably be A.M.T.P.I., A.M.I.C.E., or A.M.I.Mun.E., and have had considerable experience in the administration of the Town and Country Planning Act, 1947, and in dealing with applications for (*a*) Planning Permission and (*b*) Display of Advertisements.

The appointment is superannuable. Applications on the prescribed form to be obtained from the City Engineer and Surveyor, Town Hall, Bradford, together with three testimonials must be received by the undersigned not later than Monday, 7th September, 1953. No housing accommodation will be provided by the Corporation.

W. H. LEATHEM,
Town Clerk.
Town Hall, Bradford. 9390

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.

QUANTITY SURVEYOR: (£1,002—£1,143) required to analyse costs of building and to estimate costs of experimental methods with special regard to multi-storeyed buildings. Particulars and application forms from the Architect, County Hall, S.E.1, quoting AR/EK/Q/6. Closing date 12th September. (895.) 9391

CORPORATION OF DUBLIN.

Vacancies for—

(*a*) TEMPORARY PLANNING ASSISTANTS, Grade I.

(*b*) TEMPORARY PLANNING ASSISTANTS, Grade II.

Latest date for receipt of application 7th September, 1953.

Salary: (*a*) £750 per annum, plus Temporary Allowance (at present £225).

(*b*) £10 0s. 0d. per week by annual increments of 12s. 6d. per week to £13 13s. 0d. per week, plus Temporary Allowance (at present £2 0s. 6d. on £10 0s. 0d. and £2 15s. 3d. on £13 13s. 0d.).

Application forms and full particulars from the Establishment Department, City Hall, Dublin, where completed forms should be lodged.

P. J. HERNON,
City Manager and Town Clerk.
City Hall, Dublin.
10th August, 1953. 9392

DERBY CORPORATION.
BOROUGH ARCHITECT'S DEPARTMENT.

(*a*) JUNIOR QUANTITY SURVEYOR, Grade III/IV/V. Salary £525 to £645 per annum, commencing at £525, and National Conditions of Service.

Qualifications: R.I.C.S. Intermediate Examination standard. Experienced in abstracting and billing, measuring on site, preparation of final accounts, and taking off quantities for small building works.

(*b*) JUNIOR ARCHITECT, Grade I/II. Salary £465 to £540 per annum, commencing at £465, and National Conditions of Service.

Applicants should be not less than 21 years of age.

Qualifications: Preliminary R.I.B.A., and experience in general architectural work.

Permanent Staff appointments, subject to one month's notice and pensionable subject to medical examination.

Forms of application obtainable from, and to be returned to, the Borough Architect, The Council House, not later than 7th September, 1953.

Canvassing disqualifies.

E. H. NICHOLS,
Town Clerk.
9387

CITY OF LEICESTER.
CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of ASSISTANT ARCHITECT, A.P.T. V, £595—£645 per annum.

Applicants must be Registered Architects and preference will be given to those holding a recognised Architectural qualification. The appointment will be subject to the National Scheme of Conditions of Service and to the passing of a medical examination.

Applications stating age, experience, qualifications, past and present appointments, with present salary, together with copies of two recent testimonials, should be sent to the undersigned not later than Saturday, 5th September, 1953.

J. H. LLOYD OWEN,
City Architect.
10, Loseby Lane, Leicester. 9397

BIRMINGHAM AND DISTRICT SUB-AREA require an ENGINEERING DRAUGHTSMAN in the Architectural and Constructional Section of the Engineer's Department. Should be capable of assisting in the design of new buildings and alterations to existing buildings, and preparation of working drawings. Salary £433—£567 per annum, according to experience (N.J.B. Schedule "D," Grade 6) superannuable.

Apply within fourteen days, stating age, experience, present salary and position, to Emil Braathen, Manager, Midlands Electricity Board, Birmingham and District Sub-Area, 14, Dale End, Birmingham, 4. 9389

CORPORATION OF LONDON.
APPOINTMENT OF ARCHITECTURAL ASSISTANTS AUXILIARY STAFF.

