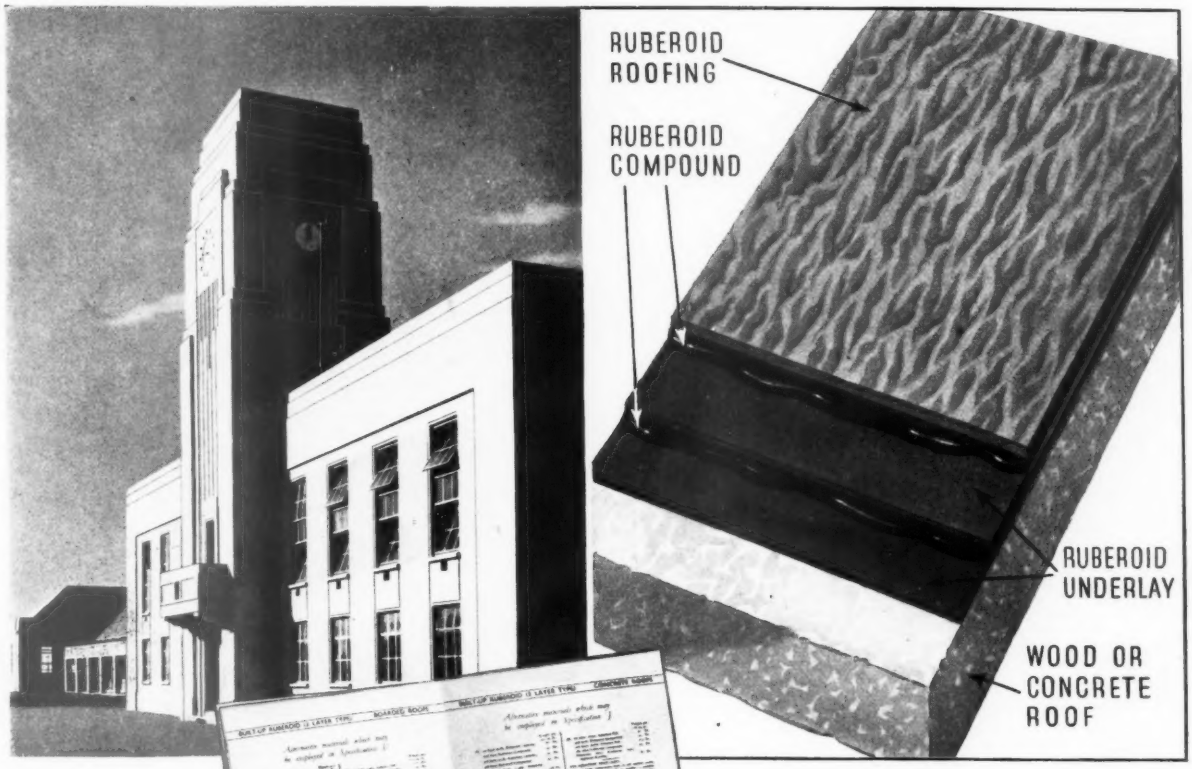


County School,
Weston-super-Mare.
Architect:
A. J. Toomer, Esq.,
F.R.I.B.A., Taunton.

THE RUBEROID BUILT-UP ROOF

A Ruberoid Built-up Roof consists of two or more layers of Ruberoid underlay, bedded together and surfaced with either Ruberoid Standard Roofing or Ruberoid Astos Asbestos Roofing. It can be laid on either boarded or concrete roofs, whether flat, pitched or curved. It is a permanent roof which will withstand all weather conditions

An attractive alternative is provided by a finishing layer of Ruberoid Slate Surfaced Roofing in red, green or blue. These colours are particularly soft and pleasant, being formed of natural crushed slate applied to the surface during manufacture

Ruberoid Contract Departments located in London, Birmingham, Manchester, Newcastle, Edinburgh, Dublin and Belfast, promptly undertake work on any scale and in any part of the country. Estimates sent on receipt of particulars

RUBEROID ROOFING

THE RUBEROID CO., LTD., 1, LINCOLN HOUSE, HIGH HOLBORN, LONDON, W.C.1

ARCHITECTS AND ENGINEERS ARE INVITED TO WRITE FOR A COPY OF THIS RUBEROID PUBLICATION No. 326 ENTITLED "STANDARD SPECIFICATIONS FOR RUBEROID ROOFS."

THE ARCHITECTS' JOURNAL

THE ARCHITECTS' JOURNAL
WITH WHICH IS INCORPORATED THE BUILDERS' JOURNAL AND THE ARCHITECTURAL ENGINEER IS PUBLISHED EVERY THURSDAY BY THE ARCHITECTURAL PRESS (PUBLISHERS OF THE ARCHITECTS' JOURNAL, THE ARCHITECTURAL REVIEW, SPECIFICATION, AND WHO'S WHO IN ARCHITECTURE) FROM 45 THE AVENUE, CHEAM, SURREY.

*

THE ANNUAL SUBSCRIPTION RATES ARE AS FOLLOWS :
BY POST IN THE UNITED KINGDOM.... £1 3 10
BY POST TO CANADA £1 3 10
BY POST ELSEWHERE ABROAD..... £1 8 6
SPECIAL COMBINED RATE FOR SUBSCRIBERS TAKING BOTH THE ARCHITECTURAL REVIEW AND THE ARCHITECTS' JOURNAL : INLAND £2 6s. ; ABROAD £2 10s.
SUBSCRIPTIONS MAY BE BOOKED AT ALL NEWSAGENTS

*

SINGLE COPIES, SIXPENCE ; POST FREE, EIGHTPENCE. SPECIAL NUMBERS ARE INCLUDED IN SUBSCRIPTION ; SINGLE COPIES, ONE SHILLING ; POST FREE, 1S. 3D. BACK NUMBERS MORE THAN TWELVE MONTHS OLD (WHEN AVAILABLE), DOUBLE PRICE.

*

SUBSCRIBERS CAN HAVE THEIR VOLUMES BOUND COMPLETE WITH INDEX, IN CLOTH CASES, AT A COST OF 10S. EACH. CARRIAGE 1S. EXTRA.

*

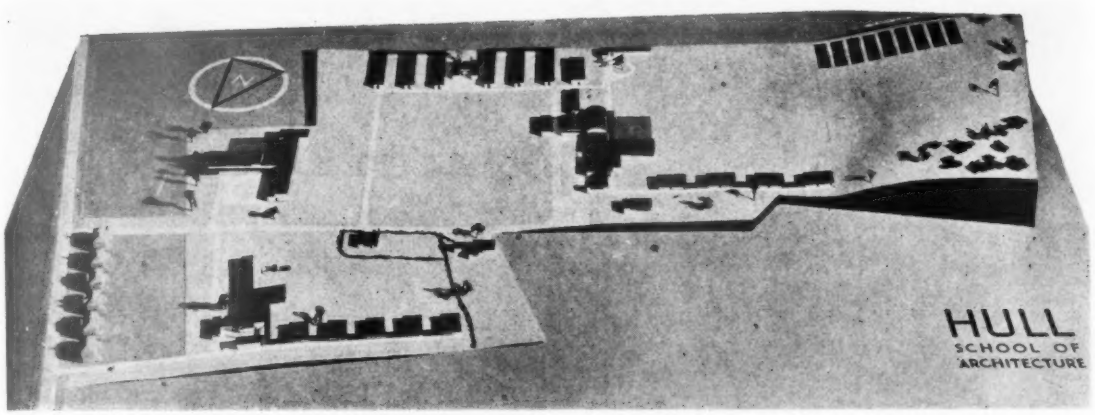
45 The Avenue, Cheam, Surrey
TELEPHONE : VIGILANT 0087-9 (3 LINES)

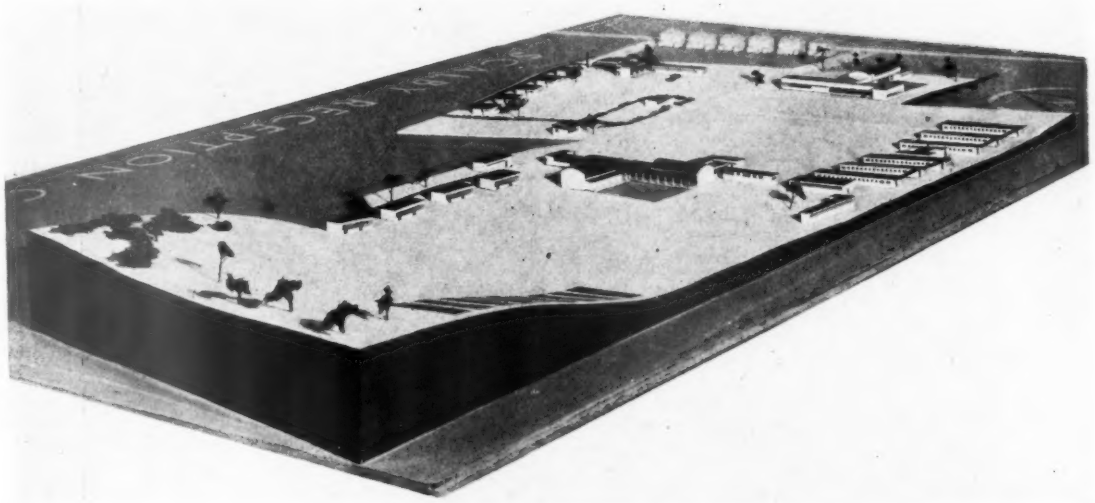
The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

THURSDAY, APRIL 18, 1940. NUMBER 2361 : VOLUME 91

PRINCIPAL CONTENTS

HULL STUDENTS PLAN NEW SCHOOL





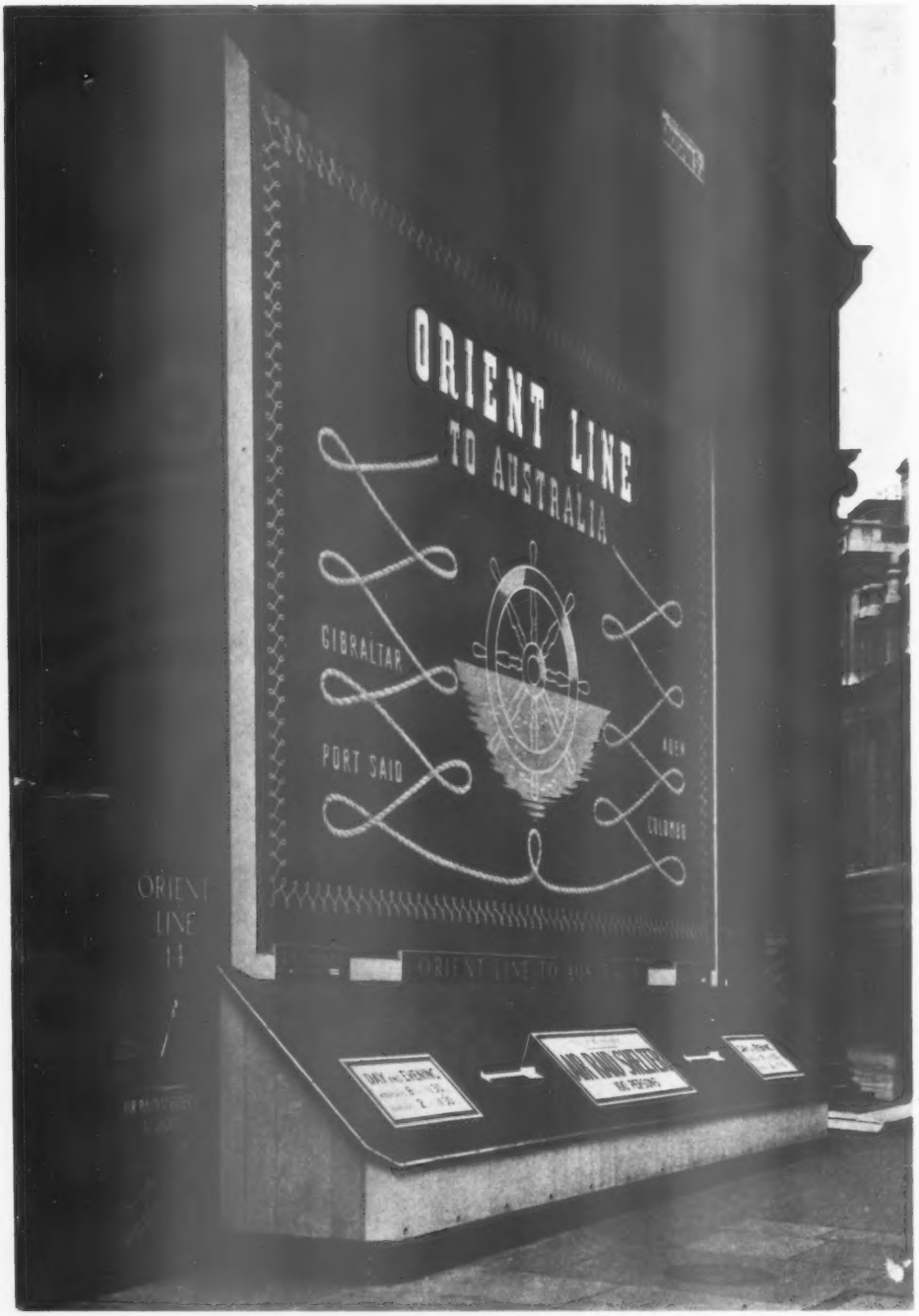
TWELVE students of architecture at Hull have planned a £75,000 school camp, nursery school and community centre for 300 children, to be built at Scalby, Yorks.

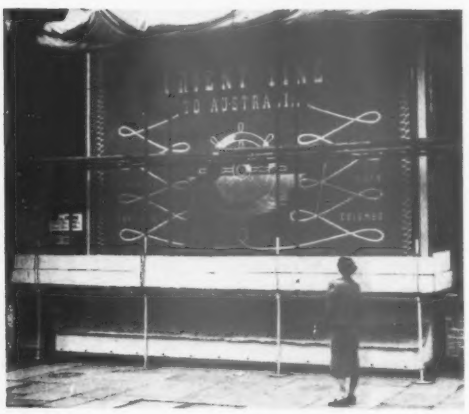
The prime purpose of the plan is to provide accommodation for evacuated children and their mothers, but the scheme will also be suitable as an educational and social centre in peace time.

Scalby U.D.C.'s Surveyor's Department assisted in the selection of the site, which stands on undulating ground liberally studded with trees. It consists of 30 acres of land. Students, under the leadership of Mr. Max Lock, Principal of the Hull College of Art School of Architecture, have included in their scheme a social centre. In addition, there will be a school building, dormitory block and residential nursery with chalets. Children up to the age of 14 are catered for, and those below five years will be accompanied by their mothers.

The idea was first conceived when Mr. Lock and his students were evacuated to Scarborough in the early days of the war. They sought for some form of constructive work and decided that the problems of evacuation could be solved by creating a reception centre of special design. Their first plans were for timber buildings, but had to be rejected because of timber shortage. Steel was also considered, but had to be rejected for a similar reason. Finally, drawings were prepared for reinforced concrete framed buildings with precast concrete slab walls.

A large model has been prepared of the complete scheme, which, together with the drawings, forms the main feature at an exhibition now being held at the School of Architecture.



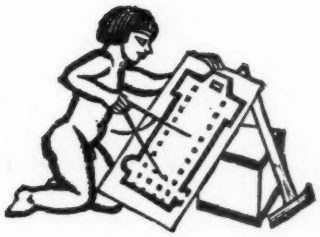


WARTIME WINDOW

Since the outbreak of war it has been obvious that A.R.P. screens and barriers in front of shops could be used as backgrounds for decorative schemes at a very low cost, and an exhibition to encourage the execution of such designs was held at the Building Centre earlier this year.

The design illustrated above was the first to be commissioned as a result of the Exhibition. It was designed and painted by John Hutton.

The general shape of the screen and casing below it was decided by the clients. The colour scheme is monastral blue, pink and white, and lettering is raised half an inch. The painting is on hardboard backed by wood boarding.



MR. J. M. RICHARDS
AND THE PENGUINS

A FORTNIGHT ago a book on modern architecture appeared in the ranks of the famous *Penguin* books,* and no doubt before many weeks are passed most architects will have put down their sixpences and carried off their copies.

There is, however, a lot more in this matter for architects than the merits of Mr. Richards' book and its encouraging price.

Its publication at this particular time is remarkable in the world of publishing. Architects have little interest in publishing; and in general there is no reason why they should. But this is a special case. *An Introduction to Modern Architecture* is important for architects for the same reason that its publication is of interest to publishers. It challenges simultaneously both publishers' ideas of how certain subjects should be presented to the public and architects' ideas of what the public is interested in—or, more exactly, is *not* interested in.

It is therefore well worth while for architects to turn over in their minds one or two circumstances attending this architectural *Penguin's* appearance.

First, the publication of a sixpenny book on architecture in the middle of a great war defies two long-established publishing principles: that the public for books on music, architecture, painting, ballet and other arts is limited to about ten thousand people; and that the sales of such books must fall off in wartime.

Secondly, it defies the belief of architects that only a minute number of the public have the slightest interest in architecture; and that the architectural enthusiasm of these rare persons is almost wholly antiquarian, sentimental or associative. Architects would probably estimate the sale to the lay public of a book on modern architecture at under one thousand copies.

Because of this common belief among architects, it would be one of the first concerns of the profession's Public Relations Department—did it possess one—to watch the sales of Mr. Richards' book with the utmost attention. For the *Penguin* company have shown by its publication that they believe architects to be entirely wrong on this intimate question of public interest in their own calling; and the publishing world at least has learnt during the last few years not to be too hasty in saying No when *Penguin* says Yes.

It is of course open to architects to maintain that they are not publishers, that they have had good reason to know the measure of public interest in modern architecture or any architecture, and that they prefer to wait and see.

This attitude is unchallengeable. But it would be advisable for architects to recall, if only in order to be more ready to retreat with dignity, what happened to the *Penguin* on "Ballet." The art of ballet might seem to rival even modern architecture in appealing only to the interest of the cultured few: yet the copies sold of the *Penguin* on "Ballet" are now well up in the second hundred thousand.

The significance of this goes beyond the publishing world. It proves that somewhere in this country there are a great many people who want to master the elements of the various arts.

