Alphabetical Index to Advertisers

For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Educational Legal Notices, Miscellaneous, Property and Land Sales—*see* pages xxxviii and xl.

CLEARING THE SITE

"Twisteel" and "Wireweld" are not believers in letting the grass grow under their feet!

ACTION is their motto! Preparing for peace whilst they are working for war!

. . . . . and surely "Twisteel" and "Wireweld" represent your views on post-war development—and surely, too, the organisation they represent can help you with your problems where steel fabrics and designs for reinforced concrete structures are concerned. Take advantage of the "Twisteel" service!

TWISTEEL REINFORCEMENT LTD.

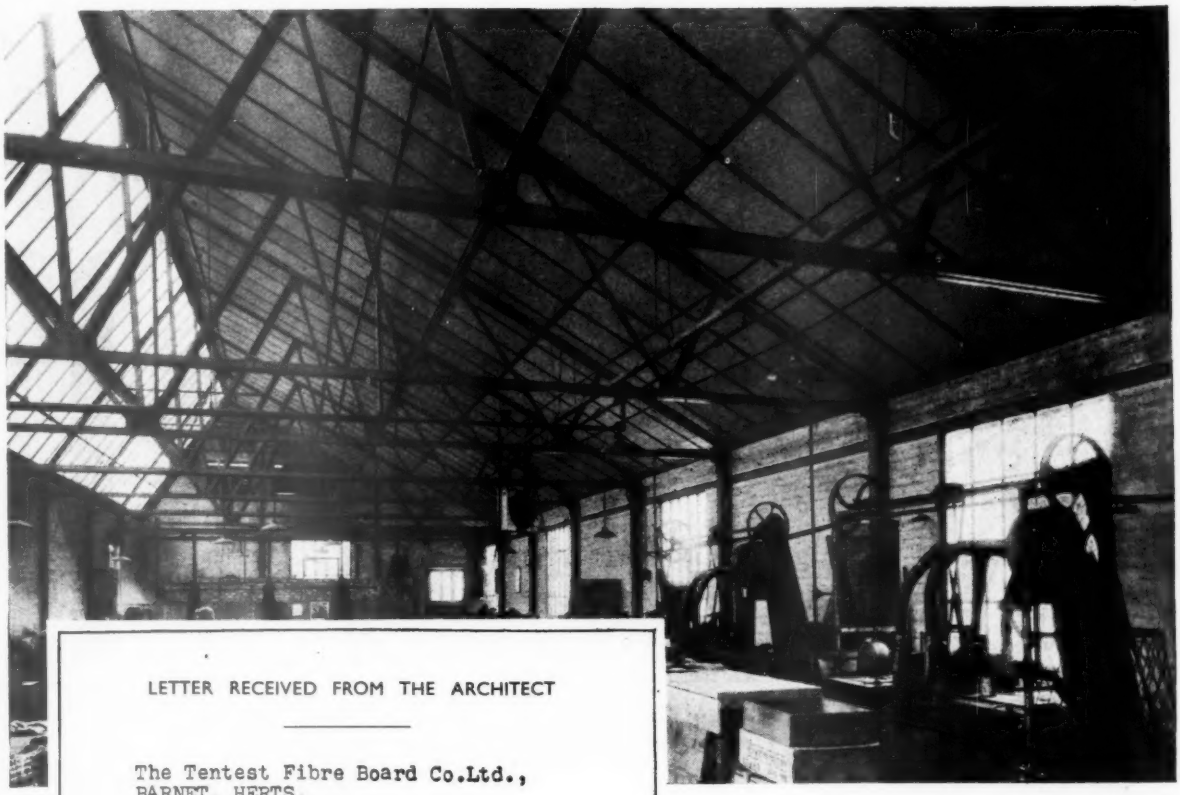
ALMA STREET, SMETHWICK, STAFFS.

and at London, Belfast, Warrington and Glasgow.

Telephone Nos.:
Smethwick 1991 (5 lines) London: Sloane 9218 (3 lines)
Belfast 24641 (3 lines) Warrington 273
Glasgow: City 7661 (4 lines)

Insulating existing buildings

EXAMPLE NO. 1. Brush Materials Factory



LETTER RECEIVED FROM THE ARCHITECT

The Tentest Fibre Board Co.Ltd.,
BARNET, HERTS.

Dear Sirs,

The insulation of the corrugated asbestos cement factory roof recently carried out by your Specialised Construction Department has given every satisfaction to my client and myself. Satisfactory temperatures are now easily obtained in winter, a very considerable saving in fuel has been effected and one-third of the heating equipment can now be used elsewhere. The excessive summer temperature is also obviated.

The work was done without interfering with production and the job has a neat and pleasant appearance.

Yours faithfully,

17th April,1944.

When the temperature in a building is so low in winter or high in summer that efficiency of workers is reduced, structural insulation performs another function just as vital as saving fuel and heating plant—*it increases production of essential commodities.*

We can advise on all aspects of STRUCTURAL INSULATION in new or existing buildings and, as in the building illustrated, we can supply and fix complete.

TENTEST
TRADE MARK

Made in Canada

IF YOU HAVE A FIXING PROBLEM, PASS IT ON TO US!

TENTEST FIBRE BOARD CO. LTD., 75 CRESCENT WEST, HADLEY WOOD, BARNET, HERTS.

Telephone : BARnet 5501 (5 lines). *Telegrams : Fiboard, 'Phone, London.*

For the post-war house . . . . . .
The M.15 Electrolux Refrigerator can be built into a kitchen fitment at any height, and will hold all the perishable food of the average small family. It can be seen at The Building Centre, London, and in many experimental post-war houses and kitchens. Write for our "Better Kitchens" leaflet.

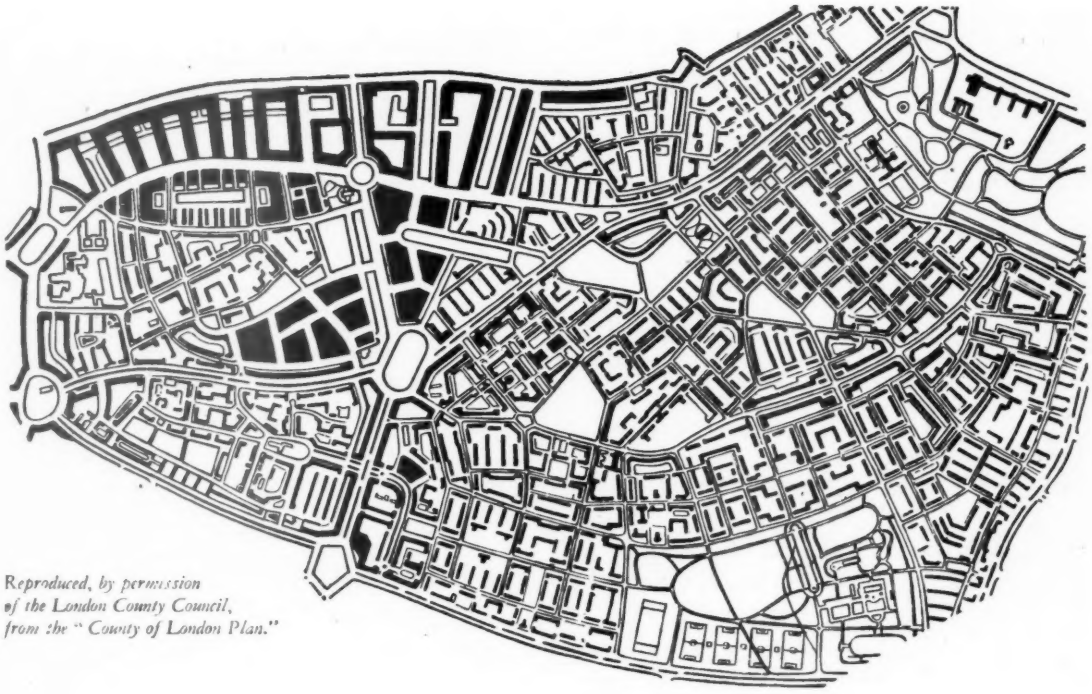
Is noiseless and without moving parts.

ELECTROLUX LIMITED

Works: **LUTON, BEDFORDSHIRE** *Tel:* **LUTON 4020**

Stoneham & Kirk

B



Reproduced, by permission of the London County Council, from the "County of London Plan."

LIGHTING IN RECONSTRUCTION

The scientific application of a high standard of artificial illumination should form an integral part of every new building project. Electric lighting technique, stimulated by the needs of war, will make an important contribution to the comfort and efficiency of the post-war world.

Public opinion will demand better lighting; plans to provide it should be made now.

The Lighting Service Bureau—backed by the research organisations of its members—offers unrivalled facilities for providing information on all aspects of modern illumination. The Bureau is at your service.

E.L.M.A

ELECTRIC LAMP MANUFACTURERS ASSOCIATION OF GREAT BRITAIN LTD

THE LIGHTING SERVICE BUREAU, 2, SAVOY HILL, LONDON, W.C.2

MAINTAINED BY THE ELECTRIC LAMP MANUFACTURERS' ASSOCIATION

This plant comes from the broadest experience

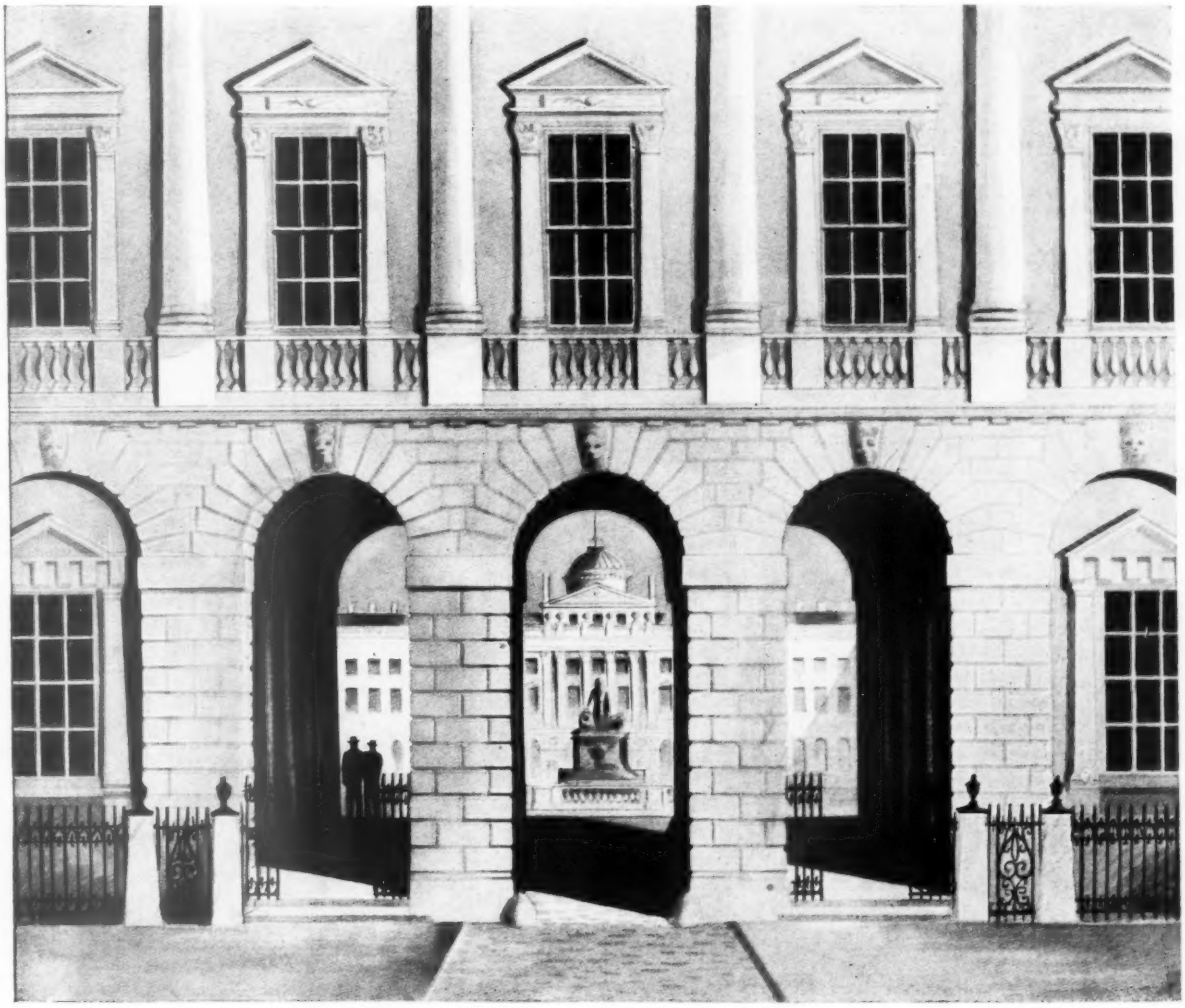
. . . experience not only of designing and building plants for ventilation of crowded places, but of the incorporation of activated carbon and particulate filters to deal with deleterious gases. Heating arrangements for incoming air can be incorporated if required. We have supplied plants, large and small, for industrial concerns, municipalities, office buildings, flats, etc., with means for standby operation in emergency. Write for full particulars.

SUTCLIFFE, SPEAKMAN & COMPANY LIMITED

Telephone: 94, 95, 96 Leigh LEIGH • LANCASHIRE *Grams: "Utilization," Leigh, Lancs.*

LONDON OFFICE: 66 Victoria Street, London, S.W.1

HOLDERS OF LICENCES TO USE HOME OFFICE CERTIFICATION MARK, LICENCE Nos. II, IV, V, VI, VII, XIV and XXII. FL.1



CIVIL ARCHITECTURE

Sir William Chambers showed a perfect appreciation of what is meet for a public building, in a capital city. What an essay in civic manners—that long, low, meticulously-restrained facade is the perfect foil for the aspiring and picturesque outline of Wren's buildings to the east. What exemplary conscientiousness in every phase of construction! And how appropriate to its function and its time is this great government office built at the height of the Palladian epoch! . . . Somerset House teaches valid lessons for our own time, when the number and importance of public buildings steadily increases. *In such public buildings Celotex products are particularly fitted to play a useful part.*

Installation costs of domestic gas and water supply services will be much reduced by the use of "KUTERLON" Long Length Copper Tube which is now supplied in coil form in lengths up to 60 ft. Annealing or the use of mechanical bending appliances are not necessary. Bending can be done by hand, and the tube can be laid easily in trenches and run round obstructions such as rock or tree trunks. "KUTERLON" will be available for post-war reconstruction, but meantime is supplied to current licensing regulations. Full information will be supplied on request.

I.C.I. METALS LIMITED

WITTON, BIRMINGHAM, 6

Sales Offices at: MILL HILL, LONDON, N.W.7 · BELFAST · BRADFORD · BRISTOL
CARDIFF · DUBLIN · GLASGOW · LIVERPOOL · MANCHESTER · NEWCASTLE-ON-TYNE
SHEFFIELD · SHREWSBURY · SWANSEA · YORK

ICI

M324

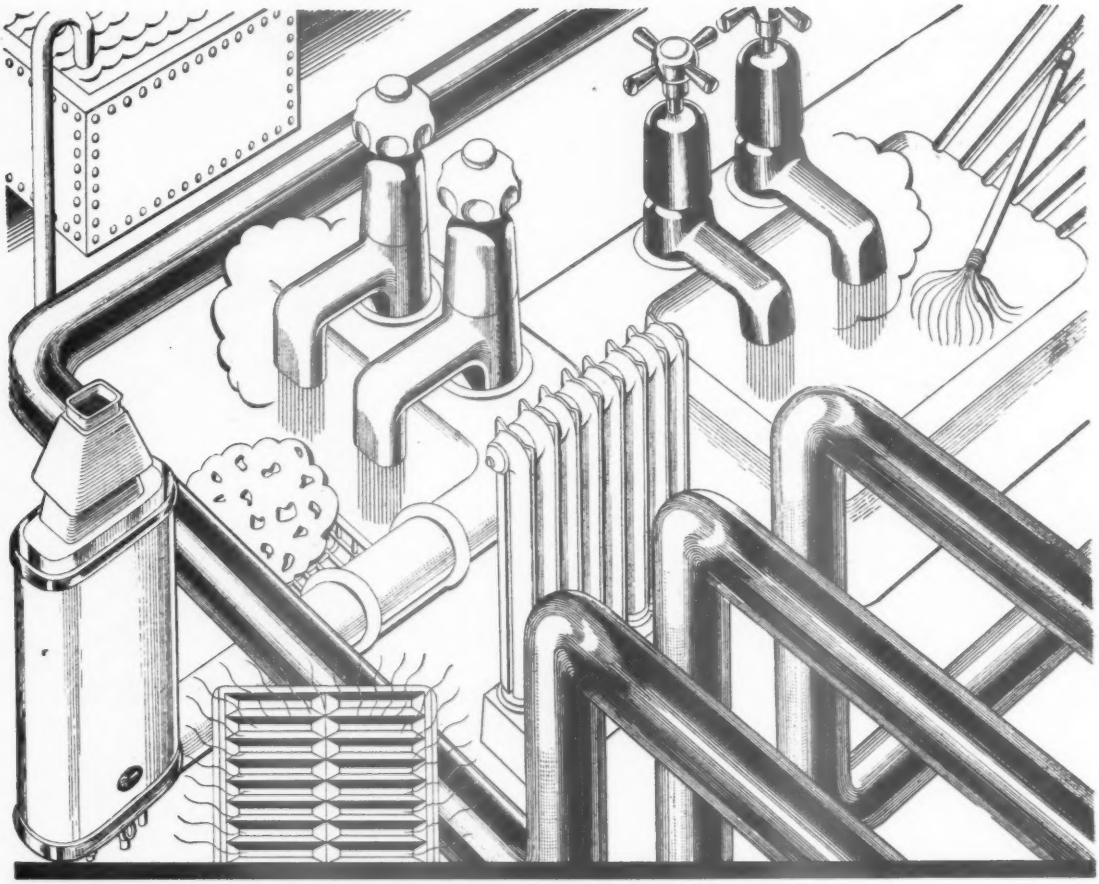
Staircases can be made by Line Production, just as doors and windows can. It's only a matter for careful organisation so that treads. risers and stringers go straight through the joinery shop from machine to machine without waste of time or effort. Magnet Joinery make thousands of good staircases one after the other in a straight line.

MAGNET JOINERY

WHITLEY STREET, BINGLEY, YORKS

WEST THURROCK, GRAYS, ESSEX • ANNE ROAD, SMETHWICK, BIRMINGHAM

Stoneham and Rhi



EMPHASIS ON PLUMBING. Pre-fabrication of plumbing units will play an important part in the construction of post-war houses. The advance in design and availability of labour-saving appliances will demand more than the mere provision of conduits for fuel and water.

A strategical approach to plumbing problems will be required to ensure the correct siting of automatic cookers, water heaters, fires, radiators, clothes boilers, drying cupboards, and the many other appliances of the modern home; and to defeat unsightliness and provide for inspection and repair.