Applications are invited for the appointment of an Assistant within the range of the General Grade scale (£418 by £20 to £586) including present cost-of-living addition, the commencing salary related to scale by age, minimum age of 23 years, maximum salary at 30 years.

Applicants should have had good office experience and have passed or be preparing for Intermediate R.I.B.A. or R.I.C.S. Examinations.

The appointed officer will require to pass a medical examination and to contribute to the Corporation's Superannuation Fund as maintained under the City of London (Various Powers) Acts, 1931 and 1950.

Applications, giving full personal details, particulars of qualifications, experience, age, past and present appointments and the names of two persons to whom reference may be made, should be sent to the City Surveyor, Corporation of London, 55/61, Moorgate, E.C.2, not later than (one week after date of insertion) Saturday, 29th August, 1953. 9430

WAR DEPARTMENT.
C.R.E. SHOEBURYNESS.
ARCHITECTURAL ASSISTANTS.

Two vacancies exist in the establishment of the Commander, Royal Engineers, at Shoeburyness for Temporary Architectural Assistants.

Candidates should have experience of simple R.C. design and be capable of carrying out simple engineering surveys.

Applications are invited from persons between the ages of 21 and 50 years.

Salaries payable will be from £340 p.a. at age 21 to £480 p.a. at age 28 or over, subject to deduction for provincial service ranging from £20 p.a. to £28 a year at the maximum. All basic salaries carry at present an addition of 10 per cent. cost of living bonus.

Letters of application giving details of experience and stating age and qualifications should be addressed within 14 days of the date of this advertisement to

The C.R.E.,
Old Ranges,
Shoeburyness, Essex. 9414

DRAUGHTSMAN at BRIXTON SCHOOL OF BUILDING, Ferndale Road, S.W.4. With exp. approaching inter, R.I.B.A.—able to prepare working drawings from prelim. sketches. Salary 66s. rising annually by 9s. to 183s., sub. by 6s. to 201s. Commencing rate on scale appropriate to quals., exp. and prof. 38½-hour week. Particulars and application form from Secretary, returnable within 14 days. 9401

THE URBAN DISTRICT COUNCIL OF KEYNSHAM.
APPOINTMENT OF ASSISTANT QUANTITY SURVEYOR—A.P.T. V.

Applications are invited for the appointment of Assistant Quantity Surveyor in the Engineer and Surveyor's Department, at a salary in accordance with A.P.T. Grade V (£595—£645).

Applicants, who must have the intermediate R.I.C.S. Certificate should have had experience in taking off building quantities for housing and other building works.

The appointment, which will be to the permanent staff, will be subject to one month's notice on either side, to the Local Government Superannuation Act, 1937, and to the submission of a satisfactory medical report.

Applications, stating age, qualifications and particulars of experience, and the names of two persons to whom reference may be made should reach the undersigned not later than the first post on Monday, 31st August, 1953.

GEO. R. ASHTON,
Clerk of the Council.

Council Offices,
Keynsham, Bristol.
August, 1953. 9425

CAMBRIDGESHIRE COUNTY COUNCIL.
ARCHITECTURAL ASSISTANTS.

Applications are invited for the following appointments:—

(*a*) One A.P.T. Grade VII, £710—£25—£785.
(*b*) Two A.P.T. Grade IV, £555—£15—£600.

Applicants for (*a*) should be qualified Members of the Royal Institute of British Architects, and should have a wide knowledge and experience in design and construction of all types of public buildings, and to be able to take charge with the minimum amount of supervision.

Applicants for (*b*) should have passed the Royal Institute of British Architect's Intermediate Examination, or its equivalent at one of the recognised Schools of Architecture, and have worked in an Architect's office for a period of two years, and should have a good knowledge of construction and details, and be able to prepare drawings from preliminary sketches.

Applications, stating which appointment is being applied for, giving age, qualifications and experience, accompanied by one recent testimonial, and the names and addresses of two referees, should be sent to the Clerk of the County Council, Shire Hall, Cambridge, not later than 12th September, 1953.

The appointments to be subject to one month's notice on either side, and to the provisions of the Local Government Superannuation Acts.

The selected candidates will each be required to pass a medical examination before appointment.