The lesson to architects and architecture of this newly discovered public needs no stressing. The development of a good architecture, as Mr. Richards makes clear, is bound to be dependent on patrons who are interested in architecture: who understand both the problems and the aims of architects sufficiently well to be able to judge the results with intelligence. Today the patrons of architecture are not the wealthy individuals for whom the few thousands of old style books on art were published. They are, in part at least, the multitude who are buying the new books on art: the multitude who want to learn.

The extent of this book's sales is therefore of importance to the profession. For if they are large, it may prove that architectural propaganda has been in the past badly handled, that it is not necessary for the minimum number of new ideas to be carefully wrapped up in familiar and sentimental associations. It may even prove that architects cannot expect from the public an intelligent interest in what architecture is trying to do until architects themselves show that they know.

* *An Introduction to Modern Architecture.* By J. M. Richards. Pelican Series. Penguin Books, Ltd. Price 6d. Mr. Richards is the Assistant Editor of the most celebrated of all architectural publications, *The Architectural Review*, and as the jacket of the Penguin hastens to tell you, has a wife and two children.

The Architects' Journal
45 The Avenue, Cheam, Surrey
Telephone: Vigilant 0087-9.

NOTES & TOPICS

FUTURE APPEALS

THE invasion of Norway and Denmark will presumably lead to a reconsideration of B.I.N.C.'s plans for improving the state of the building industry. It is certainly vital that it should do so.

*

The position ten days ago was clear. The Government, generally satisfied with the rate of progress in constructing buildings for war purposes, declined either to alter its methods or to spend time in planning ahead. The industry's main efforts were therefore confined to a general appeal for more work: though it had also secured a slightly wider distribution of war building contracts.

*

The position is now changed. Not only is an appeal to M.P.s for more work bound to make little impression on ears preoccupied by military events, but the industry itself may feel disinclined to put behind so self-interested an appeal the force which alone can ensure any success.

*

It is therefore plain that in the coming months neither the Government nor M.P.s will do anything purely for the sake of the building industry—however big and hard-pressed it may be. They will only take action which will help the industry if they are convinced it is also necessary for the efficient prosecution of the war.

*

The industry must therefore convince itself that any future suggestions it makes are necessary for the country as a whole—before it makes them. If it cannot convince itself it has little hope of convincing anyone else.

*

Two such suggestions are: (1) The allocation of war building or other work in such a manner that a fixed proportion—one quarter or one third—of the building firms in each county are enabled to keep their stocks and their operatives at full strength as an A.R.P. measure; (2) the preparation of an estimate of the amount and type of building materials which will be required each year for war building purposes, in order that manufacturers should have some indication of the output which they should maintain.

*

For suggestions of this kind the vigorous support of M.P.s may be obtained in coming months. But no sympathy can be expected for a mere hard-luck story: nor for one based on what will happen after the war if this or that is not done now.

THE FINNISH SCENE

I mentioned on March 14 that Mr. Rodney Tatchell, of the firm of Tatchell and Wilson, had gone to Finland as a member of a fire-fighting crew of the London Fire Service.

*

As I said the following week, the Russo-Finnish war had ended by the time the crew reached Helsinki: but its members volunteered to stay on, partly to help in the work of reconstruction and partly to make a more thorough study of aerial bombing from the point of view of fire fighting than would have been possible while air raids were actually taking place.

*

I have now received a letter from Mr. Tatchell, which—at the price of great delay—has survived many Censors. Here are some extracts:—

We have just returned to Helsinki after spending a few days at Tamisaari (the last town before Hangö) helping with the evacuation.

Here we spent several strenuous days unloading lorries and clearing snow to make dumping spaces. It was a heartrending business—handling all the odds and ends of homes torn up by the roots at a moment's notice. The work went on with feverish but systematic speed, since, as usual, the invaders had put forward the time of occupation.

*

Throughout our days in Tamisaari we lived—and were admirably sustained—on a diet of porridge, milk, and extremely hard bread: that being our breakfast which was doled out at a central canteen in the local school between 11 a.m. and 1 p.m. Our "mid-day" meal was the same except that there was stew instead of porridge, and it was available from 5 p.m. to 7 p.m. It seems an excellent diet for hard work in a cold atmosphere, and one of which one does not seem to get tired.

*

We have had plenty of opportunity of examining the results of both high explosive and incendiary bombs—and also the obviously haphazard aim of the Russians.

*

Tamisaari, for instance, had no anti-aircraft defence save for three Lewis guns mounted on the top of the water tower, which means, of course, that there was practically nothing to prevent low-flying to ensure accuracy of aim. Nevertheless, the railway and station had not been hit once, the docks had sustained no more than one or two hits on warehouses, and as usual most of the bombs fell on the wooden dwellings of the civilians.

*

Even so, considering the huge number of bombs, and especially fire-bombs, dropped, surprisingly few houses were completely destroyed. This was probably due to the typically Finnish practice of posting a member of the household on the roof of each building to pick up and throw off any incendiary bomb which landed there before the electron casing had begun to burn. This is apparently possible if an agile, resolute person picks up the bomb by the fins within five-fifteen seconds after it lands.

*

In view of the fact that 99 per cent. of the buildings in Tamisaari are of timber construction it is amazing that under normal peace-time conditions the volunteer fire brigade is not usually called out more than two or three times in the year, and the local

" Brandtmeister " informed me that it is ten years since a building was destroyed by fire in peace-time. It is compulsory for every building to be provided with an external ladder from the ground to the roof ridge—usually to a point near the chimney stack—and alongside this ladder is provided a long hook (or " preventer " as it would be called in the fire brigade), so that the householder himself can do a lot towards putting out in its early stages any fire that may be caused by sparks from the chimney.

*

In many cases of wooden buildings which had been set alight by fire-bombs, the fire brigade had achieved some remarkable " stops " ; not only in preventing the fire from spreading to other buildings, but in actually saving large portions of the burning building. The chief difficulty in fighting these fires during the recent low temperatures appeared to be the freezing up of the hose. Even with water passing through under pressure the water channels would gradually close up—the ice building up on the inside of the hose rather as a pipe becomes furred up. The loss of hose owing to freezing has, too, been terrific. Although long carts are used to move lengths of frozen hose, it is of course almost impossible to avoid cracking the rubber lining made brittle by frost, and even unlined canvas hose suffers to almost the same extent.

FRANK PICK TO RETIRE

It was announced last week that Mr. Frank Pick, Vice-Chairman of London Transport, is to retire in May.

*

For over thirty years Mr. Pick has been dealing with transport—and chiefly with its organization on a grand scale. But his retirement will be deplored by all designers and artists, and especially by architects, for other reasons.

*

He was one of the first to appreciate the qualities and uses of modern architecture, and to him is due the determination first of the Underground and then of London Transport to set a high standard of design in everything that belonged to it : its stations, trains, buses, street signs, shelters, and publicity. It is no exaggeration to say that London Transport's influence has improved both industrial design and commercial art throughout Britain by several hundred per cent.

*

Mr. Pick is also keenly interested in national planning and was one of the board of the A.A. School of Planning. But he is a terror to those enthusiastic advocates of super-planning who are apt to fill in disconcerting gaps in their arguments with such words as " organic " and " integrate " : and those who believe passionately in decanting all large cities into satellite Garden Cities of 50,000 inhabitants have little hope of convincing any audience if Mr. Pick is present.

*

We will all hope that the Government appointment which it is rumoured will be offered to him whenever he is ready to take it will be commensurate with his tremendous achievement.

WAR ARTISTS

Mr. Raymond McGrath is among those artists who have been officially selected to record the war. His field will be aircraft manufacture, a subject particularly suited to his technical knowledge and precise draughtsmanship.

*

According to the list published by the Ministry of Information, all branches of the war effort are to be recorded. Among others, A.R.P. will be in the imaginative hands of Robert Medley and Vivian Pitchforth ; Mr. Anthony Gross, whose architectural drawings were reviewed recently by Astragal, is to deal with W.O. activities ; and the navy will be portrayed by John Nash and Eric Ravilious.

These artists will work on commissions, but full time salaried " officers " have also been appointed. Doyen of these is Sir Muirhead Bone, whose romantic charcoal drawings of cranes and shipyards will be remembered from the last war, and who once more is posted to the Navy as temporary Major of Marines. Mr. Paul Nash is to search for " objets trouvés " in the Air Ministry, and official Army portraits will be dashed off by Mr. R. G. Eves, one of the few Academicians in the list.

*

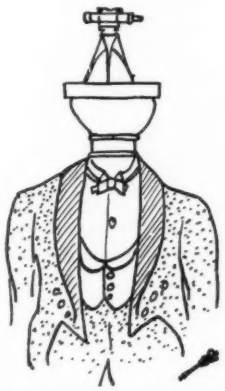
Other military activities will be divided among a very strong team consisting of Mr. Barnett Freedman, Mr. Edward Bawden, and Mr. Edward Ardizzone, the illustrator. These are all accomplished and original draughtsmen, with reputations to lose as well as embellish. Their advertising work has also shown that they possess a sense of humour. It will be interesting to see how their work, hitherto noted more perhaps for sensitive charm and lightness of touch than for fierce vigour, will react to the influences of war.

*

The list is not, I understand, complete, but even so, there are a few surprising omissions—Augustus John and Sir William Nicholson, our most distinguished portrait painters, are presumably over the age limit. My only criticism is that they have not—so far—chosen Feliks Topolski, a fine draughtsman and a wickedly accurate observer of the English scene and " type." His appointment would not only add a sharper wit and vitality to these pictorial records of the war, but, since Mr. Topolski is a Pole, it would also be a compliment to Poland.

*

There are, it will be noted, no sculptors mentioned. Their task comes with melancholy certainty when the war is over.



POISON PEN

The above drawing, after the manner of the two I reproduced last week but clearly from a different source, arrived two days ago. Its anonymous author claims that it expresses the most probable meaning of the previous drawings.

*

Artist No. 2, in fact, alleges that Artist No. 1 is a surveyor who chose an unusual way of recording his opinion that our profession has a tendency to be dense at any point above shoulder-level.

*

If I am wrong, I suggest that everyone should come into the open and explain their own meanings.

ASTRAGAL

NEWS

LIVERPOOL ARCHITECT HONOURED

The honorary degree of M.A. is to be conferred upon Alderman A. Ernest Shennan, F.R.I.B.A., by the Council of the University of Liverpool at a congregation to be held in St. George's Hall, Liverpool, on July 6.

PAINT PRICES RISE

National Federation of Associated Paint, Colour and Varnish Manufacturers of the United Kingdom announces that, at a meeting of the leading paint, colour, varnish and lacquer manufacturers held in London, it was decided that an increase in current prices was entirely justified and would be put into operation forthwith.

Federation states that many raw materials of the industry are subject to control and other disabilities such as the decreased value of sterling, which in the aggregate result in greatly increased cost of the manufactured article.

DIFFERENT METHODS

Mr. Percy E. Thomas, speaking at a luncheon of the South Wales Institute of Architects, said :

No profession has been so badly hit as ours. The truth is, that no one visualized the almost complete cessation of ordinary building, and neither the profession nor the Government made provision for this state of affairs. There are military camps and other Government undertakings badly sited and planned, and under the charge of engineers and builders, while hundreds of architects are idle.

The French have shown us how these things should be done. In France, the whole profession has been incorporated in the Army to do the work for which they have been trained and to allow the military engineers to get on with their proper services.

TIMBER CONTROL

Following notices have been issued by Ministry of Supply :

The Minister of Supply has made the Control of Timber (No. 11) Order, 1940, which provides that, on and after April 15, 1940, no person being in or ordinarily resident in the United Kingdom shall buy any veneer situate outside the United Kingdom, except under the authority of a licence granted, or a direction issued, by the Minister of Supply. Contracts in writing entered into before April 15, 1940, are not affected by the terms of the No. 11 Order. Applications for licences to buy veneer from abroad should be addressed to the Timber Control, Ministry of Supply, Clifton Down Hotel, Bristol, 8. Copies of the Control of Timber (No. 11) Order, 1940, are obtainable directly, or through any bookseller, from H.M. Stationery Office at the published sale price.

Special attention of consumers is drawn to the Control of Timber (No. 9) Order, 1940, which provides that the seller may make an extra charge of not exceeding 20 per cent. on the prices fixed by current Orders only in cases where (1) the value, calculated at the prices fixed by the current Control of Timber Orders of any one group contained in an acquisition licence granted under the Control of Timber (No. 5) Order, 1939, does not attain £15, or (2) timber is purchased against a declaration on the O.A. Form. This means that where the aggregate value of a group under a licence is £15 or more the seller may not charge the 20 per cent. extra, even if he sells only a portion (less than £15 in value), of the aggregate quantity specified in that group

To meet the greatly increased demand for Home Grown Timber it is highly undesirable that there should be any relaxation of felling and conversion during the summer months. The disadvantages, which are well known to timber producers, cannot be avoided in the present circumstances, but it may be worth while pointing out that, in the case of pine, blue stain can be reduced, or even prevented, by quick conversion after felling, the use of certain chemical solutions, and open piling of the converted material. This question has been studied by the Forest Products Research Laboratory, Princes Risborough, which is prepared to answer enquiries.

IRON AND STEEL CONTROL

Minister of Supply has made the Control of Iron and Steel (No. 8) Order, which supersedes the Control of Iron and Steel (No. 6) Order, made on January 29, 1940.

Main purpose of this new Order and the Direction (No. 1) made thereunder, is to give legal effect to the Scheme for Distribution of Steel Supplies, under which the steel products covered by that scheme will be acquired by the authorized quotation in all orders of a symbol, contract or reference number and delivery period.

Although the Order came into force on April 8, 1940, the operation of the Direction in connection with this scheme is postponed in the case of future orders for steel products covered by the scheme until Monday, April 29, 1940, and, in the case of old orders for such products, until May 31, 1940, so as to give time for the allotment through the various channels of the symbols, contract or reference numbers and delivery periods.

Attention is called to the fact that under the new Direction all licences for steel products covered by the scheme heretofore issued to stockholding merchants are revoked, and that these should be returned forthwith to the Iron and Steel Control. Arrangements have been made for the immediate replacement of these licences by new licences. Licences and exemption from licences of materials, not covered by the scheme, continue substantially on the existing basis. Increases in maximum prices have been fixed for certain more highly finished products, notably crown iron, colliery arches and accessories, galvanized sheets, tubes and pipes, certain types of wire and wire products, steel castings, and railway coil and laminated springs.

Copies of the Order may be obtained from H.M. Stationery Office or from any bookseller.

Mr. Frank Pick, Vice-Chairman of the L.P.T.B., who is to retire from the Board next month. (*See Astragal.*)

ARCHITECTURAL ASSOCIATION

Joint meeting of the Junior Members of the A.A. and R.I.B.A. will be held at the Architectural Association, 36 Bedford Square, at 6.30 p.m. on Thursday, May 2, when Mr. D. Clarke Hall, A.R.I.B.A., will speak on "The Case for Prefabrication in Building." Prominent members of the building industry have also been invited to speak. Light refreshments will be served at 6 p.m.

Annual Reception will take place at the A.A. on Thursday, May 16, at 8.30 p.m. Owing to limited accommodation, members must apply for tickets of admission.

IN PARLIAMENT

In the House of Commons last week, Mr. E. Williams asked the Minister of Health whether he had considered the memorandum of the I.A.A.S., setting forth the present difficulties of the professions of architecture and surveying, and suggesting lines upon which the Government could best assist these professions and the building industry as a whole, a copy of which had been sent to him ; and what steps he proposed to implement the three suggestions contained in that memorandum.

Mr. Elliot said that the reply to the first part of the question was in the affirmative. As regarded the second part, he could assure the hon. Member that he shared the desire of the Association that the building schemes of local authorities should proceed as soon as circumstances permitted, and that he was keeping the position under constant review.

ANNOUNCEMENTS

Oscar A. Bayne and R. Cotterell Butler, of 90 Ebury Street, S.W.1, have now opened a permanent provincial office at 3 Park Street, Hatfield, Herts. Telephone Hatfield 2643. All communications should now be addressed to this office and not to the temporary address at Cockfosters.

Mr. Leonard S. Dyer has moved to 44 Grimsdyke Road, Hatch End, Middlesex.

OBITUARY

Deaths have occurred of :

Captain Thomas Ridge, A.R.I.B.A., of Oswestry, at the age of 67.

Son of Mr. Thomas Ridge, an architect and builder, of Penygarnedd, Capt. Ridge was educated at Llanrhaiadr and at the Liverpool Institute. He worked for a time with his father, and after qualifying as an Associate of the R.I.B.A., he practised in Llanfechain and later in Oswestry and was responsible for the design of housing schemes and public buildings in many parts of North Wales.

Mr. Herbert Owen Ellis, F.R.I.B.A., at the age of 83.

Mr. Ellis will be remembered for his early association with the late Lord Northcliffe, for whom he designed Carmelite House as the home of the *Daily Mail*. In 1910 he was joined in partnership by Mr. W. Lee Clarke. During the time that they were associated, the firm of Ellis and Clarke were responsible for the design of Northcliffe House for the *Daily Mail*, of buildings for the *Daily Mirror* and *Daily Express*, and of Messrs. W. H. Smith's head office in Portugal Street and stationery store on the Lambeth Embankment. Mr. Ellis retired from practice in 1933.

Mr. Paul Ogden, F.R.I.B.A., at his home at Didsbury. He was 84 years of age.

Mr. Ogden commenced practice at Manchester in 1879. For many years he was the honorary secretary and later president and trustee of the Manchester Society of Architects. He also served on the Council of the R.I.B.A.

DIARY

Thursday, April 18.—School of Architecture, Park Avenue, Hull. Evacuation Exhibition. Until April 19. 2.30–7.30 p.m.

Building Centre, 158 New Bond Street, W.1. Exhibition of Photographs of Norway and Denmark. Until May 3. 10 a.m.–6 p.m.

Friday, April 19.—I.A.A.S. (London and Home Counties Branch). 75 Eaton Place, S.W.1. "Architectural Practice." By Sydney Tatchell. 6 p.m.

Tuesday, April 23.—Institution of Structural Engineers. Yorkshire Branch. Hotel Metropole, Leeds. "New Developments in Pre-stressed Concrete Construction." By T. J. Gueritte. 7 p.m.

Building Centre. 6 p.m. "Problems of Wartime Building." By R. Fitzmaurice. 6.45 p.m. "Timber for Wartime Uses." By E. H. B. Boulton. Chairman : Howard M. Robertson.