Radiation Ltd. has made a close study of this subject and can supply detailed information of service to all who are concerned with post-war planning.

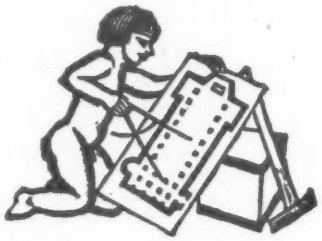
Radiation Ltd

COMPRISING

ARDEN HILL & CO. LTD. DAVIS GAS STOVE CO. LTD. EAGLE RANGE & GRATE CO. LTD. FLETCHER RUSSELL & CO. LTD
NAUTILUS FIRE CO. LTD. RICHMONDS GAS STOVE CO. LTD. WILSONS & MATHIESONS, LTD. JOHN WRIGHT & CO. LTD

RADIATION HOUSE ASTON BIRMINGHAM 6 AND 7 STRATFORD PLACE LONDON W.1

In common with every other periodical this JOURNAL *is rationed to a small part of its peace-time needs of paper. For this reason it is virtually impossible for Newsagents to accept new orders for the* JOURNAL *for the time being, and the Publishers are also now unable to enter new subscriptions. Intending subscribers should, however, send in their names either to their Newsagent or direct to the Publishers to be recorded on the "waiting list" when they would be advised as soon as a vacancy occurs. The annual post free subscription rate is £1 15s. 0d.. Single copies, 9d., postage 2d. Special numbers, price 1s. 6d. are included in the annual subscription. Back numbers more than 12 months old (when available), double price. Volumes can be bound complete with index, in cloth cases, for 15s. each; carriage extra. Goods advertised in the* JOURNAL, *and made of raw materials now in short supply, are not necessarily available for export.*



DIARY FOR JUNE JULY AND AUGUST

Titles of exhibitions, lectures and papers are printed in italics. In the case of papers and lectures the authors' names come first. Sponsors are represented by their initials as given in the glossary of abbreviations on the front cover.

BISHOPS STORTFORD. *When We Build Again.* Exhibition and Film. (Sponsor, TCPA.) JUNE 8-10

CHELMSFORD. *The English Town: Its Continuity and Development.* Exhibition, and *When We Build Again.* Film. (Sponsor, TCPA.) SEPT. 1-9

GRANTHAM. *The English Town: Its Continuity and Development.* Exhibition. At the Guildhall, Grantham. (Sponsor TCPA.) JULY 12-26

LONDON. *RA Exhibition.* Weekdays 9.30 a.m. to 7 p.m. Sundays 2 to 6 p.m. Admission: One Shilling. JUNE 8-AUG. 7

National Buildings Record Exhibition. At the National Gallery. Photographs of buildings of architectural interest throughout the country taken during the past three years for record purposes. Most parts of England, from Northumberland to Cornwall, are represented and the subjects range from the Central Tower of Durham Cathedral to Georgian wallpaper in a house at Falmouth. (Sponsor, National Buildings Record.) 10 a.m. to 12.30 p.m., 2.15 p.m. to 6 p.m. JUNE 8-JULY 15

London Discussion Group on Town and Country Planning. At 2, Savoy Hill, W.C.2. Professor Patrick Abercrombie, Vice-President of the Town and Country Planning Association and Planner of the LCC and Greater London areas, and Mr. F. J. Osborn, Chairman of the Executive Committee of the Town and Country Planning Association, will meet a group of London members of the Association and others interested, with a view to forming a central London discussion group on town and country planning. 6.30 p.m. JUNE 9

A. M. Chitty. *Science and Housing.* RIBA Architectural Science Board Lecture. At 66, Portland Place, W.1. The lecture will discuss the scientific aspect of the solution of housing needs and will demonstrate how scientific research has influenced the approach to problems that arise of construction, stability, moisture-penetration, insulation, fire-protection, lighting, ventilating, use of space, durability, maintenance, mass production and standardisation. Mr. Chitty is Technical Officer to the Inter-departmental Committee on Housing Construction convened by the Ministry of Works, the Ministry of Health, and the Department of Health for Scotland under the Chairmanship of Sir George Burt. 6 p.m. JUNE 13

J. H. McGuinness, Secretary, Scottish Advisory Housing Council. *Planning our New Homes.* At 13, Suffolk Street, S.W.1 (Sponsor, HC.) 1.15 p.m. JUNE 15

Rudi Mock. *American Housing.* At 13, Suffolk Street, S.W.1. (Sponsor, HC.) 1.15 p.m. JUNE 20

RIBA Council Election Results. To be announced at general meeting at 66, Portland Place, W.1. Followed by informal meeting at which Sir Malcolm Trustram Eve, Chairman of the War Damage Commission, will talk on *The War Damage Act and Architects.* (Sponsor, RIBA). 6 p.m. (See page 423.) JUNE 27

NEW MALDEN, SURREY. *The English Town: Its Continuity and Development.* At the Public Library. (Sponsor, TCPA.) AUG. 19-26

PEMBREY. *When We Build Again.* Exhibition and Film. (Sponsor, TCPA in collaboration with Messrs. Cadbury Bros.) AUG. 5-15

READING *When We Build Again Exhibition.* At the Museum and Art Gallery. Models and screens show diagrams of replanned city areas, factories, shopping centres, schools and nursery schools, parks, hospitals, houses and kitchens. Other screens illustrate how congested cities may be replanned with fewer people to the acre to allow for more open spaces and gardens—the surplus population going to new and existing towns, and not to further suburbs. Two full size kitchen models by the Gas and Electricity Industries are displayed. The film *When We Build Again* (running time 20 minutes) will be shown daily at 11.0 a.m. and 2.30 p.m. (Sponsor, TCPA, in collaboration with Cadbury Bros.) JUNE 8-24

SOUTH SHIELDS. *Design in The Home Exhibition.* At the Public Library. (Sponsor, BIAE.) JUNE 8-17

SUDBURY, SUFFOLK. *The English Town: Its Continuity and Development.* Exhibition. (Sponsor, TCPA.) SEPT. 21-30

UPPINGHAM. *The English Town—Its Continuity and Development Exhibition.* At the Church Rooms. (Sponsor, TCPA in collaboration with Messrs. Cadbury Bros.) JUNE 8-14

NEWS

THURSDAY, JUNE 8, 1944
No. 2576. VOL. 99

Though no feature in the JOURNAL *is without value for someone, there are often good reasons why certain news calls for special emphasis. The* JOURNAL'S *starring system is designed to give this emphasis, but without prejudice to the unstarred items which are often no less important.*

★ *means spare a second for this it will probably be worth it.*

★★ *means important news, for reasons which may or may not be obvious.*

Any feature marked with more than two stars is very big building news indeed.

Details of the COST OF WAR FACTORIES were given in the House of Commons last week by Mr. Garro-Jones, Parliamentary Secretary to the Ministry of Production.

He said: the total of approved expenditure from public funds on war factory buildings since the beginning of the rearmament period was about £830,000,000; the amount expended on Government factories was about £180,000,000; and the amount expended on shadow factories and agency schemes was about £252,000,000. The amount of capital assistance to contractors under contributory schemes was about £20,000,000. These figures related to capital expenditure covering buildings and plant.

There is a scandalous WASTE OF PAPER to-day.

So said the Minister of Information, Mr. Brendan Bracken, when he opened the Waste-Paper Recovery Association's exhibition, *Paper Packs a Punch*, at Connaught Place, Marble Arch. Continuing, he said: Anyone who wastes paper is doing a great disservice to the war. It is not true to say that because the U-boat menace has been conquered we can bring great quantities of paper into the country. It is of vital consequence to the cause of victory that the public should become paper-minded once again. Mr. Bracken suggested that the Exhibition should be sent to all the big cities in this country when the transport situation allowed it.

from AN ARCHITECT'S *Commonplace Book*

ON WATER-CLOSETS, CHIMNEYS AND BELLS. [*From* Cleanliness and Godliness, *by Reginald Reynolds* (*Allen and Unwin*)]. By the year 1814 the water-closet must at least have been reasonably common, for in this year a certain Mr. John Phair published his *Observations on the Principles and Construction of Water Closets, Chimneys and Bell Hanging*. A strange medley, indeed; but Mr. Phair had discovered that the bell-hangar looked after the perpendicular track of the coil pipe of a water-closet to convey his wires to the under-part of the house. He describes water-closets that commonly disgorged their contents into pits. Such was the state of one pit that two workmen (who had opened the flags and sought to examine the shaft with a naked light) were met with an explosion of sewer gas which split a bucket and stunned them both. Indeed, they narrowly escaped death.

★

Since the erection of the first prototype of the MOW EMERGENCY FACTORY-MADE HOUSE, the following modifications and improvements have already been made by the Minister of Works in consultation with the Minister of Health.

1. Back door leading into the kitchen. 2. Ceiling height to be raised to 7 ft. 6 in. 3. Cycle and store shed to be detached. 4. Passage door into kitchen to be abolished. Kitchen unit to be extended and combined with the stove, thus providing improved hot water circulation. Hot cupboard to be transferred to unit and to be of larger area. The vegetable cupboard to be moved away from the cooker. 5. Bathroom to be increased in area. 6. W.C. to be made larger and adequately screened. 7. Area of hall to be increased, providing larger space for pram, etc. 8. Direct entrance to be provided from hall to living-room.

Do you say that THE CHURCHILL SHED was designed by an architect? Mr. Edwards (Lab., Middlesbrough) asked Mr. Hicks (Parliamentary Secretary Ministry of Works) in Parliament.

Mr. Hicks: The President of the Royal Institute of British Architects and the Royal Fine Art Commission have both complimented my Minister on the design. A Minister: They ought to be sacked.

★

The RIBA invites British architects to submit photographs, drawings and models for an EXHIBITION OF CONTEMPORARY BRITISH ARCHITECTURE to be held during September and October.

The exhibition will consist of a selection of work by British architects executed or proposed since 1935, illustrating buildings and groups of buildings by means of photographs, drawings and models. The exhibition will be held at the RIBA, 66, Portland Place, W.1., during the coming September and October. In order to obtain contributions as fully representative as possible of British architecture an open invitation is being extended by the President and Council to all British architects to submit for selection examples of their work illustrated by photographs, drawings and models. It is hoped that this exhibition will form the first of a series. Obviously no guarantee can be given that all material submitted will be accepted but it is hoped that there will be a good response from the profession. Architects intending to submit works for selection are asked to pay particular attention to the following instructions: (1) All works intended for the exhibition must be delivered, unpacked, at the RIBA, 66, Portland Place, W.1, on one of the following days: Friday, September 1 (8.30 a.m.—5.30 p.m.); Saturday, September 2 (8.30 a.m.—12 noon); Monday, September 4 (8.30 a.m.—5.30 p.m.). Exhibits from the provinces should, if possible, be sent through an agent for delivery, unpacked, at the RIBA on one of the above days. (2) No applicant may submit more than three exhibits, which may consist of (i) single photographs or groups of photographs in one frame or mount showing a single building or group of buildings designed as a unit; (ii) single drawings or groups of drawings in one frame or mount showing a single building or groups of buildings designed as a unit; (iii) models. (3) It is recommended that photographs, including mount or frame, should measure 18 in. by 25 in. and that drawings should be about Imperial size. Very large or very small drawings are liable to be rejected on account of size. It is not essential that drawings and photographs should be framed, but the latter must be mounted. In general, photographs of executed work would be preferred to perspective drawings. If perspectives are submitted, the name of the draughtsman as well as the designer must appear on each drawing. (4) In order to make ample accommodation for models, architects wishing to submit these should write before submission stating size and, if possible, enclosing a photograph. (5) Exhibits must be labelled stating title and name and address of exhibitor. Labels and declaration forms, without which no exhibits can be accepted (except from architects absent on war service and prisoners of war) may be obtained from the Acting Secretary RIBA. Application (enclosing stamped addressed envelope) should be made during June and July, stating the number of exhibits it is proposed to send. (6) Every possible care will be taken of works submitted but the RIBA cannot hold itself responsible in any case of injury or loss. (7) Before submitting works architects are asked to ensure that their exhibits would not, if publicly displayed, infringe war-time censorship regulations. *Architects on War Service.*—In the case of architects absent on war service, restrictions as to size and presentation of photographs and drawings will be relaxed as far as practicable so as to obtain as representative an exhibition as possible at the present time.

At the first meeting of the newly formed BRITISH IRON AND STEEL RESEARCH ASSOCIATION, Sir James Lithgow was elected President.

Dr. Andrew McCance was elected Chairman. Immediate steps are being taken to appoint a Director of Research and a principal administrative officer of the Association. Pending completion of the organization of the staff, the Iron and Steel Industrial Research Council will continue to be responsible for the large volume of research at present in progress, and the transfer of responsibility for the direction of this will not be made until the new organization is complete with Director and headquarters staff. With the financial provision made by the British Iron and Steel Federation for an expenditure up to £250,000 per annum, a considerable expansion in research activities is expected immediately the requisite personnel becomes available.

The Ministry of Works has removed railings from 3,500,000 homes. And the Ministry of Works has had 3,500,000 COMPLAINTS about it.

So said Mr. George Hicks, Parliamentary Secretary to that Ministry, to the Hackney ex-Mayors' Association. Mr. Hicks said, too: The railings around Hyde Park have been removed and yet they still lock the gates every night. Somebody asked why and Mr. Hicks replied: To stop traffic.

In the House of Commons the Secretary for Scotland made reference to a SCOTTISH HOUSING RAMP.

Mr. Johnston, Secretary for Scotland, who was replying to Mr. McNeil (Soc.), who asked how many of the 1,000 houses authorized 12 months ago had now been completed, stated that four have been completed and 870 are under construction. It has been impossible to find reasonable tender prices so far for the remaining 126. One series came in for £1,815 per house, he said. This obviously is a ramp, and I do not propose to lend my assistance to it.

In the House of Commons the Minister of Health stated that 1,200 SUBSIDIZED FARM WORKERS' COTTAGES have been erected during the last twelve months.

The Minister of Health (Mr. Willink) stated that proposals for the erection of houses on which he has authority to pay subsidies have been entertained only where the houses are urgently required in the interest of war-time food production. For agricultural workers approximately 1,200 such houses have been built in the last twelve months. The Minister of Agriculture is paying an additional capital sum of £150 per dwelling on such of these houses as are included in the Government programme of 3,000 cottages which was announced last year.

Educational Ladder

This issue is largely devoted to schools, an important subject in view of the new Education Bill. Swedish school buildings, being of a particularly high standard, have something to teach us. Their progressive character is typified in this photograph by G. E. Kidder Smith showing the circular stair at the Stockholm Trade and Commercial School by Paul Hedqvist. Two other examples of Swedish schools are illustrated on pages 431 to 436.

★ *RIBA warning to country members: DON'T COME TO LONDON on June 27.*
The official warning says: As already announced, Sir Malcolm Trustram Eve, K.C., Chairman of the War Damage Commission, will give a talk on the *War Damage Act and Architects* at the Informal Meeting on June 27. While it is hoped that there will be a good attendance of London members, country members are urged not to come to London especially for the meeting in view of the Government's advice to avoid unnecessary travel and the recent request of the Railway Executive to postpone the holding of Conferences, etc. Sir Malcolm's paper and the discussion which follows it will be published in the RIBA JOURNAL for the benefit of those who are unable to hear it in person.

Mr. Hugh Dalton, President of the Board of Trade, estimates that he can provide sufficient furniture for the MOW EMERGENCY HOUSE for £44 14s.
It will be utility furniture, and, according to the Labour Correspondent of *The Star*, the estimate does not cover the cost of any other furnishing or such things as curtains, carpets and crockery. For the sum mentioned, and on the assumption that there are three people in the house, Mr. Dalton guarantees: A double bedstead, one single bed, dressing chest with mirror, dining-table, two armchairs, and six small chairs. On present prices, and if you can get it, such furniture of non-utility type would cost about £150. Since the new houses are fitted with most other requirements, very little extra outlay on furniture should be needed. The difficulty for those setting up home for the first time will be the other items required, and pressure may be brought to bear on the Government to see if something cannot be done to ease the position in regard to pots and pans, cutlery and linen.

The RIBA hopes to produce in the autumn THE FIRST NATIONAL SCHEME for the planned use of land.
So announced Mr. Percy Thomas, President of the RIBA, when he opened a *Rebuilding Britain Exhibition* in the City Art Gallery, Leeds. It will, said Mr. Thomas, only be a sketch plan, but he hopes it will encourage others interested in rebuilding Britain, and eventually a Government Department, to prepare blue prints on which the development of the country will be based. A vote of thanks to Mr. Thomas was proposed by Alderman W. Illingworth, of Bradford (President of the West Yorkshire Society of Architects), who praised the enterprise of Leeds in its housing schemes. The exhibition was arranged by the RIBA and sponsored by the building industry. A feature of the exhibition supplied by Leeds included models of housing improvements and town planning already carried out and diagrams of schemes waiting to be done, including the proposed civic centre. The models included representations of the Belle Isle community and Quarry Hill flats. Models and illustrations by Dr. J. Johnstone Jervis, the City Medical Officer of Health, showed existing smoke conditions and the anticipated effect-of-smoke abatement, and Mr. R. A. H. Livett, Housing Director, arranged exhibits showing the planning of houses and flats in the city's post-war proposals. Mr. Thomas was the guest at a luncheon of the Council of the West Yorkshire Society of Architects.

CAUTIOUS INNOVATORS

NO one can accuse the School Buildings Committee of having wildly flung its cap over a windmill. The gist of its conclusions* is that a reasonable measure of standardization could be used with good result in the post-war school building programme.

To the average architect of these days the case for a good measure of standardization seems unanswerable, both because of the size of the programme and for technical reasons.

The huge size of the programme can be seen from a glance at the Board of Education's White Paper.† Apart from making up pre-war leeway and repairing war damage, the Board expects a big increase in nursery schools, a radical improvement in junior schools, that modern schools will be generally raised to the standard of secondary schools, and that young people's colleges will appear in strength: all this apart from any increase in boarding schools. The total bill is expected to rise from about £98 millions in 1938-39 to £163 millions in the seventh year of educational reforms. And the programme would no doubt be larger if some fall in the school-age population was not expected in the next twenty years. ‡

The technical reasons in favour of standardization in school construction are equally strong. The main units of school accommodation are standardized in dimensions, equipment, and to some degree in relationship. There will be a shortage of materials after the war, and a still greater shortage of skilled labour, whether for design, setting-out or execution. Standardization not only economizes skill but it should increase speed and permit higher standards to be obtained without increase of cost.

It is therefore a matter for regret that the County Architects' Society was doubtful of the benefits of, if not actually opposed to, the introduction of a modest degree of standardization.

The degree was modest. The Committee recommended consideration of two approaches to the problem. First, that a complete school should be designed to allow the use of a standard steel frame at 8ft. 3in. centres, all infilling and coverings to be chosen according to local conditions. Second, that the main components of accommodation—classroom blocks, halls, etc.—should be multiples of some standard unit of construction, the link between these components being non-standard.