CHARLES PHYTHIAN,
Clerk of the County Council.

Shire Hall, Cambridge.
20th August, 1953. 9431

HARLOW DEVELOPMENT CORPORATION.
APPOINTMENT OF SENIOR ARCHITECT GRADE II (£1,100 by £6 by £70 by £70 to £1,300)

Applications are invited for the post of Senior Architect in the Architect Planner's Department (Frederick Gibberd, F.R.I.B.A., M.T.P.I.) to work under the direction of the Executive Architect (Victor Hamnett, B.Sc., A.R.I.B.A., A.M.T.P.I., A.R.I.C.S.).

Candidates must be qualified and have had considerable experience in controlling and supervising architectural work and qualified staff engaged thereon.

The appointment will be made under the terms of the Corporation's Conditions of Service which are similar to those of the Technical and Professional Grades of Local Authorities, etc., Staffs and will in particular involve a contribution to an approved Superannuation Fund. Housing accommodation may be made available to the the successful candidate.

Applications, giving full details of experience and qualifications together with the names of two referees should be addressed to General Manager, Terlings, Gilston, Harlow, Essex, to reach him within 14 days of the publication of this advertisement. 9434

OXFORDSHIRE COUNTY COUNCIL.

ASSISTANT QUANTITY SURVEYOR, Salary A.P. & T. Grade V (£595—£645).

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

Applications are invited for the above posts in the County Architect's Department. Applicants should have experience in the preparation of Bills of Quantities, Valuations and Final Accounts, and preference will be given to Members of the Royal Institute of Chartered Surveyors (Quantities Division). The appointments are subject to the provisions of the Local Government Superannuation Act, 1937, and to medical examination.

Applications stating age, experience, qualifications and the names of two referees, are to be sent to the County Architect, Park End Street Offices, Oxford, not later than the 12th September, 1953.

GERALD GALE BURKITT,
Clerk of the Council.

County Hall, Oxford. 9433

ALDRIDGE URBAN DISTRICT COUNCIL.
APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited at a salary scale in A.P.T. Grade III-V according to qualifications and experience.

The appointment is subject to a medical examination and to one month's notice on either side.

Housing accommodation will be provided, if necessary, and reasonable removal expenses paid.

Names of two referees required.

Closing date, Monday, 14th September, 1953.

H. G. G. NICHOLS,
Clerk to the Council.

Council House,
Aldridge, Staffs.
21st August, 1953. 9432

WARWICKSHIRE COUNTY COUNCIL.
COUNTY PLANNING DEPARTMENT.

Applications are invited for the post of PLANNING ASSISTANT. GRADE A.P.T., V. (£595—£645 p.a.)

The person appointed will be engaged on the Development Plan and will be one of a team dealing with part of the County. He will be stationed at Warwick and preferably should be an Associate Member of the Town Planning Institute with sound experience of Development Plan work.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination. He will also be required to provide and maintain a motor car for which travelling and subsistence allowances will be paid in accordance with the National Scale.

Applications, together with the names and addresses of two persons to whom reference may be made, should be forwarded to J. J. Brooks, County Planning Officer, Northgate, Warwick, not later than Friday, 11th September, 1953.

Canvassing directly or indirectly will be a disqualification.

L. EDGAR STEPHENS,
Clerk of the Council.
9429

Architectural Appointments Vacant

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

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

ILFORD, LIMITED, require Architectural Assistants with at least two years' office experience. Minimum standard R.I.B.A., Intermediate. Five day working week with pension scheme and staff canteen in operation. Applications in writing, giving age, training, and experience to Chief Staff Architect, Ilford Limited, Romford, Essex. 9182

ASSISTANT ARCHITECT, preferably school trained, three to five years' office experience, wanted in London office. Write giving details of experience and salary required to Box 9438.

IMPORTANT Public Company with Branches in various parts of the country requires fully qualified Architect. Applicants must be capable of accepting all responsibility for the preparation and execution of plans for extensions, electrical and heating installations and be able to supervise contractors and maintenance staff in alterations, decorating, etc. Appointment offers splendid scope and attractive remuneration for young professional man who is conscientious and industrious, and possesses practical knowledge of estimating and property valuation. State all details of previous appointments, age and salary desired. Box 9359.