Thursday, April 25.—School of Planning and Research for National Development Conference.—At the Building Centre, 158 New Bond Street, W.1. "The Building Industry in Relation to Evacuation." Representatives of the following have been invited to speak : Builders, materials manufacturers, architects, operatives, local authorities and small traders. 5.30 p.m.

★ *On this and the following pages the* JOURNAL *continues the publication of Mr. Robertson's personal survey of the building industry and its organization. Mr. Robertson's views and suggestions are, of course, personal: but it will not be forgotten—at a time when the structure of the industry is being closely reviewed—that Mr. Robertson is not only a Vice-President of the R.I.B.A., but has also, as a member of B.I.N.C., been closely concerned for some years with the question of the fuller organization of the industry.*

★THE NEXT YEARS

By

Howard Robertson

M. C., S. A. D. G.

[*VICE - PRESIDENT of the ROYAL INSTITUTE OF BRITISH ARCHITECTS*]

SYNOPSIS

In the opening sections of his survey of the building industry, published last week, Mr. Howard Robertson outlined the point of view on which his examination of building and its organization was based. This point of view was expressed in the following main contentions, from which his later arguments and suggestions are developed, and by which they are tested:

The present war is a fight for civilization. Civilization has been well defined as a state of well-being. A preliminary to well-being is order—now in danger throughout the world. Against increasing disorder certain groups within the community are bound to fight.

One of the national groups most closely bound up with good order is the building industry. When building achievement is at its highest so is the well-being of the community. But if building is to make its own contribution to order, the organizations which produce building must themselves be in order.

The first great problem affects the function of the architect, whose job has in the past years become more and more inclusive, and thus more and more shadowy. He is forced today to supply in building many of the functions which ought in fact to be carried out by other specialists—to the detriment of his own particular contribution.

4

SCHOOLS of thought arise in which the architect, particularly the young student, sees himself above all as a technician, aware of the latest contributions to the science of construction, and liberated thereby from many restrictions of planning and elevational design. The lure of disposing the new constructional potentialities in an orderly and fresh way, the exciting rediscovery of old truths in a new guise, are sufficient to lead the enthusiast to believe that the end and be-all is engineering science brought to the service of architecture in the forms of a pure geometry untroubled by fantasy or the personal predilections of the client. This tendency is coupled with a sense of the architect's mission as a sociological leader whose duty—in the extremist view—is to impose a new way of living on those bigoted sections of the public who do not demand it outright.

The problem is not so simple as that, nor so static. Architecture, like language, is subject to constant changes, and action brings reaction, with a residue of progress remaining from all successful experiment. The architect, however, is an individual artist, like a painter or sculptor, and it is a mistake to try to bind him to a school of design, or by thoughtless and hasty criticism to repress his personal expression. The labelling of work as belonging to the "International School," or any other, can only remain an accurate description for a short space, or as long as the architects adhering to a group feel content to remain bound by its accepted conventions. Sooner or later there will be a breakaway, defections, and the formation of new and opposition units.

The conception of architecture as an art which should evolve towards pure form eschewing decoration, canalized into a preferential choice of constructional methods, might very easily lead towards sterility or towards the creation of a vocabulary of special forms which are admissible because introduced by innovators and accepted by disciples. Le Corbusier has advised his younger admiring colleagues "surtout ne faites pas de Corbusier," meaning that they should find their own way of salvation. Yet much of the advanced work today in this country is directly imitative of works by Le Corbusier and Jeanneret, Gropius, Mies, van der Rohe and a few others. The source of inspiration is not known to the public, so this directly inspired work appears as daring innovation. The danger lies in creating, for its short term advantages, an architecture which is not indigenous and may likely not be basically suitable, and in this sense not genuinely functional. Also, the repetition of certain idioms tempts the less conscientious and well qualified practitioner also to borrow these idioms,

and by misapplying them to end by bringing them into disrepute, thus repeating the vicious cycle of rise and fall which has affected other "styles" and idioms.

The elimination of the free personal element in architectural design will tend to cause atrophy, to result in inability to use certain materials in their true craft spirit, to weaken the power to adapt design to different purposes and moods, and to reduce the range of interesting expression. Somerset Maugham, in "A Summing Up," speaks of the danger of a writer acquiring a style of his own. It is likely, he says, to constrict him, and to result in his becoming the creature of his own mannerisms. So it may be with the architect.

Diminution of the power to design, using "design" in its very broadest sense, will throw the architect back upon his technique only, and bring him into the same sphere—or nearly so—as the engineer. The architect-engineer will become an indifferent engineer, in the same way as the engineer-architect has already become an indifferent architect.

The salvation for the architect, and the hope for the well-being of building, are for the professions engaged to collaborate but not to attempt the unreasonable, namely, the entrance into each other's particular domain. The one single thing for which no other profession can offer a substitute is the architect's ability to design. On that he should concentrate. And the processes of the building programme should allow him time and opportunity to do it.

The architect should be in the literal sense a member of a learned profession, with high ideals and the practical capacity to pursue them. Every ill-trained, incompetent, or pseudo-architect damages the profession as a whole, and the art of building with it.

The organization of the processes of building must be directed towards a smoother and more efficient working method, with distinct understanding and definition of the rôles of each member in the building partnership. The builder should know building, and the architect be relieved of much of the exacting work on the practical and supervision side which now falls to his lot. Bad and defective workmanship should not, as now often happens, be a matter first for dispute and then for recrimination; it should not exist, and need not, if certain standards are maintained and more time for study is allowed to the preliminaries to actual building. A defective new motor car is nowadays either rejected by the purchaser or reconditioned under a guarantee. That should be the case with buildings, but this cannot be implemented unless the conditions of the building have been agreed beforehand through mutual consultation. In the ideal situation the architect should primarily design (i.e. originate plan, type of structure, expression) and the builder build (i.e. produce a thoroughly sound construction). Instead of which, today the busy architect designs in spare hours at home, or on the back of an envelope, and spends a vast amount of his time attending to troubles which should never arise. And the builder becomes an organizer, sometimes even in extreme cases a financier and speculator who is at the same time a by no means beloved parent to recalcitrant and uneasy sub-contractors.

There is a tendency, perhaps increasing, for the building owner to go to the building contractor direct, and eliminate the architect, who, however, reappears on the job in the guise of someone who is more or less an employee of the contractor. Various departments of the Government have followed this procedure in a big way in the present war emergency. The use of the architect in this inferior position is the misuse of what is potentially a good instrument, be he employed as a planner and co-ordinator, or as a specialist whose job is to make a bad building tolerable. The architect engaged under these conditions is without the necessary authority, and his designs are often cut about and travestied in the interests of saving money. The procedure has bad results for the well-being of building, and cheapens the status of a labourer who is worthy of his hire and who should be employed in his full and proper capacity.

Such situations will tend increasingly to disappear when there is established a closer collaboration and contact between the architectural profession and the building industry, resulting in increased respect and mutual understanding of each other's spheres, provided always that the operators in both realize the situation and adhere to standards as high as are possible in a competitive world. The architect, the quantity surveyor, the practical and accredited decorator, are all units in the building industry. They have mutual interests as members thereof, but are the guardians of their own status and dignity, and these need not suffer in any way through the establishment of closer understanding and action in common when such is indicated. The conscientious builder will come to realize that the professional classes play an indispensable part, and they will be loth to engage on operations where the lack of their aid is detrimental. But this cannot become a commonplace until the standard of professional competence becomes a matter of fact beyond dispute. The case will be parallel to that recognized in the legal and medical professions, especially when the professional element in the building world attains the complete statutory recognition which no doubt will one day be recognized as in the public interest.

The close collaboration of architects with the building industry should, in the case of a respected and skilled body of professional men, assist in the maintenance of a higher sense of responsibility towards the public on the part of the industry. It should enable the industry better to organize its relationship to government, to deal more effectively with the recurrent ills of alternating booms and slumps, to assist in the elimination of waste and duplicated effort, to organize building research on a more effective basis, to work towards the simplification of legislation and the abolition of out-of-date restrictions, to arrive at standardization which is desirable and economic yet not restrictive. The problems to be solved in common are enormously wide, the possibilities of mutual enlightenment hardly less so, including, as they do, the whole question of professional and technical education which, on both architectural and building sides, is still in the melting pot, largely owing to uncertainty of aims which results in lack of definition in the educational programmes. The embryonic machinery for collaboration exists. All that is required is a whole-hearted impetus from both sides resulting in an examination of the possibilities, followed by the charting of a programme. The status of members of an industry which is the largest peace-time industry should be correspondingly high, because of the importance of this to the community. And in passing it can be remarked that in the United States the position of both architect and builder in the community is better than in England. The Americans have a limited aristocracy of blood, and the professional man in a sense occupies a position which here is the attribute of birth and parentage. But the equally good standing of some of the important building organizations in the States is due to their skill and high record of attainment. Many of these firms receive the bulk of their work direct and not in competition; they are commissioned almost as professional men, and work on a fee basis. The conception need not necessarily apply to conditions in this country, but is mentioned as showing to what extent an industry benefits by the high standing of its members. An organization is, one must reiterate, as good or indifferent as its components make it.

Apart from the major questions affecting the building industry which architects, surveyors, builders, and manufacturers can elucidate in common, there are many matters of detail to be worked out, some of them undoubtedly practical and time-saving. Innumerable architects in offices all over the country are, for instance, designing and detailing items of construction which are so commonplace and traditional as to be capable of the same sort of standardization as a steel

cottage casement. The production of slightly varying patterns is a waste of time ; and a joint committee of research could conceivably evolve types which would be satisfactory in practice but which would not preclude individual variations. Such items as forms of contracts, specifications, agreed conventions in plan and detail drawing can all be simplified and used as a commonly accepted procedure, because the diversity of these, and the individual time spent on them, distracts attention from more important matters. The personal work put in by architects and surveyors, and the amount of head-scratching caused to the builder, owing to differences in procedure and presentation of drawings, adds up to an enormous total. And it is not productive. Some of these questions have naturally received a great deal of attention, notably the form of contract, but a great deal of spadework still remains to be initiated.

5

In order that the architect and builder and quantity surveyor should thoroughly understand each other's work, it would seem desirable that they should receive some portion of their training in common. The school of architecture seems indicated as the venue, and it would not be an insuperable task to frame a curriculum providing for joint classes for a year or two, and probably special advanced lectures in the later years. Certain architectural desiderata would become apparent to the two sets of affiliated students, and the architects would benefit immensely from the contact. The teaching facilities of the architectural schools would be increased by the support given, and the number of admissions to schools regulated by a stricter process of elimination. It should be possible, with the resources of the building side of the industry, to provide workshop training, and practical shop experience later, which would result in a common understanding, shared by all parties, of the fundamental technical processes of construction. Apart from better possibilities in training, the fact of creating improved and broader human relationships would provide a valuable asset to the ultimate consolidation of unity within the industry. The subject is a large one and will be dealt with again at greater length in the section dealing with architectural education.

While it is extremely important for this contact to exist, it is equally important for the architect to have, from an early stage in his career, similar contact with the sister arts which are developing *pari passu* with his own. In particular, Painting and Sculpture are of extreme importance, as affecting the æsthetic trends which influence the young architect, though of this he may be unaware.

A great number of architects in practically all countries, on every continent, have been aroused by the theories of Le Corbusier. These theories have an appeal, but not all of them retain their force under close examination. Nevertheless, an influence remains, and it is due less to the substance of these theories and their engaging presentation in books and pamphlets than to the æsthetic interest attached to Le Corbusier as a designer. Interest lies not so much in the case which he presents, as in the perspectives of fresh thought and idiom which he opens up. Already some of his basic ideas have lost caste ; but his research into form and colour, the purity of his æsthetic in his first phase, and its more baroque-like flowering in the later stages, are already part of the modern encyclopædia of architecture.

In explaining this achievement, one must bear in mind that Le Corbusier the architect is also a skilled painter, working under his family name of Jeanneret. His work with Ozenfant in developing from cubism a theory of painting known as Purism is almost certainly in part responsible, not only for his pioneering in polychromy, but for his sense of form, in particular his grasp of the possibilities in architectural design of principles embodied in the machine, such as movement and lightness of elements, including influences, resulting in what—for want of a better term—may be called the " steamship motif."

Another eminent modern architect, Oud, of Rotterdam, was early interested in the revival of fresco painting under the leadership of Roland Holst. Oud next turned to cubism, came into close contact with Theo von Doesburg, and with a group of painters started the magazine *de Stijl*, which in turn spread its influence in Holland and beyond its borders. Oud himself has been important, but few English architects who have admired his combination of practical minimum planning with suavity of outward form will realize that in owing something to Oud they are also acknowledging an indirect debt to the art of painting.

Arts which have a certain link with painting, such as the ballet, are not without their repercussions on architectural design. The Russian Ballet, with the designs of Bakst as its dominant background, provided a case in point. Osbert Lancaster, in his amusing book, *Homes, Sweet Homes*, makes the Russian Ballet provide one of his period settings. His book offers a satiric but remarkably faithful sequence showing that design, curiously enough, goes through phases which in the past have been very rarely the result of logical thinking and the science of sociology.

With sculpture, the relationship is harder to establish in a telling way, but it exists in the influence of Baroque sculpture, or in that of Eastern sculpture reaching through a modern sculptor's skill in the design of such a building the Colonial Museum at Vincennes by Laprade and Bazin. The sculpture of the painter, Picasso, has had its effect on the outlook of the French " interior architects," and no architect can be familiar with the work of an artist like Eric Gill without absorbing something for the benefit of his own design in beauty and simplicity of line and form.

The " International Style," or modern movement in architectural design as developing from the contributions of Loos, Gropius, Le Corbusier, Rietveld, Oud, Neutra and others, has resulted, amongst other things, in a return to a severe geometry which is a medium for the expression of ideals of form in classic or romantic vein, wilfully controlled or designedly free ; in this sense it departs from its basis of unadulterated functionalism. But the style, as we see it today, will gradually continue to evolve or else, having made its contribution, may be relegated for a time and supplanted by a movement generated by some fresh set of conditions.

In the modern style at its purest and simplest, the stage appears to be set for something still to come. Ornament has been eliminated, and in not all interiors can there be fine collections of paintings and sculptures to take the place of enrichments and the accessories which so often provide the key to the human character of room space. The result of this continued repression of decorative accessories may take the form of a reaction from the simple nudist conception of the *machine à habiter* towards a sort of Rococo of the modern, with the logical and purposeful — though sometimes monotonous—stress on form giving way to a sort of sophisticated fantasy, comprising the use of unexpected material for familiar purposes, the introduction of rustic notions against a very urban background, or the adaptation of just sufficient of the external signs of surrealism to demonstrate that the designer is aware of his world to date and can exploit it knowingly if by chance he feels inclined.

All this is amusing enough. But at its best it is ephemeral ; at its worst it becomes pastiche not so very unrelated to " Ye Olde " or any other unsubstantial form of expression which has its roots in a tired æsthetic soil. The modern movement needs something to aid its further growth, a fertilizer, and the source from which that assistance may well come is the richness of talent available in the painter's and sculptor's art.

English painting is emerging today as a very interesting manifestation of the vitality of our race. The work of a number of younger men and women shows variety and character, and promise in its freedom of direction ; culturally, and also nationally—from a prestige standpoint alone—this fact is important. And we have in England a handful of sculptors of international

repute—and certainly a larger number of yet unknown ones—who are capable of adding to their strength.

Both painters and sculptors suffer from the fact that their arts are no longer integrated in that of architecture; for the mother of the arts has little care for her children. We have our modern movement, the spirit of which, in its efforts towards purity, approaches closer to the spirit of Greece than to that of any other period. But in Greek architecture the success achieved in pure form was heightened by the resources offered by a highly appropriate technique developed in painting and sculpture.

Today there seems once more to be an opportunity to extract the same richness through a technique which will be different, and with another sort of expression, but which will be similar in principle as depending on a finely studied relationship. This development cannot take place suddenly, through the extraneous application of painting and sculpture, because the result would be the reverse of successful. Neither the architect nor his brother artists are yet attuned to each other's aims, nor have they comprehension of each other's methods; and both things are necessary before there can be a united front in which the balance of attributions is so adjusted that there is force behind the whole movement. Such collaboration cannot be imposed; it should be, in the most favourable circumstances, a spontaneous movement. But in order for that to exist, it is necessary to prepare the ground and provide conditions for its fruition. One preliminary step would be a closer personal relationship between architects and artists established perhaps through the membership of architectural bodies being widened to include artists, through the holding of exhibitions in common, and through a determined effort on the part of the artists to open up in their ranks what one might call an "architectural department"—one in which facilities would be available to study the practical and economic problems involved in the enrichment of buildings. It is well known that inferior artists often obtain commissions largely because they are reliable in the business and commercial sense. That situation requires investigation and study by the artist community with the sympathetic help of architects and all classes of creative people. But the production of a new basis on which to assess the services of the artist does not present insuperable obstacles.

It is almost certain that the Government would look with favour on a closer interlocking of the arts, which would affect exhibition policy in a constructive direction. This would be still more noticeably an element of solidarity in the event of the creation of a Ministry of Building and eventually perhaps of Fine Arts.

A strengthening of the artist element in the nation would be both humanizing and invaluable in education. It would affect schools, the theatre, the cinema, and the mass in general of those people whose roots are in their homes. These homes might well be enriched, however modestly, with sculpture and painting as part of their equipment and design, built in like the bay window and the bathroom tiles, and considered as amenities at least as important as well-selected wallpapers and mantelpieces.

The sardonic mind will at once leap to the delicious opportunity presented of ridiculing such aims, recalling the stained glass of the past, the additions of Ruskinian ornament to porches of drain-pipe Gothic, and a score of other instances of misapplied "art." But these things emerge in periods of artistic stultification; and today our general development, whatever its weaknesses, may be taken as definitely on the up-grade. The war, too, with its facilities for taking stock and for planning, offers an incentive to that sort of forward movement which does not readily flourish in times of bloated industrial prosperity. We have been quickened into a sense of our social imperfections, and we have realized that cultural life must not be swept away; for, with material prosperity jeopardized, there would remain only poverty of the pocket and bankruptcy of the spirit. It can be one of the great services rendered by post-war architecture to increase its own standard of design and to do so by extending a hand to the sister arts which belong rightly in the same field and have so much to offer in exchange for a little understanding and appreciation.