The Committee apparently favours the first, and for small schools and favourable sites it has obvious advantages. But

* *Standard Construction for Schools.* A Report by a Committee appointed by the President of the Board of Education. Ministry of Works. Post-War Building Studies, No. 2. 1944. HMSO. Price 6d. See page 437.

† *Educational Reconstruction.* Board of Education. 1943. Cmd. 6458. HMSO. Price 6d.

‡ The JOURNAL has no desire to join in the dangerous sport of forecasting population, but an examination of the expert prophecies suggests that the school-age population of England and Wales, which was about six millions in 1939, is unlikely to fall below four millions by 1960. A decrease of one-third in the average size of school classes would be one of the best of all educational reforms.

any architect who has tried to design a school on a standard grid has probably felt hag-ridden by it before the end, and will therefore favour the loose-link method for most sites. But he will almost certainly be inclined to go further than the Committee in advocating standardization of main components. There seems little reason why these main components should not be standardized in all respects within an area approximating to that of a Civil Defence Region, thus obtaining the benefits of mass production while still leaving very considerable scope for individual architects in arranging the units on different sites, and in designing the links.

When the post-war demands of the housing and industrial reconstruction building programmes are borne in mind, it seems impossible for reasonable progress to be made in school building unless some such methods are adopted. The Committee advocates further research and experiment along the lines it has suggested. The JOURNAL goes further. It believes that MOW and the Board of Education should build a number of experimental schools, using both the methods advocated by the Committee. And these schools should not be built behind the Tate Gallery, but on sites near the centres of the most bombed cities as a sign that Mr. Butler means business. §

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

NOTES & TOPICS

RURAL HOUSING REPORT

Another drop in the heavy rainstorm of government reports—this time on Rural Housing.* It's a straightforward and sensible document, and unlike too many other publications of the kind, it puts forward certain quite definite assumptions on which to base its recommendations — that post-war economic policy will aim at raising the general standard of living, that housing subsidies will be paid, and that agriculture will be a flourishing industry. The Committee which prepared the report under the chairmanship of Sir Arthur Hobhouse, also supports the Scottwattlow Three so far as they come within the terms of reference.

*

No doubt this is another pigeon that is flying over Lord Woolton's preserves, in company with that pie-in-the-sky of his. Perhaps one day we really shall get our pigeon-pie, but not without a little more straight shooting.

DEBATE AT THE AA

The recent debate at the AA on the Virtues and Vices of Architectural Journalism was a disappointingly tame affair, with more bouquets than brickbats sailing through the air above the head of the urbane and witty chairman, Mr. John Summerson. True, some of the bouquets contained a few thorns. There were requests, for instance, for better typography and layout, less subservience to advertisers, and more technical information.

There seemed, however, to be general agreement on one point — that the lack of architectural criticism in the lay and technical press was much to be regretted. We do not lack critics of ability and perceptive skill, but the technical press seems nervous of their caperings, and for the most part lets them out only once a year—and even then keeps them on the hame-rein. The excuse—and it is a good one—is the law of libel. Until this is altered, comment upon an architect's work is likely to remain guarded when it is not effusive. It is a pity, for as several speakers pointed out, skins seemed to be much thinner fifty years ago, and the journals that much livelier to read.

ARCHITECTURE FOR CHILDREN

Latest weapon to be used in the recently opened Campaign for the re-capture of architectural appreciation by means of education, is *Architecture for Children*,* a midget torpedo piloted by Jane and Maxwell Fry, who are described on the jacket as both being "connected with institutions for teaching architecture." (Do we recognize behind the veil of this impressive description the well-loved modest face of 34, Bedford Square?).

*

With so resolute and lively a crew the journey could never be dull, and the reader, of whatever age, is

The Georgian Window.
(Drawn by Maxwell Fry).

* *Rural Housing: Third Report of the Rural Housing Sub-Committee of the Central Housing Advisory Committee.* Issued by the Ministry of Health. (HMSO, 1s.).

§ An important special article on schools by C. G. Stillman appeared in the A.J., Nov. 26, 1942.

* *Published by Allen & Unwin, 7s. 6d.*

Tin Bath Era. (*Drawn by Maxwell Fry*).

hurried breathlessly in all directions, now skimming the shallows until the vessel is almost aground, now plunging the depths where all is murk and treacherous undertow.

★

From the mediæval farmer-builder we leap to the modern executive's house in the Home Counties, complete with sun-parlour and Maud —ah me !—cooking the breakfast in the kitchen. A brief glimpse of a school and a Thomas Sharp town, and then, reversing engines, we are back in the log hut of the Early Briton. Off again, skilfully guided through the baffling eddies and complex channels of modern architecture, we emerge into the well-known waters of the Pyramids and the Pont du Gard, arriving stimulated but bewildered at the epilogue, where we are presented by our indefatigable guides with a set of historical charts.

★

Equally confusing at times is the phraseology used. On one page we are told, quite simply, that " copper is used to cover the twiddly things like spires and domes," and on another we are faced with a sentence full of phrases like " elaborate machinery of social betterment." On another page we are told that " the water-closet has made life very much pleasanter," and have the phrase " *laisser-faire* " translated for us into English, while the frontispiece (depicting some toddlers washing their teeth) is captioned " Architects grow familiar to the relation of spaces to humans and their movements and design for them accordingly "—a phrase which for pomposity and lack of grammar could only be equalled in a high-brow magazine.

Two qualities above all are needed by the author of a book for children —an infectious enthusiasm for his subject and a merciless clarity in its exposition. (This does *not* mean cutting out all long words, but it does mean taking one step at a time). *Architecture for Children* is brimming over with the first, but fails on the second. Energetic, friendly, discursive it may be, but clear, ordered and consistent it surely is not.

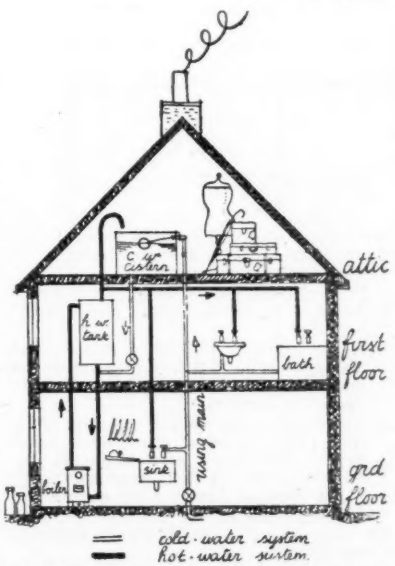
★

One final word about the Historical Charts, in which the twentieth century is represented by the steel-chair-cactus - check - shirt - unkempt - hair formula so successfully used by *Punch* in the 'twenties, and (so far as architecture is concerned) by a horrid little moderne villa. Granted these charts have a facetious flavour, but surely it is bad policy to reproduce on one page a charming little contemporary house by Jane and Maxwell Fry, and on another a little Osbert Lancaster concrete cube without pointing out why one is good and the other bad ? Perhaps the child who has reached the end of the book is deemed by the authors to be capable of judgment.

★

The only fair way to test this—and indeed the whole book—is to try it out on a 12-year-old child. Someone run out (as Groucho used to say) and get me a 12-year-old child.

ASTRAGAL



Hot Water System (*drawn by Hugh Casson*). *The illustrations are from* Architecture for Children. *See Astragal's review.*

LETTERS

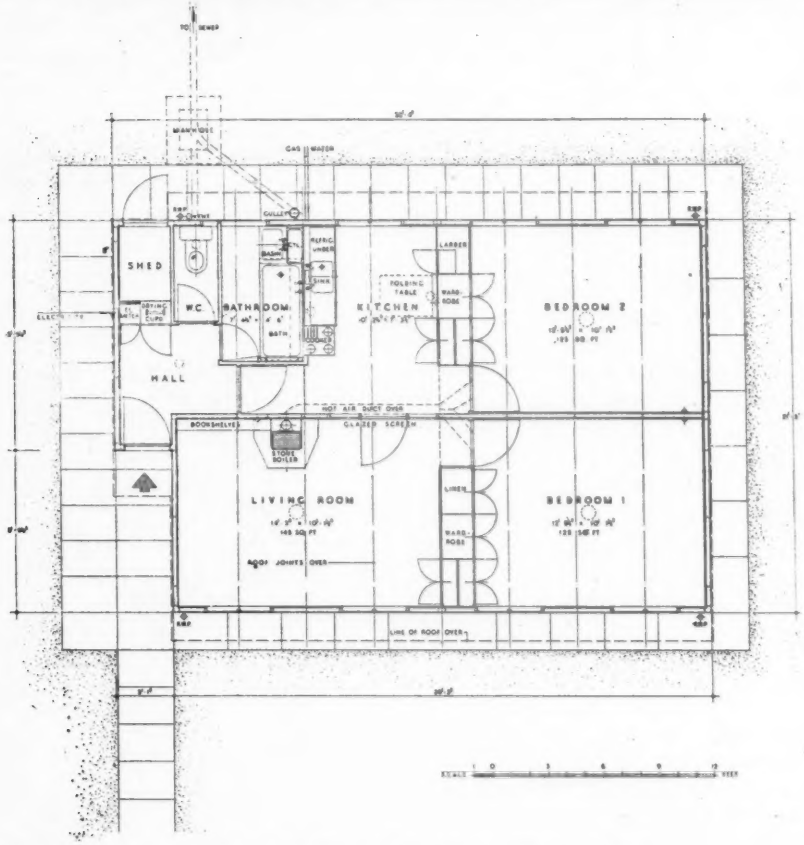
Brian O'Rorke, F.R.I.B.A.
R. Blyth Winter, L.R.I.B.A.
Geoffrey H. Coombes, M. Inst. R.A.
H. M. Enderby, O.B.E., M.Inst. M. & Cy.E.
Alec R. Boothroyd
M. E. Davies, B.A.
Douglas Rowntree, F.R.I.B.A.
Edmund Riegelhaupt, Dip. Ing.
Peter Berner, A.R.I.B.A.
K. G. MacQueen
Horace Farquharson, F.R.I.B.A.
F. Webster
H. V. Gerson
Hilton Wright, A.R.I.B.A.
Sir Noel Curtis-Bennett, K.C.V.O.
Anxious

The Churchill House

SIR,—Statements have been made in the Press that it is proposed to make several modifications to the plan of the Ministry of Works Emergency House, but it is difficult to see how these modifications are to be made without a drastic re-planning of the whole house.

The chief modifications that have been suggested are: Direct entry from the hall to the living room ; provision of a back door, presumably directly from the kitchen ; an easier access from bedrooms to bathroom.

The alternative plan here suggested is an attempt to replan the same accommodation within the same area, but giving a house which is perhaps more normal and better suited to normal ways of living. An advantage of the MOW plan was that the living room was well cut off from cross traffic in the room, but now that a direct entry from the hall is



Plan and photograph of the Churchill House, designed by the Ministry of Works.

to be given, this advantage will be lost. The alternative plan suffers to some extent from this cross traffic in the living room.

Total Size and Room Areas.

	Alternative Plan.	*M of W Plan.*
Total floor area within outside walls	616 sq. ft.	620 sq. ft.
Living Room	145 ,,	145 ,,
Bedroom 1	140 ,,	131 ,, (allowing 6 sq. ft. for built in cpds).
Bedroom 2	120 ,,	131 ,, ,,
Kitchen	70 ,, (approx.)	72 sq. ft. (approx)
Larder	3 ft. × 1 ft. 9 in.	2ft. 6in. × 1ft. 9in.
Bathroom and W.C.	44 sq. ft.	Bath 32 sq. ft. } 44½ W.C. 12½ ,, } sq. ft.
Shed	10 ,,	10 ,,
Hall, etc.	45 ,,	35 ,,
Back porch	8 ,,	none.

Appearance.—A fault in the MOW plan is that, in looking along a row or street of these houses *no doors* of any sort will be visible since the side entry will be screened by the adjoining house. Thus the result will be a repeat of a plain unbroken elevation consisting of four uniform windows in a row, and the general effect will be most bleak.

The alternative plan gives :—

(*a*) A double-fronted house which is always popular—it looks in fact more like a house.

(*b*) A front door in the centre with a porch giving scope for slight variations in design and colour, and for " roses round the door " or creepers.

(*c*) The sitting-room window is shown larger than other windows, giving some break in the uniformity. It is suggested that slightly projecting bay windows, giving a wide shelf for flowers might be provided in some houses.

The alternative plan could be built separately or semi-detached.

A yard with proper provision for fuel and dust bins as well as clothes lines is provided. These are all important points in maintaining a general standard of tidiness. Without proper encouragement these temporary estates may soon degenerate to slum appearance.

Since the back door is arranged at the end of the house and not at the back, the yards can be planned between adjoining houses, saving enclosing fencing and maintaining tidiness on the garden side of the houses.

Living Room.—This is similar in size to that on the MOW plan. As already mentioned it suffers to some extent from cross circulation, but there is a well-screened corner on the right of the stove boiler. There is a glazed screen between this room and the kitchen as in the original plan giving a view of the street from the kitchen, supervision of children and a sense of openness and light whatever the orientation. The living room is squarish in shape which is suitable for the most usual furnishing which generally includes a side-board, central dining table, probably two easy chairs and perhaps a settee.

Kitchen.—The kitchen is slightly more square than the MOW plan, and gives ample room for a meal table with a built-in locker seat. The space under the sink is left open in the interests of cleanliness, and to give space for bucket and sani-bin. Metal pot and plate racks are provided under and over the draining boards, slotted to take plates vertically, to warm over the cooker or drain after washing. The refrigerator is arranged at a higher level to avoid stooping. The larder is slightly larger than the original house and ventilates, and is lighted, on to the porch where the opening would be shaded, allowing for any orientation of the house.

Back Door and Porch.—The area of the porch (not provided in MOW plan) is combined with the area of the shed. The outer door of the porch would normally be kept open except at night when cycles could be stored locked up. There is a 2 cwt. coal bin. A recess closed with a ventilated metal door reached from the yard is arranged to take two dust bins, one on a shelf above the other. The lower bin would be for ashes, etc., and the top bin for food refuse. This upper bin is accessible directly from the porch under a hinged lid.

There is vertical storage for two cycles, the upper or front wheel supports arranged as brackets for a high level shelf.

Bathroom.—The bathroom has been planned to give full clothes washing facilities. Hinged enamel tops cover a 24 in. by 18 in. sink and clothes boiler. The lid over the sink contains a small bowl wash basin. Clothes after boiling are rinsed in the sink, rung out in the wringer (hinged to the end of the sink next bath) and can be thrown in the bath until taken to hang out to dry.

The secondary flow and return are spaced out at 5 ft. 6 in. and 6 ft. 6 in. (above floor) as drying rails.

The sink as arranged would be suitable as a babies bath.

The normal portable ironing board would enable ironing to be done in whichever room the housewife liked.

Plumbing.—The plumbing lay-out is generally simpler and would probably be cheaper than in the MOW plan. The plumbing would be preassembled as a single unit all in one plane, and fixed *to* and not in the wall, all horizontal runs with the exception of the exposed flow and return circuit being behind the bath, etc.

Drainage.—A pre-cast concrete or stoneware pot manhole is suggested.

Bedrooms.—Built-in cupboards have been omitted since in the writer's view it would be more economical from a national point of view as well as more adaptable to varying needs to provide for loose furniture. This loose furniture might be designed on a unit furniture system, and made available under a controlled hire purchase plan.

Hall, etc.—The MOW plan while providing a variety of built-in cupboards, lacks storage space for coats and boots, pram, scooters, etc., suitcases and boxes. The alternative plan gives a recess off the hall for this storage.

Coats would soon dry here since there is a hot air outlet as provided in the MOW house giving on to this space and warming the whole house from this central point.

Room Heating.—Since the convected warmed air outlet gives on to the central passageway the whole house would be warmed from this source. Hit and miss ventilators over the room doors would allow some control over room heat.

Garage.—In later years tenants may require extra shed space for motor cycles or small cars or some may need shed space for hobbies. It is suggested that 6 ft. wide prefabricated flat-roof sheds could be built between houses in front of the yards and with access through to the yard. These could in some cases be built in pairs to serve two houses.

London. BRIAN O'RORKE

SIR,—An inspection of the Ministry of Works' emergency factory-made house leaves the impression that the problem is at any rate engaging the attention of most capable brains. The working details all testify to the clear and original thinking that has gone into them. The influence of the motor industry is evident.

It would be a mistake to criticise the result by ordinary standards applicable to a permanent dwelling. It is obvious, for instance, that in the absence of lobbies the smell of cooking cannot be confined to the kitchen. The ceiling height is oppressively low and would much benefit by an extra foot. One does not, however, criticise a Ford 8 car on the ground that its performance or dimensions are inferior to a Ford 10. As an engineering job it accomplishes what it set out to do.

Considered from this standpoint there are few faults to find. Since the basic material is sheet steel, care would have to be taken that any external damage to the protective covering was promptly repaired. The danger of rust, if unchecked, would lead to rapid deterioration as in the case of pressed steel gutters. The steel ceiling in the kitchen invites condensation trouble unless treated with an absorbent material, and the joints provide a harbour for greasy fumes.

The metal casements are shown in the detail drawings as of sheet steel construction. In the actual house they are of standard mild steel sections. I should have expected from the motor industry sliding glass operated by a handle.

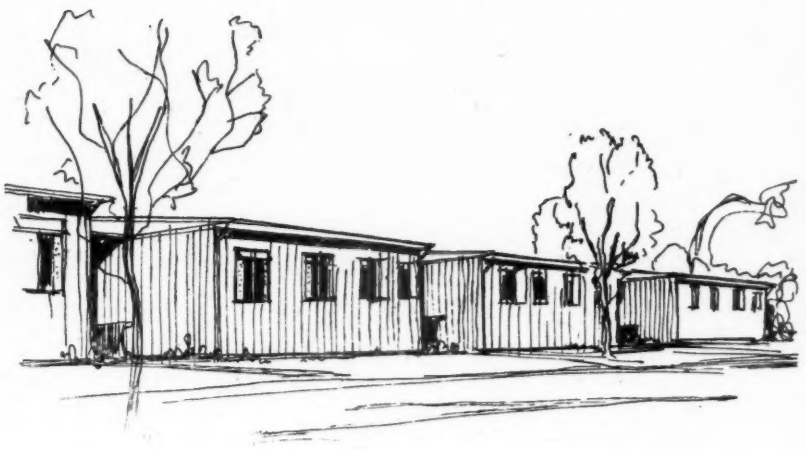
The exterior is less satisfying. The design suffers from the conscious attempt to make the product look like a house, just as the early motor cars suffered by their resemblance to horse-drawn carriages. However, if one remembers the original T-model Ford, and the progress that has since been made, the future outlook is full of hope.