ASSISTANT required for large general Architectural Practice with offices in Maidenhead. Some experience in specification writing essential. Salary £300 to £500, according to experience. Box 8953.

ARCHITECTURAL ASSISTANT required immediately for South Coast Brewery. Must be good draughtsman and have sound knowledge of building construction and specification writing. Salary £400—£600 p.a. according to age and experience. Apply Box 9415.

SENIOR ARCHITECT required by large industrial organisation. Must be A.R.I.B.A. with extensive experience of factory buildings. The appointment is pensionable and carries a good salary. Applicants should be between the ages of 30—45. Please reply giving full details of experience, etc., and salary required to Box (A 0843) AC 2185. A.K. Advg., 212a, Shaftesbury Avenue, W.C.2. 9417

ARCHITECT'S ASSISTANT (final standard) required by London firm of Consulting Engineers and Architects with mainly industrial practice. Will be expected to work independently after a few months experience. Apply to Mark Jennings, Son & Partners, 116, Victoria Street, S.W.1. 9416

ASSISTANT required, Intermediate Standard. Five-day week. Salary £400—£500 according to experience. Telephone or write Murray, Delves, Murray & Atkins, 14, Chantrey House, Buckingham Palace Road, S.W.1. SLOane 0397. 9420

LONDON ARCHITECT requires group of 2 freelance assistants to undertake the urgent preparation of working drawings for medium sized building project. Experience and first-rate draughtsmanship essential. Box 9421.

ARCHITECTURAL ASSISTANT required in Guildford Office, qualified, preferably experienced in school work, capable of preparing working drawings and details, thorough knowledge of design and construction essential. Salary £500-£750 according to ability and experience. Box 9411.

ARCHITECTS in S.-W. Surrey require Assistant (Intermediate Standard) for sketches, working drawings, specifications and some site supervision. Salary £350 or more according to qualifications and experience. Further particulars on application to Box 9410.

JUNIOR ARCHITECTURAL ASSISTANT required, some office experience essential. State experience and salary required. Deane Skurray, 22, Minster Street, Reading. 9409

ASSISTANT, intermediate standard, required. Service flat—3 bedrooms—available for immediate occupation. Full particulars and salary required to Messrs. J. R. Wetherell and Lamb, Chartered Architects, 42, Victoria Road, Darlington, Co. Durham. 9406

ARCHITECTURAL ASSISTANTS, Senior and Junior, required in Architects' office, Victoria district. To work under supervision of Principals. Flats, housing and church work. Please write stating experience, qualifications and salary required. Box 9405.

ARCHITECTURAL DRAUGHTSMEN required, preferably with experience in precast concrete and reconstructed stone. Apply in confidence with details of previous experience and copies of references to Managing Director, The Croft Granite, Brick & Concrete Co., Ltd., Croft, Leics. 9398

NUFFIELD FOUNDATION. Applications are invited for the temporary post of Senior Assistant Architect on the staff of the Nuffield Foundation. Candidates should be Associates of the Royal Institute of British Architects and have had some experience since qualifying. The selected candidate will be appointed at a commencing salary within the scale £900 by £30 to £1,200 p.a. according to age and qualifications, and will be a member of a research team engaged, amongst other projects, on the study of hospital buildings. He will be expected to work at the Building Research Station, Watford.

Applications giving age, qualifications and experience should be sent to The Secretary, The Nuffield Foundation, Nuffield Lodge, Regent's Park, London, N.W.1, not later than 2nd September. 9399

ARCHITECTURAL ASSISTANT, Intermediate standard, General Practice, Scarborough. Apply stating age, previous office experience, salary. Box 9402.

ARCHITECTURAL ASSISTANT required in country practice in North Essex. Salary £350. Write stating experience, etc., to Box 9436.

