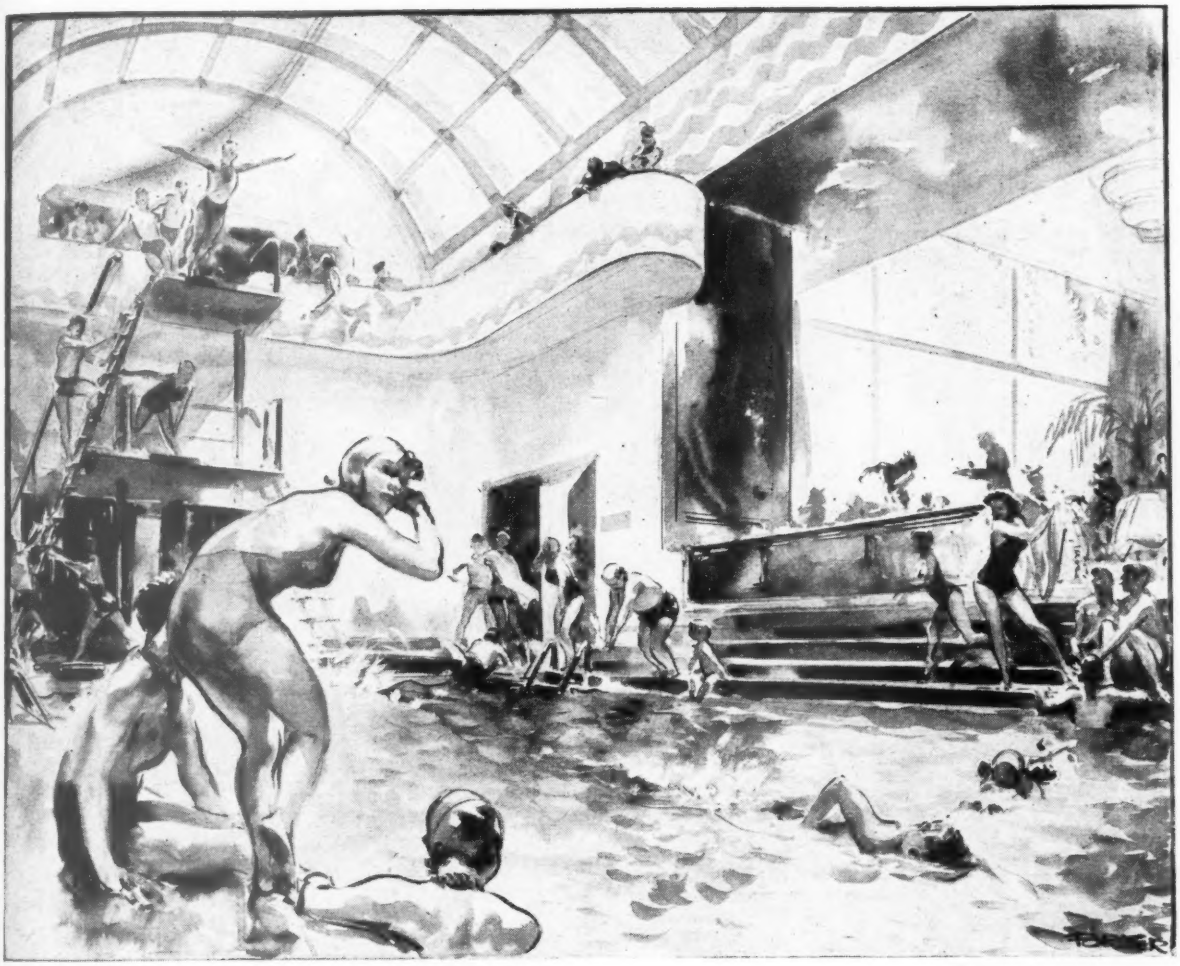
WARERITE Panels and Veneers are ideal surfacing materials for bathrooms, lavatories, kitchens and places where constant exposure to moisture is inevitable. They are not cold to the touch like many impervious materials.

Walls surfaced with Warerite Panels in the cloakrooms of the Regent Palace Hotel, London. Architect, Mr. Oliver P. Bernard, F.R.I.B.A. Contractors, George Parnall & Co., Ltd.

W12

Trade Mark WARERITE LAMINATED PLASTICS MADE BY WARERITE LTD. WARE, HERTS UNIT OF BAKELITE LIMITED



Tremendous strides have been made in the design, planning and control of swimming baths since the Education Act of 1918 included swimming in the list of approved physical exercises. What the future has in store in the shape of health development of the nation cannot yet be assessed, but it is safe to assume that there will be an intensive drive by both public and private bodies to promote the extension of a pastime which improves the physical and mental health of the community. In the planning of new or the renovation of existing swimming baths, paint will be required for the protection and cheerful decoration of dressing boxes, spectators' galleries and refreshment bars or cafés. In swimming-bath buildings designed for other temporary uses, such as dances, displays, etc., the need for good paint is even more important. "DULUX" meets the rigorous conditions of service encountered in swimming-bath buildings and when available will afford architects and builders the widest choice of finishes and colours. Advice on specifications and colour schemes will gladly be given.

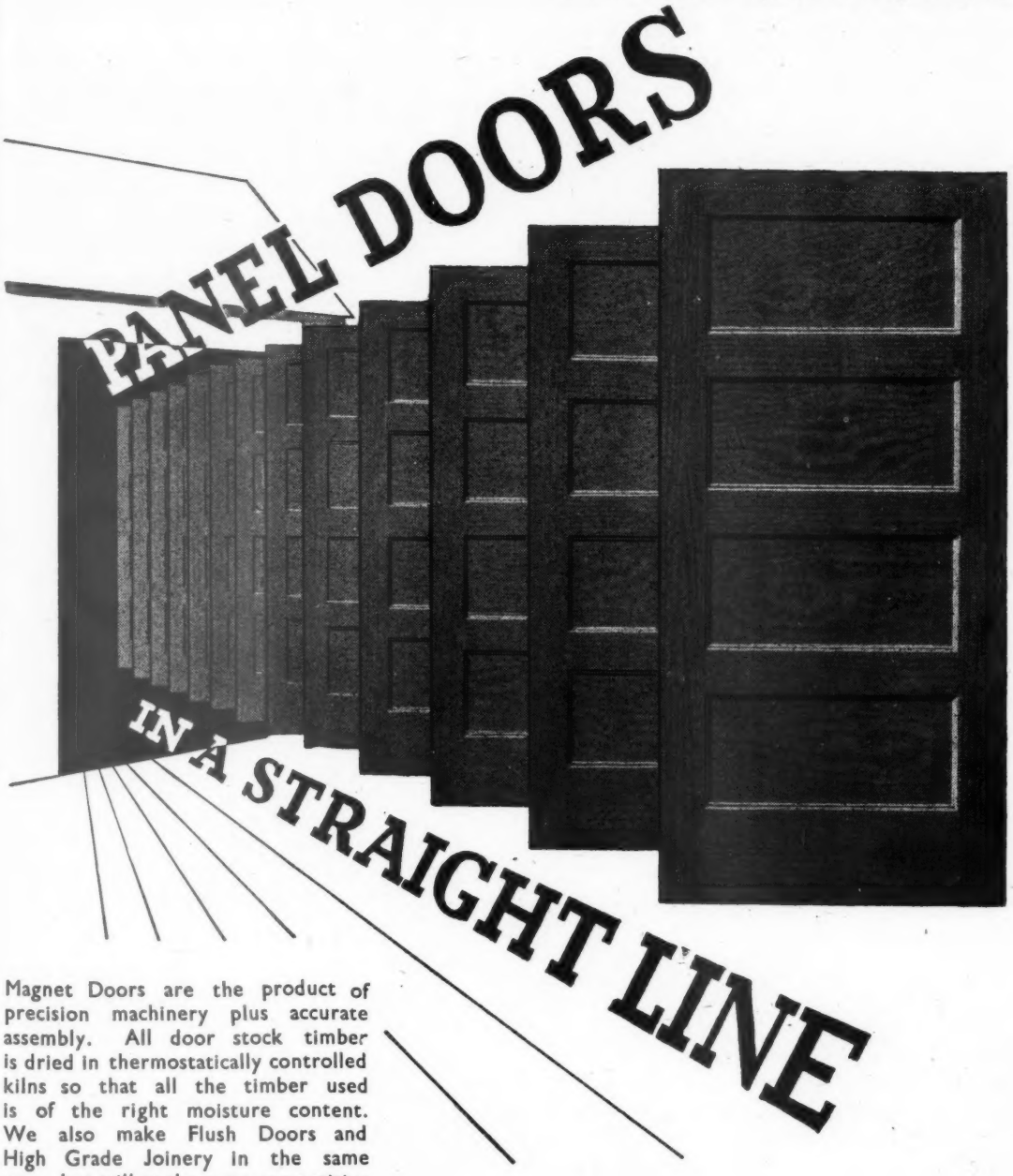
IMPERIAL CHEMICAL INDUSTRIES LIMITED

PAINTS DIVISION · SLOUGH, BUCKS.

(successors to Nobel Chemical Finishes Ltd.)

Telephone: Slough 23851

D.D.706



Magnet Doors are the product of precision machinery plus accurate assembly. All door stock timber is dried in thermostatically controlled kilns so that all the timber used is of the right moisture content. We also make Flush Doors and High Grade Joinery in the same way—but still at the same competitive prices.

MAGNET JOINERY

LIMITED

WHITLEY STREET, BINGLEY, YORKS
Telephone 547 (3 lines)

LONDON ROAD, GRAYS, ESSEX
Telephone 77 (5 lines)

Branches also at
ANNE ROAD, SMETHWICK, BIRMINGHAM, AND KNARESBOROUGH, YORKS

Stoneham & Work
B

ADAPTABILITY IN WOOD

After five years of high speed launches, motor fishing vessels, dinghies, and other equipment for the Forces, Sadds and their craftsmen are preparing to reorganise themselves for the staircases, windows and joinery work of peace time.

JOHN SADD & SONS, LTD.

HIGH-CLASS JOINERY

Windows, Doors, Mouldings, Staircases, Dressers, Kitchen Units

MALDON **ESSEX**

Telephone: Maldon 131. London Office: ALDWYCH HOUSE, W.C.2. Telephone: Holborn 7225

Stoneham & Kirk

PRESS GANG

In factories, institutions, schools and offices in most parts of the country there is a press gang at work saving fuel. But it is an unusually willing and well-behaved press gang.

These Prestex non-concussive self-closing taps have to be pressed to serve and as soon as you stop pressing they stop serving! That's the beauty of them as water savers.

With these Prestex self-closers on the job you need no longer worry about the thoughtless people who always forget to turn off the tap.

The use of these taps is approved by most Water Companies throughout the country (including the Metropolitan Water Board).

Prestex

PEGLERS LTD.

BELMONT WORKS, DONCASTER

and 58 SOUTHWARK STREET, LONDON S.E.1

Perfect acoustics

To obtain the nearest approach to these conditions in buildings you must use NEWALLS

Regd. Brand.

PAXTILES

NEWALLS INSULATION CO., LTD.

HEAD OFFICE & WORKS:
WASHINGTON, CO. DURHAM

OFFICES & DEPOTS AT: BELFAST, BIRMINGHAM
CARDIFF, GLASGOW, LONDON, MANCHESTER, NEWCASTLE.

When your client needs water from depth . . . For raising water from 100 ft. or more, the performance of the wet motor submersible pump is so marked that we no longer recommend any other pump for this purpose. Data on performances, power costs, silent operation, flexible switching methods, simple maintenance, compactness and headgear-less installation, will be sent at your request.

HAYWARD—TYLER

for A.C. Mains

wet motor pumps

Please enclose penny stamp with enquiry (paper regulations) to Hayward-Tyler and Co. Ltd., Luton, Bedfordshire.

HWT/LC/VT

London Brick Company Ltd.,
Stewartby,
Bedford,
Beds.

13th February 1945

Dear Sirs,

LIMEHOUSE GENERATING STATION

350ft x 16ft FLETTON BRICK CHIMNEY

RECORD CHIMNEYS

371' × 21' 0" (two)
365' × 18' 8" (two)
365' × 16' 0"
363' × 19' 6"
354' × 16' 0"
350' × 20' 0" (two)
350' × 15' 0"
330' × 17' 6"
330' × 15' 0" (two)
300' × 16' 0"

Further to the recent correspondence in respect to your forthcoming advertisement featuring this chimney, it is interesting to observe that, so far as we know, chimneys of these dimensions have never before been attempted in anything but the very best quality Engineering bricks, frequently brought long distances at great cost.

It seems to us to be an acknowledgement of the supreme quality of Fletton bricks that this procedure was not followed in the case of the Limehouse chimney.

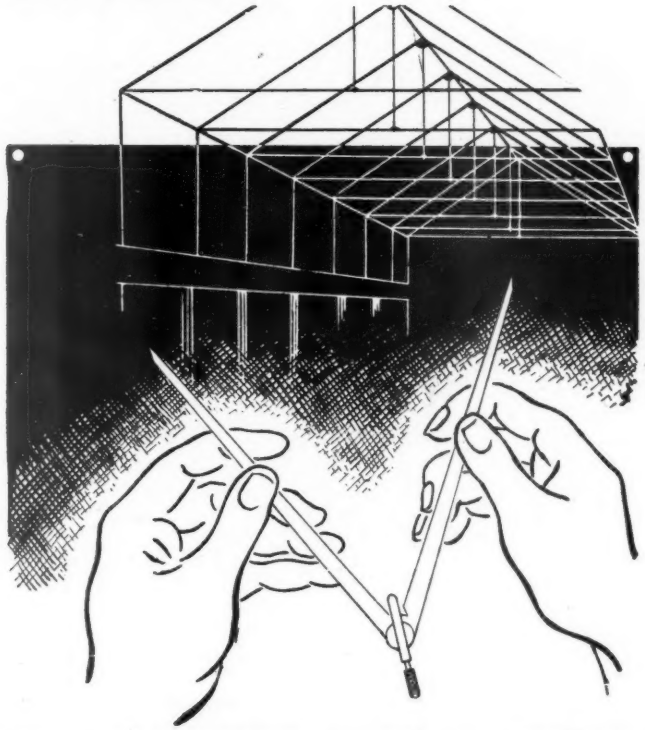
Yours faithfully,

For and on behalf of
P.C.RICHARDSON & CO. (Middlesbrough) LTD

P.C. Richardson

Managing Director.

RECONSTRUCTION



NEW MEN · NEW METHODS · NEW MATERIALS

CELLACTITE—the proved modern roofing, is ready to play a big part in reconstruction. Strong, light, incorrosible and heat-resisting, CELLACTITE spans wide purlin distances, minimises cost of sub-structure, will not rust or depreciate even under corrosive conditions, and keeps buildings warm in winter and cool in summer.

Under Control direction, CELLACTITE is available for essential work.

Write now for detailed information.