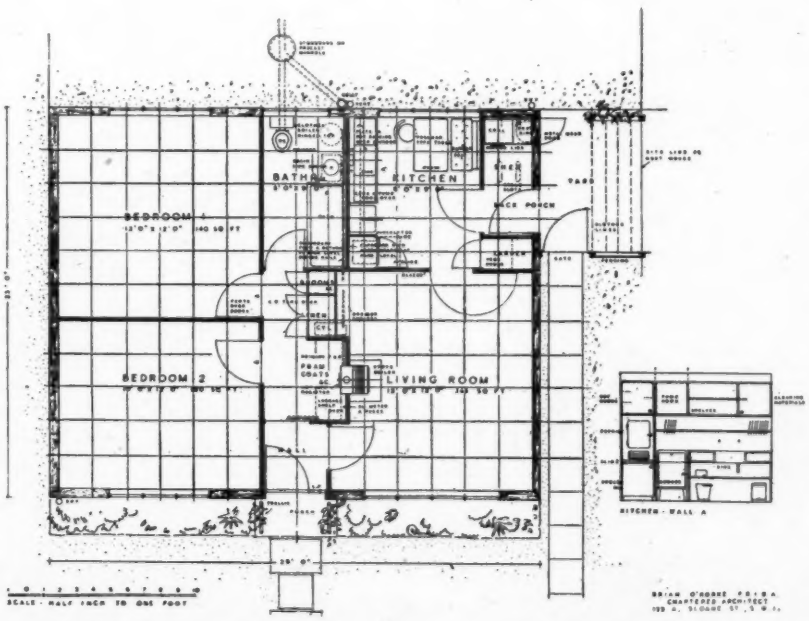
Chingford. R. BLYTH WINTER

SIR,—I was very pleased to read your criticisms on the Churchill Villa.

I cannot help but feel that, after spending some years in army huts, Anderson shelters or other persons' homes, the people (fighting and others) will expect much more than that has been offered. These houses are designed for a family of four, but I find the accommodation is quite inadequate. The exterior appearance is hideous. How is it seen fit to allow 7 ft. from floor to ceiling? Access from the bedrooms to the bathroom or w.c. through the living room and kitchen to hall in full view of the front door (the only door provided) cannot be accepted. Your report makes no mention of any precaution having been taken to prevent condensation on the steel wall lining of the kitchen or bathroom, so it is presumed that there is none. The stove (not even a sitting-room grate) is placed too close to the door, in which case the family could not sit comfortably to the fire.

To the best of my knowledge the persons whose business it is, or was, to design and build houses have not been consulted.





Suggested plan (above) and elevation (centre) for the Churchill House. By Brian O'Rorke. His elevation for a row of houses should be compared with that of the row of Ministry of Works houses at the top of the page. All three drawings are by Mr. O'Rorke.

Aluminium utensils, iron railings, etc., were sacrificed to build weapons of war, not lockers in which to pack the tools of industry when not in use. We have seen how temporary such buildings can be if one calls to mind the temporary wooden huts erected in the last war to house war workers—many of these are still tenanted.

No, we cannot accept these monuments to the steel industry without more than the usual assurances of their being temporary. We must have something concrete in the form of contracts. Something which will ensure that these huts are removed and fine buildings erected in their place within specific dates.

Sidcup, Kent. GEOFFREY H. COOMBES.

SIR,—With reference to your editorial in the issue of May 11 and the plans and sections which you show of the MOW factory-made house, I have inspected the prototype at the Tate Gallery, and have reported to the Housing Committee of this Council on the question of the adoption of some of these houses for the City.

I enclose an extract from my report giving the criticisms and a possible solution. I also enclose suggested amendments of the plan from which you will see that a solution is easily found although the same units are used.

H. M. ENDERBY,
Canterbury. City Engineer & Surveyor.

Here is the extract from the report referred to in Mr. Enderby's letter. The report was submitted to the Housing Committee of the Canterbury City Council on May 15, 1944.

Front door annexe.—This is an expensive, ugly excrescence which is not a general unit for prefabrication.

Hall.—The small space provided is of little use as there is practically no free wall space.

W.C.—This is rather close to the front door.

Kitchen.—The total free floor area is 75 ft. 6 in. sq. ft., and I consider that 31 ft. 6 in. sq. ft. of this is wasted as a corridor. There is no back door, but I understand that this has been highly criticised and a door will be provided in the final design. The shape of the folding table is awkward as it takes up so much of the width of the kitchen. This width is too narrow. The wall surfaces and ceiling being of steel will give trouble from steam or humid condensation.

Living-room.—The door opens into the kitchen and not into the hall. This fact is not an English custom. The door into the bedroom being in the corner results in a wide draught angle.

Front bedroom.—As the door opens from the living-room the privacy of the room is reduced. The position of this door also provides a wide draught angle. The hinges of cupboard doors are too close and cause adjoining doors to foul each other.

Back bedroom.—This opens from the kitchen which is not desirable. In the planning of both these bedrooms the fact that there may be illness does not seem to have been considered as the w.c. or bathroom are not easily accessible.

Shed.—This is rather small and not sufficiently long to accommodate a bicycle unless the front wheel is lifted. The position of the shed is a long distance from the house door.

Solution of the above criticisms.

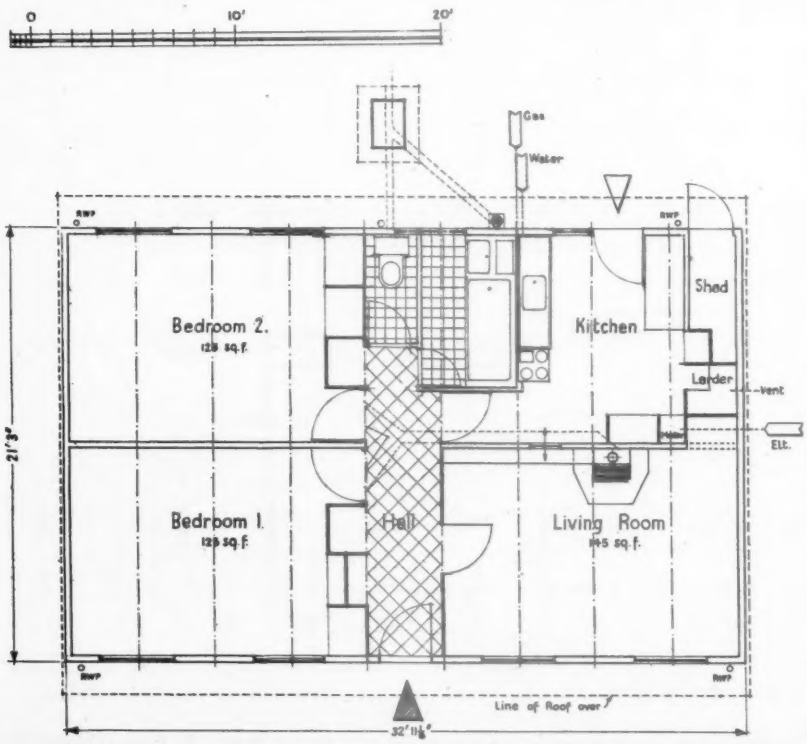
In order that the above criticisms may be constructive, I have replanned the units to provide a central hall and eliminating all the disadvantages mentioned above.

The first plan accompanying this report shows the bedroom units as in the prototype, but the kitchen, bathroom, etc., plans reversed and the living-room entered from the main hall.

The external walls in this design are of practically the same length as the original and the flank wall on the left would be practically identical with that on the right and so make easier the jigs and manufacture of the sheets.

If the criticisms are taken in order it will be seen that all these are answered and solved by this amended plan.

The second plan shows the first plan reversed in case anyone would argue that the kitchen and bathroom unit must be as originally designed. This plan, of course, moves the bedrooms to the left and the living-room to the right. I would suggest also that the provision of a front door in the centre of the frontage would make a more simple, pleasing, symmetrical elevation.



Suggested plan for the Churchill House. By H. M. Enderby. This is the second plan referred to by Mr. Enderby. The first plan contains the same accommodation reversed from left to right.

SIR,—As you ask for comments and criticisms on the MOW emergency house, here are some from a third-year architectural student.

First, let me say that I agree with your leader writer when he suggests that a unit system might have been developed rather than a single type of house. Surely one of the advantages of prefabrication which will appeal to the general public should be its comparatively easy adaptability to suit many sizes and conditions of family and changes in one family using the house?

Secondly, with regard to other systems of construction. During the war there has been considerable use of precast concrete and asbestos cement. Surely the experience gained in these materials could have been utilized, not to speak of timber, which will probably be in plentiful supply not too long after the armistice.

Thirdly, the exterior. Barren is not the word I and my fellow students used when we saw the elevations. The Royal Academy houses illustrated in the same issue as the MOW house show some of the possibilities. If the MOW house is put up in large numbers after the war, with the present elevations, it will set back the public opinion of prefabrication 20 years.

The interior is good and the fittings are what the housewife has been wanting from time immemorial. I will not comment on the detail design as only practical use will show any real faults.

The layout of these houses will have a great effect on their reception by the public. I will assume that they will not be ribbon developed, but also let us beware of putting them up in estates such as were built between the two wars by local authorities. American experience and their use of landscape architects should be studied; Greenbelt, Maryland, is an example which springs to the mind. To help secure intelligent site planning I would suggest that it should be made compulsory by law for any authority erecting these houses, or any other buildings, to have on their staff a fully qualified architect, preferably with town planning qualifications, who would have control of all building development.

Beeston. ALEC R. BOOTHROYD.

SIR,—Very few articles on the exhibition prefabricated house which have so far appeared in the general press or elsewhere have commented on it from the point of view of the housewife or the young woman who is going to live in it. The reason is obvious: few women have had the opportunity to see it. The admission rate of thirty-two an hour does not allow even local authorities—which will have to provide the houses—to send their own interested officials. The observations of a woman who runs a home under wartime conditions and is also in touch with women in the Services may therefore be useful.

There is no doubt whatever about what the woman in uniform wants when the war is over. She wants to be married, to have several children, to get right away from other women and, above all, to enjoy the privacy she has missed through these hard years. If she can choose between a flat and a house, the house will win every time. It does not matter how small it is (at least she says so now), if only it is not in a row and has a high hedge all round it.

The other girls, the ones on the home front who are not in uniform, have been influenced in another direction. They have heard American comment on the absence of amenities such as central heating and refrigeration, in the British house and they have heard glittering accounts of the luxury of the American kitchen.

Well, the factory-made house is going a long way towards satisfying both groups. It is a complete unit; it won't be overlooked, for the simple reason that neighbouring houses in the same style will have no upstairs windows; and it is just big enough for husband, wife and one or (with some adjustment) two children. For a few years after marriage, that is, until personal possessions begin to accumulate, the occupants will not feel cramped.

The young women who are acting as guides at Millbank spoke enthusiastically of how, when men and women in uniform first enter the house "their eyes nearly pop out of their heads." They have never seen or expected anything like it.

The outside is as satisfactory as one might expect in the circumstances of its construction. It looks like a seaside bungalow, and a colony of them will have the appearance of a pre-war holiday camp. When one thinks of the popularity of holiday camps, this may even be held a point in its favour.

Inside, one's first impression is that every scrap of space has been carefully utilized. Built-in fittings dazzle in comparison with their complete absence in the average council house. Central heating, slow-combustion stove, modern cooker, frig, thermostatically controlled hot water supply for warm weather use, even built-in bins for soiled linen, and a set of fitted bookshelves—everything has been thoughtfully provided. Or has it? What about washday? Where will the housewife do the family washing? In the kitchen sink or in the bathroom washbowl? Emphatically, both are far too small for the purpose.

The difficulty has aroused adverse comment already, apparently, for an alternative unit, presumably intended to replace the washbowl in the bathroom, has been dumped outside. It is a clumsy and unsightly improvisation consisting of an enamelled bowl supported on a wooden frame above a small copper. Few British women will be easily converted to doing the family wash in the bathroom, and even if they are, where will they dry it on a rainy day? The kitchen certainly cannot supply the answer. At present there is not even a hook or rail whereon to dry a damp tea towel, or even the possibility of a couple of hooks from which to sling a short line.

Where will the wringer go? Or, for that matter, the baby's pram? The shed outside now houses a bicycle, making room for a few gardening tools by standing on its hind legs. No room for a wringer or pram here. The hall, then? Possibly—if the airing cupboard is to be kept permanently closed and the risk of chipping or scratching the paint when easing the pram into position is disregarded.

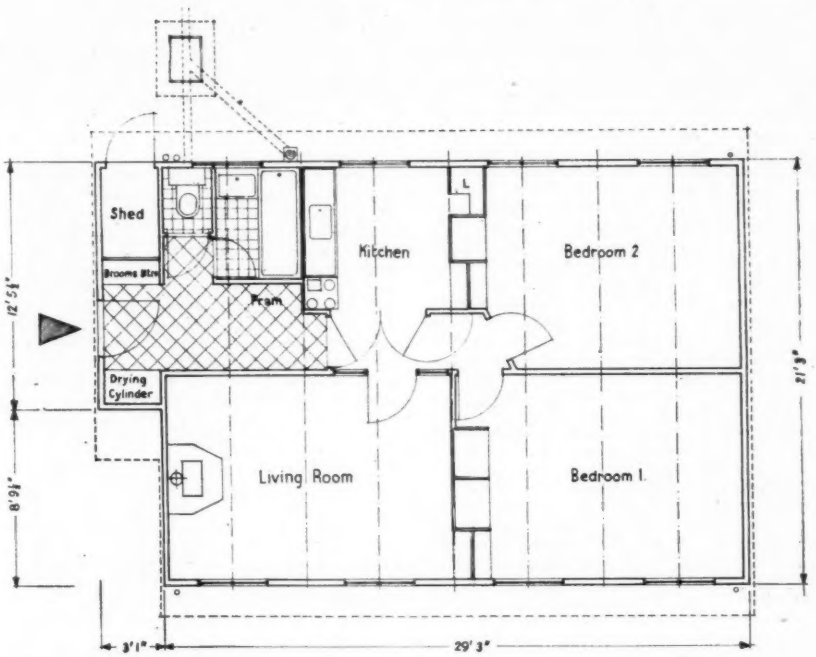
The glass panels between kitchen and living-room are unexpectedly pleasing in appearance and are also serviceable. They will be a boon to the woman who leaves her children playing by the fire while she cooks the dinner. Most women will, however, want to screen the panels with net curtains to hide unsightly piles of pots and pans while the meal is being eaten. Steam on the glass will also be a problem.

I have nothing but praise for the central heating system and hot water supply, which I hope will so accustom British people to a modicum of comfort in the home that they will demand it in all houses and dispose of foreign criticism of our primitive methods once and for all.

The ceilings do not look as low as they really are. This is probably because they are the same light colour as the walls and the usual limiting differentiation is absent. So also is the ubiquitous picture rail, thank goodness. The appearance of space is partly attributable to that same light-coloured paint. How far it will prove serviceable when the household includes several children remains to be seen.

Finally, I, personally, should love to have one of these little houses for myself, but then, my husband and I are young-middle-aged. We should be careful occupants and we have no children at home. We could also afford to send our washing to the laundry. We have had to share a house since the beginning of the war—each home worse than the others—and we know what it is to envy a dog the privacy of his kennel and cattle the comfort of their stall.

Byfleet. (MRS.) M. E. DAVIES.



Suggested plan for the Churchill House. By Douglas Rowntree.

SIR,—The most obvious criticism of the MOW house is that access to all the habitable rooms is through the kitchen. Normally this may have advantages, but there are times, particularly when the housewife is already overworked, when this arrangement will be extremely inconvenient. In cases of illness, for example, the doctor will have to pass through the kitchen, left untidy perhaps, and the slops will have to be taken through it. In the case of bedroom No. 1 the living-room is also on the route. Numerous other objections will occur to the kitchen being a passage room.

The enclosed plan suggests how the MOW plan could be modified to meet these objections. Double doors are shown which would cut off the passage portion of the kitchen and form a proper passage. In normal times one of these doors can be fixed back against the wall and the other operate as the hall-kitchen door.

Secondly, there is no place for brooms, vacuum cleaner, and pram. The MOW hall, though of pleasant apparent size, hardly gives room for an umbrella. If the washing unit can be modified (and surely the tail should not wag the dog) a good useful hall can be made with brush cupboard and place for pram as my plan shows.

Thirdly, the living-room stove comes on the long side of the room and narrows it so that there is only 7 ft. 3 in. between the face of the hearth and the outside wall. This seriously limits the ways in which furniture can be arranged. Moreover, the dipping primary return is not an ideal arrangement. It involves tricky initial plumbing and very tricky repair plumbing if anything went wrong. My plan shows the stove on the end wall with simple flow and return to a cylinder in a drying cupboard in the hall.

It does not appear as though modifications on these lines would increase the cost materially if at all, and I suggest that they would greatly improve the house.

London. DOUGLAS ROWNTREE.

SIR,—All factory-made houses so far designed anticipate the whole unit to be prefabricated, and speedily assembled on the site. Such an erected prefabricated house or bungalow will hardly harmonize with English architecture both in town and country.

Why not erect a 4½ in. brick skeleton which would be the outer skin of a cavity wall with the inner leaf already prefabricated. Apart from this outer brick wall everything else, including roofs, may be prefabricated. This I believe will be more readily acceptable by the majority of the population in this country.

As for time and man-power, 100 bricklayers would be quite sufficient to cope with, say, 1,000 brick skeletons per year for factory-made bungalows such as the Portal house.

To those who may retort that these factory-made houses are only temporary buildings for, say, 10 to 15 years, I may add that this is a very long period in one generation.

Northampton. EDMUND RIEGELHAUPT

SIR,—Your frontispiece photograph of the MOW utility house emphasizes the effect of one detail of the design—the considerable roof overhang—which I venture to criticize. The shadow thrown by this projection on to the upper part of the windows is clearly shown.

In section, the effective window opening seen from a sitting position within the house is thereby reduced, with it of course the daylight penetration. With such an unavoidably low window head, the penetration cannot be very great, and should not further be impaired without good cause. It seems unlikely that an impervious wall material such as steel needs so much weather protection, and unless this is the case, the detail surely needs revision.

A further criticism, which may be ruled out of order on the score of cost, is of the apparent lack of accommodation for fuel or for even one cycle. I do not consider that the shed provided meets either of these needs.

Maidstone. PETER BERNER.

Modular Design, Standardization, and Prefabrication

SIR,—In this country there is a conviction that buildings should be constructed to last for at least four generations. The desire for compactness, requiring the minimum of labour and upkeep, has out-dated ancestral buildings. The continuous advance in building materials will out-date post-war houses in ten years.

The post-war building programme entails the erection of several million houses, flats, shops, schools, hospitals, factories, municipal centres and places of entertainment. The time factor is important. The quality of design and construction are important. To maintain this programme there must be co-ordination of designing to the module, standardization of dimensions and prefabrication to the fullest extent. To achieve this, co-operation between architect, engineer, builder and manufacturer is vital.

The training and consequent mental outlook of an architect has not encouraged him in the use of new materials, new methods of construction, and new building practice, nor is he familiar with the method of manufacture of these materials, with the result that manufacturers do not consult architects on their products. This results in a complete lack of dimensional unity and an excess of field cutting.