IMPERIAL CHEMICAL INDUSTRIES, LIMITED, General Chemicals Division, invite applications from qualified Architects for the post of Assistant Architect in the Chief Engineer's Department, Runcorn. Applicants should be associates of the R.I.B.A. and have had experience in the design and construction of factory amenities, laboratories and offices. The successful applicant will be required to act as Section Leader and take charge of a section of the Civil Drawing Office under the Architect. The position is of a permanent nature subject to the Company's Superannuation Fund and offers good prospects. Applications should be sent to the following address by not later than 11th September, stating age, qualifications, experience and salary required: The Staff Manager, Imperial Chemical Industries, Limited, General Chemicals Division, Cunard Building, Liverpool, 3. 9435

Architectural Appointments Wanted

CHARTERED ARCHITECT (Canadian), age 36, seeks responsible position. 8 years' experience (4 years as Chief Assistant). Box 747.

A.R.I.B.A., 3 years' experience, desires position in small contemporary office, where hard work and enthusiasm are welcomed. 5-day week. Salary £800. Box 746.

A.R.I.B.A., (26), single, seeks progressive position in Birmingham. Five years' varied experience including specifications, surveys, levelling and site supervision. Box 748.

ARCHITECT, (40), Colonial Office appointment, varied experience domestic architecture and Municipal work with wide experience gained from 5 years in the Colonies, seeks responsible position, preferably in Southern England. Box 9396.

ARCHITECTURAL ASSISTANT, (21), requires position on South Coast; 4 years' office experience; neat draughtsman; good references. Edward W. Cave, 84, Yorkland Avenue, Welling, Kent. 749

STUDENT R.I.B.A., Final next July, 3 years' experience in good London office, requires position in small private practice. Traditional work. Within 100 miles of London. Box 750.

ASSOCIATE, B.A., (43), experienced domestic/agricultural work, seeks position leading to partnership in rural practice, southern counties, preferably Sussex. Box 9400.

ARCHITECTURAL ASSISTANT and Sculptor, 5½ years' varied experience, seeks position where integrity, enthusiasm, and interest are not stifled. Box 9422.

SENIOR ASSISTANT, school trained, 23 years' experience in the design and construction of domestic buildings, large industrial projects, factories, research laboratories, etc., able to control works throughout, supervision of draughtsmen and site works, seeks responsible senior position, salary £750. Box 749

F.R.I.B.A. giving up practice in London due to lack of work seeks engagement as a Senior Assistant for all classes of large works. Drawings, specifications, supervision of works. Large experience in war damage claims. Box 751.

REMUNERATIVE post required in London by young Associate; married; five years' school training, three years' experience in small practices engaged with general work and private estate development. Box 752.

SENIOR ASSISTANT, (A) Cert. T.P., 5 years' varied experience, requires post in London office, preferably, but not essentially, with opportunities for Town Planning. Box 9408.

Other Appointments Vacant

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

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

REQUIRED. — DRAWING OFFICE MANAGER AND TECHNICAL EDITOR for Architectural Magazine. Applicants must be first-class draughtsmen, possess a sound knowledge of building practice, and be interested in the preparation of technical data; salary according to experience. Applications in writing only, to the Organising Secretary, The Architectural Press, Ltd., 9-13, Queen Anne's Gate, London, S.W.1. 9158

DESIGNER-DRAUGHTSMAN required to prepare interior colour schemes and perspective drawings. Also to assist in exhibition stand design, working drawings and specifications. Fullest personal details and past experience, with salary required to: The Manager, S.A.C. Division, Arthur Sanderson & Sons Ltd., Berners Street, W.1. 9424

EDITOR required, part-time, for Architectural Magazine. Someone between 25 and 35 years of age. Write stating architectural or other qualifications and experience. Box 9413.

MANAGER required for new wood block flooring factory in South of England, preferably with knowledge of selection, storage, kilning and preparation of timber and also wood working machinery for this type of production. The position will entail the management of the processing from receipt of timber to the packing of the finished flooring for distribution. Applicants must have experience of works management, be able to handle labour, and should be over 30 years of age. Will be required to join Pension Scheme. Apply giving full details of age, experience and salary required to Box 9427.