[To be continued.]

LECTURE

PUBLIC SHELTERS

A paper entitled "Dual Purpose Structures" was read by Mr. Sydney Clough, F.R.I.B.A., at a meeting of the Air Raid Protection Institute in London last week. In the first part of his paper Mr. Clough dealt with private shelters; in the second part, reproduced below, he discussed public shelters.

Turning from private shelters to the larger and public ones, the peacetime use will, I venture to say, upon examination, prove to be very limited. I have carried out a good deal of investigation into this matter and, except where a public body or borough council have got an isolated and particular peacetime use for their shelter, I have been inevitably forced to the conclusion that perhaps the most economical use that can be made of public shelters in peacetime is for car parking where such a need exists. This is particularly so in London and the larger cities of this country, where the sites available for the construction of public shelters are situated in the natural centres of public movement and congregation, where the demand for car parking is naturally acute.

In London most of the squares in the central areas have for some time past been used as the only available parking sites, and we have got used to seeing our public gardens surrounded by a dense mass of cars. Even so, the capacity of such car parks does not touch the fringe of the problem. In these areas, I think, we can accept as a fact that the authorities before the war contemplated that large masses of the population would be evacuated or leave the locality and that the requirement of shelter provision for the transient public on the streets would be very much less than it has in fact proved to be. This, to my personal knowledge, is the case in several instances, and borough authorities, after completing their original programme of public shelters, feel it desirable even now to add to such accommodation.

Thus you will appreciate we have two demands, the one for shelters for large numbers of the public in wartime, the other for the parking of large numbers of cars in peacetime. The peacetime use for the parking of cars will not only be one for which the demand will be sustained, but must be a progressive one, and I venture to predict that air raid shelters, properly constructed for the public in such areas, will be serviceable again in the future, should they be required. Moreover, where they are built under open spaces, usually the natural and proper site, extra overhead protection can readily be added.

There is no dispute, I think, that well-constructed public shelters give the public that feeling of security which is such a valuable psychological factor in sustaining the civil morale.

If a really competently designed shelter could only be made to serve as an efficient car park, we have obviously got a high degree of economy in combining the two demands in one structure. Hitherto car parking *qua* car parking has not been possible as a financially sound undertaking because, if cars are to be free to enter and leave the park at will, no matter where they are stationed, then from 40 per cent. to 55 per cent. of the area has to be devoted to gangways and manœuvring space. Thus the number of cars actually parked will not sustain the capital invested in a central area unless a prohibitive charge is made for parking. On the other hand, if cars are to be driven freely in and out of a structure, very wide spacing of supports and large open floor areas in the building are essential, but if the structure is to be used as an air raid shelter, we get the contradictory requirement of the division of these large floor areas into cells or sections limiting the number of persons in any one compartment. Thus the two demands so urgently needed in the one building are at first sight incompatible.

Some time ago, I was faced as an architect with the necessity of providing in the centre of an important civic development at Cardiff an open space laid out as gardens and at the same time a car park for approximately twice the number of cars that by ordinary means could be placed upon the area which was to be taken up by gardens. By placing the car park underground, beneath the gardens, I was able to solve the problem of getting a car park, but only for about half the number of cars required.

I looked about for some means of increasing the car capacity of a given area without destroying the mobility necessary in a car park. I investigated many systems of mechanical parking, and whilst several of these proved to be efficient in parking most of them I found to be expensive, either in first cost or in operating costs or both, and few were able to effect the economy of space which was essential in this scheme. However, finally I was placed in contact with a group of technicians who had designed and perfected a simple, very efficient and comparatively inexpensive mechanical system of parking. Up to this time the provision of public air raid shelters had not been a consideration, but approximately coincident with my examination of this parking system the question of air raid shelters for the public in this development scheme was raised by the borough council concerned. With the designers of the car parking system, we were jointly able to evolve a plan which permitted of the closest packing of the cars, preserving complete mobility of every car, approximately doubling the capacity and at the same time allowing of division walls being built throughout the building as close as 7 ft. 6 in. apart. This seemed to solve my immediate problem, and over the past few years I have been associated with the design of a number of public car parks which can be used as air raid shelters at any time, with the minimum of trouble in changing over.

Several boroughs are realizing the need for more public shelters, and at Kingston-upon-Thames, Cardiff and Finsbury the Corporations are building such portions of their future mechanized car park as they require for present shelter purposes. In every case practically the whole of the work now being built will be retained in the permanent structure.

In order that you may follow me clearly, I think I ought briefly to describe the main features of the parking system which makes possible the combined air raid shelter/car park.

First the cars are parked a few inches apart, end to end and side to side, in units generally two cars wide and ten long, i.e. 20 car spaces per bay. These bays, each about 15 ft. wide, are side by side, so that in a park of 200 car spaces there would be ten bays separated only by the structural columns or dividing walls.

At one end, at right angles to the bays, is a "through-way" leading to the down and up ramps and this single road serves as many bays as required. The other end of the bays is usually closed by a wall.

The car is driven on to the car space immediately next to the through-way and there is taken over by the mechanism, which is a simple type of shuttle movement. This moves the cars longitudinally in the bay and transversely at each end, and is reversible in its movements.

The cars are moved without recourse to the use of their wheels or their engine. In other words, they are dealt with as though they were large boxes without wheels.

Each bay is independent of the other bays in its operation and cars can be accepted or delivered simultaneously in all bays. When delivery of a car is required, a button is pressed and an electrical selector gear puts the mechanism into operation. This delivers the car from its station, whatever its position, by the shortest route to the through-way, ready to drive away. The depth occupied by the mechanism is only 8 in., so it does not encroach materially on headroom.

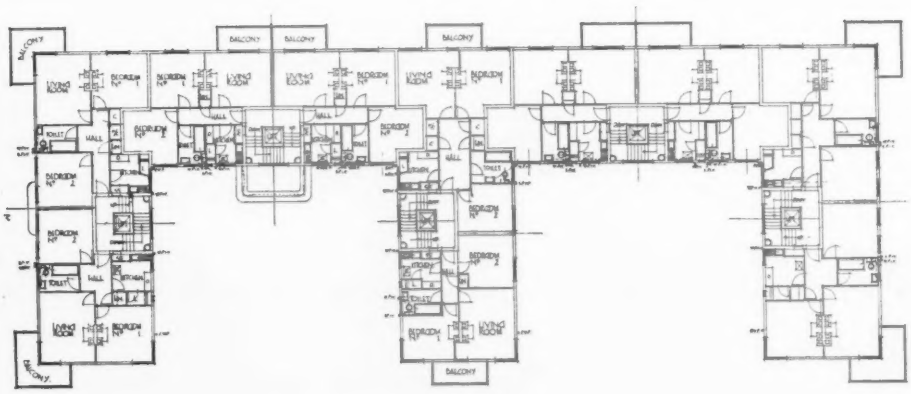
In its application to air raid shelters, the points of value to the planner are that, while providing up to double the parking capacity of ordinary methods, and thereby incidentally doubling the income, its gross cost is only 15 per cent. to 20 per cent. extra on the cost of the structure. Against this is the saving in construction over a building with wide spans, as by this system, as I have told you, the supporting columns or dividing walls, as the case may be, need be only 7 ft. 6 in. apart, eliminating heavy beam work altogether. This is especially valuable where the structure is under ground with any load overhead.

In the buildings at Kingston, Cardiff and Finsbury the dividing walls have been placed at 15 ft. apart and approved by the Home Office.

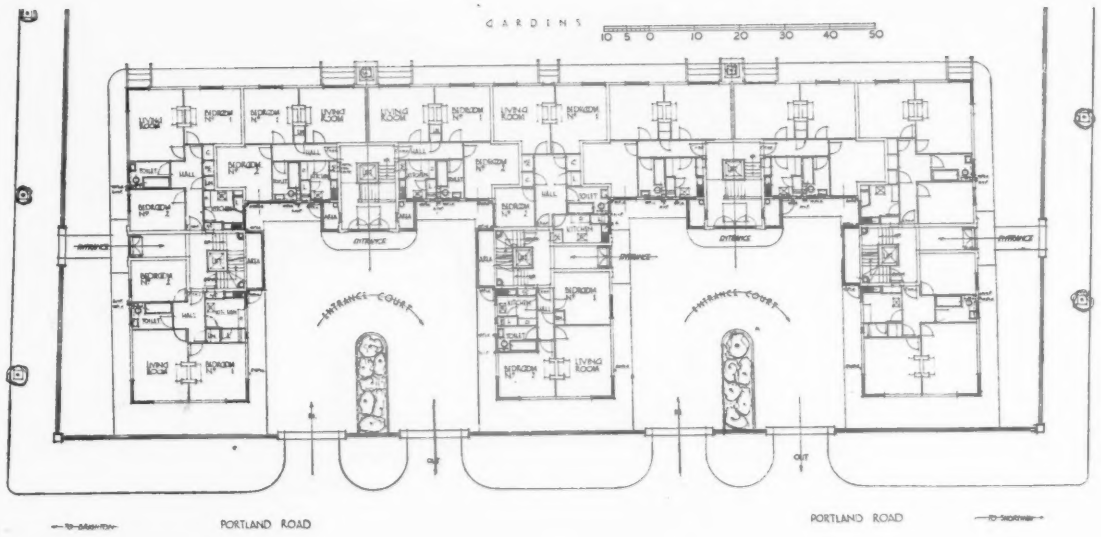
TWO BLOCKS OF FLATS

1: PORTLAND GATE, HOVE, SUSSEX. DESIGNED BY JOSEPH HILL

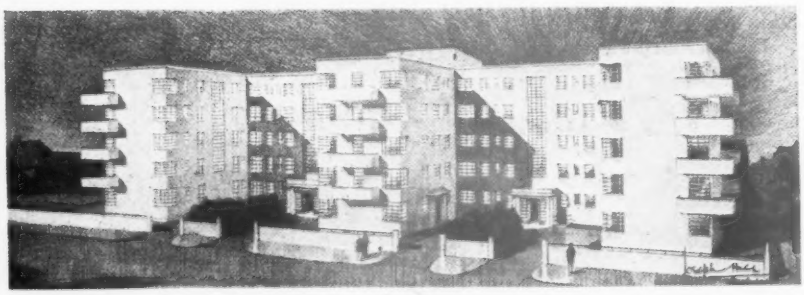
South front



TYPICAL FLOOR PLAN



GROUND FLOOR PLAN

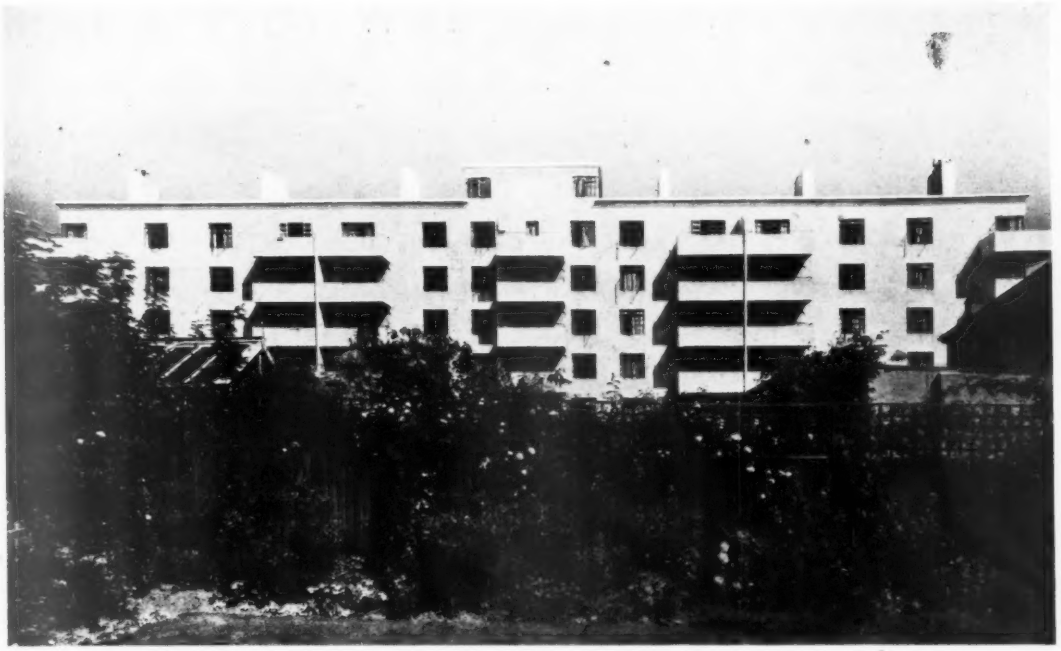


Perspective, by the architect, of the north front.

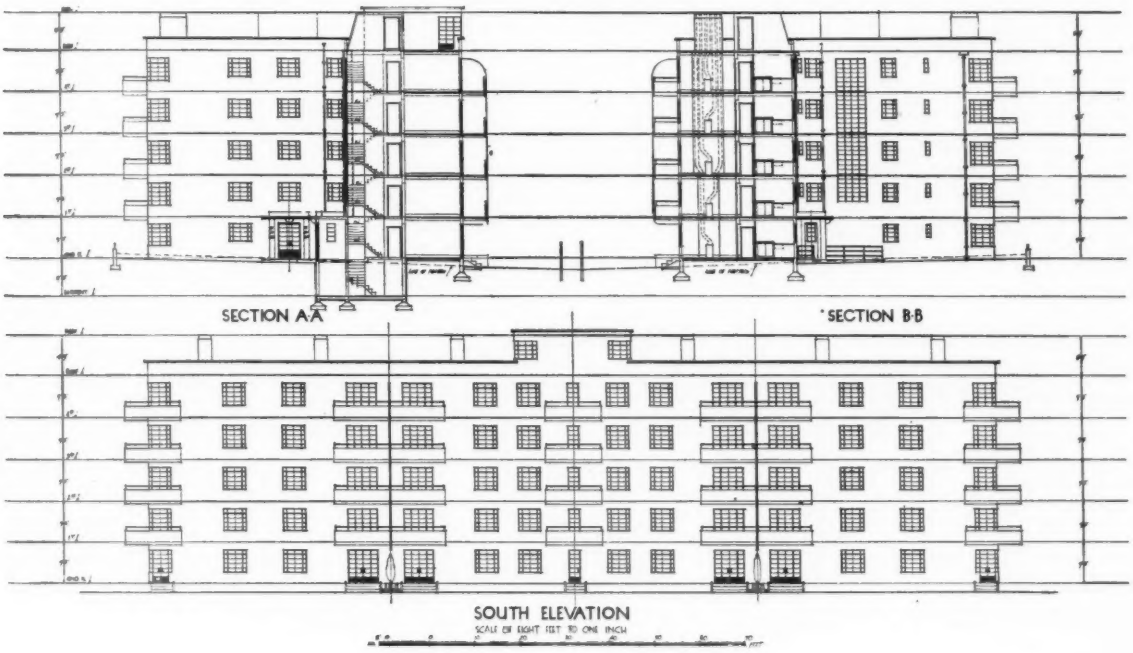
CONSTRUCTION AND EXTERNAL FINISHES—R.C. floors and walls and flat roofs. Internal partitions in partition and breeze blocks. Projecting balconies to each flat. Concrete walls rubbed down to smooth surface and finished with special waterproofing slurry.

INTERNAL FINISHES—Entrance halls and staircases : Concrete stairs and landings finished with linoleum. Walls and ceilings plastered and decorated with plastic paint. Flats : Bathrooms and kitchens have tiled dadoes with painted walls above. Living-rooms and halls : Distempered

PORTLAND GATE, HOVE, SUSSEX



South front



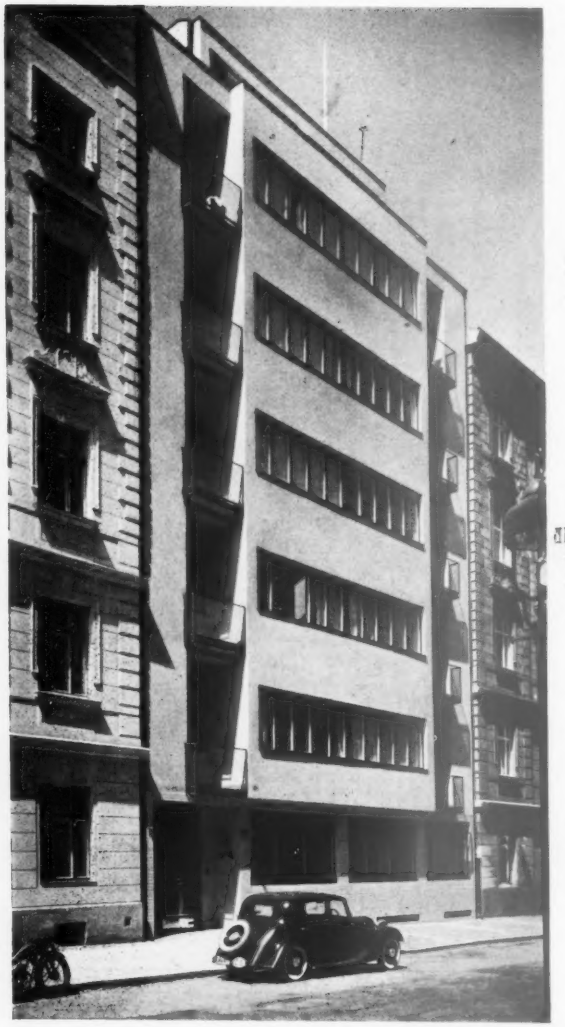
walls and ceilings. Whole of floors finished with patent flooring.

SERVICES—Lifts : Electric passenger service lifts. Heating : Coal fires in living-rooms and electric fires in bedrooms. Hot water : Water heaters to kitchens, serving sinks and bathrooms.