If post-war building on a planned scale is to be achieved, modular design is essential. This means the acceptance of a Modular Unit. The three dimensional multiplication of this unit gives the exact sizes of any building unit or material, due allowance being made for any necessary jointing.

A group must be formed to decide the modular unit and to apply it to standardize building materials. This group, which would be similar to the American Standards Association, should consist of young active representatives of architects, engineers, building contractors, and manufacturers, together with statisticians, research workers, etc. This group should take the form of a Royal Commission with legal powers of enforcement. The members and staff should receive high remuneration, so that only those with the widest experience may be utilized. The salary scale should not be on a civil service basis, which classes equally the man who has always been in the same job, and the man who risked to gain experience.

The commission would also be required to compile lists for publication, from data and samples of manufacturers, of the latest materials, building methods, and construction with the results of their own tests on them. They should also set the highest possible standard of quality of manufacture, with heavy penalty for default, and with an inspection on the lines of the Association of Industrial Design.

All designs, whether of materials, units, or buildings would have to be submitted to the commission for approval and all finished products and buildings would have to carry a certificate of the inspection department. To deny offhand that this is possible, and requiring too many skilled men who could not be trained quickly, is to deny the whole existence of the far more skilled aircraft industry, the Ministry of Aircraft Production, and its Inspection Department.

The commission should absorb and expand the Building Research Station, with salary scale in proportion to that of the members of the commission, so that there too those with the widest experience may be utilized. The research should cover materials, construction, building methods, and particularly prefabrication.

The general opinion on prefabrication is that the results are shoddy. This too can be compared to the aircraft industry. Before the war aircraft were built completely bit by bit in one factory. Then the war came with its demand for tremendous production, and new methods had to be found. The aircraft was split up into sections and then into smaller and smaller units and factories hundreds of miles apart produced these sections and units by the thousands, and when they were subassembled, assembled, and fitted into the final assembly, they all knitted together to form the planned aeroplane.

So in building, if for example the wall and floor sections were standardized with their jointing by the commission, these could be mass-produced in factories all over the country. The sections could be assembled together in countless variety. There should be the largest number of different sections available, contingent on the economic considerations of manufacture. Thus the latest methods of mass production could be employed and the best materials utilized to produce a low cost, sound, well-designed product, which will require no field cutting, and which is of modular design, standardized dimensions, and is prefabricated. This applies equally to every other section of the building—plumbing, lighting, heating, roofing, foundations, etc.

London K. G. MACQUEEN

The Northants Competition Exhibition

SIR,—You and other professional papers advertised the exhibition of the winning plans in the Northamptonshire Women's Institutes Cottage Competition as being on view at the Housing Centre from May 18-31.

I went to Suffolk Street on the 30th, before 12 o'clock, only to be told that someone had come that morning and had packed up and removed all the drawings.

I should like to protest against such a procedure which is, putting it mildly, bad manners, or, putting it a little more strongly, a breach of faith.

London. HORACE FARQUHARSON.

Vacancies for Architects

SIR,—I found the letter from Mr. Athoe, published in your JOURNAL for June 1, to be a free and outspoken expression of opinion which most architects will endorse, particularly as he writes on behalf of *all* professionally trained men and in no way adopts any sales talk applying only to the association to which he acts as a very efficient secretary.

It does not appear to be generally recognized by Government Departments and local authorities that there are very many architects whose training enables them to become registered architects, who are far more efficient in every way than many in the Royal Institute of British Architects.

The Ministry of Works have several senior architects who carry no indication of connection with any professional organization of which the RIBA is but one.

When all is said and done, a man may qualify for Associateship or Licentiateship with the RIBA and from either class reach Fellowship, but should he fail to pay his annual subscription he ceases to be permitted to use the appropriate letters after his name. It is, therefore, simply a matter of £ s. d. rather than ability that apparently counts.

Teddington. F. WEBSTER.

Holidays with Pay

SIR,—Now that the holiday season is again approaching we are thinking about the problems of holidays with pay as these affect the architect with a small private practice. Such an architect may employ only one permanent assistant, with whom, of course, he can make some fixed arrangement for holidays—usually two weeks in the year—but for the others, and it may well happen that for short periods his staff may leap to 4 or 5 assistants, no such fixed arrangements can be made. If they stay with him for perhaps 4 or 6 months out of the year, how is he to arrange for holidays?

We suggest that some system should be evolved whereby architects would contribute to a central fund an amount for each temporary assistant in proportion to his pay and period of employment, assuming a minimum holiday of two weeks. On leaving, this amount would be paid out, or it could be left in the fund until the assistant wished to take his holiday. The scheme could be elastic in its constitution, and could be administered by the RIBA in much the same way as the Benevolent Fund if the Institute were willing to take the initiative.

It might be possible, from the interest on the fund, to finance travelling grants for which yearly open competitions could be held. No doubt there are other possibilities and we invite comments and suggestions.

H. V. GERSON.

London. HILTON WRIGHT.

Post-war Housing

SIR,—To-day the vital question of post-war housing is naturally uppermost in the minds of all those interested in the welfare and happiness of the gallant lads who are sacrificing their all for us. It is up to those of us at home to see to it that all those who return find good houses for their families and themselves. Housing rightly takes priority of all other matters of post-war reconstruction. Amid this welcome clamour about housing, it would, I am sure, be gratifying to those who are at present soldiers, sailors, airmen and war workers if these future homes of theirs were related to what they themselves would like them to be.

For example, one small yet to many important fact is that they are looking forward to running a car in the days of peace. As in the United States, almost every citizen will become a potential motor-car owner and thereby gain much pleasure and health for themselves and their families. If local authorities are aware of that perfectly legitimate ambition, very few of them have expressed their awareness by including garages in their housing plans.

How many of their members who read the ARCHITECTS' JOURNAL have taken up the question?

If any have not, will they bear in mind that the ambition is not only, as I have said, perfectly legitimate: it is an indication of a thrifty attitude, worthy of encouragement in itself and moreover a contribution to the stability of our social fabric? It is a wise local authority which remembers to-day the need that will arise for such amenities when the war is over.

NOEL CURTIS-BENNETT,
President,
Guild of Master Motorists and Civil Service Motoring Association.

Town Planning Scheme

SIR,—I have graduated from three schools: architecture, engineering and town planning. I have also practised on large town planning schemes where all these three professions have been employed, and have had the opportunity to study the points of view of each of them.

These experiences have led me to the conclusion that a good town planning scheme can only be produced when the city engineer, the architect and the town planning consultant work in full collaboration.

A town planning scheme usually begins with a borough (or city) engineer preparing a plan, and presenting it to his council with a report recommending his project as the ideal one for the town. Should the council succeed in bringing in a town planning consultant to approve, revise or reject the plan, most of the engineers feel that their authority is being challenged.

Then again where there is an architect on the staff in the borough engineer's office, he is usually employed as an assistant and consequently has no control over the preparation of any proposed town planning scheme.

It is essential in my opinion that a borough engineer should collaborate with the architect whether the latter is Borough Architect or Assistant, as an equal partner, and that both of them should collaborate with and help the town planning consultant and not treat him as an intruder. It is only in this way that the best scheme can be produced.

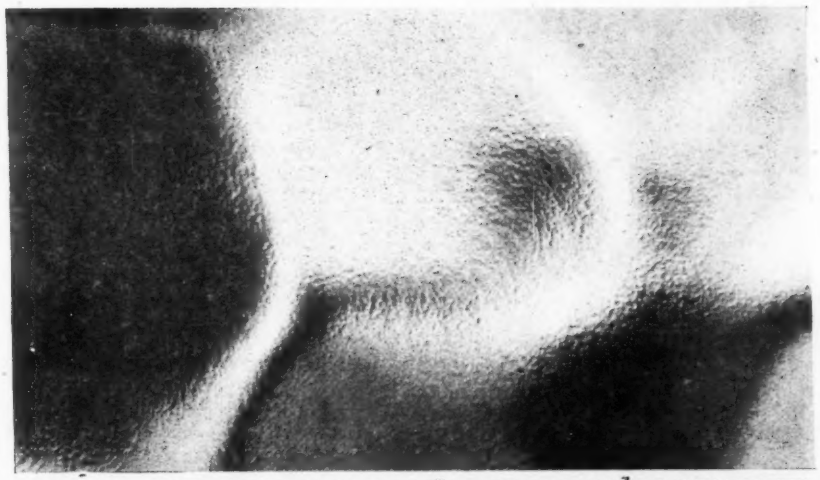
ANXIOUS.

THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

ROLLED GLASSES

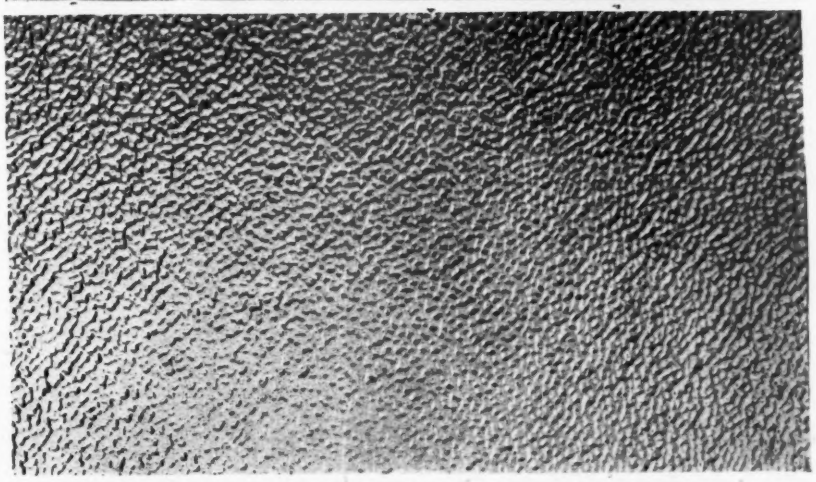
Large Flemish :
Rolled :
Formal pattern impressed on one side during rolling.
Slight obscuration.
Translucent.

The accompanying photographs are full-sized illustrations of a typical section and elevation.



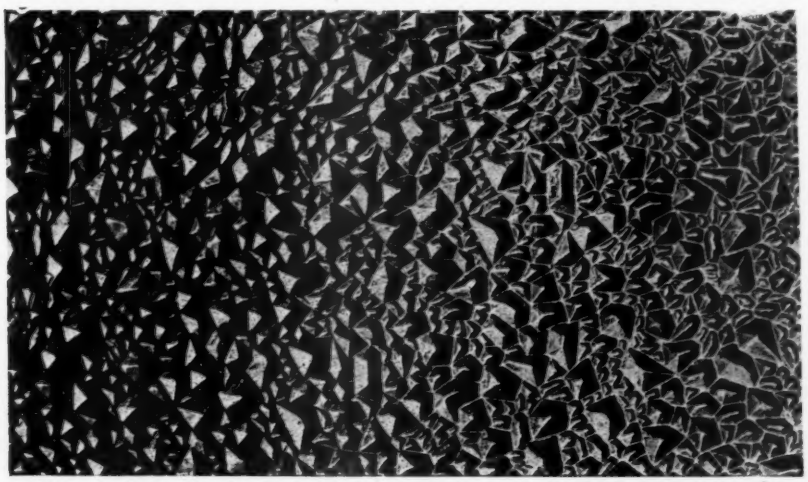
Stippolyte :
Rolled :
Pattern impressed on one surface during rolling.
Medium obscuration.
Translucent.

The accompanying photographs are full-sized illustrations of a typical section and elevation.



Dewdrop :
Rolled :
Pattern impressed on one surface during rolling.
Considerable obscuration.
Translucent.

The accompanying photographs are full-sized illustrations of a typical section and elevation.



Information from Chance Brothers Ltd

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET
• 940 •

GLASS: No. 12

Subject: Figured Rolled Glasses.

General:
This Sheet is the twelfth of the series dealing with glass and glass products, and the fourth of the section on types of glass.

Types:
Formal Patterns:

Flemish, Small Flemish, Large Flemish, Deep Wavene	These patterns give a high degree of brightness to the glass and almost obscure direct vision.

Diffusion Patterns:

Stippolyte Glistre, Small Glistre, Large Montene Dewdrop Pattern "G"	These patterns give a high degree of brightness to the glass and offer almost complete obscuration with little attendant loss of light.

Light Transmission:
75 per cent. to 85 per cent.

Maximum Standard Sizes:

White	120″×47″.
Tinted	100″×36″ or 90″×42″.

Nominal Thicknesses and Weights:

1/8″	1 lb. 8 oz. per sq. ft.
1/4″	3 lb. 8 oz. ,, ,,

Quality:
Made in one quality only.

Colour:
Small and Large Flemish available in 13 pastel shades.

Other Figured Rolled glasses available in 12 standard tints (for full information regarding Tinted glasses, refer to Sheet No. 9 of this series).

Standard Variations:
None.

Packing:
Packed in crates containing full sheets of 1/8″ up to 420 sq. ft.

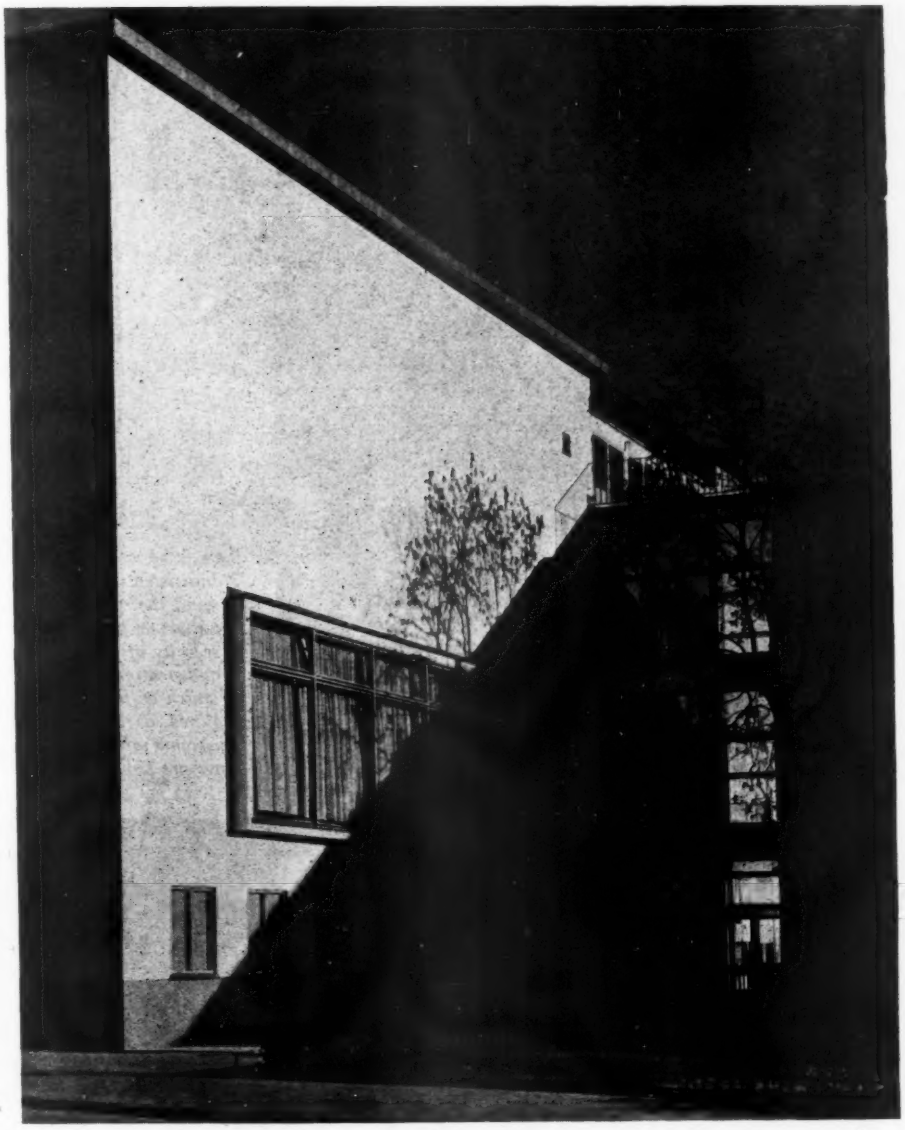
Half-sheets of 1/8″ up to 250 sq. ft., and full sheets of 1/4″ up to 230 sq. ft.

Specialised Applications:
To give partial or complete obscuration in doors, partitions, etc., and for artificial illumination, to obscure electric lamps and strip-lights.

Previous Sheets:
Previous Sheets of this series on Glass are Nos. 914, 917, 919, 922, 925, 927, 929, 932, 937 and 938.

Issued by: Chance Brothers Limited.
Address: Glass Works, Smethwick, Birmingham.
Telephone: West Bromwich 1051.
Telegrams: Chance, Smethwick.

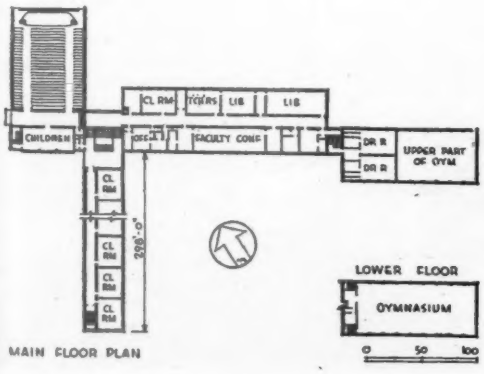
Right, the glazed main entrance to the school with the classroom wing to the right, and the auditorium with music room below to the left. Below, the ground floor plan. All the photographs of Swedish schools shown in this issue are by G. E. Kidder Smith.