QUALIFIED STRUCTURAL ENGINEERS, thoroughly experienced R.C. framed structures, and having good personality, for East Africa. Brief personal and professional details to Box 38/2, Overseas Technical Service, 5, Welldon Crescent, Harrow. 9419

THE BRITISH OXYGEN COMPANY LIMITED have a vacancy for a senior female Tracer at their Head Office in the West End of London. Applicants should have at least six years' practical experience. Please reply giving full details of age, qualifications and experience to A 0837, British Oxygen Company Limited, Bridgewater House, Cleveland Row, St. James's, London, S.W.1. 9418

Partnerships

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

A.R.I.B.A., A.M.T.P.I., (32), seeks partnership with progressive firm, preferably in Yorkshire, though not essential. Box 9394.

CONSULTING CIVIL ENGINEER, with own staff and large clientel, requires partnership with Architect. Box 9437.

For Sale or Wanted

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

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

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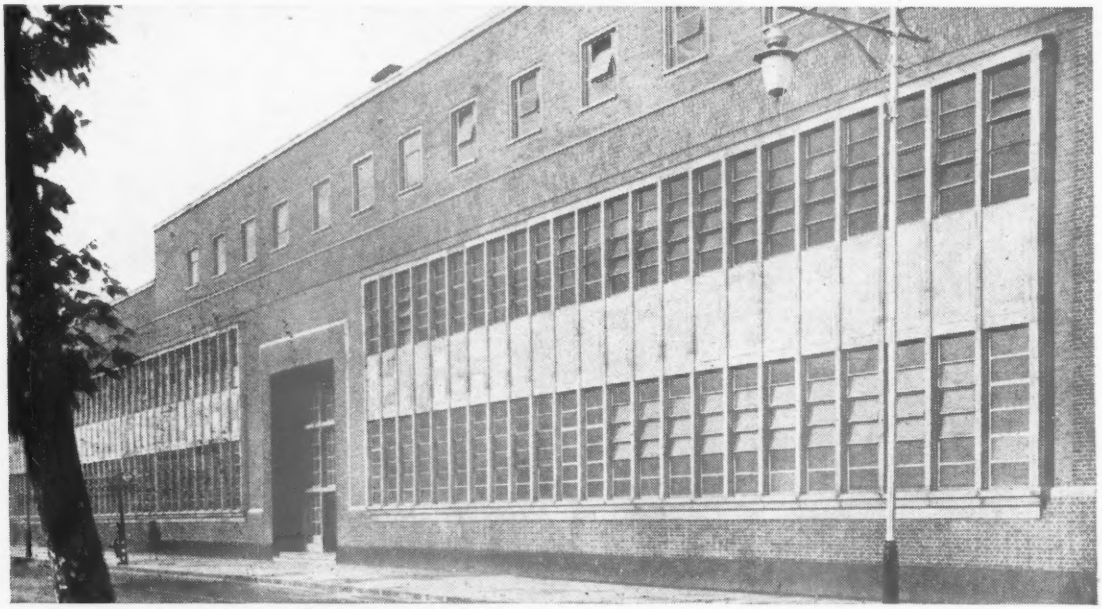

South-west elevation, featuring artificial stone panelling and mullions

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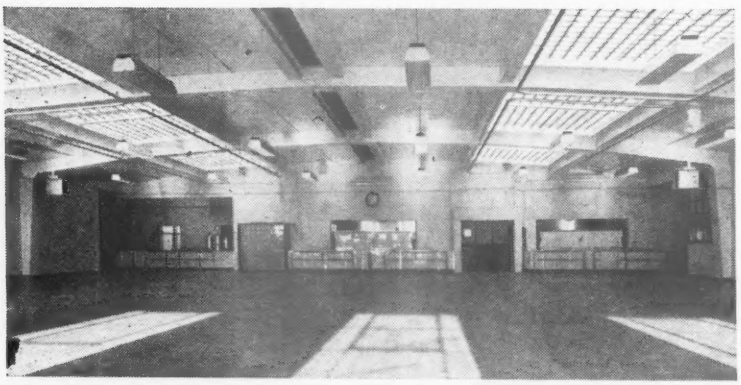

Main hall and works canteen, showing service counter. The floor is of Rhodesian teak

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