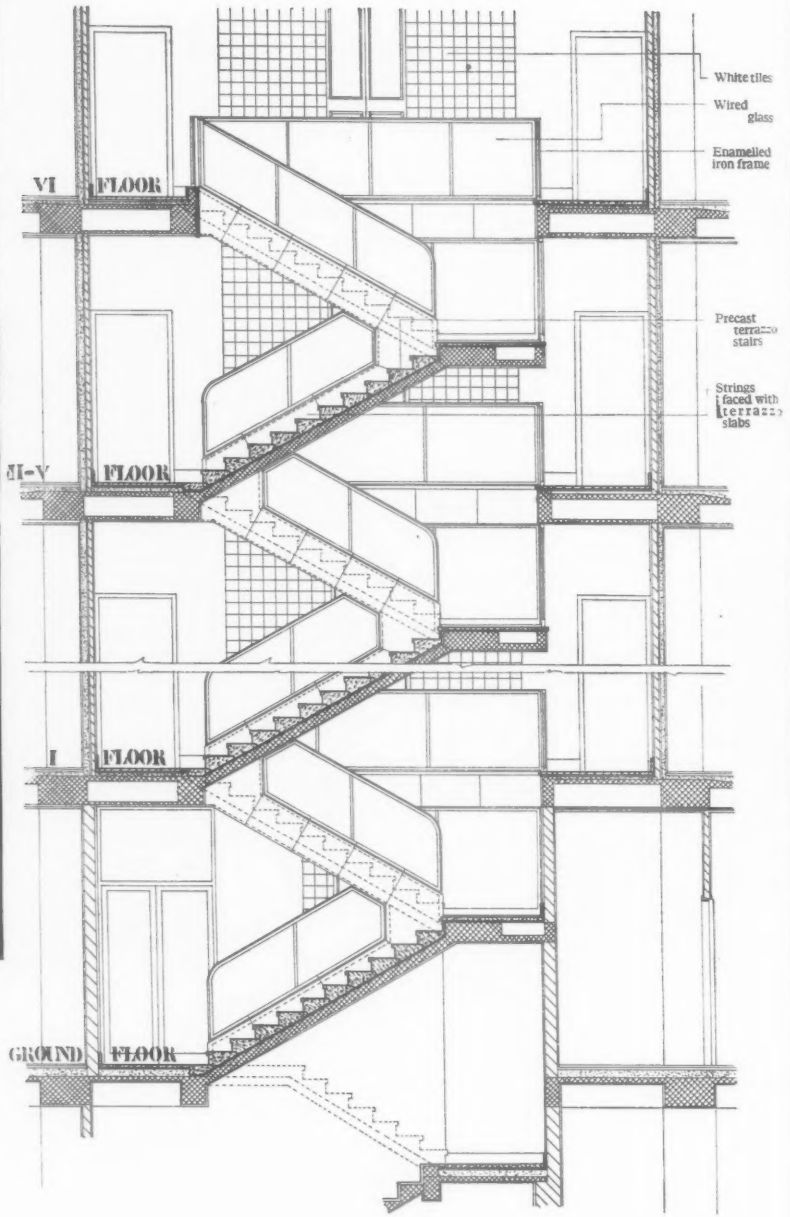
General contractors were Messrs. H. Meckhonik ; for list of sub-contractors and suppliers see page xx.

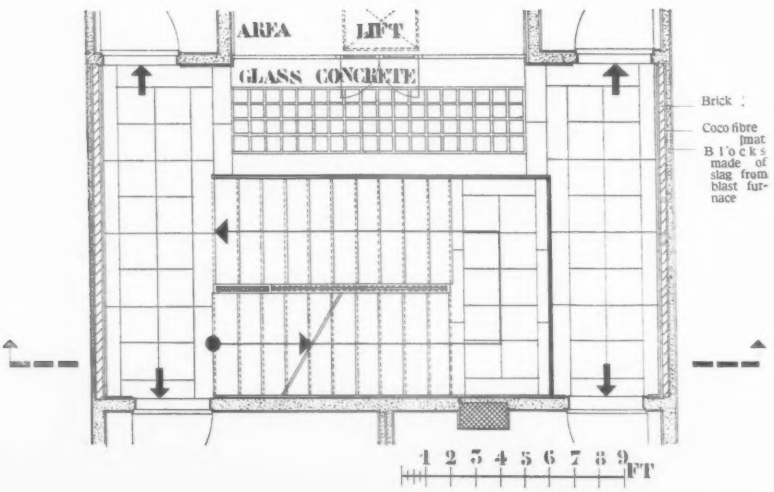
DESIGNED BY JOSEPH HILL

TWO BLOCKS



Main front

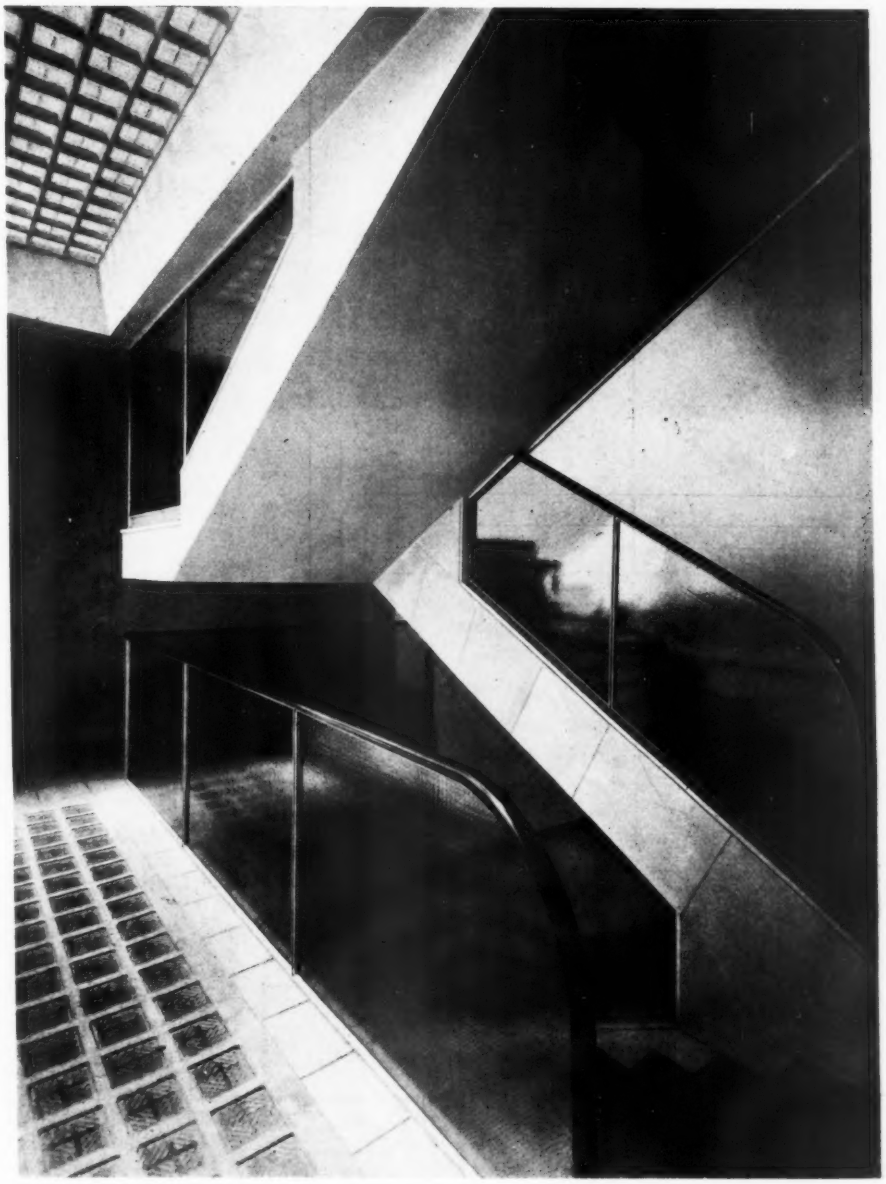




SECTION AND PLAN OF STAIRCASE

OF FLATS: 2, PRAGUE

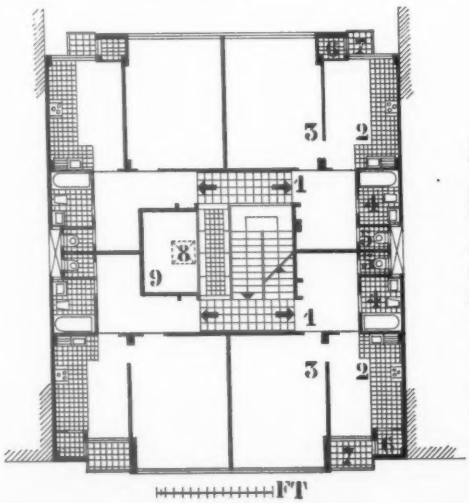
DESIGNED BY MICHAEL ROSENBERG



Main staircase.

KEY TO PLAN:

1 : Entrance vestibule
2 : Kitchen-dining room
3 : Bed-sitting room
4 : Bathroom
5 : W.c.
6 : Larder
7 : Balcony
8 : Lift
9 : Glass-covered area



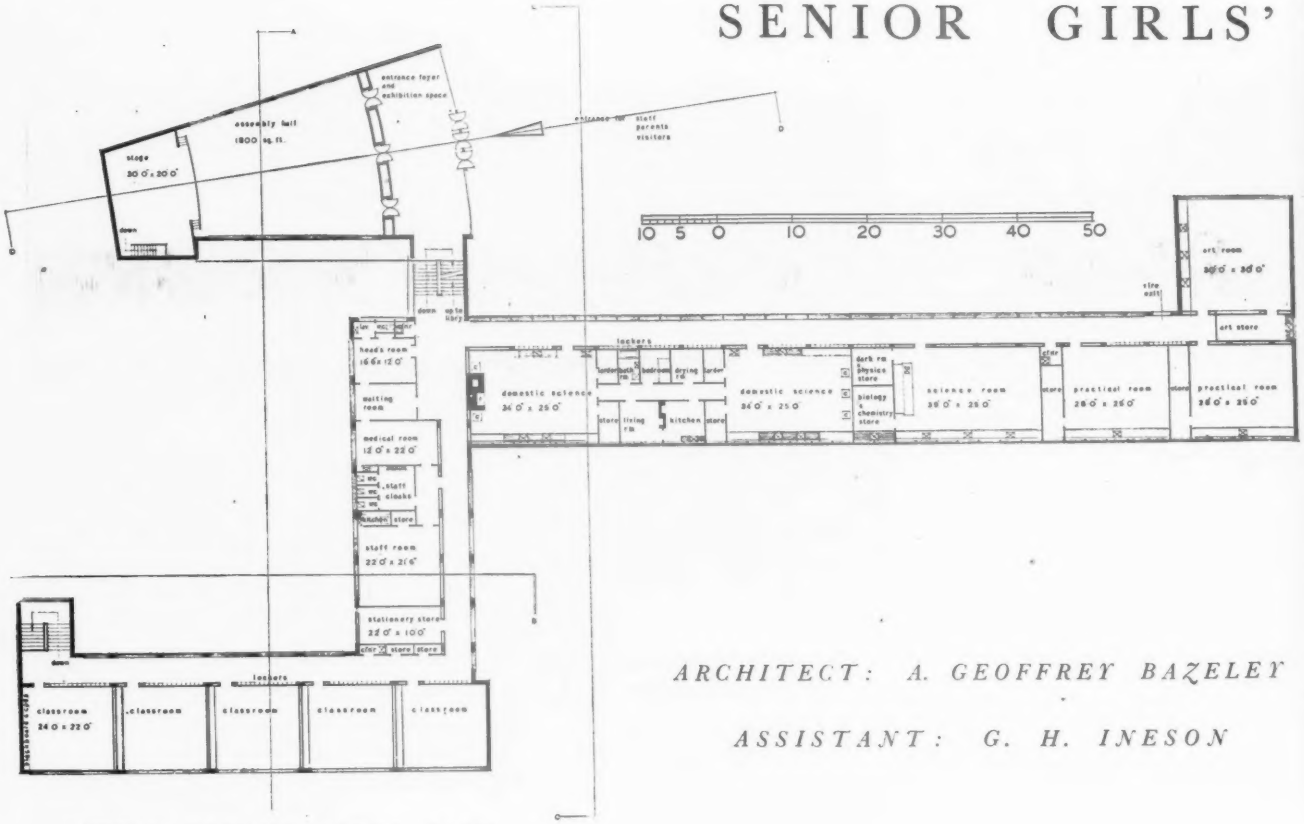
GENERAL—This small block of low rent flats comprises 24 two-room flats. The kitchens are also used as dining-rooms. Each floor has four similarly-planned flats, and each contains an entrance-vestibule, living-room-kitchen, with larder and balcony, a bed-sitting room, bathroom, and w.c.

CONSTRUCTION AND FINISHES—Staircase is placed in the middle of the building. Landings, which are of glass concrete, surround the stairs on three sides. Adjoining the staircase is an area which is separated from the landings by means of a 3 ft. 6 in. high railing. The white tiled area and the staircase are covered with a glass roof. The middle landings and flights are constructed as one continuous cantilevered reinforced concrete slab. Balustrade is cast glass framed in steel. Outside walls are faced with a frost and waterproof plaster. Railings of the balconies are of expanded iron sheet.

SERVICES—Central heating (steam heated from distant plant), hot water supply and laundry.

COST—£9,850. Cost per ft. cube, 8d.

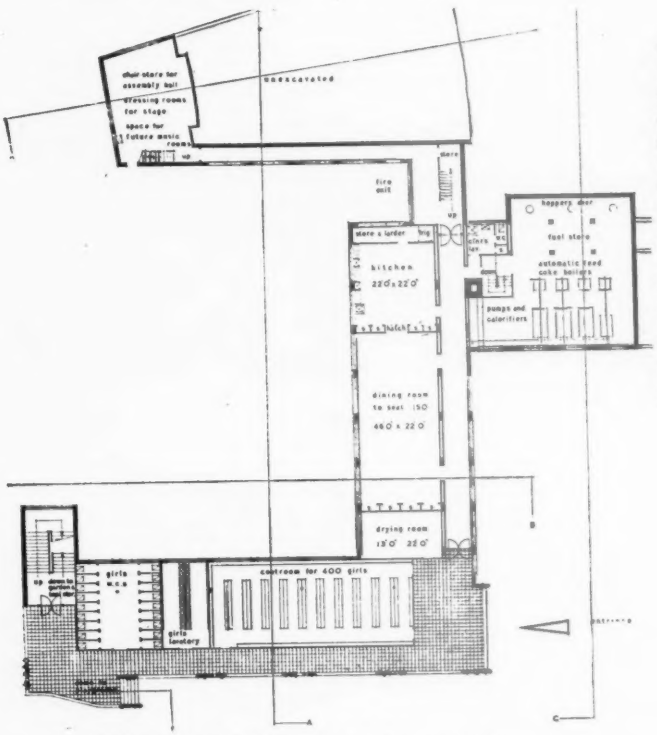
SENIOR GIRLS'



UPPER GROUND FLOOR PLAN

ARCHITECT: A. GEOFFREY BAZELEY

ASSISTANT: G. H. INESON



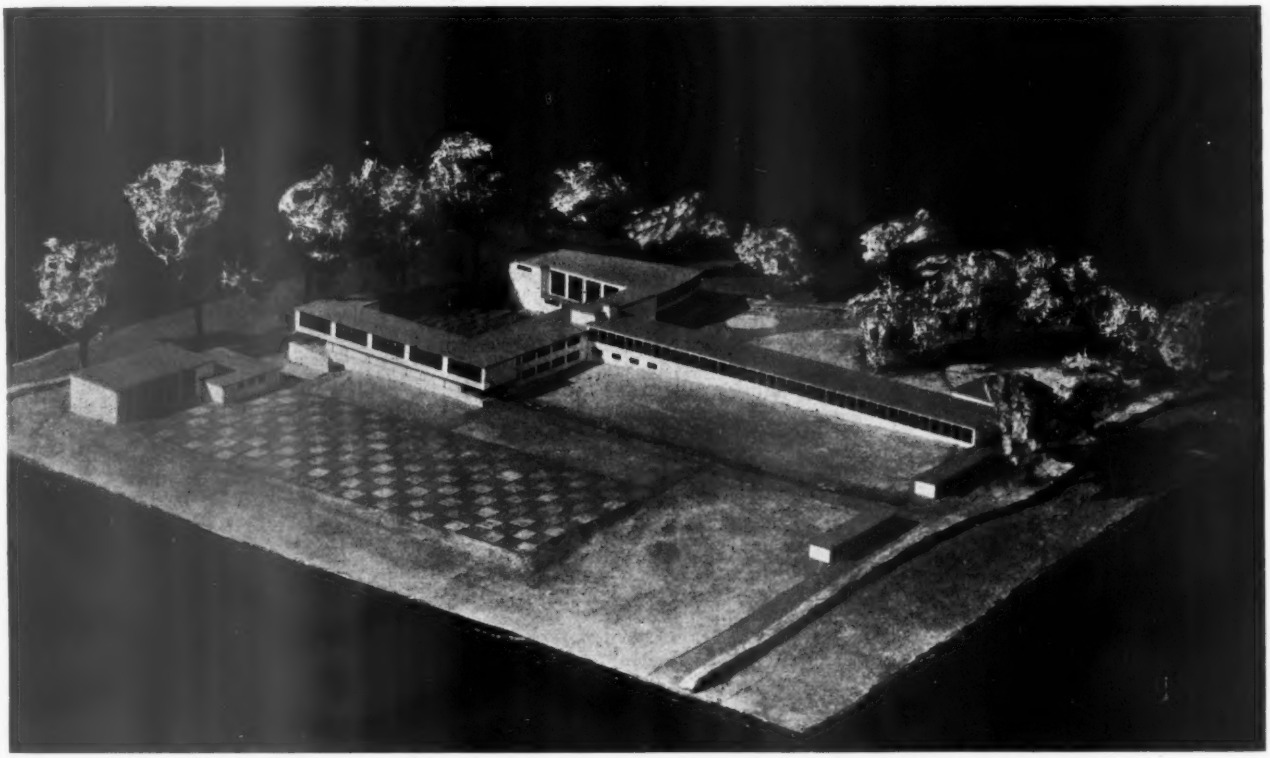
LOWER GROUND FLOOR PLAN

GENERAL—Proposed new senior elementary school for a maximum of 400 girls, to serve Penzance and district. This will form part of a complete scheme for the reorganization of the elementary education in the borough. The wide area covered necessitates provision being made for a large number of bicycles and for approximately 100 girls staying to lunch every day. In other respects the school has been designed in accordance with the Board of Education's recommendations.