CELLACTITE

steel cored, incorrosible roofing and ventilators

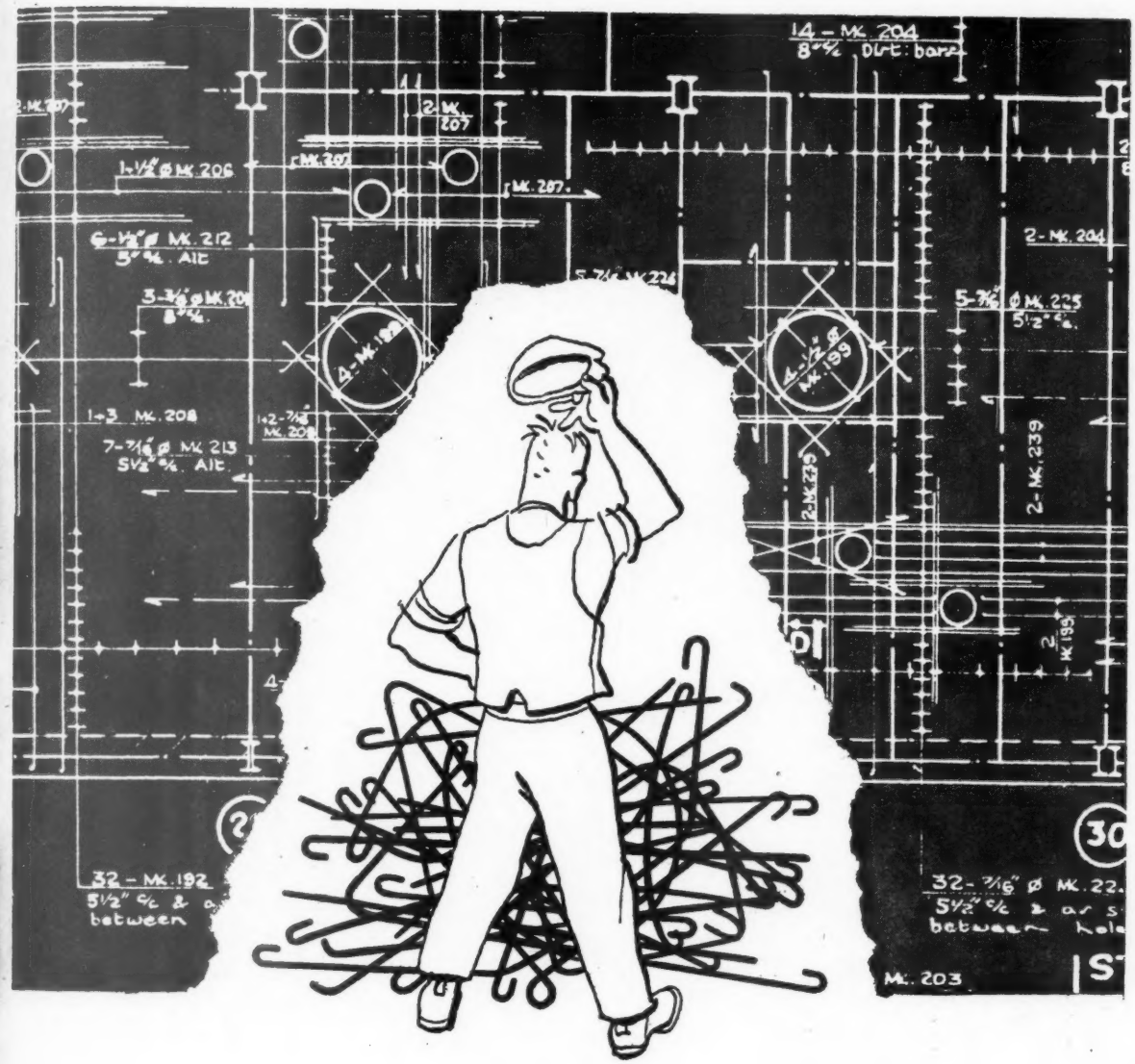
A CELLACTITE STRUCTURAL SYNTHETIC

CELLACTITE & BRITISH URALITE LIMITED

TERMINAL HOUSE · GROSVENOR GARDENS · LONDON · S.W.1

Phone: SLOane 5127 (4 lines) WORKS: HIGHAM, KENT 'Grams: Cellactite, Sowest, London

TAS/CL 304a



No head scratching on the site

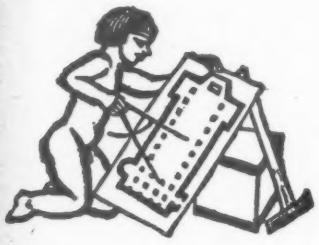
From the time you let us have the specification we take off your hands all the worry concerned with the supply of reinforcing material; do all that's required in the way of bending, hooking, radiusing, etc., and get the material to the site not only when it's wanted but in the order it's wanted, and bundled and labelled for easy sorting and quick handling.

GUEST, KEEN & NETTLEFOLDS LIMITED

GKN
CARDIFF

CASTLE WORKS AND ROLLING MILLS, CARDIFF. 66 CANNON ST., LONDON, E.C.4. 111 NEW ST., BIRMINGHAM

In common with every other periodical this JOURNAL *is rationed to a small part of its peace-time needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee that he will get a copy of the* JOURNAL. *Newsagents now cannot supply the* JOURNAL *except to a "firm order." Subscription rates: by post in the U.K. or abroad, £1 15s. 0d. per annum. Single copies, 9d.; post free, 11d. Special numbers are included in subscription; single copies, 1s. 6d.; post free, 1s. 9d. 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 1s. extra. Goods advertised in the* JOURNAL *and made of raw materials now in short supply, are not necessarily available for export.*



DIARY FOR AUGUST SEPTEMBER AND OCTOBER

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.

BIRMINGHAM. *Modern Building Tools Exhibition.* At Big Top Site, New Street, (Sponsor, MOW.) OCT. 9-13

BRISTOL. *Modern Building Tools Exhibition.* At Black Boy's Hill (Sponsor, MOW.) OCT. 23-27

HOMERTON. *NALGO Exhibition.* At Homerton College. (Sponsor, BIAE.) SEPT. 24-OCT. 8

ILKLEY. *NALGO Exhibition.* At the Grammar School. (Sponsor, BIAE.) OCT. 1-8

LIVERPOOL. *Modern Building Tools Exhibition.* (Sponsor, MOW.) SEPT. 11-15

LONDON. *NALGO Exhibition.* At the YWCA. (Sponsor, BIAE.) OCT. 6-13

NALGO Exhibition. At the Geffrye Museum, Kingsland Road, E. (Sponsor, BIAE.) DEC. 3-15

John Summerson. *Russian Architecture: The Historical Background.* First of a series of introductory lectures to the study of Soviet architecture. At the RIBA, 66, Portland Place, W.1. Chairman, Percy Thomas, P.R.I.B.A. Tickets from SCR Architecture Group, 98, Gower Street, W.C.1. Admission free to members of the group, non-members 1s. 6d. 6.30 p.m. SEPT. 25

Dr. F. Klingender. *Socialist Realism: The Aesthetics of Soviet Architecture.* Second of a series of introductory lectures to the study of Soviet architecture. At the RIBA, 66, Portland Place, W.1. Chairman, E. J. Carter. Tickets from SCR Architecture Group, 98, Gower Street, W.C.1. Admission free to members of the Group, non-members 1s. 6d. 6.30 p.m. OCT. 22

MANCHESTER. *Manchester and District Planning Exhibition.* At the City Art Gallery, Mosley Street. The exhibition is the result of research by engineers, architects, surveyors and other experts, working together under the direction of R. Nicholas, the City Surveyor and Engineer of Manchester, and Honorary Surveyor to the Manchester and District Regional Committee. Over two years ago a start was made with a very small planning staff, and although the City Council approved of a large extension of this staff, great difficulty was encountered in obtaining the services of efficient and capable assistants. The partial completion of the air raid shelters programme released a number of technical assistants for planning, but the majority of the large amount of work has been carried out during the past 18 months. At the peak of the output the staff consisted of 29 technicians and 20 draughtsmen working at high pressure on the City Plan, whilst 10 technicians and 8 draughtsmen were similarly engaged on the Regional Plan. Information has readily been given by other Departments of the Corporation and by the Surveyors to the other 13 constituent authorities of the Regional Committee. The City Surveyor was authorized to prepare and publish these tentative plans, but the constructive criticism of individuals and all sections of the community is sought, in order that the respective authorities may be in a better position to gauge the requirements and wishes of the public when official schemes are adopted. (Sponsor, Manchester City Council.) AUG. 30-SEPT. 8

TPI Conference. In connection with the Planning Exhibition arranged by the Corporation of Manchester and the Manchester and District Regional Planning Committee at the City Art Gallery, Mosley Street, Manchester, the Town Planning Institute has arranged to hold a Conference on August 31 and September 1, under the chairmanship of the President-elect of the Institute, Thomas Sharp. (Sponsor, TPI.) AUG. 31-SEPT. 1

Modern Building Tools Exhibition. (Sponsor, MOW.) SEPT. 25-29

NEWCASTLE. *Modern Building Tools Exhibition.* At Lovaine Place, Barras Bridge. (Sponsor, MOW.) AUG. 30-SEPT. 1

REYDON. *Country Life and Country Needs Exhibition.* (Sponsor, BIAE.) SEPT. 19-26

RUGBY. *NALGO Exhibition.* (Sponsor, BIAE.) OCT. 20-NOV. 3

VENTNOR. *The Future of British Resorts. Planning Our Holiday Areas.* Town and Country Planning Association Conference at The Winter Gardens Pavilion, Ventnor, Isle of Wight. The conference will be opened on October 6 by the Rt. Hon. Ernest Bevin and end on October 9. Among those taking part in the discussions will be Sir Patrick Abercrombie, representatives of all the main resort towns, of the travel and holiday organizations, of the hotel, catering and resort industries, and by interested members of the public. The conference will be preceded by a holiday week, from September 29 to October 6, at the Wellington Hotel, Ventnor. The Holiday Week has been designed primarily as a holiday meeting of town and country planners, members of the Association and their friends. Excursions and a limited number of lectures on subjects related to town and country planning are being arranged. (Sponsor, TCPA.) SEPT. 29-OCT. 9

YORK. *NALGO Exhibition.* At Holgate Hill Settlement. (Sponsor, BIAE.) FEB. 10-23

NEWS

THURSDAY, AUGUST 30, 1945
No. 2640. VOL. 102

News	145
Housing, Town Planning and Health	146
This Week's Leading Article ..	147
Astragal's Notes and Topics ..	148
Letters from Readers	149
Saving Steel	150
Physical Planning Supplement, National Planning by Stanislav Maressa	151
American Small House Exhibition	155
Information Centre	160
Societies and Institutions ..	162

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.

Lord Derby has sold DERBY HOUSE, a famous mansion in Stratford Place, London.

The sale includes adjoining freeholds, 7 and 9, Marylebone Lane, a total site area of two-thirds of an acre. Derby House contains a dozen reception rooms of stately proportions. Stratford Place was developed in 1775 by Edward Stratford, Lord Aldborough, on land leased to him by the City Corporation. The Place consists of two rows of mansions, and at the end of it looking directly to Oxford Street, is Derby House. Residents in Stratford Place at various times have included the Duke of St. Albans, Prince Esterhazy, and three Royal Academicians. The City Corporation originally held a large area in the neighbourhood south of Stratford Place in connection with the water supply to the City. Water from reservoirs near Stratford Place was used certainly as early at 1236.

The transfer to the National Trust is announced of COUGHTON COURT, a historic mansion two miles from Alcester, Warwick.

Coughton Court is close to the Birmingham-Evesham road. Since 1409 it has been the property of the Throckmorton family and Sir R. Throckmorton is the present life tenant. The house contains pictures, documents, and relics of great interest. The family adhered to the Roman Catholic cause, providing hiding places for priests, and were also adherents of the Stuart cause. The house is rich in associations with many stirring events in English history. Additions made in the seventeenth century probably included the two projecting wings at the back, of half timber work on a stone base. Many internal features are of considerable architectural interest. The transfer provides for the house to be shown to the public.

From AN ARCHITECT'S *Commonplace Book*

HAWKSMOOR'S MASTERPIECE. [*From* British Architects and Craftsmen, *by Sacheverell Sitwell (Batsford).*] The Mausoleum is approached by long flights of balustraded steps, and stands, itself, upon a huge stone platform. It is a circular domed building, with disengaged Doric columns. In the interior there is a vault, up to the level of the platform, and above that is the chapel with Corinthian columns that uphold a rich and splendid frieze of stone. The domed roof, of stone, is high above. The whole of the Mausoleum is ideally Roman, even Virgilian, in grandeur. Yet Hawksmoor, was completing, at the same time, the High Street front of Queen's, in full Baroque, and the " Gothick " spires and turrets of All Souls . . . He was determined to be Roman in his Mausoleum, and one of the curiosities of architecture is that a man who could build so delightful an absurdity as St. George's, Bloomsbury, and imagine that he was copying closely the Mausoleum of Halicarnassus in so doing, had the poetical power and skill, and the cold intellect, as well, to rise to this Virgilian wonder among the woods and lawns of Castle Howard . . . Not a genius, not an assured instinct, even, for if we admire Christchurch, Spitalfields, we need not say that St. Mary Woolnoth is a thing of beauty . . . But in the Mausoleum at Castle Howard Hawksmoor is altogether exceptional. No longer Baroque ; or, indeed, anything else than Roman, but in the poetical, not the correct meaning of that term, for it applies only to the high dome and the drum of columns as we catch a sight of them from far away, through the trees or across the landscaped waters. In that setting the Mausoleum of Castle Howard is one of the poetical beauties of the Kingdom.

★★★

Sir Hugh Beaver and Sir Frederick Pile have RESIGNED FROM THE MINISTRY OF WORKS.

The Minister of Works has agreed, at the request of Sir Hugh Beaver, Controller-General, Ministry of Works, and in accordance with long-standing arrangements made with the late Minister of Works, to release Sir Hugh Beaver from his present appointment with effect from the end of September. In order to facilitate the reorganization of the Ministry of Works consequent upon the alteration in its responsibilities in relation to housing, General Sir Frederick Pile, Bt., G.C.B., D.S.O., M.C., Director-General of the Ministry, has placed his resignation at the disposal of the Minister, who has accepted it. Sir Hugh Beaver, M.I.C.E., M.I.Mech.E., who was a consulting engineer in Westminster, joined the Ministry of Works and Buildings just after its creation in October, 1940, as Controller of Building Materials and Building Priorities. He was appointed to the newly created post of Director-General, Works and Buildings, in April, 1941. In April, 1945, when the Ministry was reorganized, the duties of Director-General were divided; Sir Hugh was appointed Controller-General and remained responsible for the control and direction of the building programme and the whole organization to carry it out, the control and co-ordination of building materials production and supply, civil licensing, building costs and materials prices and generally for conducting the relations between the Ministry of Works and the Building and Civil Engineering Industries. His services were recognized by the award of a Knighthood in the Birthday Honours List of 1943. Sir Hugh's future arrangements will be such as will make it possible for the Minister of Works to continue to benefit from Sir Hugh's wide experience of the building and civil engineering industries as and when the occasion arises.

The following letters have been exchanged between the Minister of Works and General Sir Frederick Pile:—

August 20, 1945

My Dear Minister,—In April, at the invitation of your predecessor, with the consent of the last Secretary of State for War, and with the concurrence of the then Prime Minister, I relinquished my position as Commander-in-Chief, A.A. Command, and accepted the position of Director-General at this Ministry. I had been a servant of the State for 40 years and only wished to serve in whatever capacity the Government considered I could be of most use to the community. It is now clear from the directive on housing issued by the Prime Minister that the functions of this Ministry are to change considerably. As I told you at my first meeting with you on your arrival as Minister, I am anxious not to be a source of embarrassment to you in any way. In the light of this, and in view of the reduced activities of this Department, I feel I should place my resignation at your disposal.—Yours sincerely, (signed) F. A. Pile.

George Tomlinson, Esq., M.P.,
Minister of Works.

August 21, 1945

Dear Sir Frederick,—I thank you for your letter of yesterday's date, placing your resignation in my hands. The changes contemplated in the work of the Department due to the new set-up on Housing will completely alter the status and scope attaching to the post you hold at this Ministry. It is also my desire to reform my team on peace-time lines as soon and as effectively as I can. For these reasons I would suggest your duties here might be cleared up by the end of August, your final date of retirement being fixed so as to enable you, if you wish, to take any leave to which you are entitled afterwards. For the work you have done on behalf of the Department during the period of your service, may I express thanks, and sympathize with you in that you will not be able to finish the job you undertook at the request of my predecessor. — Yours sincerely, (signed) George Tomlinson.