SCHOOL

AT STOCKHOLM

1. DESIGNED BY PAUL HEDQVIST



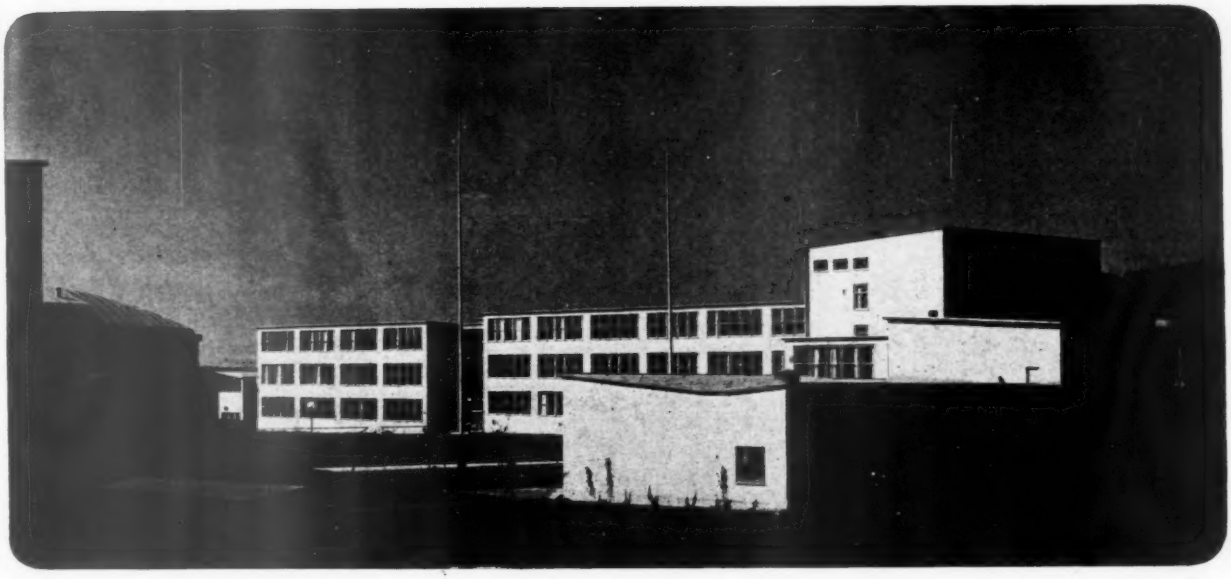
MAIN FLOOR PLAN

Among all the types of jobs carried out by contemporary Swedish architects, schools are outstandingly good. This is partly due to the Swedish Board of Education which has open-mindedly encouraged rather than stifled architects with timid and conservative mandates. Though simple and economical, modern Swedish schools are well equipped, spacious, sunny and pervaded with a feeling of cheerfulness and well-being. Paul Hedqvist has been responsible for a number of them including the Bromma High School, shown here. Built for 1,000 pupils it is fairly typical, especially in being situated on a large site which allows free planning, proper orientation, plenty of light, sun and air, adequate playgrounds, and isolation from surrounding streets and buildings. Typical also is the building of separate wings with varied functions linked by a glazed entrance hall.

SCHOOL AT STOCKHOLM

DESIGNED BY PAUL HEDQVIST

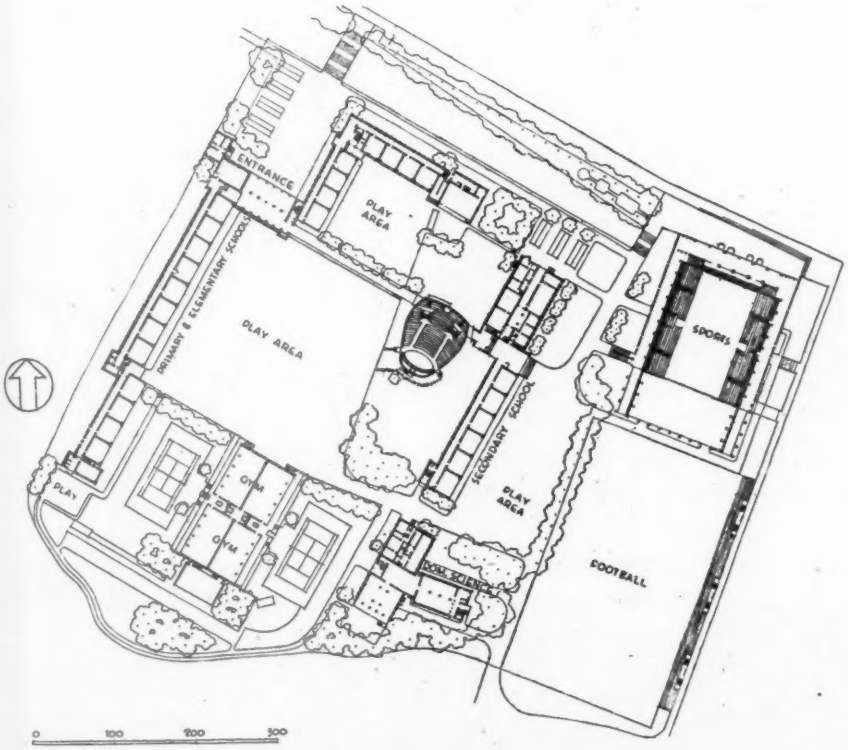
Left, a view from the entrance hall as one enters the building. Administrative rooms and science laboratories are on the left. Behind the statue is the gymnasium. As in all contemporary Swedish architecture, the most is made of natural possibilities especially of existing trees. Below, one of the science rooms, a demonstration laboratory. Such rooms do not need sunlight so much as the regular classrooms, and they are therefore often grouped, as here at Bromma, in a wing at right angles to the classroom wing, which usually faces south-east. Schoolroom windows are simply curtained, have large panes and double glazing.



SCHOOL

AT STOCKHOLM

2. *DESIGNED BY NILS AHRBOM & HELGE ZIMDAHL*



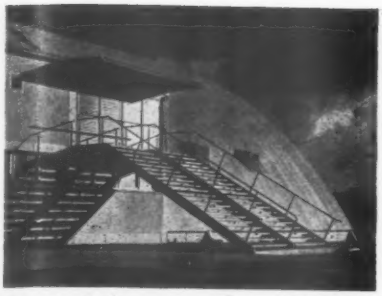
Top, a general view from the north-east. The administrative wing is in the foreground, and the elementary wing beyond it; on the left is the auditorium. Above, the plan shows the extensive area covered by the school and the careful attention paid to orientation.

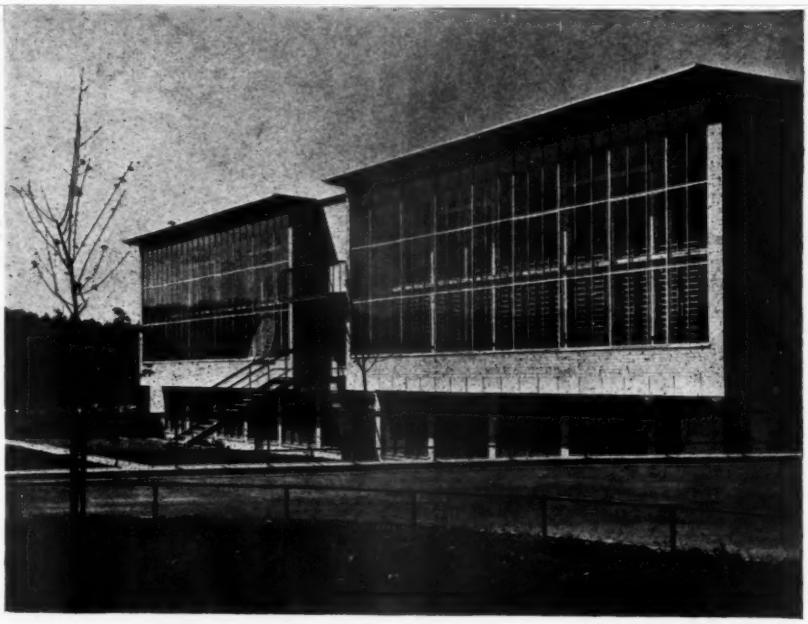
The Eriksdal School by Ahrbom and Zimdahl is something of an experiment by the Board of Education in calling for very extensive facilities. It is in fact several schools in one—primary, elementary, secondary and domestic science. It is built for over 2,000 pupils, contains 59 classrooms, and is the largest school in Stockholm. Opened in 1939, it is now generally considered to be too large.

It is built of reinforced concrete frame covered with local yellow bricks. Though the various blocks lack architectural coherence, and though some of the individual buildings are rather barren, others are extremely interesting such as the sports hall with its simple laminated timber trusses, and the gymnasium building with its great glass walls. The photographs here show the school before the planting had developed. This will form, when mature, an important part of the whole scheme, for landscaping has been carefully considered.

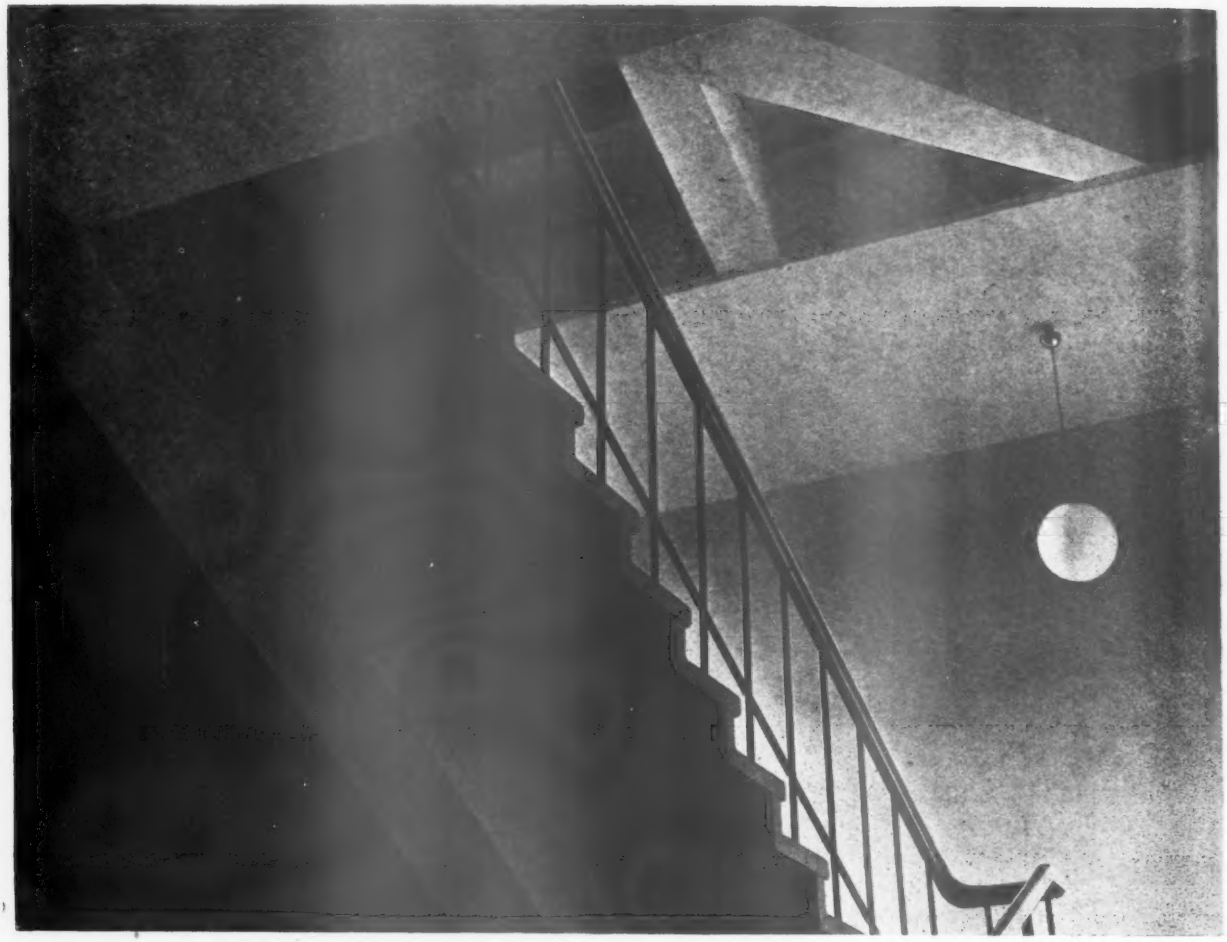
An interesting building is the four-fold gymnasium with its attached solarium. Gymnasia are the particular pride of the new Swedish schools, being large and very fully equipped. Another building with notable features is the ovoid auditorium.

SCHOOL AT STOCKHOLM: *BY AHRBOM & ZIMDAHL*





On the facing page, a general view ; in the background is the administrative unit, in the right foreground is the secondary school wing and on the left the chimney of the domestic science unit. Right, the gymnasium ; lockers, dressing rooms and showers are below. Above, a corner of the tennis and sports hall with its entrance steps. The windows on the left ventilate the dressing rooms in the space beneath the seats. Below, the interior of the sports hall (also used for meetings, concerts, exhibitions, etc.) The trusses are of laminated wood.



Above, a staircase of precast concrete treads and risers simply supported by a plain reinforced concrete beam. Below, the interior of the ovoid auditorium. The curtain can be drawn around the rear of the stage, and the organ console can be rolled away through the sliding door at the back. Air conditioning vents dot the ceiling above the stage. The double brick wall has heating pipes between and is open at the top.

SCHOOL AT STOCKHOLM

BY AHRBOM AND ZIMDAHL

INFORMATION CENTRE

The function of this feature is to supply an index and a digest of all current developments in planning and building technique throughout the world as recorded in technical publications and statements of every kind whether official, private or commercial. Items are written by specialists of the highest authority who are not on the permanent staff of the Journal and views expressed are disinterested and objective. The Editors welcome information on all developments from any source, including manufacturers and contractors.

STRUCTURE

1504 *Planning & Building in Sicily*

ARCHITECTURAL NOTES OF A RECENT VISIT TO SICILY. *Eric Bird.* (*Lecture at the AA, April* 18, 1944. *The Architects' Journal, May* 18, 1944, *pp.* 376-378, *and other journals.*) Social, geological and climatic conditions governing town planning and building technique. Plaster tradition. Predominance of Baroque. Messina, entirely rebuilt after earthquake in 1908, example of planned modern town with reinforced concrete framed buildings.

The most important part of the lecture from the point of view of our own problems is the description of Messina. On December 28, 1908, the ancient town was almost totally destroyed by earthquate in 31 seconds. 80,000 of its 120,000 inhabitants were killed. First a temporary town was built, with help from abroad, particularly USA and Russia. The USA sent prefabricated timber houses. The final town plan was not approved until 1911. The Government acquired most of the freeholds, subsequently erecting most of the buildings, which they still own.

Main tree-lined avenues, from 80 to 120 ft. wide, run through the town, the remaining portions being laid out in rectangular grids with streets 40 to 60 ft. wide. There is a planned industrial area. Height and construction of buildings were strictly regulated. All buildings were to be framed, the residential blocks being planned with a rectangular grid of columns not to exceed 5 metres (16 ft. 5 in.) between centres. This meant in practice that rooms were about 15 ft. square with one window to each bay. Thus the whole town has a basic unit of measurement which is reflected in the façades.

At first no buildings were to exceed two storeys or 10 metres in height. After 15 years, three storeys or 12 metres were allowed, and during the last few years the limit has been increased to four storeys or 14 metres (46 ft.). About 70 per cent. of the roofs are flat. These regulations gave two curious results. First, the lower buildings are in the centre of the town and the higher buildings, erected at later dates, are on the outskirts. Second, whole streets are of uniform height and present an even skyline. The result of this planning is an unusually spacious and charming town.

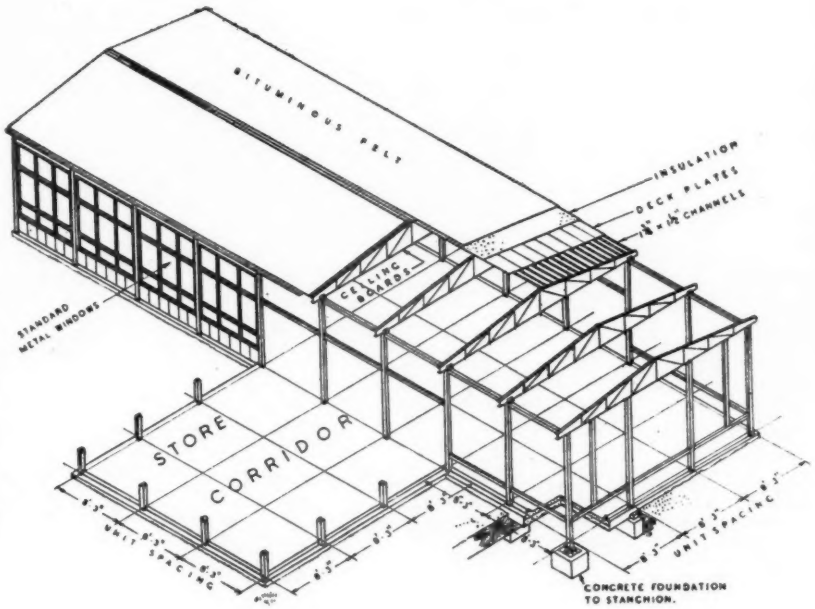
1505 *Construction of Schools*

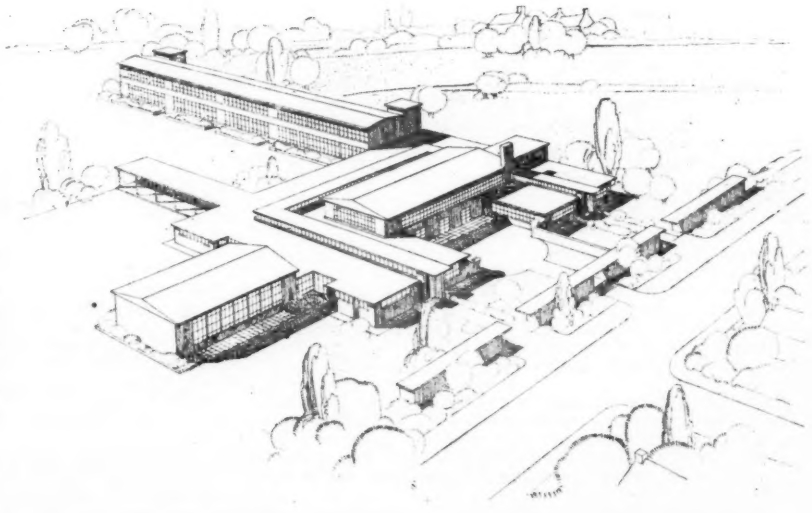
STANDARD CONSTRUCTION FOR SCHOOLS, POST-WAR BUILDING STUDIES, NO. 2. *By a Committee appointed by the President of the Board of Education.* (*HMSO*, 1944, 6*d.*) Application of standardized construction to schools. Recommendations as to their planning, layout and equipment.

When building operations can be resumed there will be a demand for school building vastly in excess of pre-war programmes, which were themselves in fact considerably smaller than real necessity required. The provision of school accommodation should be treated as an essential part of any housing development.

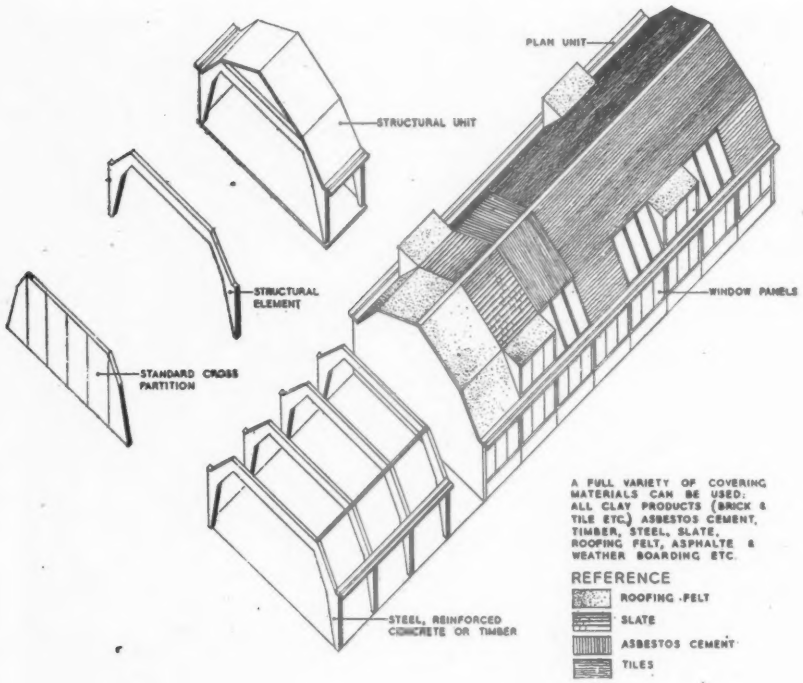
The procedure in force before the war often led to a delay of more than twelve months, taken up in the completion and approval of the plans, before the contract was signed and work could be begun on the site. Appendix I, prepared by the County Architects' Society, sets out suggestions for the modification of administrative procedures affecting sites and buildings.