SITE—Site slopes steeply to the south and west, the view is almost due south, and the east and west boundaries are bordered with tall trees. This necessitated the teaching rooms facing south instead of south-east, which is generally preferable. Slope was utilized to arrange all the cloakrooms on the lower ground floor and the assembly hall on a mezzanine

SOUTH ELEVATION

ELEMENTARY SCHOOL, PENZANCE



Model of scheme : view from the south

level. Space has been left at the south end of the site for playing fields.

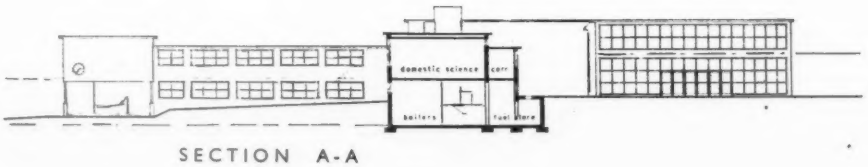
PLAN—Assembly hall has been planned as a separate unit to avoid transmission of sound to the teaching rooms, and to facilitate the use of the hall for dramatic performances and speech days. Class-rooms are separated from the practical rooms, and the staff are centrally placed for reasons of supervision (at the wish of the Education Committee, who considered this highly desirable).

CONSTRUCTION—Light uncased steel frame. Roofs, timber joists spanning between R.S.J.s, timber boarding and three layers of felt. Floors, reinforced concrete slab. Walls, 11-in. cavity concrete block, rendered. Windows, centre-hung in timber.

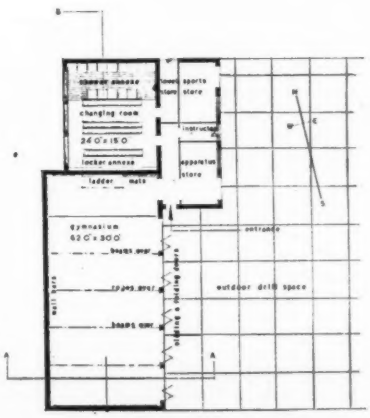
FINISHES—Teaching rooms : ¼-in. linoleum floors ; back walls and ceilings, fibre board sheets ; walls, plaster, distempered ; dado, glazed cement. Corridor and staircases : coat-room, lavatory, w.c.s, kitchen : 6-in. by 6-in. buff quarry tile floors ; dado, glazed cement ; walls, plaster, distempered ; ceilings, fibre-board sheets. Assembly hall : floor, Austrian oak secret nailed T. & G. strip on sleeper walls ; walls, back and side acoustic tiles, with dado of oak flush plywood panelling.

SERVICES—Heating and hot water by radiators under windows and automatic feed coke boilers. All pipes, electric and gas supplies are accommodated in horizontal and vertical ducts.

ESTIMATED COST—Main building, 427,902 cu. ft. at 1s. 1d., £23,221 ; gymnasium, 61,468 cu. ft. at 10d., £2,561 ; playground, bicycle sheds, demolition of existing house and site works, £2,146 = £27,928.



SECTION A-A



GYMNASIUM BLOCK

LETTERS

Student Groups

SIR,—May I use your columns to make contact with any of your readers to whom the following scheme appeals?

I want to get together perhaps twelve R.I.B.A. students who, because of the proximity of military service, because their present work is arranged in shifts, or for any other reason, cannot join in a normal day or evening school course but who are trying to get ahead as far as possible with the design subjects and other work for the final examination. That is my own position, and I find that not only is it difficult to keep oneself going when working alone, but the work one does is of less value as a training in the absence of criticism and comparison with other solutions of the problems set.

If ten or twelve such solitary students were to amalgamate and each contribute half a crown a week, a studio could be hired which would be available at any time to work in, and which would provide each member with the facilities of a drawing office and contact with other students. On one or two evenings each week, if the scheme materializes, a qualified man with some experience and enthusiasm for the academic side of architecture has agreed to come in and act as coach and critic.

The studio would be in or near the Bloomsbury district; I should like to see it in action with very little delay, and shall hope to hear from some who are interested.

London, W.C.1. R. M. BETHAM

Information Centre: Gas and Electricity

SIR,—In your issue of March 14 the reply to Question Q.211 suggests that for heating purposes eight units of electricity will provide the same amount of heat as one therm of gas.

In the second paragraph of that reply it is indicated that the efficiencies of the appliances should also be taken into consideration.

If the first portion of your answer did not take into account the efficiencies of the appliances, then, on the basis solely of the amount of heat in a unit of electricity and a therm of gas, 29 units of electricity would be required to give the same amount of heat as one therm of gas.

A unit of electricity contains 3,412 British thermal units; a therm of gas contains 100,000 British thermal units; that is to say $\frac{100000}{3412} =$ approximately 29 times as many British thermal units as those contained in a unit of electricity.

Electric heaters are designed solely as flueless heaters, having a radiant efficiency ranging up to about 75 per cent., but with an overall efficiency of about 100 per cent. Gas flueless heaters have a radiant efficiency ranging up to about 40 per cent., with an overall efficiency of 90 per cent.; thus, on overall efficiencies, about 26 electrical units are required to give equivalent service to one therm of gas.

Comfort requires both heating and ventilation and, wherever possible, efforts are made to introduce gas fires rather than flueless heaters, although necessarily the latter have a higher thermal efficiency if the benefits of ventilation can be ignored.

Comparing electric flueless heaters with ventilating gas fires giving equal heat output, 17 B.O.T. units are required to equal one therm of gas; and electricity would have to cost no more than 0·7d. per unit (without any addition of overhead charges) to be equal to gas at 1s. per therm.

A reasonable general figure of comparison (compromising between the above two figures of 26 and 17) would be 20 B.O.T. units equals one therm. Thus, with gas at 1s. per therm, electricity to give an equal service would have to be sold at 0·6d. per unit.

W. D. ROWE,
Grosvenor Place, S.W.1 Manager

[*Director of the Information Centre writes: I agree that when the comparison lies between two particular types of heater the relative efficiencies can be much more exactly stated. And it may be that the ratio given in our reply, which was intended to be valid in all circumstances, was too favourable to electricity.*—ED., A.J.]

Maintenance of Property

SIR,—There is a widespread tendency to regard the maintenance and renovation of property as something that may well be put off as a proper part of the war economy which the Government rightly urges all to practise.

Nothing could be more fallacious than this mistaken idea. Already, owing to industrial concerns and property-owners, including individual home-owners, falling victims to this misapprehension, property is depreciating at an abnormally rapid rate all over the kingdom, threatening before long to burden the country with losses in its assets amounting in the aggregate to millions of pounds.

The extreme shortage of timber, making it difficult if not almost impossible to replace doors, window frames or other woodwork decayed through unprotected exposure to the elements, makes its preservation an absolute necessity.

That painting, for instance, in so far as it represents maintenance, is true economy is recognized by the Finance Acts, in that its cost constitutes a legitimate deduction from taxable funds. This affects Schedule A and the Excess Profits Tax, in the latter case saving 60 per cent. of the maintenance cost.

It is high time that property owners, industrialists and others revised their ideas of economy in the light of this provision, which places property renovation in its right relation to real economy. They will conserve their own interests no less than those of the nation.

G. B. J. ATHOE,
Secretary, I.A.A.S.
Eaton Place, S.W.1.

Politics and Architecture

SIR,—There has been a good deal of discussion within the profession recently on the vexed subject of the expression of political opinion or the assumption of a political attitude by architects or their professional institutions.

Without wishing to express any opinion on this subject myself, I should like to draw attention to the fact that we have now been given a very clear guide in this matter by the President of the R.I.B.A. in his recent speech to the Birmingham and Five Counties A.A., which was reported in your JOURNAL of March 21.

The President said: "Behind Mr. Chamberlain's leadership we architects are willing and anxious to play our part in this gigantic struggle."

This clears the air considerably.

It is to be expected (indeed, hoped) that in a democratic country such as this, there will be some (even among architects) whose opinions will vary more or less from that of the President of the R.I.B.A.; so that we may look forward, now that the ban on expression of political opinion has been officially lifted, to the free expression in the professional Press of the political views of both architects and their representative institutions.

BIRKIN HAWARD

SOCIETIES AND INSTITUTIONS

A.A.S.T.A.

Following statement has been issued by A.A.S.T.A. Council under the title: "Building for Social Services Must Go On":

The Building Industry

At the outbreak of war the Government, by a series of instructions to local authorites and by its control of finance, brought almost all civil building to a standstill. The result has been that unemployment among building trade workers has increased from September 1, 1939, to March 1, 1940, by over 150 per cent. and now, in spite of the numbers who have been called up, includes more than a quarter of the industry. An unprecedented number of the smaller contractors and materials manufacturers have gone bankrupt, while a survey made by the Building Industries National Council has revealed that in the first few months of the war over £200,000,000 of work in the hands of private architects was stopped. In the whole industry the amount is several times as great.

A further B.I.N.C. memorandum contends that there is no serious shortage of any building material except timber—for which substitutes can be found. Nor does it find that there would be any lack of finance if schemes were permitted to go ahead. The sole obstacle in the way of a resumption of building is restrictive legislation and the economic and financial policy of the Government.

On the one hand there are the vast resources of the building industry which are stagnating; on the other, there are urgent social needs for new buildings which are intensified rather than diminished by the war. The A.A.S.T.A. believes that, war or no war, there are certain

minimum social services which must be carried on if civilized standards of health and education are to be maintained.

Health

Apart from the military and civilian casualties, public heath in war-time will inevitably be adversely affected by the speed-up in the factories, the higher cost of living, the restriction of consumption goods, the black-out, etc. At the end of the last war ten millions died all over the world from influenza in two years—more than were killed in action—because lowered living standards allowed the disease to spread easily. Effective health and social services can check epidemics caused by the present war. Are they, in this country, to be cut away to nothing before the war has really started?

In spite of the increased need medical services have in fact been drastically reduced. Hospitals and parts of hospitals, clinics, health centres, convalescent homes, etc., have been taken over for military or civil defence purposes, but almost nothing has been done to provide alternative accommodation for the civilian population in large towns or to augment the accommodation available in reception areas. New buildings are required to extend the hospital accommodation, especially for maternity cases, in all country areas. Welfare clinics are an equally urgent need.

Housing

Bad and overcrowded housing is one of the major causes of disease. It is the main contributory factor in spreading pulmonary tuberculosis, diphtheria, and all epidemics, skin diseases, etc. Vital statistics show that these diseases are responsibile for one death in ten.

And yet at the outbreak of war, according to official estimates, more than 500,000 houses were needed to remedy the worst slums and overcrowding. This leaves out of account the accumulating annual housing requirements to meet the expansion of the population and to replace old houses falling into decay; nor does it take into account the shoddy construction, the high prices, and the lack of amenities of so many speculative houses built since 1919.

Well-planned, low-rental housing, particularly in rural areas, in mining districts, near the new munition centres, and in Scotland, is an imperative necessity. It should be carried out immediately, by means of Government subsidies, through the local authorities, and not through the speculative builder.

Education

At the outbreak of war there were over 800 schools on the "black list." They were ill-lit, insanitary, or dilapidated buildings still in daily use as schools. There were over 2,000 classes with more than 50 children per class. As for nursery schools, there were places for only four children in 1,000 between the ages of 2 and 5.

At the same time, building programmes of county councils and other education authorities were some hundreds of schools behind schedule.

In peace-time there was unquestionably an enormous need for more schools, which has now been made all the more urgent by the taking over of school buildings for military and other purposes and the evacuation of some hundreds of thousands of children to rural areas unprepared to absorb them. Educational building must now be closely linked with that for evacuation, and the most important present requirement is to commence a programme of building new schools and of adapting certain existing buildings for educational purposes in rural areas.

Evacuation

The failure of the Government's evacuation scheme is generally recognized, and is evidenced by the fact that of the three millions proposed to be evacuated, only 1¼ millions actually went, and of these, 750,000 returned to their homes within the first six months of the war. The Government's new scheme, recently announced, proposes no new features—other than a pledge from parents—and limits the evacuation to children of school age. The scheme is not to be put into operation until air raids actually commence, and for this reason has been called a "plan for panic."

Perhaps the main reason for the failure of the first scheme in spite of the self-sacrificing efforts of volunteer workers and individual householders in the reception areas was the lack of organized preparation for the education, feeding, medical care and social life of the evacuees over a long period. The Government's present programme for camp schools will, when completed, cater for only 1 to 2 per cent. of the school population in vulnerable areas. The most urgent requirements in the reception areas are (1) an extension of the Government's scheme for camp schools, (2) buildings for full-time education and communal catering for those children who remain billeted, (3) residential nursery schools for children of pre-school age, (4) hostels for those mothers who can accompany these infants, and (5) extended facilities for day nursery classes.

Air Raid Protection

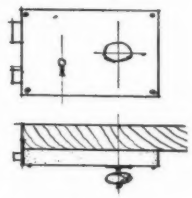
There is at the present time an additional special need for building for civil defence purposes. In certain types of air raid shelters at present being provided, standards of protection and of accommodation are inadequate. Unsuitable shelters must be condemned and a programme for communal shelters suited to the different areas must be commenced. Construction should conform to a new Government Code based on a scientific method of computing the relative safety of different shelters.

What is to be Done?

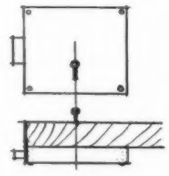
The case for a resumption of civil building to the extent necessary to meet the essential wants outlined above appears to us to be overwhelming. The Government, while expressing polite sympathy, has refused to budge in response to deputations or to appeals so far submitted to it. What is now necessary is the organization of public opinion on as wide a basis as possible to demand from the Government that the industry shall be allowed to supply these needs.

The A.A.S.T.A. hopes that its analysis of the facts and its research into the technical problems involved will stimulate and inform such a mass demand. It invites the co-operation of local authorities and all other organizations who are in agreement with the general policy expressed in this statement. It believes that concerted pressure from those whose living standards are being so drastically reduced can result in a reversal of the present trends and a happier and healthier life for the whole country.

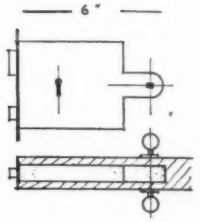
LOCK TYPES AND HANDS



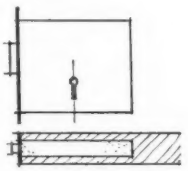
1 RIM LOCK
Right hand



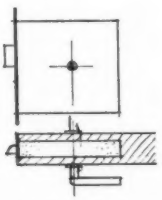
2 RIM DEAD LOCK
Right hand



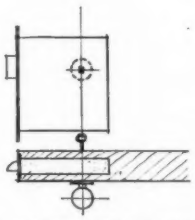
3 6" MORTISE LOCK
Reversible



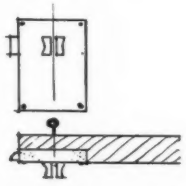
4 MORTISE DEAD LOCK
Suitable for left or right hand door



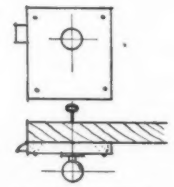
5 MORTISE LATCH
Suits left or right hand



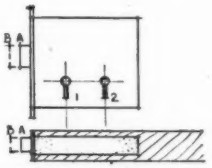
6 MORTISE NIGHT LATCH
Or hotel bedroom lock, right hand, key outside and handle inside



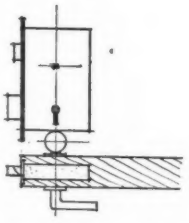
7 FLUSH NIGHT LATCH
Right hand



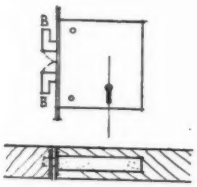
8 RIM NIGHT LATCH
Right hand



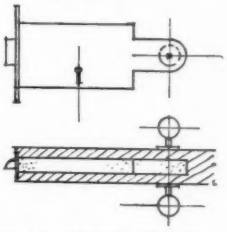
9 MORTISE DEAD LOCK
If required under master key, with assurance that ordinary keys will be unalterable into master or pass keys, must have two key holes. Ordinary key (1) throws dead bolt to A. Master key (2) throws dead bolt to B putting No. 1 key out of use. Suitable for right or left hand door



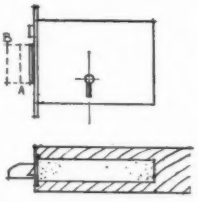
10 UPRIGHT MORTISE LOCK
For pair of lever handles, or lever outside and knob inside (pull side)



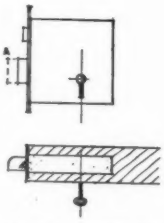
11 MORTISE SLIDING-DOOR LOCK
Hooks B are thrown by the key. Unlocking, the hooks are drawn in flush. Section shows lock applied to pair of plain edged sliding-doors



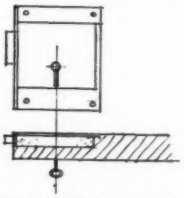
12 6" MORTISE LOCKING LATCH
For narrow rails, right hand



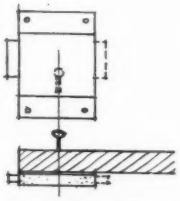
13 MORTISE AUTOMATIC
Dead locking double-shoot CELL DOOR LOCK. *Locks automatically to point A, then bolt may be thrown to point B by master key*



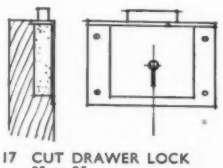
14 MORTISE AUTOMATIC DEAD LOCK
To dead lock upon closing the door, key being necessary only to open from either side or from one side only. A is extent of shoot of dead bolt. Right hand



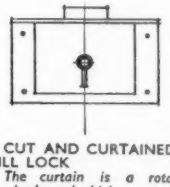
15 CUT CUPBOARD LOCK
Left hand



16 STRAIGHT OR RIM CUPBOARD LOCK
Right or left hand



17 CUT DRAWER LOCK
3" × 2"



18 CUT AND CURTAINED TILL LOCK
The curtain is a rotating wheel-ward which moves with the key

The architect who can recall at will the correct trade description of all types of lock is very rare; and so is the architect who is never at a loss for the hand of a lock. The drawings shown above illustrate most common lock types, their description and hands.

From *Specification 1940*, reviewed overleaf.

BOOKS

THE NEW SPECIFICATION

Specification 1940. Edited by F. R. S. Yorke. The Architectural Press. Price 10s. 6d.