General Sir Frederick Pile, Bt., G.C.B., D.S.O., M.C.

Designer of the Masonic Place Memorial in London in partnership with Mr. Winton Newman, Mr. H. V. ASHLEY DIED AT HAMPSTEAD on July 29.

Born in 1872, the youngest son of John Ashley, Henry Vincent Ashley was educated at Merchant Taylors' School and articled to William Dunn. After also studying his profession at Oxford and Cambridge and in France, he began to practice in 1896 and since 1907 had been in partnership with Mr. Winton Newman. Several important competitions besides those for Masonic buildings were won by the firm, including the Birmingham Council House and Art Galleries; and the firm designed the French Bank, London, Glyn Mills Bank, Oxford, the Technical College, Cheltenham, several hospitals, housing schemes, and houses in London and elsewhere.

Russia wants to know HOW BRITISH HOUSES ARE BUILT.

In response to a request from Moscow Building Organisations, Davis Estates are sending through the Soviet Trade Delegation here to the USSR, films, plans and literature showing how various types of homes are built in Britain. Russian building experts and technicians will attend special showings of the films of British buildings. One of the films opens with shots of London, and goes on to picture the construction of an English house, showing the laying of the foundations, and the building of walls and roof. The camera then tours the complete house to show fittings, kitchen equipment, and the interior decoration. Finally, different types of British housing estates are shown. It is anticipated that many British methods of house construction will be employed by the Soviet in the reconstruction of war devastated parts of Russia.

The RIBA is acting in an advisory capacity to the Committee appointed to investigate BUILDING TECHNIQUE IN GERMANY.

The Council has appointed Mr. Mark Hartland Thomas, F.R.I.B.A., with the technical assistance of the Librarian, to act on the RIBA's behalf in preparing lists of " targets " and making recommendations with regard to the architect members of delegations to Germany. Certain delegations of investigators have already been formed to study specific aspects of German building technique and others are in the course of formation. The Royal Institute will be glad to hear from members who possess special qualifications likely to be of service in investigations and who would be free to go abroad for periods from two to eight weeks. Knowledge of the German language is not essential but desirable.

Housing, Town Planning and Health

Four Ministers in the Labour Government responsible for Housing, Town Planning and Health. Top, George Tomlinson (Works), and Lewis Silkin (Town and Country Planning). Below, Aneurin Bevan (Health), and Arthur Greenwood (Lord Privy Seal). Mr. George Tomlinson, age 55, is a Lancashire member who began his working life in a cotton mill at the age of 12 and afterwards became a trade union secretary. Parliamentary Secretary to the Ministry of Labour during the Coalition, he became chairman of the Inter-departmental Committee on the rehabilitation and resettlement of disabled persons. Mr. Lewis Silkin, a solicitor, aged 56, is chairman of the LCC Town Planning Committee, and has a wide knowledge of London housing problems. He is a member of the Central Housing Advisory Committee. Mr. Aneurin Bevan, aged 47, a former collier, has served on the executive of the South Wales Miners' Federation and acted as miners' dispute agent in 1926. He is editor of the *Tribune*. Mr. A. Greenwood was Minister without Portfolio and a member of the War Cabinet from May, 1940, to February, 1942; acting leader of the Labour Party during the remainder of the Coalition; has sat in Parliament almost uninterruptedly since 1922, and was Minister of Health in the second Labour Government. Housing responsibility, announced Mr. Greenwood, the Lord Privy Seal, in the House of Commons, will be shared. The Minister of Health, and the Secretary for Scotland (Mr. J. Westwood) will be responsible for policy, and the Minister of Works for prefabricated and temporary construction.

★★

The North-Eastern Electric Supply Co. has abandoned the DURHAM POWER STATION scheme and taken steps to instal generating plant elsewhere.

Opponents of the Kepier scheme had contended that the plant would spoil the view of Durham Cathedral and Castle and destroy the mediæval charm of the city. Announcing this decision of the company, the Ministry of Town and Country Planning states: In December, 1944, the Ministry of Town and Country Planning and the Electricity Commissioners held in Durham concurrent inquiries into the application of the North-Eastern Electric Supply Company, Limited, to the Commissioners for permission to erect a power station at Kepier near Durham. The Electricity Commissioners were satisfied as to the technical suitability of the Company's proposals, but the Minister of Town and Country Planning (Mr. W. S. Morrison) found them open to objection on planning grounds and decided, in consultation with Major Lloyd George (Minister of Fuel and Power) that, if the occasion arose, he would on those grounds feel bound to refuse his consent to the proposal. The Minister of Town and Country Planning has now been informed by the company that in an endeavour to mitigate the effects of the delay which has taken place in this matter, it has taken steps to meet the present demand for additional electric supply by the installation of plant elsewhere than at Kepier. The following comments on the decision of the company were made to a correspondent of the *Daily Telegraph*. The Dean of Durham, Dr. A. C. Alington, president of the Durham City Preservation Society, the body which opposed the project and forced the public enquiry by the Ministry of Town and Country Planning and Electricity Commissioners, said: I am thankful that the Durham Preservation Society has been able to take some part in preserving what is perhaps the most beautiful city in England. The Mayor of Durham, Councillor J. F. Bell, who opposed the scheme at the inquiry, also welcomed the decision. Mr. Sam Watson, treasurer of the Durham Miners' Association, said: It would appear that the inquiry was more concerned with the glory of Durham than with the power.

★

Until January 31 a NEW LICENSING SCHEME FOR HOUSE BUILDING and Repair has come into force throughout Great Britain.

The main features of the new scheme of modified licensing of building and civil engineering work are: During this six months' period building work costing up to £10 may be undertaken without a licence; in addition, £2 worth of work may be undertaken in each calendar month from August to January; in reckoning the amount of work which may be undertaken without a licence no account will be taken of work licensed or authorized by a Government department, licensed or undertaken by a local authority, or carried out before August 1; where work is carried out by an owner or occupier on premises occupied wholly or partly as a private dwelling, with his own personal labour, or with unpaid labour, the value of these services and the cost of any materials used will be disregarded; owners of large properties such as large blocks of flats, or offices and large estates, for which the £10 and £2 allowances would obviously be totally inadequate, may obtain maintenance licences to cover specified categories of maintenance and repairs over a period of 12 months.

THERMAL INSULATION

WE are more insulation-conscious than we used to be as a result of the use of thin-membrane walls first in wartime hutting, and now for prefabricated houses. We used to rely upon the insulation of the solid walls, without much regard for the roof, although this is the most exposed part of a building. A surprising number of houses were built with nothing whatever under the tiles, and factories are still constructed with only thin corrugated sheeting for top cover, in spite of the easy demonstration that in any building which has to be heated a moderate layer of insulating material pays for itself by coal saving in a very short period. In Germany, where the climate has greater extremes, the standard factory roof covering is not corrugated sheeting, but light-weight concrete slabs with a metal or bitumen weathering. For a tiled or slated roof the best arrangement is to lay building paper under the tiles for wind-break, but to put the main insulating layer at the ceiling. There is no reason to include the roof-space with the interior of the rooms as space requiring to be heated.

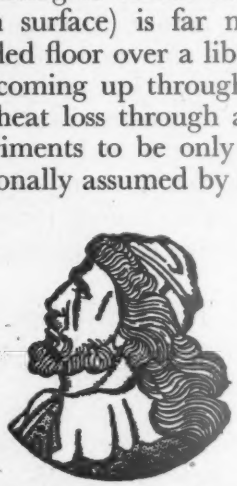
Insulation may be in the fashion, with many excellent materials and published figures for conductivity, but the time has come for a little more discrimination and refinement. There is a law of diminishing returns in this as in other things, and there comes a point that can be calculated where additional thickness is not justified by further fuel saving or greater comfort. Comfort, again, is not too well regarded when an *average* heat conductance is laid down for a house or a room—especially in a small room where one might sit at the fire with a comparatively large window at one's back. No amount of additional wall insulation makes up for the direct radiant heat loss from the human body to the window glass. The double or triple thickness window pane, with dehydrated air-space, would in such a situation provide more equalised comfort.

But windows can upset the calculated insulation of an interior in another way—by air leakage at the opening lights when these are closed. This is the largest single factor for heat loss in the average room. The American practice of weather-stripping in steel sash is the complete solution under present circumstances (the flexible head copper strip being particularly effective) but only to point the way to a long-needed improvement in standard casement sections. These have an absurd elaboration of checks and fillets in an attempt to overcome the original mistake of engaging metal to metal on *flat*. The solution is simple—engage a metal *edge* into a soft gasket recessed into a channel. We trust that this will be adopted for the newer alloys at least, if not for steel.

We mentioned the law of diminishing returns from piling up thickness of insulation. The reverse is also true: the first two or three thou's of insulating material are the most important. (Any woman will tell you that the difference in warmth with silk stockings from bare legs is most significant)

The thin membrane of "warm" material (that is, of low thermal conductivity and capacity) on the interior surfaces of a room is important in other ways. It makes the surface temperature of the walls, floor or ceiling march closely in step with the temperature of the air in the room. This prevents condensation. Moreover since such a surface material warms up quickly, only intermittent heating is required. Plywood wall covering, a woollen rug on the concrete floor, even wall-paper or anti-condensation paint have these advantages.

Floors are likely nowadays to be more often laid solid on the ground instead of joisted with an air-space under. It is comforting to reflect that the solid floor (especially if it has a warm surface) is far more efficient for insulation than the boarded floor over a liberally ventilated air-space, with half-a-gale coming up through the joints to keep away the dry rot. The heat loss through a solid floor has been found by recent experiments to be only about thirteen per cent. of that conventionally assumed by the heating engineer.



The Architects' Journal

War Address: 45, The Avenue, Cheam, Surrey

Telephone: Vigilant 0087-9

NOTES & TOPICS

CAMBRIDGE REVISITED

Cambridge seems to have managed to keep its gardeners. There were not very many flowers to be seen during a weekend visit but the lawns and hedges were just the same: as were the buildings. And immediately one realized how wonderful it was for an architect to be able to think that the area from Magdalene to Pembroke and from Queens' to Emmanuel cannot be much more than half a square mile. A single Baedeker raid could doubtless have largely destroyed the buildings it contains.

*

There is no important phase of architectural expression during the last 500 years which is not represented in that area and few famous architects of the past century and a half who have not a work there. But it did not happen; and the architects of Britain might do worse than put up a little thanksgiving memorial.

*

A tour of Cambridge makes one realize how hard it is for one architect, try as he will, to like the work of another when that other has strained every nerve to do the right thing. There seem only three ways in which an architect can succeed within that wonderful half mile. He can restrain his individuality almost to vanishing point and do something "seemly and neighbourly"; the Peterhouse building across the street occurs to me as an example. Or he can design a building which has a surface individuality of quite a distinct kind but which in mass and general feeling is chummy with its neighbours; the Jesus new buildings and (funnily enough) Lutyens' Magdalene building achieve this type of success.

*

Or he can believe himself big enough to snap his fingers at the whole illustrious pack of neighbours and let himself go. No modern architect has both had the chance and the daring to do this. When the chance occurs again the lucky man can take his, probably, doubtful clients to look at the Fellows' Building and Chapel at King's. No two buildings ever made the duty of neighbourliness look sillier. The demolition of a row of small shops and lodgings to make way for the new buildings of St. John's raises a problem which I hope the town-planner of Cambridge and the Colleges will treat with the importance it deserves. There are two Cambridges—the Backs where many Colleges can be seen spaciously across lawns and the river, and the "Fronts" where the Colleges are linked together and with the life of the town by rows of 3 and 4-storeyed buildings many of which are nearing the end of their useful lives and adjoin streets which are regrettably narrow.

*

It is probable that by now the land on which most of these buildings stand is owned by one of the Colleges and equally probable that row by row the small buildings will vanish and be replaced by new College buildings until the ordinary life of the town has been squeezed out of its own central area. This would be a grievous mistake architecturally as well as socially, but I have not heard that it has been recognized as such by the University.

SMALL HOUSES IN AUSTRALIA

The air mail from Sydney has flown me George R. Hann's *Book of Low Cost Homes.** It brings me also a mental flash back to the Australia of 1908, on my first adventurous visit. Corrugated Gothic was still the rage in those days, even on the ranches, and Victorian lodging house architecture of a mean and depressing kind still mocked the generous and exhilarating spaces of the sheep lands.

*

But now, as Mr. Hann reminds us in his vivid picture book, most of that has changed for the better. Influences from Europe, America, and Hampstead Garden Suburb, have largely liberated Australian domestic planning from the tyranny of the ingle nook. The examples in this book reveal on the whole a generous and open approach, especially to the possibilities of that azure climate.

*

The restrictive influences of crazy corner and cosy paving are kept well in the background, though they re-appear sometimes in an occasional fussiness of arrangement. But the characters of most of these new

* Building Publishing Co., Sydney. £1.1.0.

Australian houses are direct and attractive. Of particular interest are the twin family flatted house and a 2-storey block of workmen's flats in timber. The standard of existence in Australia is well ahead of our own. Their workmen, even of 1908, were rich beside the British navvies, and Australian workmen of the future, judging from these pages, look as though they are going to do still better.

*

One curious omission, in view of the title, is the lack of precise data on costing. It would also have been useful to have included some brief link up with Australian town planning prospects. Australia is a land pre-eminently of the single garden house rather than the terrace, and the resulting scale of layout presents peculiar problems of civic coherence. The occasional over deference to the Ever-so-English-my-Dear period country house gives a slightly archaic touch.

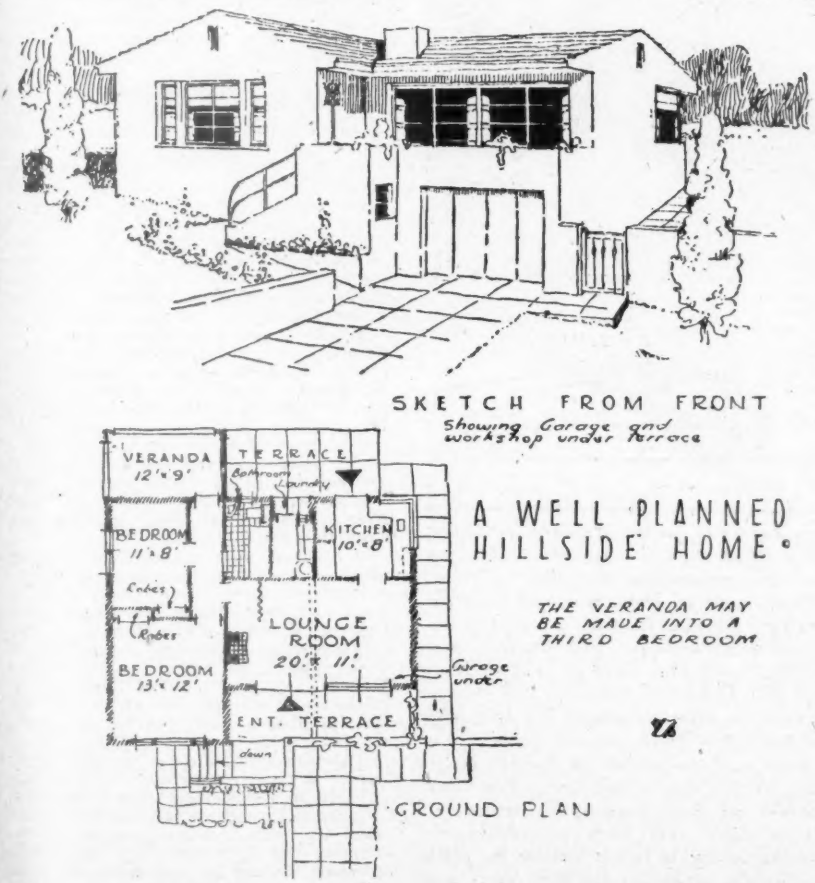
*

The general feeling of this publication is, however, unmistakably alive and up to date. Australia once had eyes only for England, then only for the United States. These pictures, stuffed with a bouncing vitality, show that Australian eyes are now fixed on the world at large. Many influences are there at work, little distinctively Australian building seems yet to have arisen, but with victory over the Japanese, who can tell what new and exciting architecture may not soon issue forth from the melting pot of the Pacific?