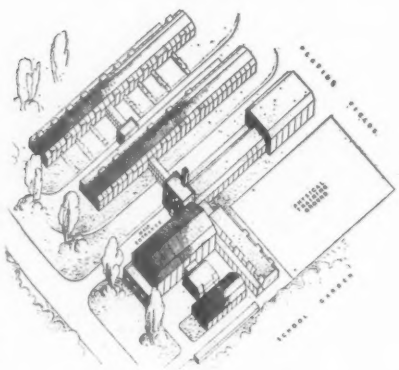
Apart from any changes in administrative procedure, the work which precedes the letting of the contract for the erection of a school,





Drawings from Standard Construction for Schools. *See No.* 1505. *The perspective above shows the principle of the building up of rooms, corridors, etc., from a number of structural units of uniform widths and running lengths for the teaching rooms, communal rooms and corridors respectively. These structural units are combined to form plan units. The isometric drawing at the top shows the structure of a skeleton of a sample plan unit. The framework consists of a light form of steelwork.*





Drawings from Standard Construction for Schools. *See No.* 1505. *Above, a structural element, which is the framework of the unit, has been given an overall shape which it is thought would best lend itself to the economic use of different types of steel, of timber, or of reinforced concrete. The shape, with its sloping sides, allows for bi-lateral lighting, if and where required, and lends itself to different treatment of roof-covering materials. Right, a bird's-eye view of a suggested school taken from the south-south-west.*

and the time taken in securing the approval of plans could be substantially shortened if some system of standardized planning and construction were adopted. The basic requirements of schools of the same type are identical. The differences between schools of the same type do not rest on differences in educational requirements but on differences of layout and architectural treatment.

The main elements of school building fall into three groups—classrooms, practical rooms (for science and art) and communal rooms (hall, gymnasium, etc.). There are accepted standards of accommodation in terms of the dimensions of rooms and of the numbers and types of rooms required according to the type of school and the number of pupils. Standardization of the construction of schools need not lead to rigidity or uniformity. It can only succeed if each case is dealt with by a competent architect.

The school can be arranged as a structural whole or as a group of separate units. These may be left unconnected, or connected by standard corridors or by in situ work.

The first arrangement is based on a general and connected framework to which the whole of the structure must conform. The unit dimension suggested is a clear span of 24 ft., which is in excess of the usual 21 or 22 ft. width of classrooms. The excess space over existing standards is likely to be welcome. The diagrams illustrating the application of this unit dimension have been drawn to a sub-multiple of 8 ft. 3 in., which is one-third of the span if allowance is made for wal thickness. In case of the second arrangement, when the plan units are regarded as separate entities, structural considerations do not make it necessary to base both the width and the length of bay units on the same unit of dimensions. Thus in the diagram illustrating this alternative the bay unit has a running length of 7 ft. 6 in.

It is desirable that any system recommended should allow not only for flexibility in planning but also in the use of materials. The Committee is of the opinion that for the first arrangement structural steelwork suits best, whereas for the second arrangement reinforced concrete and timber may also be used. The structural elements should be mass produced. The system offers all the advantages of framing as against the traditional load bearing walls. The architect will have complete freedom as to the infilling walls and partitions and the formation of roof and ceiling surfaces. Roofing can be taken in hand while walls are still in course of erection.

It is emphasised that further research should be undertaken to determine the design of the best and most economical type of structural elements. The diagrams accompanying the report are purely illustrative of structural principles; the same units could be grouped in an endless variety of ways.

The report is an indication of the possibilities of standardization and prefabrication without affecting the freedom of the architect to adapt the layout and elevation to local conditions.

QUESTIONS and Answers

THE Information Centre answers any question about architecture, building, or the professions and trades within the building industry. It does so free of charge, and its help is available to any member of the industry. Answers are sent direct to enquirers as soon as they have been prepared. The service is confidential, and in no case is the identity of an enquirer disclosed to a third party. Questions should be sent to: THE ARCHITECTS' JOURNAL, 45, *The Avenue, Cheam, Surrey.*

1506 — *Party Walls*

Q *Is there any law, or are there generally bye-laws covering the rights of adjoining party wall owners outside London? I am conversant with the control of this matter in London under the London Building Act, but am unaware of procedure in urban and rural areas.*

A Outside London the rights of party wall owners are based on Common Law. Where the boundary is quite clearly defined, the owners are considered to possess the portion of the wall projecting over their own land. Where the boundary is in doubt the two owners are considered to hold the ground and the wall standing on it in common and are considered as tenants in common.

Generally speaking, if an owner builds a party wall he can require the adjoining owner to pay half the cost if and when he uses it. Also either owner has the right at his own expense to pull down and rebuild or underpin the wall, without damaging the adjoining property.

If an owner pulls down and rebuilds a party wall which is in a very bad state of repair, he may have difficulty in getting the adjoining owner to pay half; in such a case he can apply to the courts, who will, if necessary, apportion the costs between the owners.

As the law is not clearly defined, it is usually advisable for an owner to consult a solicitor before proceeding too far if he is unable to reach a friendly agreement with the other party.

1507 — *Books on Welding*

Q *Can you supply a list of books dealing with: 1. Welding practice in built-up sheet metal structural components; 2, Stress analysis of built-up welded sheet metal structural components. Have welded sheet metal structural components been used in building?*

A There have not been any books published on welding practice in, or stress analysis of, built-up sheet metal structural components. The Institute of Welding, 2, Buckingham Palace Gardens, London, S.W.1, have, however, certain articles on this subject which have appeared in American journals, and would be willing to let you see these at their London library, or may be of assistance in this matter if you communicate with them.

Welded sheet structural components have been used in building, but again there is not much published data on this subject, and we would suggest the same source if further information is required.

1508 — *Dorothy Staircase*

Q *In a brochure describing a layout of building lots at Park Langley, Kent, one moderate sized house was described as having a magnificent Dorothy Staircase. From the plan it appeared to be simply a stairway with a landing. I have never seen the term used elsewhere. Perhaps it was only an over-enthusiastic real estate man's description.*

A We regret that we have no knowledge of the term Dorothy Staircase. Perhaps one of our readers will provide the answer.

SOCIETIES AND INSTITUTIONS

Speeches and lectures delivered before societies, as well as reports of their activities, are dealt with under this title, which includes trade associations, Government departments, Parliament and professional societies. To economise space the bodies concerned are represented by their initials, but a glossary of abbreviations will be found on the front cover. Except where inverted commas are used, the reports are summaries, and not verbatim.

WYSA

P. B. Haswell

Paper read before the West Yorkshire Society of Architects on EDUCATIONAL BUILDINGS by P. B. Haswell, B.Arch., A.R.I.B.A., Architect to Leeds Education Committee.

P. B. Haswell: In any general scheme for post-war development, the provision of buildings for educational purposes must take an important place. Many education authorities are already some years in arrear with their pre-war programme and, in addition, considerable changes in the administration of education will still further increase the number of buildings to be provided.

The services of architects will be called for in this important work which requires not only a comprehensive knowledge of the special planning of such buildings but also the introduction of many new ideas which a trained designer should be able to give.

I do not propose to attempt to tell you, as architects, how to use building materials or the type of construction to adopt. That would be presumption on my part. Instead, I am going to regard myself as the client and as such to set out the probable requirements of a programme for educational buildings with some hints which I trust will be valuable in assisting you to formulate the ultimate design.

NEW EDUCATION BILL

Before an architect can begin to consider the planning of any building for educational purposes, it will be necessary for him to have some knowledge of the general scheme of education which is likely to be in force in this country within the near future.

The Government is considering at the present time a Bill which, with minor alterations, may shortly be put into operation. The avowed purpose of the Bill is to reform the law relating to education in England and Wales and its main provisions are these :

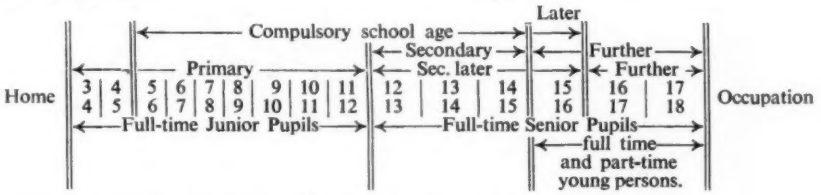
Central Administration is to be conducted by a Minister entitled President of the Board of Education, together with departmental staff and advisory councils.

Local Administration to be carried out by local education authorities who are to be the councils of Counties and County Boroughs with variations for combining smaller county authorities and for part division in the case of the larger non-county authorities.

All education is to come within the control of such authorities except for special provisions for independent schools, which include the registration of these on a register to be kept by the Minister. This will include those public and private schools which prefer to remain outside the general scheme.

Education is to be conducted in three stages : i.e. Primary, Secondary and Further.

The various age divisions and types of education for which provision must be made can be set out thus :



Schools which provide accommodation for these different categories are to be named : County Primary and County Secondary, if provided by LEA ; Auxiliary Primary and Auxiliary Secondary, if provided otherwise.

Auxiliary schools will be named either (1) controlled ; (2) aided ; or (3) special agreement, according to the proportion of maintenance borne by the local authority and by the school managers.

Further education will be provided by colleges for art, commerce and technical subjects, together with young people's colleges for part-time education for those already in trades or professions.

Further education by means of colleges and universities will generally remain as at present.

Special schools are to be set up to cater for the needs of children requiring special educational treatment owing to physical or mental disabilities.

Ancillary services which local authorities must provide are those for : (*a*) medical services ; (*b*) meals and milk.

It should be noted that under the Bill school buildings are to be exempt from local acts and byelaws if erected in accordance with plans approved by the Minister. This clause will not, however, exempt any proposal from the provisions of such acts as the Town and Country Planning Acts and Orders.

Every local education authority is required to submit to the Minister a development plan which shall include a comprehensive programme of all arrangements proposed to bring the education services up to the standards required. This will include new buildings, alterations and additions.

TYPES OF BUILDINGS

The architect may thus be instructed to prepare plans for any of the following types of buildings :

Nursery school.
Infants' school.
Infants' school and nursery.
Junior school.
Infants' and junior school.
Secondary (grammar type).
Secondary (modern).
Secondary (technical).
Colleges (*a*) Art.
(*b*) Commerce.
(*c*) Technology.
(*d*) Training of teachers.
(*e*) Young people's.
Special (*a*) Mentally retarded.
(*b*) Blind and partially sighted.
(*c*) Deaf.
(*d*) Cripples.
(*e*) Rheumatic cases.
Kitchens—supplying.
Canteens or combinations.
Clinics—central, district, rooms in building.

The size of the building and the separation or combination of age groups depend on the number of children to be catered for and the distances their homes are from the school.

Before proceeding with the analysis of individual buildings, I should like to put forward some general ideas as a means of approach to the preliminary design stage of all projects. These are :

SITE

(*a*) Preferably sloping gradually towards the south.
(*b*) Position should be away from main roads or, if unavoidable, the entrances should be from secondary roads.
(*c*) Building should be placed so that the main rooms do not face towards noisy roads.

CHARACTER

The activities of a nursery school are similar in many respects, as far as the children are concerned, to those in a dwelling house, and I suggest that the appearance of this type of school should therefore be of a domestic character with an absence of formality.

At the other end of the scale, the activities carried out are often identical with those of the trade or profession the student will ultimately follow, and the character of the building might appropriately suggest that of public building or work place.

Buildings for children between the two extremes could conveniently be graded in appearance upwards from the former to the latter to avoid an abrupt change in the continuity of the child's progress from the home to the adult working life.

SHAPE

There is no inherent advantage in any particular plan shape. Subject to the provision of adequate light and air and convenient and direct access between the parts, the plan type to be adopted should depend on the conditions of the site and the requirements of the programme.

If an enclosed plan is considered the better solution to the problem, the open space or spaces in the middle should not be merely light wells, but large enough to be called Quadrangles, preferably not less than 90 ft. (about) in each direction so that the space may be put to some use.

THE PLAN

Plans of school buildings which I have examined quite often seem to suffer from preconceived ideas which had become firmly fixed in the designer's mind. The so-called school assembly hall is a good example, preconceived thus—large room, some 30 ft. high with elaborate roof trusses, 8 ft. high panelled boarded dado, clerestory windows, unsatisfactory platform at one end, etc. Entirely wrong in conception, the average school hall is used for activities where one or more units may be grouped together, in other words, for class use. Thus a simple shape, not too elaborate, windows on both sides preferably nearly to the floor; where a platform is required then either a low small feature for junior children or a properly equipped stage separated from the hall by a proscenium. The whole light, open, airy and cheerful.

This designing of a school by means of preconceived ideas to assemble together a series of rooms with fixed titles to each, definitely restricts the flow of any new ideas in planning, and I would therefore ask you

to consider a programme from the following point of view :

The programme ordinarily requires the provision of a number of spaces in which school activities are carried on either individually or collectively in small or large numbers with differing needs as far as the amount of space is concerned.

All these spaces, or nearly so, require similar considerations of light and air, of comfort, of adequate facilities for the purpose and of appearance.

This planning by space rather than by room names is of great importance as it enables satisfactory grouping and separation where required. Each unit or group can thus be made to occupy the most satisfactory position on the site from the point of view of its purpose.

For example, a programme might be drawn up in this manner :

Space.	*Activity.*	*Aspect.*
6— 500 sq. ft.	Quiet	S.
4— 700	Some noise	S.
2— 900	Quiet	E. or S.
2— 900	Noisy, smells	E. or W.
1— 1,000	Quiet (essential)	E. or W.
*1— 1,800	Some noise	S.
1— 1,800	Very noisy	E., S. or W.
2— 600	Smell from clothes	N.E. or W.
2— 400	Sanitary fittings	N.E. or W.
*2— 300	Quiet, central	S. or W.
*1— 600	Quiet, central	S. or W.
1—20,000	Noisy, no roof	Sunny
1—5 acres	Noisy	Sunny

* Possible separate use by public.

NOTE.—Corridors, stores, stairs, etc., not included in above.

HEIGHTS OF BUILDINGS

Buildings for children up to the age of seven should be one storey in height ; from seven to twelve, preferably one storey, but not more than two ; over twelve may be two storeys or on confined sites three ; for young people, may be more than three ; but the higher the building so the difficulties of lighting, use of lifts, etc., increase the problem from the point of view of the user.

INDIVIDUAL BUILDINGS

To proceed with individual buildings we have first the *Nursery and Infants* types, Seacroft plan—shaped to suit the contours to provide all main spaces with southerly aspect. The cloaks and sanitary wings are split up between the various spaces to reduce the distance for young children between the class and the lavatory. The nursery spaces are set out with direct communication. Storage space for toys, beds, etc., should be on a generous scale. An important requirement is the provision of cross access between class spaces and front and back open spaces to avoid undue travel, particularly the nursery classes. In the Middleton model, the use of the buildings to act as windscreens and the informality of the play spaces for young children.

The Junior School type has the same requirements as the infants, but certain spaces are larger for simple practical work. A hall is also required, and its use by the community in the evenings will affect its position.

The Secondary type. Points of interest are grouping the changing rooms for the hall and the gymnasium together, the arrangement of sections or blocks so that separate bodies of people may use the buildings out of school hours.

The Colleges type. (1) The main feature of the plan must be maximum elasticity. The activities carried on change from year to year, some disappearing and new ones taking their place with different requirements.

(2) An important requirement in buildings of this type is the provision of points in practically every bay of the structure to supply water, gas, electricity, wastes, etc., so that fittings can be installed later without alterations to structure or supply systems.

(3) Cloakrooms. The arrangements for cloakrooms is a problem which is difficult to solve. After some consideration I am suggesting here the provision of a small room attached to each class space. The advantages are better supervision against loss, the elimination of cloakroom attendants and crowding of central spaces, and the gain in space when smaller units are grouped into larger ones.

(4) Separation of various elements by use of cross blocks, stores, staircases, etc.. In the case of very noisy and dirty trade classes, it may be necessary to house these in independent buildings, as adequate insulation may be impossible.

SPECIAL SCHOOLS

The planning of special schools takes the same form as ordinary schools, with the addition of some open-air pavilions, use of ramps instead of steps, and provision of additional spaces for rest and medical services.

RESIDENTIAL SCHOOLS

It is unlikely that residential schools will be erected in towns. A limited number of residential school places may be provided by means of an extension of the schemes completed just before the war by the Camps Corporation, of which the Leeds authority is in possession of the one at Pateley Bridge. Plans of buildings of this type, which you have probably seen, are satisfactory, but some additional units for school activities would be an advantage.

DETAILS

There are a few points of detail to which I should like to draw your attention :

1. *Storage Space.* A much more generous space allocation should be made for the storage of (*a*) fuel to allow for winter stocks ; (*b*) ashes and clinker ; (*c*) waste bins ; (*d*) general school stock and storage of special materials.

2. *Meters.* Meters for supply services in schools may be quite large. For instance, the main electric switchboard with the meters is often about 8 ft. long, 6 ft. high, and requires access on both sides. Separate accommodation should always be provided and ample space left for reading meters and undertaking repairs.

3. *Use of Radio, Epidiascope and Film.* A considerable increase in the provision of these facilities has been made in the past few years and it is likely to continue. Provision for these should be made in all the main units. Where blinds are provided to shut out natural light, these should be of light-coloured material or lined inside with such material.

4. *Furniture.* The present tendency is to have all furniture light in weight and portable wherever possible. Fixed heavy tables and benches should be avoided unless they contain fittings which must be fixed. The furniture should be light in colour with no sharp edges or dust collecting ledges.

FUTURE DEVELOPMENT

The question inevitably arises : What are the possibilities in the future of using lighter structures with the various forms of prefabrication and new materials ?

In any school building a large proportion of the work consists of fittings for which we do not appear to be able to obtain satisfactory alternatives, i.e. electric, gas, heating and hot water installations, sanitary fittings, windows and doors, hard-wearing non-splinter floors and steps, and special fittings to ensure safety on doors, windows and hot water. Only a small proportion of the fabric is left with which experiment can be made.