WRITING a specification is becoming more and more the listing of proprietary products which are to be used or fitted according to makers' instructions and less and less the tying down of a builder to use materials which are available to everyone in the way the architect thinks best.

This process is going to continue. It is the only way out for an architect who wants to find, and use properly, the materials and equipment best suited to a particular purpose among the many thousand alternatives which are now on the market. But it is a process which must change specification radically and so must change *Specification*.

A comparison of *Specification 1940* with the copy on which one had previously relied shows Mr. Yorke marching with the advance guard in this great change. Standard clauses are still there, as they must be for a long time: but they are no longer of first importance. It is the illustration, description and comparison of proprietary products and their methods of application which architects now want most: and these now take up most of *Specification's* space.

The drawings which illustrate the multitude of alternatives also serve a second purpose: they show *sizes* as well as methods of fitting and application.

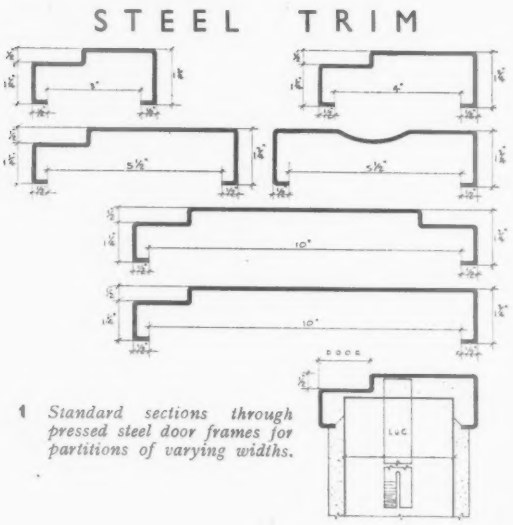
Here Mr. Yorke teaches a lesson to advertisers which, to architects, seems to be being mastered with uncommon slowness. If an architect is hovering over two advertisements for, say, water-closets; and one shows a photograph only while the other also shows dimensions in plan and section and suggestions for fitting, it is the latter which is likely to be chosen. And this applies to windows, doors, boilers, patent roofs and every other part of a building: for the dimensions show whether the product *fits* and the information tells how to fit it.

Many advertisers in *Specification* have already adopted this idea of advertisements being—if I may coin a phrase—Information Sheets. If Mr. Yorke can win over the others before the next issue, architects will have for 10s. 6d. a comparative illustrated guide to almost everything that can be used in a building—and all clearly described or illustrated. If they can get this, they are not likely to let the chance slip.

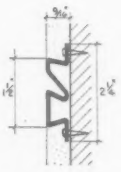
H. M. W.

BOOKS RECEIVED

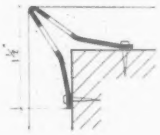
South-Western Survey. By Richard Wyndham. Batsford. Price 8s. 6d.

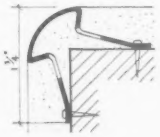


1 *Standard sections through pressed steel door frames for partitions of varying widths.*



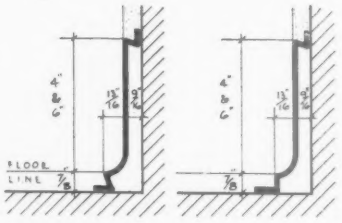
2 *Recessed pressed steel picture rail.*

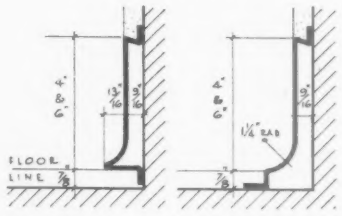


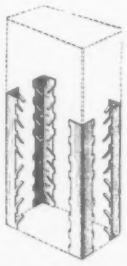


3 *Pressed steel angle-bead, for plastered angles.*

4 *Standard 4 in. and 6 in. coved skirting.*







5 *Standard steel angle guard.*

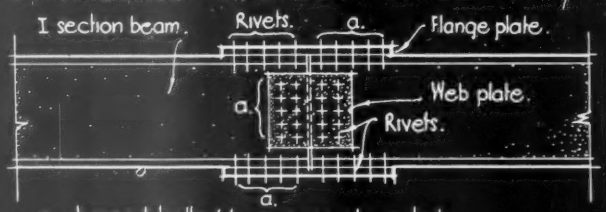
At a time when timber for joinery is extremely difficult to obtain, special attention is being given to substitutes. Steel trim for door lining, skirtings and other purposes has been making headway for some years, and this drawing illustrates shapes and sizes of common standard pressings already on the market.

From *Specification, 1940*

967.

THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

STANDARD SPLICES IN BEAMS, AND LENGTHENING:



a = turned bolts if beams are site-jointed.

FIGURE 1: TYPICAL SPLICE OR JOINT.

FIGURE 1A, flange plates.

FIGURE 1B, joist.

$An = t(b - 2D)$.
$Zn = An \times h$.

$Zn = Z - 2Dt_1(h - 2t_1)$.

DETERMINATION OF SECTION MODULUS.

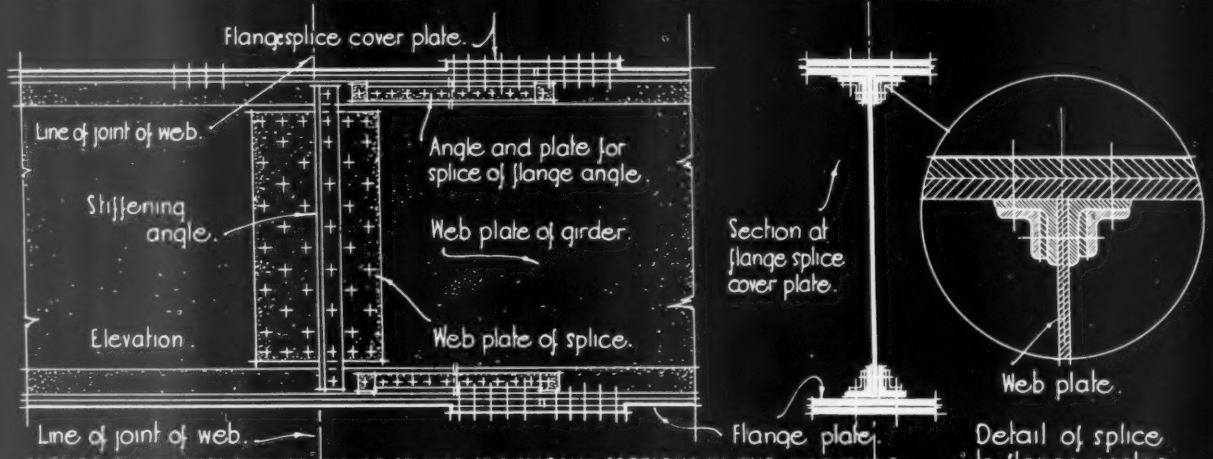


FIGURE 2: MEMBERS OF PLATE GIRDER SPLICED AT DIFFERENT SECTIONS IN THE WORKSHOP.

FIGURE 2A: STAGGERED SHOP SPLICES FOR SEVERAL FLANGE PLATES.

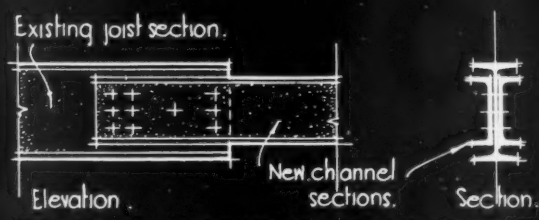


FIGURE 4: LENGTHENING EXISTING JOIST.

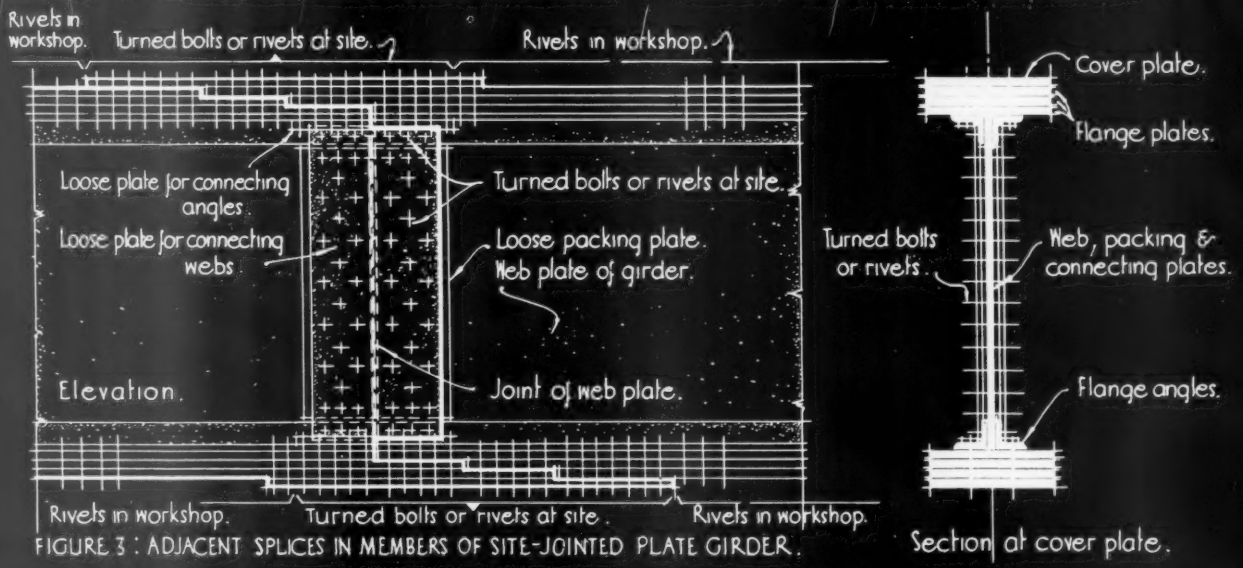


FIGURE 3: ADJACENT SPLICES IN MEMBERS OF SITE-JOINTED PLATE GIRDER.

Issued by Braithwaite & Co, Engineers, Ltd. Compiled by C.W. Hamann, Consulting Engineer.

INFORMATION SHEET: STEEL FRAME CONSTRUCTION: No. 22

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 785 •

STRUCTURAL STEELWORK

Subject : Standard Connections, Splices and Bases : 4, Splices in Beams and Lengthening

General :

This series of Sheets on steel construction is not intended to cover the whole field of engineering design in steel, but to deal with those general principles governing economical design which affect or are affected by the general planning of the building. It also deals with a number of details of steel construction which have an important effect upon the design of the steelwork.

Both principles and details are considered in relation to the surrounding masonry or concrete construction, and are intended to serve in the preliminary design of a building, so that a maximum economy may be obtained in the design of the steel framing.

This Sheet is the twenty-second of the series, and deals with standard splices to beams, and lengthening.

Uses :

Splices in beams become necessary for three reasons :—

(1) Because a sufficient length of material cannot be procured from the mills ;

(2) Because it would be impossible to transport the complete beam in one piece ;

(3) Because of an alteration to an existing joist (lengthening) or because it is convenient to use a certain length of beam available in the workshop.

Except in the third case, splices will usually be required for long and generally heavy beams only. Unfortunately, plates and angles used for plate girders are available only in shorter lengths than R.S.J.'s and thus require more splices.

Grouping :

All splices (except welded ones which will be shown in later Sheets) belong to group 2 on Information Sheet No. 19 of this series, i.e. shear connections.

Types :

Splices or joints can be of two types :—
(*a*) Carried out in the workshop ;
(*b*) Carried out during erection.
Splices necessitated by difficulties of transport will, of course, have to be carried out at the site.

Typical Splice :

Figure 1 shows the typical splice of two lengths of joist. Flange plates must be sufficient to take the tension and compression stresses in the flanges, and on the tension side in particular the total area of the rivet hole is to be deducted from the area of flange plate.

The web plates have to transfer the small part of the bending moment which is in the web, and the shear. If such a splice occurs where the bending moment in a joist reaches the maximum, it should be remembered that only the net section of the joist can be relied upon, i.e. that two rivet holes are to be deducted in every flange (Figure 1B).

Site Splices : (*a*) **Beams :**

If the splice is to be made at the site, one flange plate is to be fastened in the workshop to either flange of the joist by means of rivets (see Figure 1), while turned bolts would be used at the site in the positions indicated.

(*b*) **Plate Girders :**

Although the parts of a plate girder to be spliced in the workshop may have the joint of each member at a different section (see Figure 2), where the splice is to be made at the site, all members must have their joint near each other, similar in principle to the jointing of the beams shown in Figure 1. Figure 3 shows the three separate but adjacent joints for the web plate, angles and flange plates of a site-jointed plate girder. The flange plates act in a similar way to Figure No. 1a. Angles are replaced by the corresponding material in the splices.

In every case sufficient rivets must be provided to take all stresses.

Shop Splices :

Where several flange plates are to be spliced at the workshop, this can be done by using each following plate as a splice for the one before, staggering the actual splices of the different plates, and arranging one splice plate on top, which covers all individual splices—see Figure 2a.

A site-jointed girder is shown in Figure 3. The part to the left of the heavy line, and the part to the right are delivered ready from the workshop.

The jointing of web plates of site-jointed girders is similar to that in Figure 2 representing a typical workshop jointed girder, but that of flange angles and web plates being combined is different.

Lengthening :

Figure 4 shows an existing joist lengthened by means of two channels connected to the web. The rivets must be sufficient to take the bending moment.

Previous Sheets :

Previous Sheets of this series dealing with structural steelwork are Nos. 729, 733, 736, 737, 741, 745, 751, 755, 759, 763, 765, 769, 770, 772, 773, 774, 775, 776, 777, 780, and 783.

Issued by : Braithwaite and Co., Engineers, Ltd.

Address : Horseferry House, Horseferry Road, London, S.W.1

Telephone : Victoria 8571

SOME QUESTIONS ANSWERED THIS WEEK:

★ *THERE exists a method of slating whereby timber and nails are eliminated. Are there any details available?* - - Q262

★ *WHAT was the pre-war price of 2-in. and 3-in. solid rubber coved skirting per foot run, including labour and fixing?* - - - Q264

★ *WILL you let me know where light pressed steel sections are obtainable and their approximate price?* - - - - - Q267

★ *DO you know of any dye—giving a reddish tint—that could be applied to a concrete cement floor?* - - - - - Q268

THE ARCHITECTS' JOURNAL

INFORMATION CENTRE

SINCE the Information Centre was started many manufacturers and suppliers have asked for the names and addresses of enquirers to whom they consider their products would be of special interest. It must, therefore, be made clear that the Information Centre's Service is confidential, and the names and addresses of enquirers cannot be disclosed.

Manufacturers who feel that certain of their products would fulfil the special requirements of an enquirer are, of course, at liberty to send to the editor descriptive literature and samples, and these will be sent on in all cases where the Director of the Information Centre considers that they will be helpful to the enquirer. A number of enquiries are however, made by telephone, and in this case the full name and address of the enquirer is sometimes not known.

Any questions about building or architecture may be sent to:

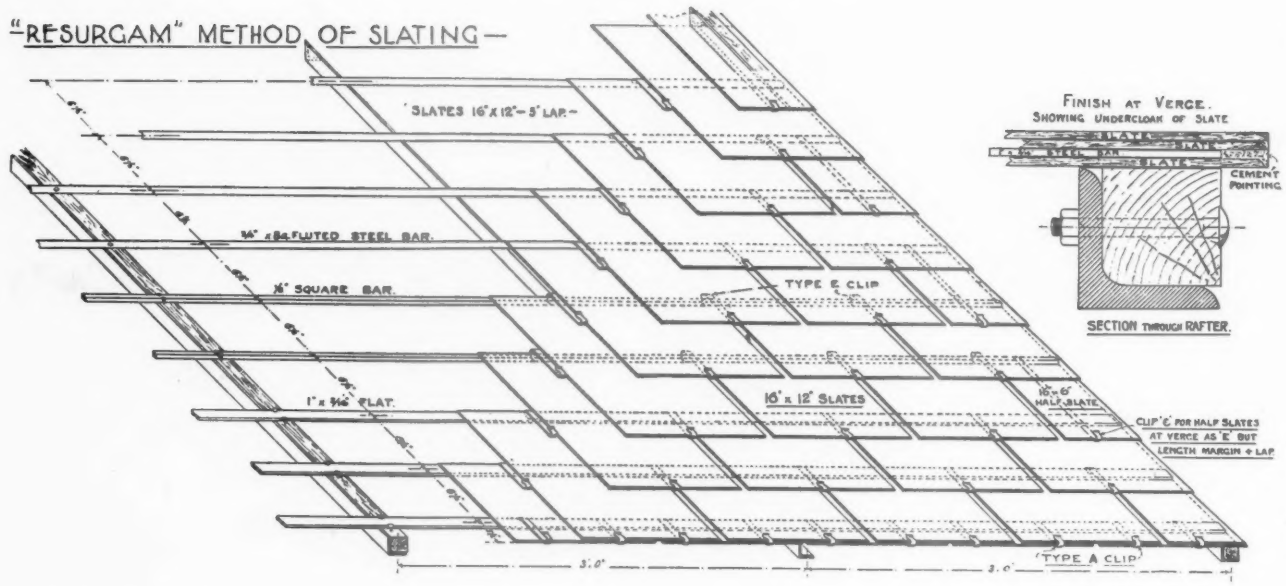
THE ARCHITECTS' JOURNAL
45 THE AVENUE, CHEAM, SURREY.
Telephone: *VIGILANT 0087*

or ring the Architects' Journal Information Centre at

REGENT 6888

Q261 ARCHITECTS, WALSALL.—*We have in hand the construction of a considerable amount of Cotswold STONE walling, which is finished with a sawn face and is 4½ in. on bed. The contract for this work has been let for some time, but we have recently received a claim for an increase of 4s. per yard super, which is stated to be due to an increase of 3d. per hour on sawyers' wages. The contractors state that from the first day of February, 1940, up to the present time SAWYERS' WAGES have risen from 1s. to 1s. 3d. per hour. We should be obliged if you would let us know whether you have any knowledge of this increase, and if so, whether you consider the amount suggested for the increase on the finished work is reasonable.*

Since the outbreak of war there has been an increase of 1d. per hour in the sawyers' rate of wages, ½d. of this having taken place at the beginning of February last. But this information may not be a complete answer to the enquiry, since certain areas, in addition to having granted an increase in hourly rate, due to rise in cost of living, were regraded, and it might be that this latter factor accounts for the increase of 3d. per hour claimed by the contractor. From



the enquiry, it could not be decided whether this regrading affected the actual quarry or works at which the stone was being sawn, but the complete circumstances should be submitted to the official mentioned below,* who will be in a position to confirm the increase in labour costs. No doubt, upon confirmation of the increase per hour in labour rates, it will be possible for the quantity surveyor concerned to arrive at an additional rate per yard super for the walling as erected. Such enquiries as have been made seem to show that the increase claimed is reasonable.