BEACHCOMBER'S CORNER

Diary for 1950: *June* 26.—Government scientists, working in a State laboratory, are reported to have succeeded in manufacturing music and poetry by a complicated chemical process. They claim that we may now look forward to the day when poets and composers will be saved the labour of their trades. A certificate will entitle them to purchase a certain amount of poetry or music direct from the laboratory. This can then be sold to the public at the standard rate.—Beachcomber in the *Daily Express*.

ASTRAGAL



An Australian Hillside Home. From the Book of 150 Low Cost Homes *by George R. Hann. See Astragal's note.*

LETTERS

F. J. Samuely

Box Frame Construction.

SIR,—I have read with great interest Mr. Arup's article on Box Frame Construction, and I should like to compliment the author on the lucid manner in which he has expressed his ideas.

While, however, I appreciate that the Box Frame construction will have definite applications I cannot help but feel that, put forward as a standard construction, it is likely to be misleading. There are three points that are worthy of comment:

(*a*) While standardisation of method is very useful within limits, care must be taken to see that this standardization does not restrict the architectural layout.

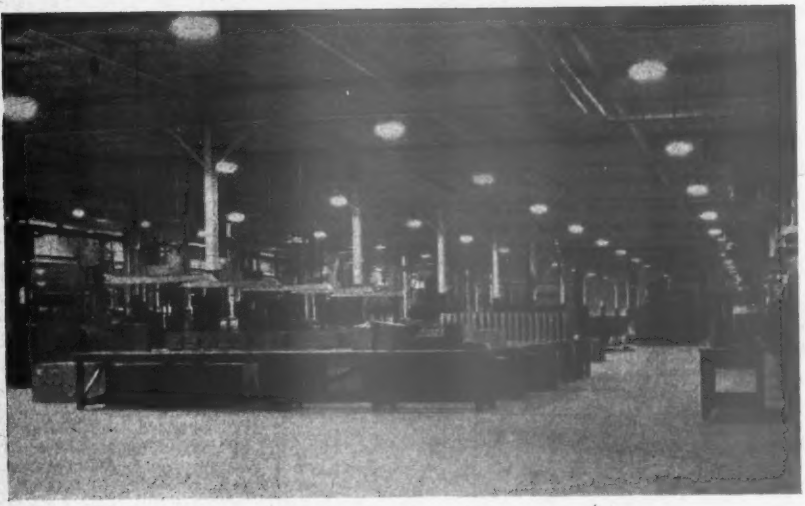
(*b*) The use of Box Frame Construction with materials other than reinforced concrete—a very important question—has been dealt with very vaguely.

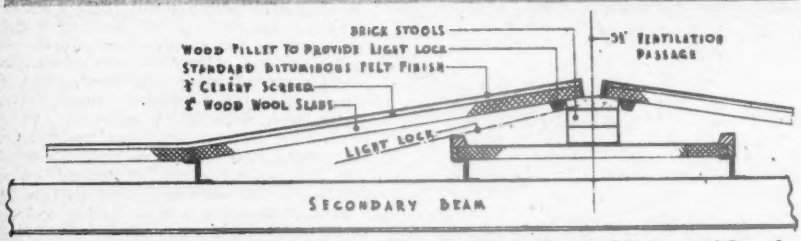
(*c*) The problem of frame construction has been over-simplified, and this might be dangerous because, if applied impartially to all buildings, there will be so many failures that the actual construction will be blamed instead of just the use to which it is put.

With reference to the first point, the general trend during the last few years has been to find a solution that allows a sensible architect to put his ideas into practice without being hampered unduly by structural considerations. There are some types of building, the layout of which calls for cross walls at regular intervals, and for these buildings the Box Frame Construction is obviously the best, but this is by no means so in the majority of other cases. The need to introduce a cross wall very often interferes with the architectural layout to such an extent that it would have to have substantial advantages in other respects to compensate for the inconvenience. The ordinary frame construction, consisting of beams and columns only, would cause less interference to the architectural layout.

Mr. Arup states that "box frames can be constructed in any suitable material,

SAVING STEEL





A factory recently erected to war-time building standards, for the Ministry of Supply, embodies a high degree of steel economy with a simple type of construction, resulting in quickness of erection at relatively low cost. The construction is of the "J" type, designed by the Building Section of the Department of Industrial and Scientific Research. Rolled steel joists and stanchions form bays 33 ft. 0 in. by 28 ft. 2 in., with main and secondary steel beams designed as continuous. The flat roof is of cement woodwool slabs reinforced with wood strips and laid to break joint at alternate purlins. The slabs are secured to the angle iron purlins by wire ties and covered with a layer of cement screeding ¾ in. thick and two layers of roofing felt laid with hot pitch. The finished roof has a designed loading of 15 lb. per foot super. The weight of structural steel in the factory framework worked out at 600 lb. per 100 sq. ft. of floor area, which is an extremely low rate for this size of building. The ¾ in. thick cement screeding was found in practice to be too thin, resulting in crazing and powdering. It should have been at least 1½ in. thick. Tar pitch (provided as the next best material to bitumen) has proved unsatisfactory as in hot weather the pitch melts, runs through cracks in the cement screeding, penetrates the slab joints and falls into the factory. Top, the steelwork erected. Centre, the finished job. Below, section through the roof at ventilator.

for instance, in a structural steel frame with brick or concrete panels." This is very true and this would be the typical steel construction as it has been carried out for many years, but why not mention that it might also be a reinforced concrete frame construction with infilling brick panel walls where required which, as the experience of the ten years before the war has shown, is usually more economical than concrete bearing walls, gives much greater freedom of design, and can be much more easily sound proofed.

While this type of construction would truly "make a clear-cut distinction between the structural and non-structural elements of a building," the Box Frame Construction in reinforced concrete, as suggested in the main body of the article and shown in the sketches and illustrations, certainly does not, as many walls are unnecessarily constructed in such a way that they can carry loads, while in actual fact they could be fabricated so much better from materials that are more suitable for acoustic and heat insulation. In fact the Box Frame Construction in reinforced concrete does not lend itself at all well to proper acoustic insulation.

I was also very surprised to read that "to start with, the box frame can best be constructed of reinforced concrete, which is immediately available." I was under the impression that for many years to come shuttering will be a serious problem, and the box frame, of course, requires almost twice the amount of shuttering which would be used for an ordinary reinforced concrete framework.

Reverting to the third point, I agree with Mr. Arup that a definite structural system of arrangement for a multi-storey building is much superior to a haphazard one, and results in considerable economy, but there are two obvious possibilities:—

(1) To span the actual construction parallel to the front of the building and have cross walls or a cross frame as the bearing construction.

(2) To span from front to back and have the front and back walls with possibly a central spine, as bearing construction.

The Box Frame Construction makes use of only one of these, and while I quite appreciate that in combination with the so-called 'monolithic' reinforced concrete structure the second arrangement has often proved to be unsuitable, it can still be successfully applied in connection with steelwork and ordinary reinforced concrete frame construction. In fact, which of the two types is preferable depends largely on the use to which the building is to be put. I have found, for instance, that something like the Box Frame Construction (although not in monolithic reinforced concrete) is often suitable for schools, laboratories, certain types of factories and hostels while a layout using the front and back walls, in combination with a central spine, as main construction, is to be preferred for most types of flats, many office buildings, and most multi-storey factories.

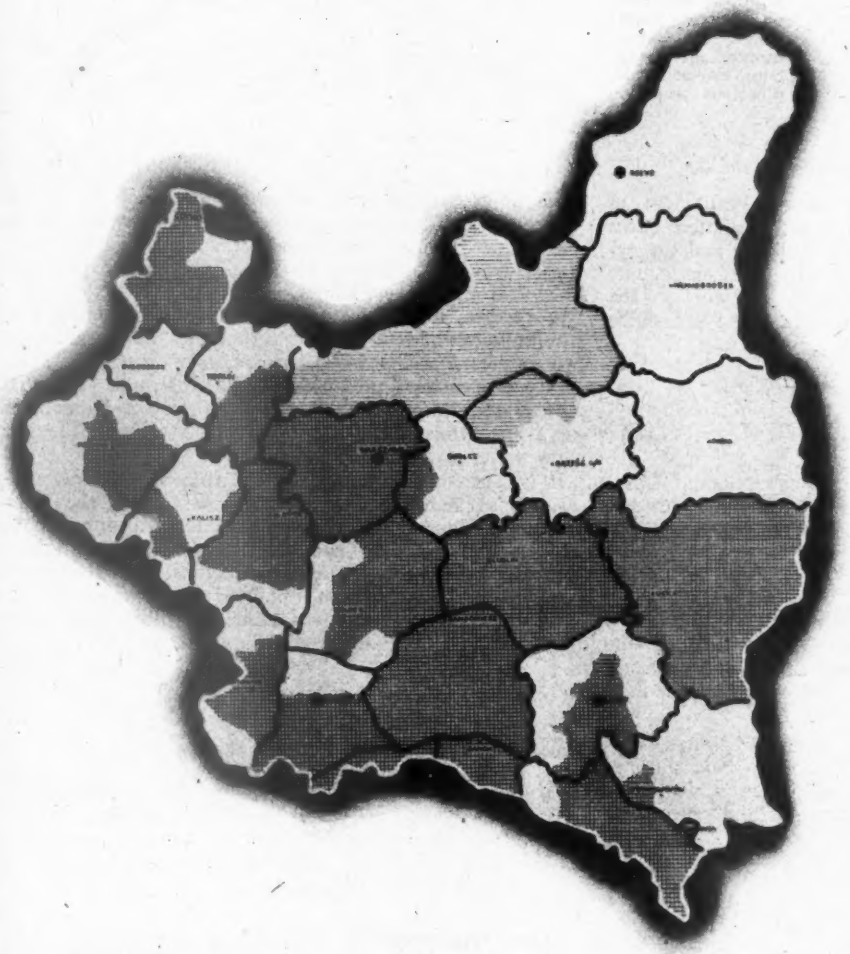
To illustrate these points, there are two buildings which were published in the ARCHITECTS' JOURNAL some years ago. The first is Gilbey House (Architect Serge Chermayeff, F.R.I.B.A. which was constructed according to Method 1, and has no cross walls at all, and the second is Brae Court, Kingston (Architects Edward Armstrong and Oscar Bayne), which was constructed from a reinforced concrete skeleton frame with panel walls, in such a way that the main structure was formed by cross frames at regular intervals. As there was no need to fill in these cross frames with brick panel walls everywhere, partition walls are used in many instances for this purpose, and even they were not strictly necessary, as can be seen where the main hall extends right through one of these frames.

London F. J. SAMUELY

PHYSICAL PLANNING SUPPLEMENT

NATIONAL PLANNING

a Polish approach to the task of the hour



Poland, battleground of Europe, inherited in 1918 a traditional formlessness of society and industry. But Great War changes produced, in 1924, the Polish Town Planning Society, spearhead of a drive for planning nationally.

At first the Society propagated its ideas informally, but with such success that in 1936 an advisory body, the National Planning Office, was set up, under the direction of the author of the article which appears below.

The work of the advisory National Planning Office in co-ordinating national survey material and in supervising the planning and linking of Regions resulted, in 1938, in a demand from the Regions themselves for a National Plan for all Poland.

Left, hatched and white areas and black lines show old divisions, amorphous areas, and revised Regions. Present conditions may require revisions, but we publish this material from the general interest viewpoint. This National Plan also envisaged continental link-ups.

Stanislav Malessa

laisser faire background

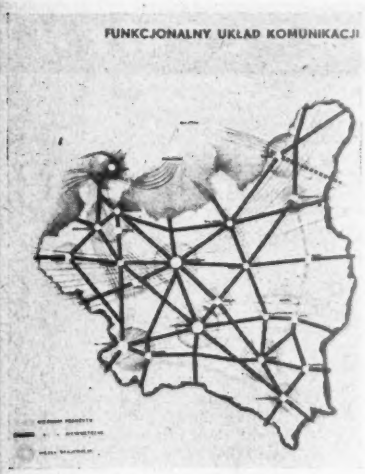
The first so-called Planned Regions in Poland were few in number, isolated and scattered over the country, and mostly centred around big towns or industrial districts. Gradually, economic surveys and social research revealed the fact that every one of these Regions was only a part of other areas, some larger, some smaller, each with its own individual structure, and which together constituted the real Regions which had been hidden behind an assumed pattern.

It was recognised from the first that a Regional Plan was an organised conception of how to employ human activities and the natural and man-made resources of an area, to the best advantage, and for the full economic and cultural development of the community. It was of course understood that all the Regions were *functional factors in the social and economic organisation of the national unit of the Country*, and were therefore both inter-related and inter-dependent.

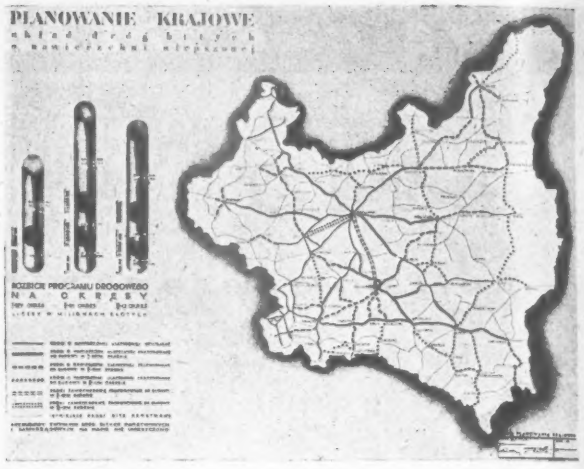
a national organisation

It followed that in order to set up the Regional Plans in a functional way it was essential to have a National Plan for the whole country. This need, now so familiar, was only realised after much striving to find the proper directive lines for regional development and planning.

This ripening of the idea of planning was reflected by the organisation of National Planning, Regional Planning, and



Left, a survey of necessary national communications, irrespective of existing roads, railways, and canals.



Right, a road plan on existing and proposed alignments, resulting from the communications survey.

Town Planning. In 1928 we passed through Parliament, in Warsaw, a Building Act which defined and regulated Town Planning and the status required for the building and surveying professions. But this definition of status was inadequate as it did not eliminate the unsatisfactory elements in the building profession. Later this Act was amended to include the organisation of the Regional Plan.

a regional commission

Regional Planning was carried out by a Regional Commission set up by the Home Office. This Commission was composed of:—

1. A Chairman and Committee.
2. A Regional Planning Office, with its staff of professional planners, technical workers, and scientific advisers.

The main idea of the Commission was to link up the ordinary citizens and the local interests of the various communities with the planning affairs and processes of their Regions.

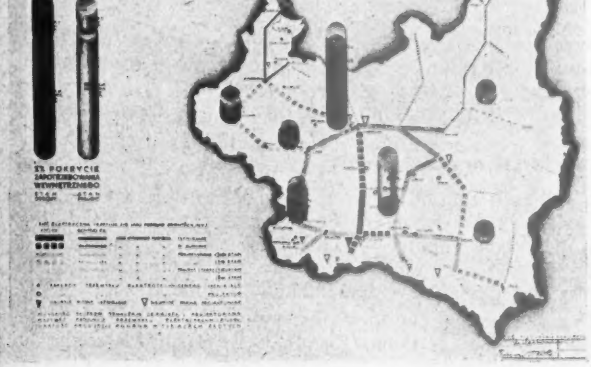
To this end some of the members of the Regional Committee were elected by the Local Authorities and autonomous bodies representative of economic interests, whilst the remainder consisted of specialists, scientists, and representatives of governmental departments nominated by the Home Office. This nominated group equalled in number the elected delegates. The executive body was the Regional Planning Office which was guided by the Chairman and directed by the chief Executive Planner.