The suggestion I put forward is that school buildings of the future will tend to be a combination of traditional and new forms. Owing to the great need for buildings and the shortage of labour and materials, it is not likely that a large group of buildings can be erected in one operation, but that building operations will proceed by stages. For instance, a hall, together with a few small rooms, will be built as a nucleus. This group can house, say, two classes temporarily and can also be used by the community. Owing to its size and importance it could be in traditional materials. At later stages other blocks can be added in light prefabricated units and further future extensions in either type of structure.

In this connection some consideration should be given to the possibility of using entirely separate blocks surrounding quadrangles after the fashion of some universities and public schools. These separate blocks could be, say (*a*) physical training group ; (*b*) dining and kitchen facilities ; (*c*) science group ; (*d*) handicrafts ; (*e*) classrooms, etc. They may be connected by corridors, covered ways or merely paths to suit circumstances.

LMBA

Dr. E. A. Woolf

May 16, at Sidcup. Luncheon of the London Master Builders' Association's South-Eastern Area. Guest of honour : Dr. E. Alec Woolf, Principal of Erith Technical College, and member of the Kent Education Committee, who spoke on TRAINING FOR THE BUILDING TRADE.

E. A. Woolf : We are living in a changing world, but the extent of the change will not be apparent until we have learned to adapt ourselves to almost entirely new conditions of existence in the post-war period. The education of the past, successful as it may have been in certain directions, has not been truly representative of the needs of this industrial nation of ours. Industry has progressively needed more and more trained personnel, but the major training in educational institutions has been more specifically academic than industrial. The job can be learnt best on the job, but the need for people with trained minds and trained hands who will have a proper appreciation of industrial needs was never fully appreciated until the prime need was revealed in all its crude reality in a period of war emergency.

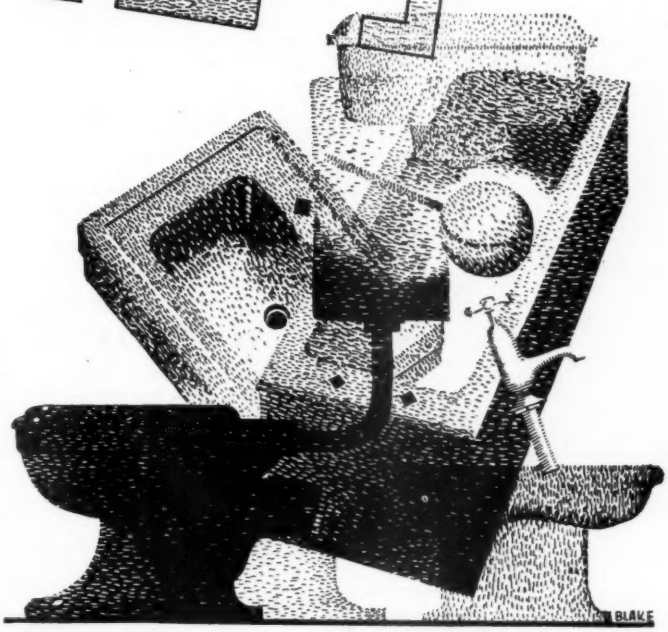
In its proposals for post-war education the Board of Education has referred to the need for a closer relationship between education and industry. There are suggestions of the possibilities of National Advisory Committees, but the solution of the problem of the provision of personnel for industry, and especially for the building industry, is a problem that will have to be solved regionally by co-operation between the education authorities, who are responsible for the training and education of the young people, and the industries themselves.

The school-leaving age is to be raised to 15, with a probability of 16. The boy, after the age of 11, is to be guided to one of three educational organizations—modern, grammar, technical—at least, this is the interpretation of prominent educationalists, although there is nothing in the Education Bill which stipulates this definition. All that the Education Bill implies is that the 3 R's shall be replaced by the 3 A's with a deviation according to age, adaptability and attainment.

The building industry needed at least 20,000 entrants into the skilled trades and vocations in a normal year. In the post-war period this number will obviously be much larger as there has been little recruitment in war time, and the building needs will be intensified by losses during the war period and by increased building needs, and the figure of 50,000 per annum has been quoted by a national federation. The Board of Education and local authorities have set up in technical colleges and junior technical schools building courses intended to provide some measure of instruction and training which may supply within a reasonable time, provided that all of these young people enter the building industry, some 10,000 entrants per annum.

There are two ways of preparation for industry. One is by taking up the job and learning the job on the job, and the other is by a cultural-cum-technical education which will provide not only the background of an education for living, but give an opportunity of learning the technique of a livelihood. A great teacher of building has said, " The building course in a day technical school does not contemplate a preponderance of

FROY



The "DENAM" Plumbing & Heating System Units

as recently exhibited at Abbot House, Regent Street, are now installed under working conditions at our Brunswick Works where inspection is invited.

Established in 1850, the House of FROY has occupied a leading position in the building trade for nearly 100 years.

Whilst the present activities of the Firm are of necessity mainly devoted to meeting the demands of the National effort, yet stocks are available for immediate attention to those enquiries permitted by war time regulations.

When the time comes to cope with the many problems of post-war reconstruction, "Froy" Service, with added experience and new ideas and designs, will be fully available to all departments of the Building Industry.

W. N. FROY & SONS LTD

BRUNSWICK WORKS, HAMMERSMITH, LONDON, W.6.

Telegrams: Froy, Hammersmith Telephone: Riverside 4101 (24 lines Private Exchange)

SANITARY EQUIPMENT · FIREPLACES · HEATING & COOKING EQUIPMENT · DOOR & WINDOW FITTINGS

workshop training. The main object is not proficiency in trade practice, but rather a study of scientific principles underlying the practice of building construction."

I think it is acknowledged that there is a need for a comprehensive, considered scheme for a building education, and the junior technical school and building courses may form a comprehensive part of this scheme. Given adequate attention to general school subjects, such as English, history, geography, current affairs, the curriculum will include mathematics, general science, drawing (including art, building drawing and technical sketching), building construction, workshop practice and physical training.

It cannot be intended to provide a trade training in the junior technical school. Materially and spiritually the facilities are not adequate. Junior technical schools have not been provided with either workshops or equipment comparable with those to be used in the trade, and the young people are not of an age when they should be trained entirely in a trade technique.

We, the day technical schools, must be prepared to train for general ability rather than the specific technique. The changing world industry postulates a need for the training of skilled minds as well as skilful hands. The phrase that I have always used is "training for mental agility and manual dexterity." Part-time day courses and evening courses will provide for the training of young employees in two directions—one for the ambitious apprentice and the other for the craftsman. The courses for the former will include building construction, building science, building mathematics, etc., and for the latter a practical course on City and Guilds lines.

In the building courses in the day technical schools there is a bias on the building industry, but the decision to enter the industry depends on the opportunities provided by the industry itself. If all that the industry can provide for the boy of sixteen who has passed through a three-year technical building course is a job as a bricklayer's apprentice, or a plumber's apprentice, then you will find that the parent's point of view will be that if the boy is going to learn a specific job only, then there is no reason to keep him at school until he is sixteen before entry. If, however, the building trade is going to offer the possibility of a general training or a general apprenticeship with an opportunity of learning the many sides of the building industry, including office work, then I do not fear that the recruitment needed will be difficult to find.

The difficulty of finding teaching personnel cannot be overestimated. We shall have to recruit from the building trade for the teachers of the various courses, and it may be necessary to ask the industry from time to time to loan their skilled craftsmen who can demonstrate modern technique in the various aspects of crafts instruction. In order that the training should be as up-to-date as possible and on the right lines, co-operation with the industry is essential, and here the setting up of Building Advisory Committees in each area where there is a technical college or day technical school is not only a wise but an essential step. In this way the relationship between training and industry can be maintained and the smoothness of flow of recruitment be guaranteed.

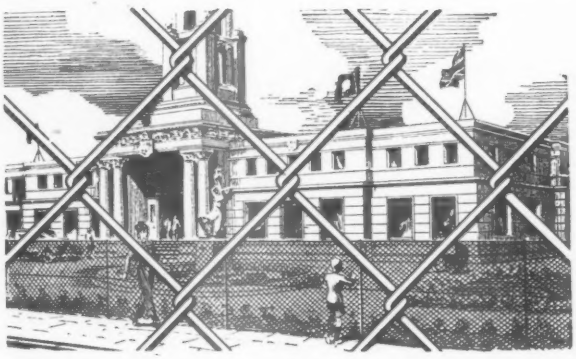
RIBA

New Members

As FELLOWS (3).—Towndrow, Frederic Edward (London), Young, William Cecil (Manchester), Taylor, Gertrude Molly Justice (Mrs. R. A. Gerrard) (Bath).

As ASSOCIATES (12).—Burden, Hamish Eadie, D.A.(Edin.) (Edinburgh College of Art) (Stirling), Hershman, Abraham Anthony (Salford, Lancs.), Jamilly, Edward Higham, DIP. ARCH. (The Polytechnic, Regent Street, London) (Rudgwick, Sussex), Jeffries, William Trevor (Watford, Herts), Lawrie, Miss Marion Hope (Edinburgh College of Art) (Alness, Rossshire). Nathanielsz, Ray James Holman (The Polytechnic, Regent Street, London) (Harrow-on-the-Hill, Middlesex), Orme, William Rossell (Twickenham, Middlesex), Stewart, William Ferguson, B.SC. (Glasgow School of Architecture) (Abington, Lanarks.), Storer, Frederick Ernest Samuel (Birmingham), Sutcliffe, Tom Allison (London). *Overseas*: Connell, Paul Harold (Cape Town), Edwards, Miss Mary Dorothy, B.ARCH. (University College, Auckland, New Zealand) (Auckland).

As LICENTIATES (24).—Akers, Richard Thomas (London), Bishop, Albert Edward (London), Burrows, Philip Randle (Wirral), Clague, Thomas Wilfred, P.A.S.I. (Baldrine, Isle of Man), Davies, Gwilym Jenkins, P.A.S.I. (Llandyssul, Cardiganshire), Dickson, John Alexander Thornton (Dunfermline, Fifeshire), Dunlop, Alexander (Kilmarnock), Edmonds, Stanley Earl (Stafford). Ellis, Reginald Arthur Charles (London), Fennell, Frederick Wilfrid (Gateshead), Francis, Henry Prescott (Worcester Park, Surrey), Hannaford, Guy Melville (London), Harvey, Marshall (Sittingbourne, Kent), Hurst, Sidney Cecil, P.A.S.I. (Brighton), Ives, Ernest Lovell (Northampton), Jordan, Norman (London), Kett, Frederick Sidney (Axminster), Lee, John James (London), McCrossan, Russell Peter (London), Marsh, Harold (Kings Lynn), Roberts, Major Keith Preston, R.E. (West Wickham, Kent), Thorn, Kenneth Harry (Bath), Weltert, Frederick Albert (London), Wood, William Glover (Leicester).



CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal." War Address: 45 The Avenue, Cheam, Surrey, and should reach there by first post on Monday morning for inclusion in the following Thursday's paper.

Replies to Box Numbers should be addressed care of "The Architects' Journal." War Address: 45 The Avenue, Cheam, Surrey.

Public and Official Announcements

Six lines or under, 8s.; each additional line, 1s.

The Incorporated Association of Architects and Surveyors maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. Address: **75 Eaton Place, London, S.W.1. Tel.: Sloane 5615** 991

CITY OF OXFORD EDUCATION COMMITTEE.

SCHOOLS OF TECHNOLOGY, ART AND COMMERCE, OXFORD.

JUNIOR DAY DEPARTMENT—BUILDING TRADES.

Applications are invited for the post of Full-time Teacher of Building Drawing and Geometry.

The person appointed will be required to give some assistance in Building Science and Mathematics or a Building Craft, and will be mainly concerned with the teaching of boys of from 13 to 16 years of age. The appointment will date from September 1st, 1944.

Salary in accordance with the Burnham (Technical) Scale, together with the appropriate war allowance.

Forms of application and further particulars may be obtained on receipt of a stamped addressed foolscap envelope, from the Chief Education Officer, City Education Office, 77, George Street, Oxford, to whom completed forms must be returned not later than 17th June, 1944. 661

Architectural Appointments Vacant

Four lines or under, 4s.; each additional line, 1s.

Wherever possible prospective employers are urged to give in their advertisement full information about the duty and responsibilities involved, the location of the office, and the salary offered. The inclusion of the Advertiser's name in lieu of a box number is welcomed.

ARCHITECTURAL AND SURVEYING ASSISTANT required by Chartered Architect's and Chartered Surveyor's office in the North, with very varied practice. Apply with references, Box 636.

LONDON ARCHITECT'S OFFICE. Two assistants required to work on prefabricated housing. Salary £6 to £12 according to qualifications. Box 638.

ARCHITECTURAL ASSISTANTS REQUIRED

(*a*) Senior Assistant; to prepare schemes, perspectives, working drawings and details, site-surveys, etc., A.R.I.B.A. or equivalent.

(*b*) Junior Assistant; to prepare working drawings and details under supervision, assist on surveys, etc. Inter A.R.I.B.A. standard.

Applicants must be keen, energetic and capable of original work. Midlands area, permanency with good prospects to the right applicants. Apply in writing, stating age, qualifications, brief resume of training and professional experience, salary required and liability for National Service to Box 637. [Chartered Architects].

SENIOR ARCHITECTURAL ASSISTANT required, capable of undertaking responsibility in the preparation of post-war plans for factory work, and in connection with work on prefabricated housing. Advertisers are an old established, progressive firm in the north midlands willing to pay a good salary to the right man. The work to be undertaken is considered of national importance and covered accordingly. [Chartered Architects.] Box 643.

ARCHITECTURAL GENERAL ASSISTANT required by chartered architect in Midlands county town—must be exempt from military service. Apply, stating age, salary and experience to Box 652.

Architectural Appointments Wanted

Architectural Assistants and Students seeking positions in Architects' offices will be printed in "The Architects' Journal" free of charge until further notice.

ASSISTANCE. A/A.R.I.B.A.'s will prepare schemes and drawings, etc., in own office, spare and part-time work. Total experience 25 years. Central Scotland area. Write Box 301.

CHIEF ASSISTANT (Chartered Architect) desires similar or executive position of permanency, offering sound prospects. Wide first class experience in design, detailing and supervision (including resident site supervision). Box 302.

YOUTH, aged 17 years, seeks position in architect's office, in London area. Has knowledge of architectural subjects and experience in office work. Box 303.

DRAUGHTSMAN AND CIVIL ENGINEERING ASSISTANT, 28, Reinforced Concrete Designer, no release required present employment (consultants). Exempt military service. Car owner. 114, Franciscan Road, S.W.17. 304

ASSISTANT, seven years' experience domestic, commercial, industrial structures and prefabrication, is available immediately for professional firm, contractor, industrial concern or research organization. Salary about £6 6s. Box 305.

SURVEYOR, BUILDING SURVEYOR, INSPECTOR, Etc., with over 30 years' varied experience, qualifications (theoretical and practical), in all branches of the profession, and building trades, seeks responsible position in Birmingham, or surrounding five counties; with Local Authorities, or public bodies, etc.; experience in public offices; and includes war damage, dilapidations, etc.; exempt military service, over military age. Box 306.

ARCHITECTURAL STUDENT, having trained for 2 years at Day School of Architecture and who wishes to obtain practical experience while continuing studies in Evening School desires position with progressive firm on essential work, preferably in London area. Box 307.

Classified Advertisements continued on page xl.

BOY (aged 16½), trained draughtsman, very interested in architecture, requires post in architect's office. Box 310.

MALE ARCHITECTURAL STUDENT, second year Liverpool school of Architecture, wants work of national importance in an architect's office, London preferred, during summer vacation after July 8th. Box 308.

ARCHITECT AND SURVEYOR, L.R.I.B.A., A.I.A.S. (Quants.), Age 37, seeks contact with firm offering post-war prospects, preferably with view to partnership; 20 years varied experience; very excellent credentials. Box 309.

JUNIOR DRAUGHTSMAN (aged 17), 4 years' technical college (building) training; some experience; wants position in either architect's office or drawing office in London area. Box 311.

Planning

As originators of the Auto-Recorder System of Machine Milking we have had extensive experience of planning layouts to accommodate the new technique. The service of our Technical Department is available to any Architect planning or modifying farm buildings for this purpose. Write in confidence to:—The Planning Dept., Gascoignes (Reading) Ltd., Gascoigne House, Berkeley Avenue, Reading. 603

Other Appointments Vacant

Four lines or under, 4s.; each additional line, 1s.

ASSISTANT EDITOR wanted for Architectural Paper. Write, with full particulars of qualifications, salary required, &c., to Box 51.

TUTOR ORGANISER required immediately—full-time, London, to conduct Correspondence Course in Town and Country Planning for members of H.M. Forces; course sponsored by Army Education Authorities but administration and tuition are handled by non-profit-making independent organisation. Young ex-service man with wide qualifications and teaching experience preferred, war disability no handicap. Write full particulars, salary required, to Box 658.

ADVERTISER would like to contact Craftsmen and Designers able to do part-time work for metalwork of all kinds. Box 660.

Miscellaneous

Four lines or under, 4s.; each additional line, 1s.

A. J. BINNS, LTD., specialists in the supply and fixing of all types of fencing, tubular guard rail, factory partitions and gates. 53, Great Marlborough Street, W.1. Gerrard 4223-4224-4225.

WANTED. Complete set or part ARCHITECT'S JOURNAL Library of Planned Information Sheets. Bound or Unbound. Good price offered. Box 621.

SPECIFICATIONS AND BILLS OF QUANTITIES, etc., expeditiously and accurately typed or duplicated. Translations and Facsimile, Typewriting. All work treated confidentially. Miss G. Saunders, Typewriting Bureau, 17, Dacre Street, Westminster, S.W.1. Telephone: Whitehall 2605

1,000 TYPEWRITERS NEEDED. £25 paid for Royal, Underwood, Remington, LC Smith, Smith Premier, Imperial machines up to 6 years old; £20, 10 years; £10, 25 years. Others at current values. Collected cash. King's Equipment Co., 26, Buchanan Buildings, Holborn, London, E.C.1. 651

ARCHITECTURAL METAL WORK. Advertisers are prepared to consider purchase of goodwill of an established business for post-war development. Full particulars in confidence to Managing Director, Box 659.

MONOMARK service. Permanent London address. Letters redirected immediately. Confidential. 5s. p.a. Royal Patronage. Key tags 3 for 1s. 3d. Write BM/MONO5R, W.C.1. 44

FENCING AND GATES of every type, supplied and erected. Specialists in chain link. Boulton & Paul, Limited, Norwich. 662

Educational Announcements

Four lines or under, 4s.; each additional line, 1s.

R.I.B.A. AND T.P. INST. EXAMS. Private Courses of tuition by correspondence arranged by Mr. L. Stuart Stanley, M.A., F.R.I.B.A., M.T.P.I. Tutor, St. Catherine's College, Cambridge. 231

R.I.B.A. QUALIFYING EXAMINATIONS
Mr. C. W. Box, F.R.I.B.A., M.R.San.I.
Courses by Correspondence and Personal in Studio.
115, Gower St., London, W.C.1.
Telephone: Euston 3305 and 3906.