Q262 ARCHITECTS, LONDON.—*There exists a method of SLATING whereby TIMBER AND NAILS are ELIMINATED. Are there any details available?*

Probably what is intended is the RESURGAM method of slating, in which slates are hung by means of special clips to flat or rounded bars acting as slating battens. The accompanying drawing illustrates this method of slate fixing. The company responsible for its introduction is given below.†

Q263 ARCHITECTS, NEWCASTLE-UPON-TYNE.—*We understand that by some new legislation it is now possible to apply for a GRANT towards the construction of an AIR RAID SHELTER provided that it is completed before the end of April, even though it was not commenced before September 30 last, and in fact is not even commenced yet. Is our information on this point correct?*

No legislation has been introduced to this effect. Before qualifying for a grant, plans of the shelter intended must have been submitted to the authorities concerned, and the project completed, started or agreed to before September 30 last. Within recent months, however, additional areas of country have been added to those throughout which the grant scheme operates, and it may be that the shelter contemplated is to be constructed in one of these new areas. From enquiries made, it would appear that for those new areas no final date for application for a grant has been fixed. It is recommended, however, that application be made at once to the Home Office,* stating the exact location of the intended shelter and whether for a factory or commercial building.

Q264 ARCHITECT, ESSEX.—*What was the pre-war PRICE OF 2 in. and 3 in. solid RUBBER COVED SKIRTING per foot run, including labour and fixing?*

It is not possible to quote prices with any exactitude since so much depends upon quantity and location of work and on the nature of the work itself. But, with these reservations, the following prices are mentioned—being for work in London area and as part of a floor-laying contract with a specialist sub-contractor—2 in. solid rubber coved skirting fixed, 1s. 6d. per foot run; and 3 in. solid rubber coved skirting fixed, 1s. 11d. per foot run.

Q265 ARCHITECTS, INVERNESS.—*Can you suggest any ALTERNATIVE material TO take the place of WOOD FLOORING on timber joists spaced at 18-in. centres?*

It is possible in Southern districts to approach the Local Timber Control and obtain a licence to purchase the amount of flooring needed for uncompleted buildings. Then the problem resolves itself into finding a firm with stocks of suitable floorings, and they in turn obtain a licence to sell the quantity covered by the buyer's licence. Admittedly, it is difficult to procure supplies of softwood floorings, but a fair range of hardwood strip floorings are available. So far as can be judged from practice in the South, there should be no difficulty in procuring the licence to purchase, and in your case approaches should be made to the official given below.* If difficulties are encountered in finding a firm with stocks of flooring timber you should make enquiries from the firms mentioned below.† As to materials other than timber which can be used for flooring and spanning over joists at 18-in. centres, it would seem that there is really no satisfactory solution. Wood fibre boards of the hardboard type of $\frac{9}{16}$-in. thickness have been suggested, but even with two layers of such boards considerable deflection must be expected where point loads from

* *The Secretary of the South-western Federation, W. H. Orram, Esq., 22 Richmond Hill, Clifton, Bristol, 8.*
† *The Oakley Slate Quarries Co., Ltd., 332 Abbey House, Victoria Street, London, S.W.1.*

* *Home Office, O.3 Division, Cleland House, Page Street, London, S.W.1.*

* *The Timber Control Officer, 53 Shore Street, Inverness.*
† *A. M. MacDougall & Co., 20 Renfrew Street, Glasgow, C.2. The Wachal Flooring Co., Ltd., 28 Victoria Street, London, S.W.1. Hollis Bros. & Co., Ltd., Craven Hill, Hull.*

furniture occur in the centre of the span. Another material, the compressed wood wool cement slabs, such as "Thermacoust,"* could be used, but a 2-in. thickness of the heavy duty slab would be necessary, or, as an absolute minimum, the 1½-in. heavy duty slab could be used. Probably the most satisfactory alternative in so far as thickness and rigidity are concerned would be the 3D.F.2 "Durasteel"† fire protection panel available in ⅛-in., ¼-in., and ⅜-in. thickness, and in 6 ft. by 2 ft. 6 in. and 8 ft. by 2 ft. 6 in. sheets. This sheet has a core of a compressed asbestos mix, and is surfaced on both faces with perforated thin steel sheet. When laid over the joists nailing could be done through the steel perforations. While the hardboard could be regarded as the floor surface and polished, both the woodwool slab and the Durasteel sheet would act only as a base for a floor covering. With a certain amount of preparation such as filling the surface interstices, any form of linoleum, cork carpet, cork tile, rubber or thin strip hardwood overlay could be used as the floor covering.

Q266 ARCHITECT, WATFORD.—*Just prior to the war a demolition order was served upon a property with which I am dealing, and plans were prepared showing a RECONSTRUCTION OF the PREMISES of such an extent as to change their character from cottage dwellings to villas, and it was my intention to demolish certain parts of the property whilst using such main walls as might be sound in the reconditioning. From a conversation with one of the local council officials some doubt arose as to whether I was entitled to do this. Assuming that the reconstructed building complies with the local by-laws, and is soundly constructed; I am arguing that there is no infringement of legislation. Failing agreement with the local authority, I assume that this is a matter on which one can appeal to the Ministry of Health.*

It is to be assumed that the cottages referred to are inhabited by the working classes, in which case under the Housing Act, 1936, a local authority may order a landlord to carry out alterations to the premises to bring them to a standard of habitable condition required under the Act, and specifying a time—usually 21 days—for the execution of such works. During this period the landlord is at liberty to appeal to the Ministry of Health against the directions of such an order. Failing the landlord doing the work or lodging an appeal during these 21 days, the local authority are empowered to issue a demolition order. This order is served on the landlord, and usually takes effect in 28 days, during which time the landlord can appeal against the order, but *not* against the items of work requiring to be done to make the premises habitable. The demolition order will not have effect pending the hearing of the appeal. Alternatively, if the local authority considers that a house cannot be made fit at reasonable expense, they serve on the landlord a notice of the time and place at which the condition of the house and any offer to carry out work will be considered by them. The owner or landlord may then give notice that he intends to make an offer and submit a list of what he proposes to do. If this offer is accepted, the owner enters into an undertaking to do such works as will render the property fit for human habitation. If no undertaking is accepted, or if after an undertaking is given, the work is not done in the specified period, the local authority may forthwith make a demolition order operative in the time period previously mentioned. The foregoing notes explain how a demolition order may arise, and it might well be that in your particular case the time allowed for appeal has passed. If appeal is still possible it should be addressed to the Ministry of Health.*

Q267 ENQUIRER, TRING.—*I should be obliged if you would let me know where LIGHT PRESSED STEEL SECTIONS are obtainable and their approximate price as detailed and described in the twelfth article of "Temporary and Semi-Permanent Buildings" in* THE ARCHITECTS' JOURNAL *for February 8.*

There are a number of firms interested in the production of pressed steel structural units such as angles, tees and joist sections and also built-up lattice work, but the output so far has been insufficient for any standard or list prices to be given. Prices for this work depend largely on quantities required and the amount of repetition and fabrication work involved. The firms mentioned below,† however, would be pleased to co-operate with designers interested, so that the work can be planned to use only the simplest sections most readily producible.

Q268 BUILDING CONTRACTORS, SCARBOROUGH.—*One of our customers has asked us if we know of any DYE—giving a reddish tint—that could be APPLIED TO a CONCRETE cement FLOOR.*

We have no knowledge of any dye which could be applied to an existing concrete floor. There are numerous paints specially prepared for application to concrete floors which give a fair measure of wear under foot traffic. These paints are available from firms mentioned below.* In addition to producing a floor paint, one firm† produces a concrete floor surface tinter, and probably this material will be the nearest approach to a dye treatment.

REFERENCE BACK

[*This section deals with previous questions and answers.*]

Q207. *March* 14, 1940.

In the reply given an enquirer the address of Diagrid Structures, Ltd., was given as Horseferry House, Westminster, London, S.W.1, whereas the address of the company now is 42 Onslow Gardens, London, S.W.7. Telephone Sloane 6335–6.

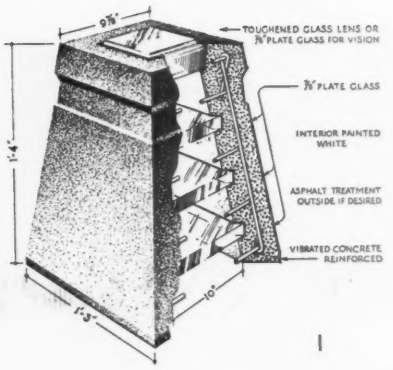
Q225. *March* 21, 1940.

In the answer given in an enquiry as to present supplies of imported compressed reed partition and building slabs, it was suggested that at the moment there was no import of the material. It has since been brought to our notice that the material, imported from Holland, is available from H. Kraayvanger, Esq., 606 Watford Way, Mill Hill, London, N.W.7, Telephone Mill Hill 1826, and in sizes up to 5 ft. 3 in. wide and in lengths up to 13 ft.

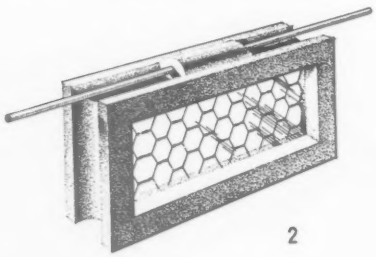
* *Thermacoust Products, Ltd., 32 Victoria Street, London, S.W.1.*
† *Durasteel Roofs, Ltd., Oldfield Lane, Greenford, Middlesex.*

* *The Secretary, Ministry of Health, Whitehall, London, S.W.1.*
† *Messrs. Jos. Sankey and Sons, Ltd., Hadley Castle Works, Wellington, Salop. Steel Ceilings, Ltd., Steleonite Works, Hayes, Middlesex. Henry Hope and Sons, Ltd., Smethwick, Birmingham.*

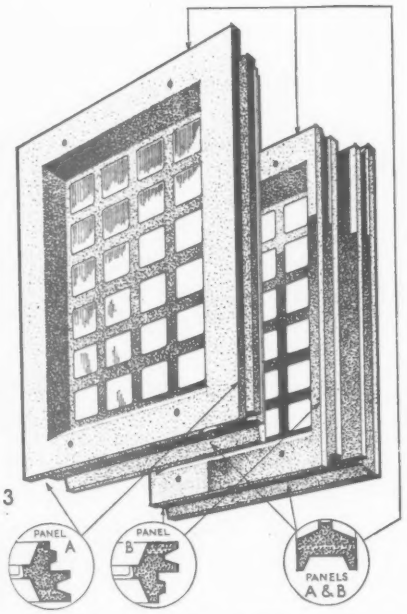
* *Jos. Freeman, Sons & Co., Ltd., Cementone Works, Wandsworth, London, S.W.18. Watco, Ltd. 56 Buckingham Gate, London, S.W.1. Matthew Keenan & Co., Ltd., Armagh Works, Tredegar Road, Bow, London, E.3.*
† *Jos. Freeman, Sons & Co., Ltd., Cementone Works, Wandsworth, London, S.W.18.*



1



2



3

TRADE NOTES

[*By PHILIP SCHOLBERG*]

Light in A.R.P. Structures

The newly combined firm of James Clark and Eaton have just issued a pamphlet describing three new lighting units which can be used for a variety of purposes. The first type is a reinforced concrete unit which is intended for new or existing air raid shelters or observation posts, and which, as can be seen from the part sectioned sketch (Fig. 1), consists of four sections of ⅞ in. plate glass spaced at 3 in. intervals: this type allows clear vision and may be used in observation posts, but if light only is required a toughened glass lens is substituted for the external plate. In either type the ⅞ in. sheets of plate glass may be replaced by toughened or laminated glass.

The other two types consist of a panel light (Fig. 3) and a brick-light (Fig. 2.) The panel lights weigh some 4 cwt. apiece and are designed to withstand a pressure of 400 lb. per sq. ft., and where full splinter-proof protection is required it is suggested that two or more panels may be used, one behind the other. These panels are intended for walls or inclined roof lights in new buildings, or for external protection over existing windows or skylights. The lenses are made of toughened glass, and each panel is self-supporting in its frame. The longer sides are tongued and grooved for fixing (two types A and B with complementary tongues and grooves) and the shorter sides are channelled. A number of different fixing methods are possible, and the units are generally supplied with handles so that they may be more easily lifted.

The brick-light is a glass and concrete unit made to standard R.I.B.A. brick size for incorporation in brickwork and for filling in window openings. The glass is ¼ in. thick wired plate and, owing to its small area, it will withstand a considerable amount of blast. The bricks can be obtained with or without the reinforcing rod, and there is a further type suitable for ventilation. In filling the vertical joints between bricks the reinforcing rods are bent up out of the way, after the joint is filled they are bent back and wired together: end bars may be bent up or down, or fixed into the wall.—(*James Clark and Eaton, Ltd., Scoresby House, Glasshill Street, Blackfriars, London, S.E.1.*)

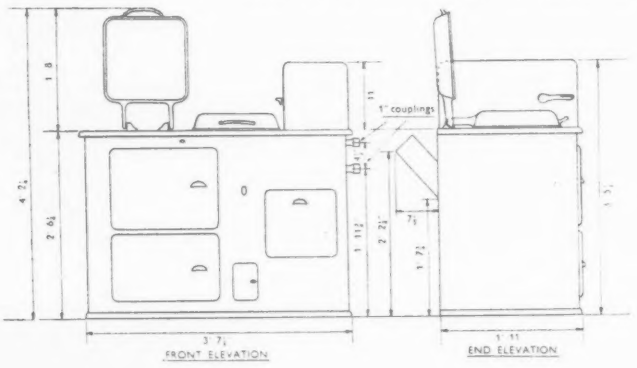
MANUFACTURERS' ITEMS

A new slow combustion, solid fuel cooker has recently been placed on the market by Federated Sales, Ltd., of 80 Grosvenor Street, W.1. It is called the "AB Cooker" and is the subject of a twelve-page illustrated brochure issued by the firm last month. The cooker, which contains cooking and domestic water heating in one unit, is suitable for use in houses, hotels, canteens and institutions. It costs £40, and is finished in cream and black; other colours are available if required, at an additional charge.

Burning a variety of smokeless fuels the cooker is fitted with a special automatic fuel feed hopper that requires refuelling only twice in 24 hours. This feed ensures that a continuous minimum supply of fuel, governed by cooking demands, is fed to the fire pot. Thus waste and frequent re-stoking are eliminated.

The cooker is "table-size" in height, and comprises a roasting oven (17 in. by 13½ in. by 16¼ in.), a simmering oven (17 in. by 8 in. by 16¼ in.), and a separate plate oven (11 in. by 8¼ in. by 19½ in.)—facilities for cooking meals for 6–20 people. Both boiling and simmering hot plates have been provided; each measures 13 in. by 13½ in. The former boils water at the rate of a pint a minute. Each of the hot plates has a specially insulated baffle plate which can be lowered on the hot plate when it is not in use in order to

Photograph and elevations of the new AB Cooker



conserve the heat and increase hot water facilities.

One of the many advantages of the cooker is that, in addition to ensuring a better cooking service, it not only gives a constant day and night hot-water supply, but even more hot water than before. Yet no extra boiler is necessary; and there is no complicated installation. It is delivered *in one complete unit*, and can be fitted simply and inexpensively to the existing water system by a local plumber or builder.

As a result of the necessity of economizing paper in wartime, newsagents are unable to keep a stock of journals and periodicals for casual sale. If you wish to make sure of receiving your copy of this JOURNAL *in future, you should either place a definite order with your newsagent or subscribe direct to*

THE PUBLISHER, 45 THE AVENUE, CHEAM.

Annual subscription rates £1 3s. 10d. inland; £1 8s. 6d. abroad.

•

As a fitting corollary to the recent introduction by Radiation, Ltd., of the Nos. 345 and 348 Regulo New World cookers, they now announce the production of a New World double-oven gas range, No. 3458. The front frame is of cast iron, white vitreous enamelled, and the whole structure is based on a rigid cast- and wrought-iron framework. A feature is the supporting plinths, which can be adjusted with levelling screws for use on an uneven floor.

The New World Double-Oven Gas Range

This range has two independent ovens, of the latest New World design, each fitted with a Regulo of the new cleanable type. The oven on the left has a door opening 16 ins. high by 15½ ins. wide with an oven depth of 14 ins., while that on the right has 2½ ins. wider door opening. Each oven burner is readily lighted from a lighting point at the front of the oven using a Radiation gas taper, which is included.

Two of the boiling burners are of the high speed ring type (26 cu. ft./hr.), three are Duplex Rado burners (18 cu. ft./hr.), and the sixth is a Simplex Rado burner (also 18 cu. ft./hr. capacity).

The tap handles are safely housed below the front top rail and so protected from being turned on inadvertently, those with the Duplex burners having dual fans whereby both the simmering and the full-on positions are positively indicated. The new high-capacity grill (38 cu. ft./hr.) has a solid pierced plate for toasting and grilling, and the three runners of the grill frame give positive grilling positions.

THE BUILDINGS ILLUSTRATED

FLATS, PORTLAND GATE, HOVE (pages 407–409). Architect: Joseph Hill, F.R.I.B.A. General contractors, Messrs. H. Meckhonik. Sub-contractors and suppliers included: L. G. Mouchel and Partners, Ltd., foundations and reinforced concrete; Ragusa Asphalt Paving Co., Ltd., asphalt; Eonit (Pumice), Ltd., concrete blocks; Glass and Glazing, Ltd., glass; Cellulin Flooring Co., patent flooring; Sika-Francois, Ltd., waterproofing materials; Belling & Co., Ltd., electric heating; Crittall Manufacturing Co., Ltd., casements; Hammond Bros. and Champness, lifts; Ewart & Son, Ltd., Califont hot-water boilers.