In addition to the duty of preparing its Regional Plan the Commission had to draft specific rules and regulations in the interests of the wholes or parts of particular Regions. These drafts were presented by the Chairman to the Home Office and were passed by the Minister for Home Affairs, or, if the Ministry had not the authority to make them valid, they were placed before Parliament.

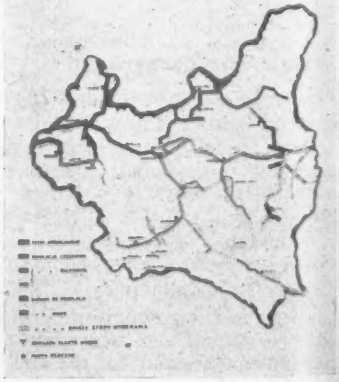
It is necessary to emphasise the role played by the Commission's Chairman. It was his task to lead the Regional Planning Office along the main lines decided on by the Committee, and to co-ordinate the work of the local planning centres with Master Plans for Regions. Local Authorities and Governmental Offices submitted their plans to the Chairman and if no reply was received within four weeks it meant that these plans would be adopted.

autonomous regions inadequate

At first, as representatives both of local commitees and of central authorities formed part of the Regional Commission,



Left, electrification plan for a country half candle lit. Black, existing supplies, grey, new supplies.



Right, waterways plan resulting from the communications survey, black shows existing waterways, grey new waterways

Top right, principal population groupings as revealed by social survey in a country of many racial cross currents. Bottom right, the first planned Regions, black, begin to overlay the old administrative boundaries, hatched. Below, a survey of the natural raw materials of Poland, found principally along the line of the Carpathians and the Oder, and comprising mainly coal, lignite, oil, iron ore, and zinc.

it was thought that it would be possible to set up working plans for the different Regions as each came up for discussion, but it was soon recognised that the different geographic and economic surveys, together with the proposals for development or redevelopment presented by the Regional Communities, were by themselves insufficient to set up effective Regional Plans without a general co-ordinated arrangement for the country as a whole. So the Town Planners' Society, Representatives of the Universities and Chairmen of Regional Commissions forthwith urged the Central Authorities to issues directives for a National Plan for all Poland.

industrialisation

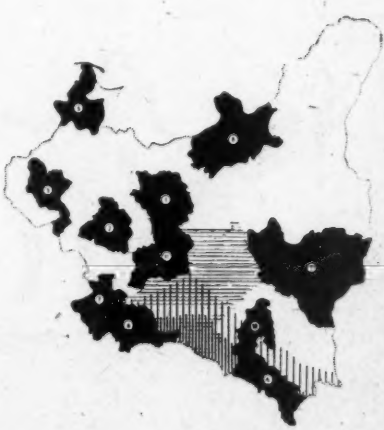
The theme for the change-over of the pre-war national economy of Poland was *Industrialisation*, or in other words, so far as the new Poland was concerned, a new division of society, half agricultural and half industrial. In order to carry out this programme it was essential to emphasise:—

1. Relocation or new location of industry.
2. National electrification linked up with full utilisation of water power and land reclamation.
3. New schemes of communication and transport to provide easy and cheap distribution of raw materials, agricultural products, and manufactured goods, the new national communications system being a functional factor in the industrialisation and electrification of the country.
4. The transfer of surplus agricultural population to industry; farmland now available being sufficient only to support two-thirds of the agricultural population living on old fashioned dwarf holdings.

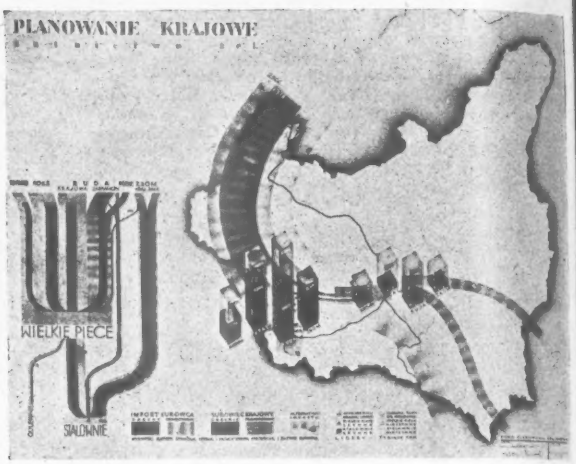
a national planning office

The demands of the planners and the need for an industrialisation policy for the whole nation resulted in the creation in 1936 of an Office of National Planning, under the guidance of the Deputy Prime Minister. In a short time the surveys and first blue-prints of the main lines of the new industrialisation were placed before Parliament, where they met with almost unanimous approval. In addition, the Conference of the thirteen Chairmen of the Regional Planning Commission, held in 1938, passed a resolution on the urgent need for a National Planning Authority with full powers.

This resolution stated that during the first two years of its life the National Planning Office had prepared a framework for the National Plan which gave economic and technical suggestions to the planners of different Regions and had provided bases for the creation of new Regions, of which the new Central Industrial Region was already in actual process of formation.



Industrial Poland depends, for its supplies of raw iron ore, partly on supplies from Russia and Sweden. Right, a diagram showing the principal directional lines of these imports from and exports to East and West; also, black, existing heavy industries, and grey, proposed new heavy industries under the National Plan. Development follows the lines of rivers and of the planned electrification.



purely advisory

It is necessary also to emphasise that this National Planning Office had no legislative status or any administrative authority. It was purely an advisory body, but the need for a National Plan was so obvious that the Chairmen of the Regional Commissions were in constant contact with the National Planning Office so as to co-ordinate the main lines of the Regional Plans with the National Plan. In addition, the central governmental departments, the National Union of the Chamber of Commerce, and the representatives of Industry, also started to co-operate and seek advice from the National Planning Office.

conclusions

My experience of these planning processes serves only to confirm the following familiar principles:—

1. It is impossible to set up Regional Plans without a National Plan, in which each region plays its proper part in the economy of the whole country.

2. It is impossible to start Regional Planning without proper collaboration between scientists, planners, and the citizens of the regions concerned.

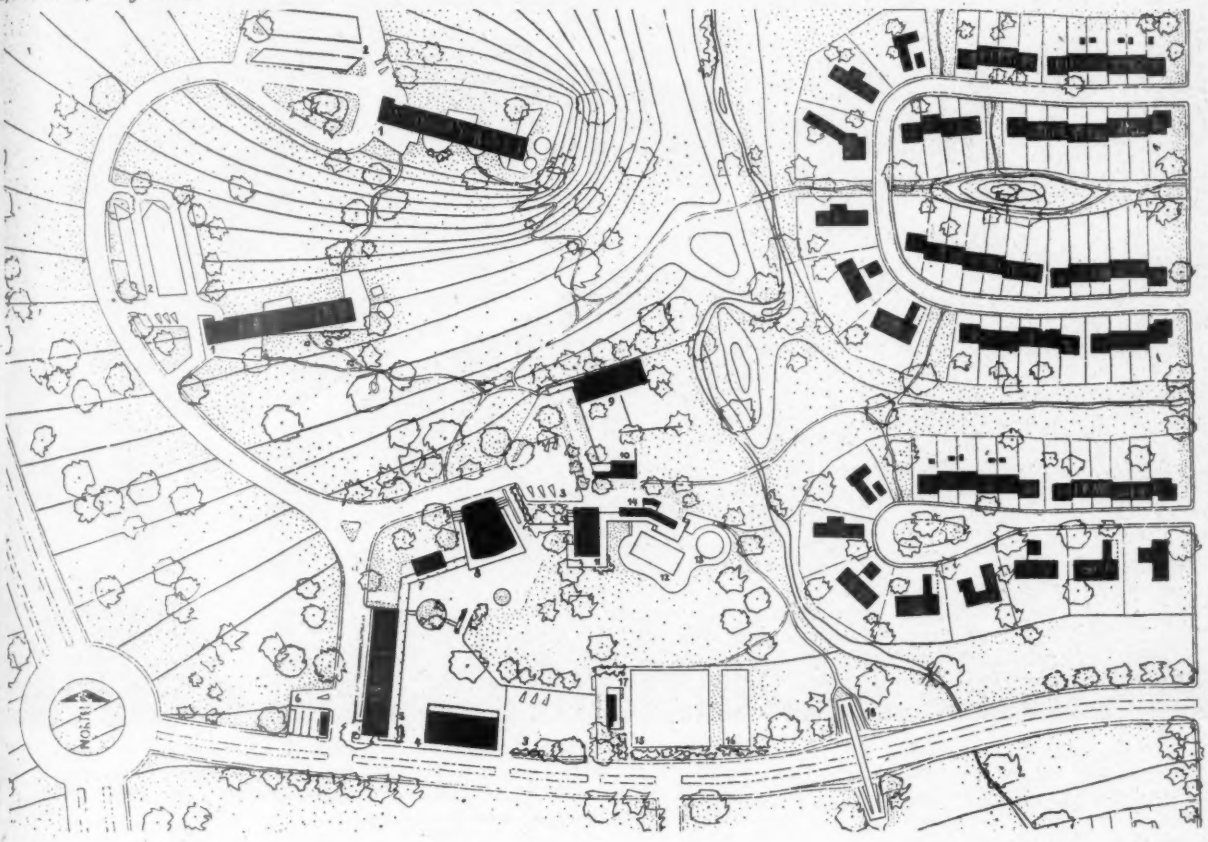
3. The general proposals of the National Plan should be carefully and clearly explained at the different levels of planning, from central to local, and the local proposals put forward by the central planners should never be rigid. The central planners should be ready to adjust their plans to meet the local needs of the communities, but without losing sight of the main lines of their Master Plan.

4. The central planners should always remember that in the majority of cases the proposals concerning the planning of communications, location of industry, and the link-up of local industry and agriculture can often be resolved more successfully by the local planners.

5. Physical Planning is nothing more than the final shaping of the economic, social, and cultural plans of the community, and all plans should be made, not for the gratification of some abstract and preconceived planning principle, but for the concrete happiness and well-being of men and women.

Nationwide industrialisation, changing Poland from a semi-Feudal society, overweighted on the side of agriculture, into a balanced community, demanded vast expansion of manufacturing, especially of various metallurgical industries heavy and light required to raise the general standard of living. Left, a diagram showing the various metallurgical centres, black cylinders summarise existing industries, grey new industries.

The site plan of the neighbourhood to incorporate the houses shown at the exhibition, a collaborative project of the Ladies' Home Journal *and the Museum of Modern Art. Original site plan by Vernon DeMars, developed by Serge Chermayeff and Susanne Wasson-Tucker.* 1, *flats*; 2, *garages*; 3, *parking*; 4, *supermarket*; 5, *shops*; 6, *service station*; 7, *library*; 8, *auditorium*; 9, *nursery school*; 10, *workshop*; 11, *restaurant and club*; 12, *swimming pool*; 13, *children's pool*; 14, *bathing lockers*; 15, *tennis courts*; 16, *bowling green*; 17, *pavilion*; 18, *footbridge*. *The plan represents a fragment of a neighbourhood of* 1,000 *to* 1,500 *families.*



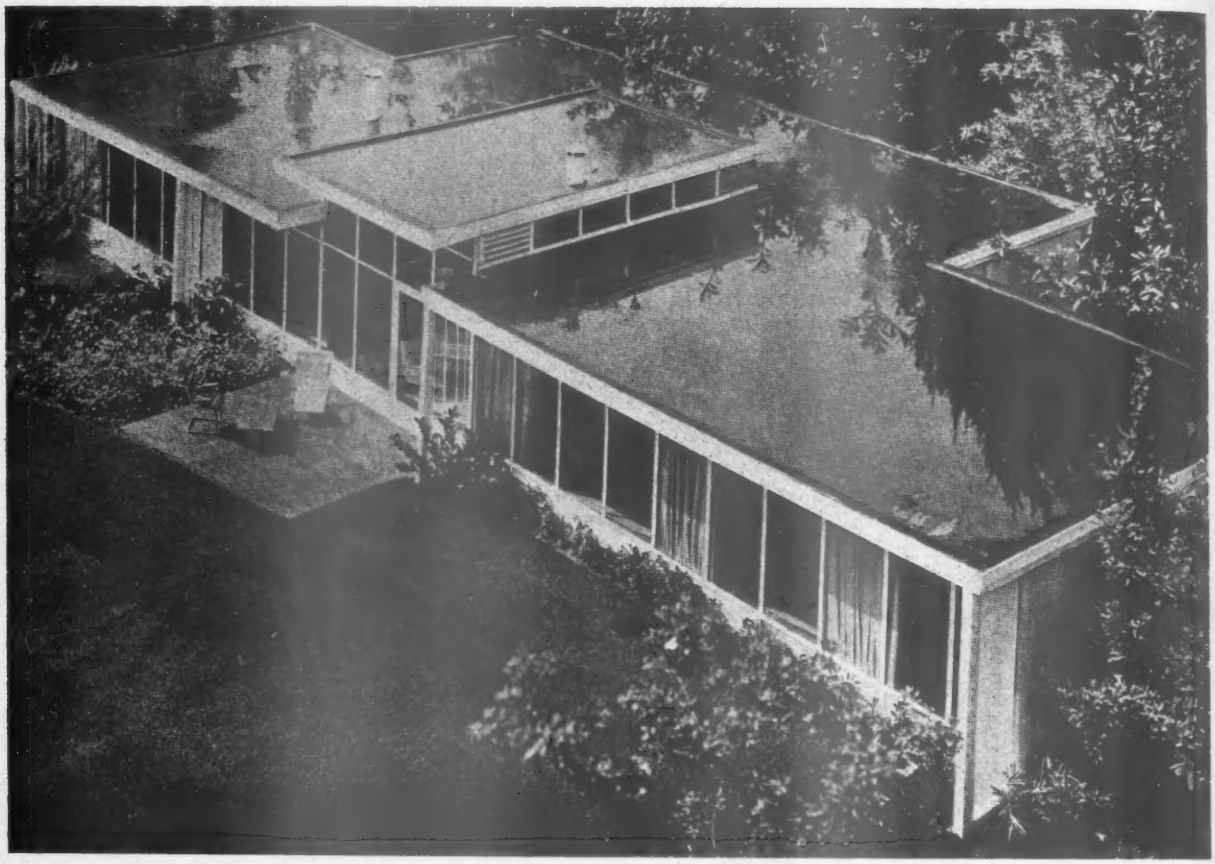
AMERICAN SMALL HOUSE EXHIBITION AT THE MUSEUM OF MODERN ART

The Museum of Modern Art, New York, is now holding an exhibition called *Tomorrow's Small House*, in which plans and models of houses by well-known American architects are shown. Some of these are illustrated here. The models were originally prepared for reproduction in the *Ladies' Home Journal* under the direction of its Architectural Editor, Richard Pratt. The houses are designed for an average American family of two adults and from two to four children, with an income of from 2,000 to 3,000 dollars a year at prices ranging from 4,000 to 6,000 dollars. The houses are intended to dramatize the advantages of modern planning and building techniques and the pleasanter possibilities of mass-production.

The exhibition has been directed by Elizabeth B. Mock, Curator of Architecture of the Museum, Assistant Director being Susanne Wasson-Tucker, Acting Curator of Industrial Design.

The Museum of Modern Art has made a selection from the models for the exhibition, and "since a good neighbourhood is as essential to a house as a weathertight roof," the programme has been expanded to include a scheme for a model community in which the houses shown are incorporated.

The most striking thing about all the houses is the quantity of glass used. Heat loss is minimized

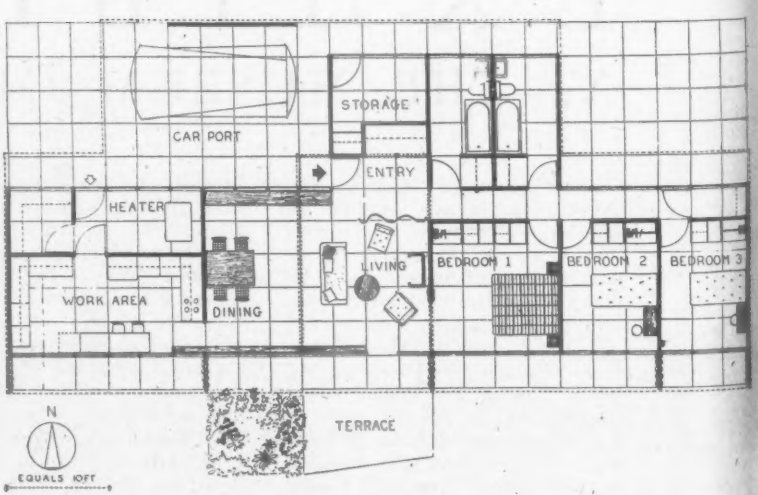


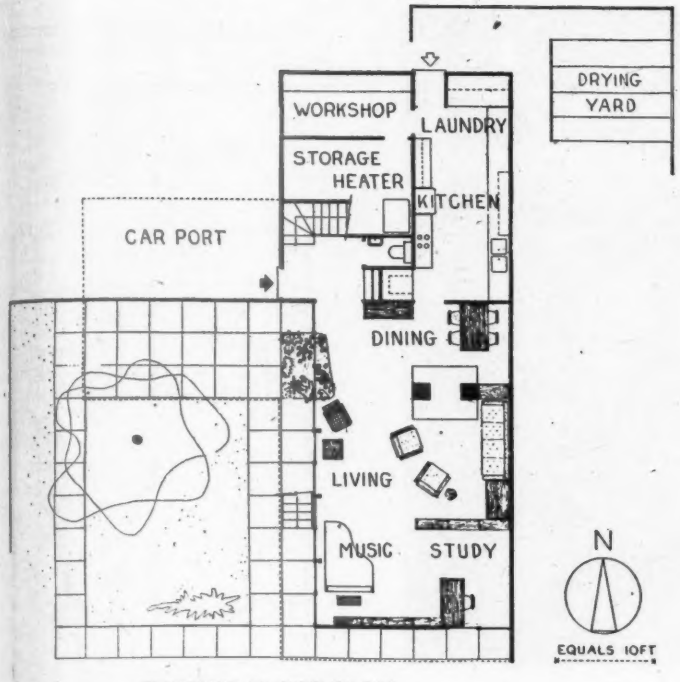
Design by George F. Keck. Single storey plan with all rooms facing south. All glass is fixed and, like all the other designs, has triple glazing. Ventilation is by screened louvres at the base of the south wall and the top of the north wall. Water on the roof helps to keep the house cool in summer.

by triple glazing, separated by dehydrated air for insulation, and by drawing curtains at night. The wide eaves shade the interior in summer, when the sun takes a high curve, but allow the sun to penetrate deep into the rooms in winter. Planning is open and the living areas of the houses flow into one another and into the surrounding gardens. All cellars and attics have been avoided. Each house is designed for erection on a concrete floor slab with provision for radiant heating incorporated in floor, walls or ceiling, the automatic heating plants being placed on the ground floor.

"Despite marked differences in architectural expression," says the bulletin of the exhibition, "many of the houses are so similar in basic conception as to suggest that the long, single-storey, precisely outlined rectangle, open to the south and closed to the north, will emerge as the dominant post-war plan type."

With the exception of the Wright house and the masonry walls which separate the DeMars row houses, each house is designed for assembly from standard-sized, factory-made panels, some solid, some set with fixed glass, some with doors or movable sash. Each house, too, is based on a module.

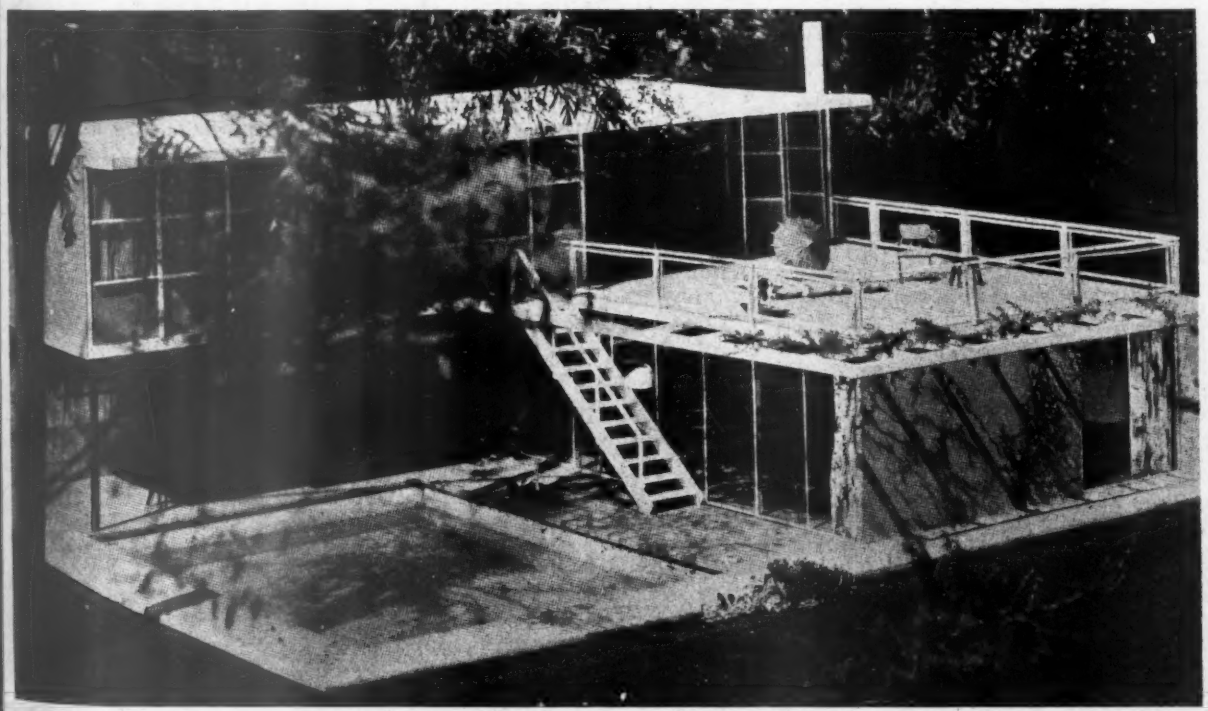




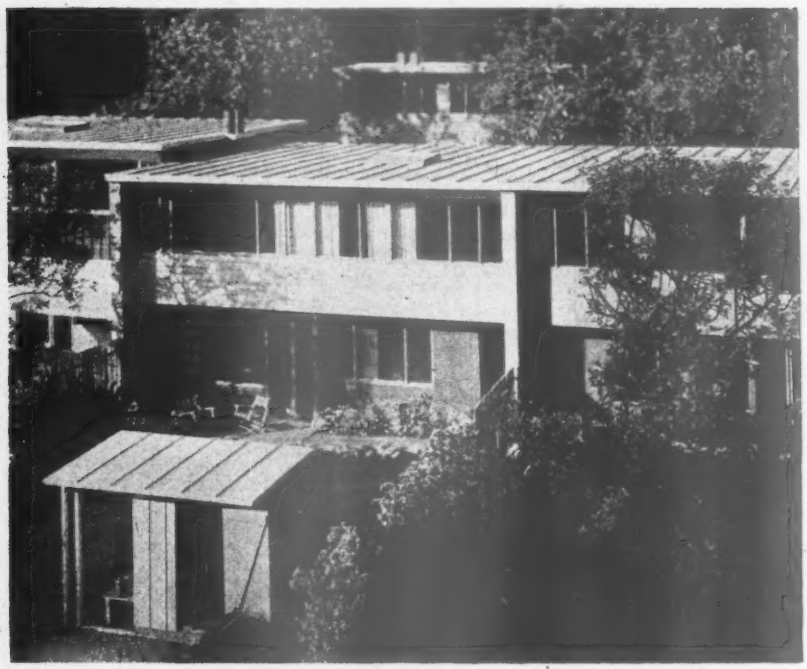
GROUND FLOOR PLAN

FIRST FLOOR PLAN

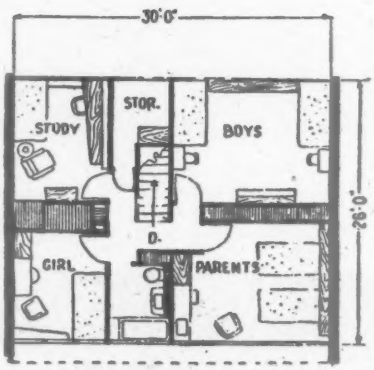
Design by Carl Koch. Upper and lower storeys are defined as separate blocks, forming a right angle. Various types of prefabricated panel would fill in the light metal framework. The long grid of the bedroom wall forms an important decorative feature.



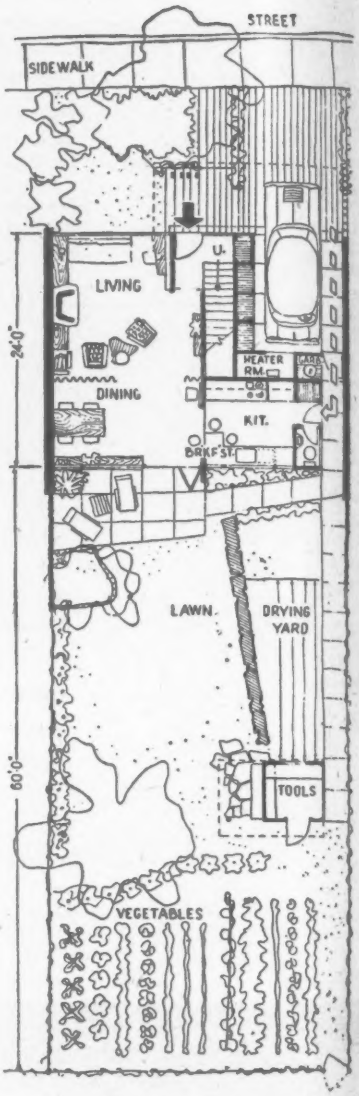
AMERICAN SMALL HOUSE EXHIBITION



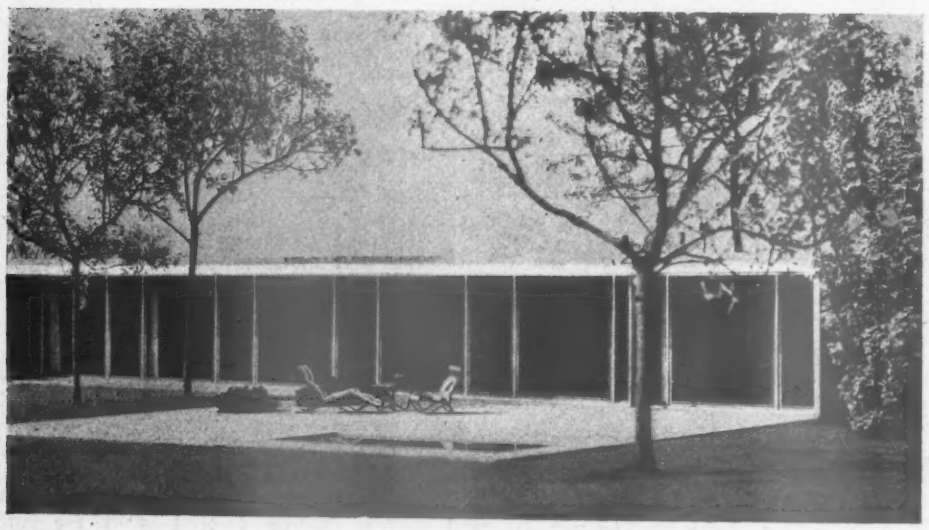
Above and right, design by Vernon DeMars for row houses. Projecting party walls and a staggered building line define each house as a separate unit, and give privacy. Varied colours and textures give each house its own special character. There is an open passage to each garden and the outdoor living area is separated from the service yard. Flexibility is not limited to the exterior. Interior partitions can be arranged in different ways for different tastes and needs. Since the living room runs from back to front, the house can face either north or south. Below, model of the house by Philip Johnson. Its character depends on the concise clarity of its plan and the spare elegance of its structure.



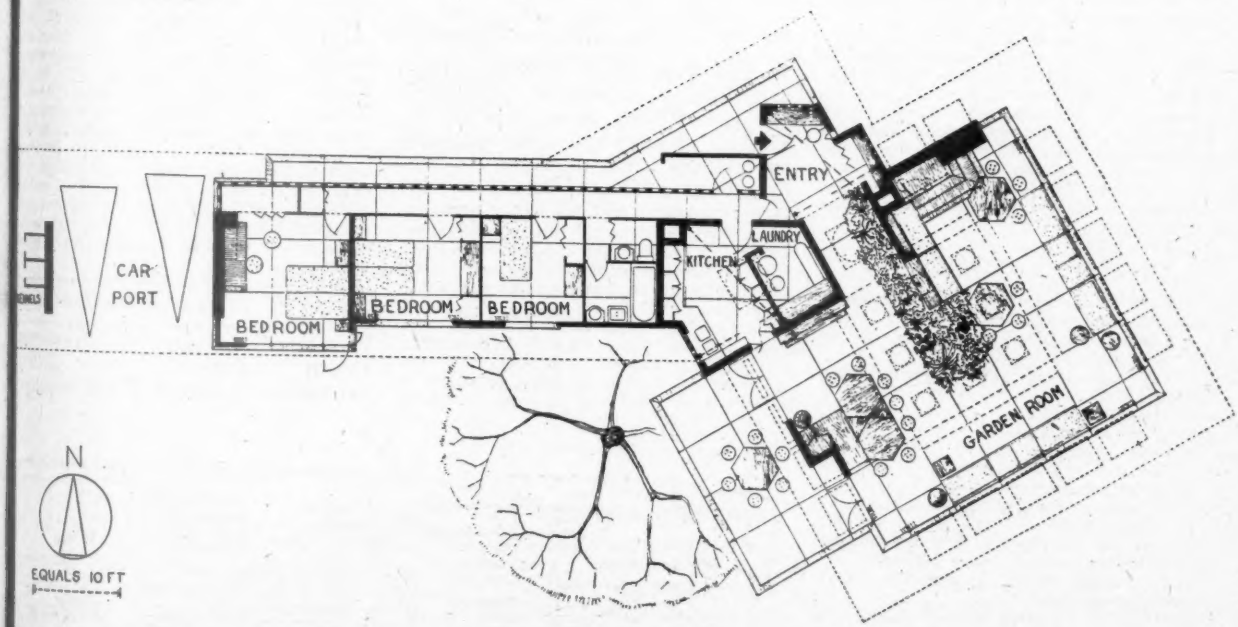
FIRST FLOOR PLAN

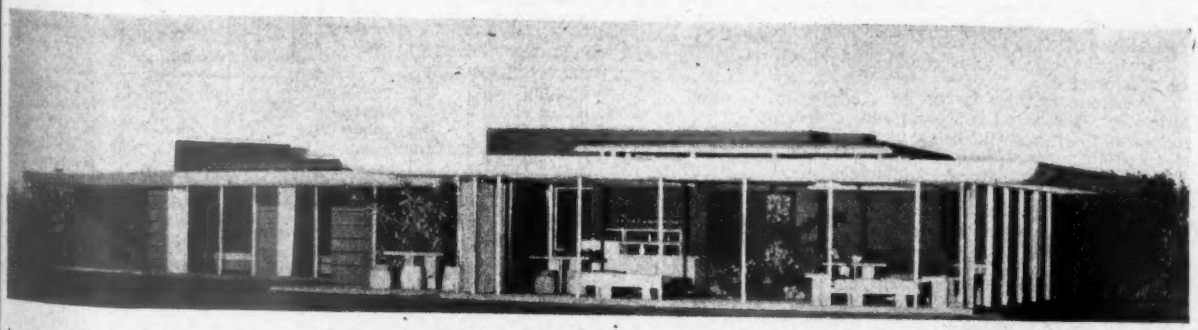


GROUND FLOOR PLAN



Right, model of a house by Hugh Stubbins, Jr. The unusual roof slopes to interior drain pipes. Structure is of steel columns permitting the free placing of walls. Below, model and plan of a design by Frank Lloyd Wright. Materials are brick, concrete, steel and glass. The garden room is a great glass square. The thin upswept roof slab of reinforced concrete is pierced at the eaves for lightness and centred with a movable clerestory. Under this hole-in-the-roof, modern version of the Roman compluvium, growing plants make a green partition between living and dining areas. The entrance hall and work area at the angular intersection are top-lit. The clerestory runs the length of the house and provides most of the ventilation as well as supplementary light.





AMERICAN SMALL HOUSE EXHIBITION

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.

PHYSICAL PLANNING

2074 **Regional Boundaries**

REPORT ON THE DETERMINATION OF REGIONAL BOUNDARIES WITHIN THE STATE OF VICTORIA. (*State Regional Boundaries Committee of Victoria, Australia.*) Report presented to the Cabinet, December, 1944, by Committee under chairmanship of W. J. Jungwirth, containing recommendations on regional boundaries. Basic information collected on topography, population distribution, climate, industry, transport, soils and geology, water resources, etc.

The Committee was appointed to make enquiries and to submit recommendations as to the Regional Boundaries which might be adopted within the State of Victoria.

One of the first steps undertaken by this Committee was the collection and co-ordination of basic information. From the many factors that may influence the extent of a region, the Committee selected the following as being a practical minimum for carrying out its task:

1. Topography.
2. Distribution of population—urban and rural.
3. Community of interests, spheres of influence, and mutual problems.
4. Climate, rainfall, temperatures, etc.
5. Soils and geology.
6. Land utilization, types of farming and productivity.
7. Mineral resources.
8. Water resources.
9. Power resources.
10. Secondary industries.
11. Transport services.
12. Amenities and Community facilities.

In delimitating an area as a suitable regional unit for planning and development the following principles were adopted:

1. A Region should, preferably, be a physiographic unit.
2. It should be large in size so that the regional viewpoint may be preserved and parochial issues prevented from becoming predominant.
3. It should not cut across a unified pattern of development.
4. It should be able to justify the provision of adequate transport and communication services and other public utilities and amenities.
5. It should stimulate a community of interest, one aspect of which is the growth of regional consciousness and sentiment.
6. It should be such that it can be administered in a practical and efficient manner.

Although the Committee realized that no area in the State can be regarded as fulfilling all these conditions, it has applied the above-mentioned principles in making its determinations, and has recommended the division of the State into thirteen regions, adhering to existing administrative boundaries. These Regions vary largely in population and area.

Summaries of the resources and development of each of these regions are given in the Report.

It is pointed out, however, that in the light of more detailed information regarding each Region and the future development of the State, it might be necessary to adjust some boundaries in the future.

It is further suggested that the Port Phillip Region might be divided into three Sub-Regions, comprising the Metropolitan Area of Melbourne, the rural areas to the East and those to the West.

STRUCTURE

2075 **Concrete Surface Processing**

VACUUM PROCESSING OF SHASTA DAM SPILLWAY. *C. S. Rippon.* (*Engineering News-Record, June* 14, 1945, *pp.* 829-832.) Excess water and entrapped air removed from surface of concrete by vacuum process to densify and increase hardness and resistance to wear.

The ways in which to obtain satisfactory internal strengths in concrete are well known, but less progress has been made towards giving exposed surfaces the maximum durability. Several means of securing better surfaces have been devised. (See Nos. 1048 to 1050: 4.2.43.) Utmost care was necessary in the construction of the spill-way of the Shasta Dam to secure a surface highly resistant to wear. Such a surface on the concrete was obtained by removing excess water and entrapped air by vacuum suction after the concrete was placed. An average of 0.58 lb. of water was extracted from each sq. ft. of surface processed at a cost of 20 cents. As a result of the lowered water-cement ratio, a smooth, dense and substantially improved concrete surface was produced. The indicated compressive strength of the vacuumed concrete surface was found by tests to be 2.6 times greater than that of concrete placed against a wood form.

2076 **Two-stage Housing**

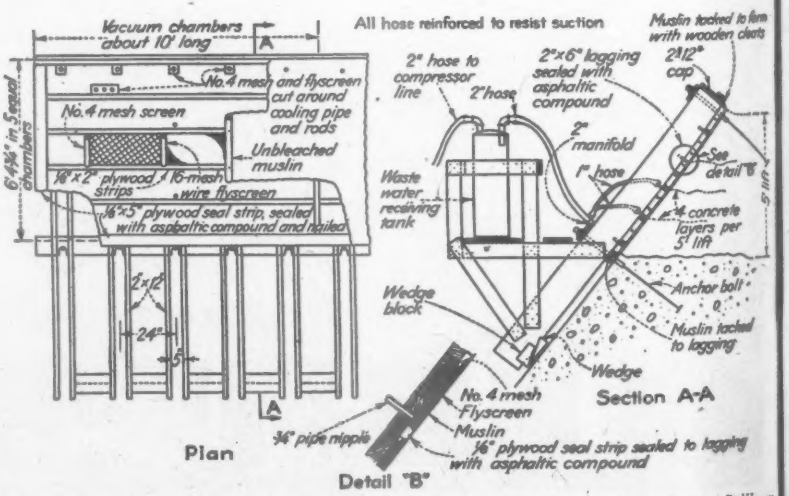
EXTRA-RAPID TWO-STAGE HOUSING. *E. J. Buckton.* (*The Engineer, July* 13, 1945, *pp.* 32-33.) Utilization of the civil engineering industry in rapid production of housing.

The idea of Two-Stage housing was described by the same author in a previous series of articles. (See No. 1,654: 2.11.44.) As a further means of speeding up production of dwellings, it is recommended that at first the inner walling or cladding only of cavity walls should be constructed, and should be designed to be weatherproof. The outer cladding can lag behind the inner cladding. The first stage will have an unfinished appearance, but the average time should not exceed one year. The change-over from the first-stage bungalow to the second-stage three-bedroom house will take place after the fourth year of the intensive building programme and before the twelfth or last year.

The building industry is at present only one third of its pre-war capacity. After the Government twelve-year housing programme the building industry required will be no more, and possibly less, than pre-war normal. The building effort during the twelve-year programme will be about double the normal. It is better for the building industry to expand now to something not much more than its pre-war normal, and to collaborate with the civil engineering and the prefabrication industry for the additional effort required for the Government programme.

2077 **Houses of Stabilised Earth**

PROPOSED HOUSES OF STABILISED EARTH. *Architect: Herbert Collins.* (*Architectural Design & Construction,*

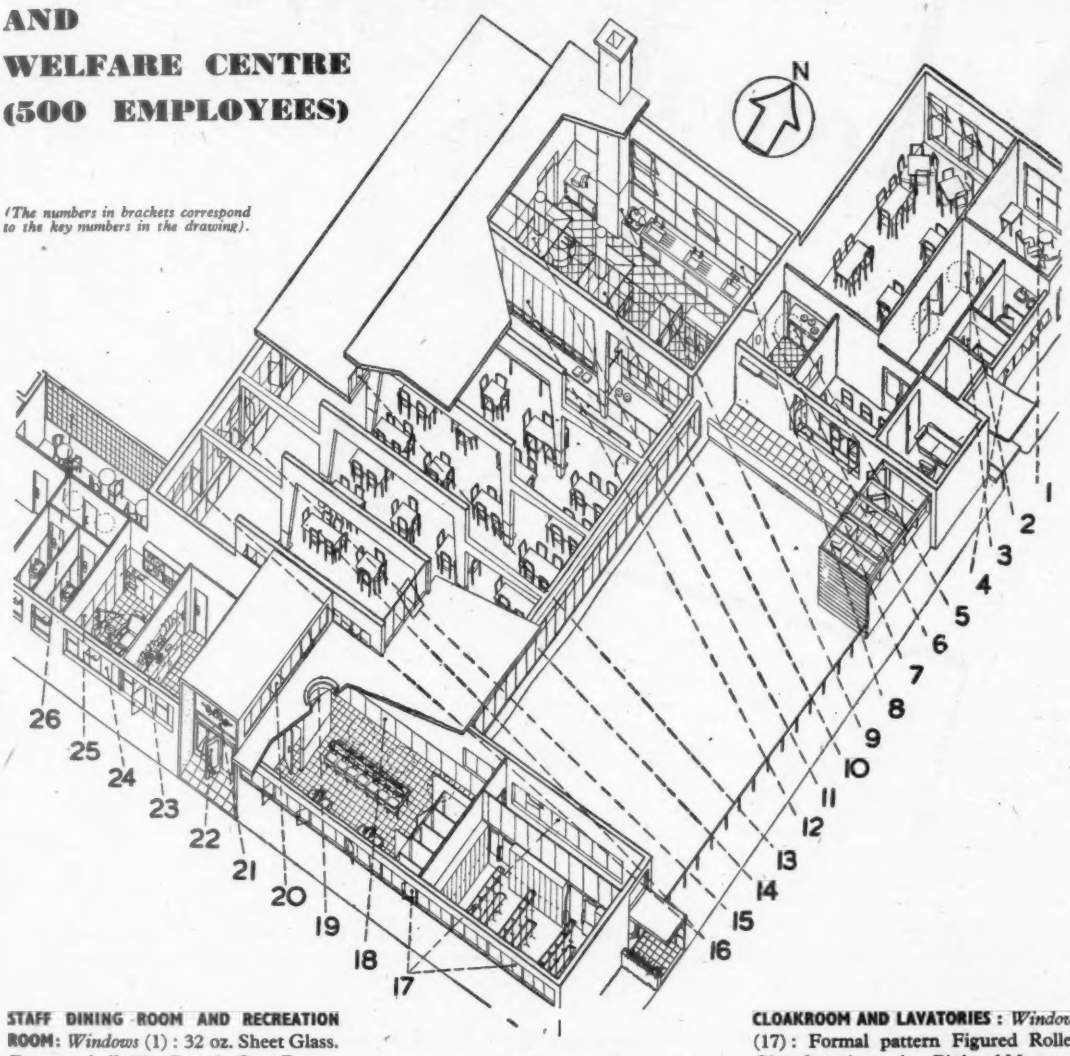


Drawings showing the method of concrete vacuum processing used on Shasta Dam Spillway. Vacuum mats were built on cantilever forms. Muslin covering was released, then removed separately after panel was raised. See No. 2075

FACTS ABOUT GLASS FOR ARCHITECTURAL STUDENTS

SPECIFICATION FOR GLASS IN A FACTORY CANTEEN AND WELFARE CENTRE (500 EMPLOYEES)

(The numbers in brackets correspond to the key numbers in the drawing).



STAFF DINING ROOM AND RECREATION ROOM: *Windows* (1): 32 oz. Sheet Glass. *Entrance hall* (2): Rough Cast Domes for top lighting. *Lavatories* (3): "Vitrolite" to dado height. *Lavatory partitions*: "Vitrolite." *Lavatory windows* (4): Formal pattern Figured Rolled Glass, i.e., Small Morocco.

SERVERY: *Top light* (5): Rough Cast Domes. *Walls* (6): "Vitrolite" to door height.

DIRECTORS' DINING ROOM: *Windows* (7): ¼" Polished Plate Glass.

KITCHEN: *Windows* (8): 32 oz. Sheet Glass for centre hung pivotted windows. *Walls* (9): "Vitrolite" to door height. *Canopy over cooking and wash-up units* (10): Georgian Wired Cast. *Kitchen/Servery partition* (11): ¼" Rough Cast, doors in Georgian Polished Wired. *Servery/Canteen valance* (12): ¼" Rough Cast.

WORKS CANTEEN: *Clerestory windows* (13): Centre hung, diffusing glass, i.e., Small Morocco, Kaleidoscope, etc. *Windows in east wall* (14): Translucent, textured glass, i.e., Clouded Cathedral. *Windows in west wing* (15): 32 oz. Sheet Glass. *Walls to cill height, columns and table tops* (16): "Vitrolite."

CLOAKROOM AND LAVATORIES: *Windows* (17): Formal pattern Figured Rolled Glass for privacy, i.e., Pinhead Morocco, etc. *Walls* (18): "Vitrolite" to dado height. *Top lighting* (19): Rough Cast Domes.

ENTRANCE HALL: *Clerestory lighting* (20): ¼" Rough Cast. *Fanlight* (21): ¼" Polished Plate, acid etched letters. *Doors* (22): Georgian Polished Wired.

WELFARE CENTRE: *Dispensary shelves* (23): "Armourplate." *Windows* (24): ¼" Polished Plate, satin finished surface. *Dental surgery walls* (25): "Vitrolite." *Waiting room* (26): External wall of Insulight Hollow Glass Blocks. Window cills throughout in "Vitrolite."

This is published by Pilkington Brothers Limited, of St. Helens, Lancashire, whose Technical Department is always available for consultation regarding the properties and uses of glass in architecture.

LONDON OFFICE AND SHOWROOMS AT 63 PICCADILLY, W.1 · TELEPHONE: REGENT 4281

where architectural students may get advice and information on all questions relating to the properties of glass and its use in building.

"ARMOURPLATE" and "VITROLITE" are the registered trade marks of Pilkington Brothers Limited.

July, 1945, *pp.* 169-170.) Suggestion to build bungalows in rammed earth, improved by addition of 6 to 10 per cent. of cement. Earth walls reasonably stable, with good heat insulation. Chief problems: Shrinkage cracks and weather protection.

2078 **Hinges**

HINGES. *B.S.* 1227:1945. (*British Standards Institution*, 2*s.* 0*d.*) Cast iron, steel and drawn brass hinges. Types and sizes suitable for houses.

LIGHTING

2079 **Domestic Lighting**

LIGHTING THE HOMES OF TO-MORROW. *J. B. Carne.* (*Transactions of the Illuminating Engineering Society* (*England*), *June*, 1944, *p.* 95.) Conditions to-day. Decoration. Lighting units. Practice.

Mr. Carne commences his paper with notes on the present expenditure by low-income groups on lighting, and a discussion of some prevailing characteristics of decoration, not only as "practised," but as encouraged by some authorities. These relate mainly to the use of dark colours, of course, and the author proceeds to show what improvements can be made by changing over to lighter shades for walls and ceilings. Naturally there is an increase in the intensity of light, but attention is drawn also to the valuable reduction in brightness contrasts between the source and the background.

An interesting passage is provided by the discussion of lighting units. Mr. Carne would like to see a good range of efficient, well-designed units marketed favourably rather along the lines of "post-war utility" productions. (In the discussion this idea was accorded a varied reception; for some reason the Light-Fitting Manufacturers seem not very fond of the idea, though the position is far from satisfactory, as the Study Report of the DSIR Lighting Committee shows.) There are illustrations of well-designed, efficient fittings in the paper, and one is attracted particularly to a pendant which much resembles the BS Study Lamp, inverted. There is a clear downward component, a diffuse upward component, and a luminous shade of moderate brightness. And in that description lie the elements of a good light for most purposes.

There are notes on the lighting of kitchens, bedrooms, and so on, and Mr. Carne uses as a design basis the IES recommended values, which are higher than those of the Lighting Committee. He draws attention to the increased fuel consumption which the IES standard implies.

A useful paper.

2080 **Art Gallery Lighting**

ART GALLERY LIGHTING. *A Report by a Committee of the Illuminating Engineering Society* (*America*). (*Illuminating Engineering, January*, 1945, p. 11.) Colour and Intensity. Lighting of flat object and solids. Light sources. Examples.

The findings of the Committee may conveniently be reviewed under the main headings of the Report.

Colour: Out of some tens of thousands of distinguishable colours, man has confined his interest to about 600, the majority of which are in the warm yellow and red range. Commonly the lighting should therefore be warm, and fluorescent sources should be used with discrimination.

Amount of Light: It is carefully argued that artificial lighting is more satisfactory for the complex problem of displaying many pictures in a room than natural light. The general lighting should generally be caused by the overflow from the light directed at the works of art. There is a table analysing the different types of display, and the form and intensity of light recommended.

Lighting of Flat Objects: Reflection factors for paintings in the National Gallery, London, are quoted as being from about 1 per cent. up to 50 per cent. The brightness of the illumined work must always be greater than that of any reflection which may be seen on it.

Lighting of Solids: Ancient sculpture was most often designed for outdoor illumination, and this should be similated by strong direct light, a good reflection from a high nearby wall, and moderate light reflected from below.

Light Sources: Combinations of natural and artificial light are said not to be possible because of the changes in colour. It is advised that incandescent light be retained or used with fluorescent, but in general not the latter alone, though metallic objects seem best under it.

Artificial Lighting Methods: Success has been obtained by using a laylight over a large area of ceiling, lighted from above by incandescent lamps in reflectors; the glass of the laylight should be configured on the lower face, but not sanded or etched. Variations of this, using lenses are described. A well-known method is mentioned in which a ceiling is suspended below the laylight, the light being allowed to "spill" over the edges on to the side walls. There are several interesting illustrations and also some specifications.

There is just a suggestion of the technical hum-drum perfection in this Report (natural light rejected because of its variations, for instance), but it undoubtedly contains the fruits of valuable experience.

2081 **School Lighting**

FLUORESCENT AND GERMICIDAL LAMPS USED IN SCHOOL LIGHTING RENOVATION. (*Lighting and Lamps, March*, 1945, *p.* 18.) Experimental fluorescent lighting for schools. Use of germicidal lamps.

This article describes a lighting installation in an American school where the fluorescent lighting provides an intensity of 20-35 foot candles, and a germicidal lamp installation providing a disinfection of the atmosphere equivalent to 60 air changes per hour. The incidence of disease in rooms with the germicidal lamps is 12.6 per cent., compared with 51.8 per cent. in rooms without it.

2082 **Cost of Fluorescent Lighting**

FLUORESCENT LIGHTING—COMPARISON OF COST. *S. D. Lay.* (*Electrical Review, June* 29, 1945, *p.* 948.) Fluorescent lighting cheaper than tungsten.

The author compares the capital costs, rated life and lumen output of fluorescent and tungsten lamps, and examines running costs with various tariff rates. On all comparisons he finds the fluorescent lighting to be the cheaper.

The note gives rise to two points. First, it is observed that the cost of the 80 watt fluorescent tube is now only 24s., as compared with the original 36s. Even at 24s. the lamp appears to be much more expensive than the same lamp ever was in America.

Second, while it is interesting to know which is the cheaper of the two forms, it is not suggested that this is the only basis for comparing them. There is widespread agreement now that fluorescent and tungsten work very well together, the one supplying a diffuse light, and the other a sharper light giving good contrasts.

2083 **Printing Press Lighting**

LIGHTING OF A COLOR PRESS. *C. H. Tibbetts.* (*Illuminating Engineering, January*, 1945, *p.* 45.) Fluorescent lighting system for printing press.

2084 **Electricity Showrooms**

POST-WAR ELECTRICITY SHOWROOMS. *R. P. Reynolds.* (*Electrical Times, June* 14, *p.* 708.) Design and layout requirements for electricity showrooms. Site, layout, character, lighting and heating, and space usage.

2085 **Prefabricated Wiring**

PREFABRICATED WIRING SYSTEM. (*Electrical Times, July* 5, 1945, *p.* 8.) "Octopus" unit. Pre-cut wiring and pre-fixed fittings.

The unit consists of an aluminium box housing connectors and fuses. The cables are of twin p.v.c. with phosphor-bronze braid protector acting as a continuous earth. Separate cables run to each outlet and switch, the inter-connection being made at the junction box. Sixty-four cables can be accommodated. A specially designed outlet for lighting enables the installation to be completed quickly. Wiring for a normal small house is estimated at £20.

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.***

2086 **Cemstone Blocks**

Q *Can you give me the address of manufacturers of Cemstone blocks mentioned on page* 307 *of the A.J. for April* 26, 1945?

A Cemstone Slab Units are manufactured by a number of manufacturers under licences from Unity Structures, who would be pleased to supply this product or an amended slab to suit your particular need. We therefore suggest that you should write direct to: Unity Structures, 35, Tavistock Square, London, W.C.1.

2087 **Iron Rainwater Goods**

Q *Is there an Association in existence of manufacturers of iron rainwater goods?*

A The Associations concerned are the British Ironfounders' Association, 145, St. Vincent Street, Glasgow, C.2, and the British Cast-Iron Research Association, Alvechurch, Birmingham.

2088 **WHAC Address**

Q *Can you let me know the address of the Women's Housing Advisory Council?*

A The address of the Women's Housing Advisory Council is Room 244, No. 21, Bloomsbury Street, London, W.C.1.

D

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 economize 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.

RIBA

Schools

The RIBA has submitted to six Government Departments a REPORT ON POST-WAR SCHOOL BUILDINGS by a special committee recently set up by the Royal Institute. The Departments concerned are the Ministries of Education, Works, Health, Labour, Transport and Agriculture. Here are the Committee's observations on war-time hutting and the improvement of existing buildings. The Committee's suggestions concerning the general problem, the architect's contribution and methods of construction, available materials and supply of labour, were published in our last issue.

Notes on War-time Hutting

1. Very little permanent-type school building has been erected during the war; additional accommodation has been provided in the form of standard hutting, either of the concrete portal-frame or plasterboard types. Roof construction of home-grown timber with reduced scantlings eked out by the application of plywood gussets with synthetic tarred felt covering has proved to be a failure. Heating has been provided by slow combustion stoves and ventilation left to its own devices, fresh air being introduced through cracks between window and door frames and the adjoining jambs.

2. Standard war-time hutting is definitely sub-standard for post-war school building. The huts are too low for corridors to be provided and natural lighting, heating and thermal insulation are inadequate, while high-level cross ventilation is impossible to achieve. All these shortcomings are fundamental defects in school construction.

3. The huts have been found to be comparatively expensive to erect and maintain, and delays, owing to widely-spread sources of supply of components and breakages in transit from depots to sites, have been all too common. Timber doors and windows supplied with the huts have been consistently bad in quality.

4. The completed hutting is shoddy and ugly in appearance and, with the functional and structural disadvantages above-mentioned, it is clear that no useful contribution to the provision of school building can be expected from this source. Its use for school accommodation should be discontinued forthwith.

Improvement of Existing Buildings

1. A large proportion of the school building programme will consist of enlarging and improving existing premises. In this work each case required individual attention, and although it may be possible in some instances to use light-weight structural units for extensions, the greater part of the alterations must be carried out in the traditional manner. Work of this character, particularly having regard to the difficulties of closing schools for extended periods, must inevitably be slow and costly and will absorb a great amount of traditional building labour and material.

The extent of the improvements required to bring the buildings up to present-day standards and to provide additional accommodation, will vary considerably according to the age, condition and type of school. Many of the buildings are very old, completely obsolete and built in a manner to make them almost incapable of adaptation.

2. The classrooms are too small or badly shaped; they cannot be entered save through other rooms; natural lighting, heating and ventilation are poor, sound insulation bad, and the service accommodation, *i.e.*, staff rooms, kitchen, dining room, stores and drying facilities, etc., unsatisfactory or non-existent.

Cloakrooms, lavatory and w.c. accommodation are often out of date and inadequate, and in many cases there is no suitable assembly hall nor facilities for physical education, *i.e.*, gymnasium and changing rooms, etc.

Sites are too small and the playground space insufficient.

In a great many instances it will be quite impracticable to make the necessary improvements, and in these cases the schools must be closed and replaced by new buildings.

3. Despite the fact that in probably four cases out of five it would be more satisfactory to rebuild completely, every effort must be made to reclaim as many of the older schools as possible if only to relieve the pressure on rebuilding generally. In doing this, however, careful consideration should be given to the following points:—

(*a*) That time, labour and materials required for remodelling should be compared with those required for the erection of a completely new school.

(*b*) That the accommodation will be needed for a sufficiently lengthy period to warrant the cost of the alterations.

(*c*) That the accommodation can be made to conform to the new standards.

(*d*) That the premises, when altered, will be capable of still further adaptations to meet future changes.

(*e*) That the return of evacuated children to their homes may make it impossible, in some instances, to dislocate further their schooling by the interruption and disturbance caused by alteration work.

Conclusions

1. Future changes in educational theory and practice are unpredictable, but it will be unwise to ignore the probability of their occurrence. The present-day teaching system bears little or no resemblance to the accepted educational policy of 40 years ago and the development of oral and visual radio transmission, to name but one example, may produce as great a relative change during the next 40 years.

2. The new school-building programme to the standards set forth in the latest School Building Regulations will prove to be a very large undertaking, and it is obvious that it will have to be spread over a number of years.

The foregoing observations lead to the conclusion that it would be against the nation's interest if a school building policy were adopted which stresses rigid uniformity in constructional methods and absolute standardization in planning and design. The danger of such a policy is that the school buildings will act as an obstruction to later experiments in progressive educational development. The old School Boards built standard-pattern schools which were considered adequate for the system of education best suited to the needs of that time. These schools are now hopelessly antiquated and cannot be altered and adapted economically to accord with present-day requirements. So it may be with the schools now to be built, unless the utmost flexibility in planning and constructional methods is adopted.

3. Local education authorities should be encouraged to experiment, under expert architectural guidance, with methods of construction best suitable to local climatic conditions and the use of materials most readily available to them. A school built on the Yorkshire moors needs to be more sturdily founded than one built in the sheltered folds of the Devonshire hills. Local knowledge gained from long experience is, in the long run, the most reliable guide to the achievement of sound building.

RIBA

Practice

The following members have notified the RIBA that having been RELEASED FROM THE FORCES or from other forms of National Service; they are resuming practice and would like to receive trade catalogues, information sheets and other data, etc., at the addresses given:—

Edward Armstrong (F), 19, Manchester Square, W.5. (Wel. 3820).

William Beech (L), Chambers of Commerce Buildings, Cumberland Place, Southampton.

Kenneth E. Black (F), 10, Prince Albert Street, Brighton, 1. (In partnership with Mr. C. Lawrence Clayton (F).)

Selby J. Clewer (A), c/o The Ministry of Education, Addis Ababa, Ethiopia, E. Africa.

C. J. Epril (F), 55, Pall Mall, S.W.1.

Walter N. Fisk (A), 52, Gwalior House, Chase Road, Southgate, N.14.

John S. Fowler (A), 41, Portland Terrace, Southampton.

Lieut.-Col. Wallace J. Gregory, R.E. (F), 5, All Saints Passage, Cambridge. (Cambridge 54714).

John Grey (F), 68, Abingdon Villas, Kensington, W.8. (Wes. 7977).

C. E. Hanscomb (F), The Old School House, Eastwick Road, Bookham, Surrey.

Walter Lewis (L), Venice Chambers, 61, Lord Street, Liverpool 2.

G. F. Long (L), 2, Dorchester Court, Muswell Hill, N.10.

Robert Lutyens (F) with Mr. Harold Greenwood (F), 13, Mansfield Street, W.1. (Langham 1838).

J. H. Markham (F), 82, Victoria Street, S.W.1. (Vic. 7651).

Lieut.-Col. G. H. Nicholls, R.E. (L), White Walls, Batchworth Hill, Rickmansworth, Herts.

Major Lennox D. Paterson, T.D. (F), Chambers, 6, Cadzow Street, Hamilton, N.B.

H. T. Rushton (L), 19, Swains Lane, Highgate, N.6.

Arthur H. Russell (L), 9, Duke Street Hill, London Bridge, S.E.1.

Colonel G. Shenstone, C.B.E., T.D. (F), 34, Bloomsbury Way, London, W.C.1.

F. G. Southgate (A), Borough Architect, Town Hall, Walthamstow, E.17.

Major A. M. Watt Low, R.E., J.P. (L), 366, King's Park Avenue, Bankhead, Rutherglen.

G. Berkeley Wills (F), 41, High Street, Marlow, Bucks.

Trenwith Wills (F), 24, Yeoman's Row, Brompton Road, S.W.3. (Ken. 8581).

Clifford Worthington (A), China Dog Studio, East Row, Rochester.

MC

Housing

A course of twelve lectures on HOUSING AND TOWN PLANNING will begin at Morley College on September 27.

The lectures will cover the present situation; the housing programme, including the work of Government, local authority and private builder; individual house plans; the building industry, building technique and materials, and modern production methods; furniture and equipment; problems of town and country planning, including the neighbourhood unit, the London satellite and National Parks; architecture; and ideas from other countries. Among the lecturers are: W. A. Allen, R. Coppock, G. A. Jellicoe, R. Furneaux Jordan, C. S. Mardall, Colin Penn, Gordon Russell, Richard Sheppard, Gordon Stephenson and R. Wynne-Edwards. The lectures will be held on Thursdays at 6.30 p.m., beginning on September 27, and the course fee is 10s. Further particulars can be obtained from the Secretary, Morley College, 61, Westminster Bridge Road, S.E.1.

ICE

Lewis Silkin

The opportunity now available to replan Greater London must not be missed, said Mr. Lewis Silkin, making his first appearance as Minister of Town and Country Planning, when he opened the GREATER LONDON PLAN EXHIBITION at the Institution of Civil Engineers.

L. Silkin: Let us deal with the planning of Greater London as a great adventure and in a spirit of urgency. What is being attempted is nothing less than the creation of conditions in which ugliness and dreariness are ended.

There is overcrowding in many places, lack of open spaces, housing unrelated to industry, and traffic congestion.

Few beautiful or even pleasant buildings have been erected in the last 50 or 60 years.

The separate views of the 143 planning authorities of the area must be co-ordinated. Powers of local authorities are at present inadequate, and further powers must be provided.

An urgent plea for statutory powers to put into operation his two plans for the rebuilding of London—the County of London plan and the Greater London plan—has been made by Professor Patrick Abercrombie.

Here are some of the things I have to say about the plan.

It is evolutionary, not revolutionary.

The movement of population is steadily going on and will go on. All we ask is that it shall take place according to some sort of plan.

We must not shell houses like peas. You must see that they are built in places that will satisfy community living.

Although the plan cannot be finished under about 50 years, some of the essential features, such as regrouping of the population, can be done easily in ten years.

Announcements

The Home Timber Production Department of the Ministry of Supply announces the following staff changes:—G. H. A. Golding, Divisional Officer—transferred from Exeter to Headquarters. N. J. Davies, Deputy Divisional Officer—promoted Divisional Officer, Exeter (Division 3). A. H. Popert, Divisional Officer, Nottingham—resumed duty with Forestry Commission. F. J. Bailey, Trade Production Officer, Nottingham (Division 5a)—appointed Divisional Officer. L. S. Moss, Assistant Trade Production Officer, Nottingham—promoted Trade Production Officer, Nottingham. C. Manson, Trade Production Officer, Chester—transferred to Timber Control Department of the Ministry of Supply, Nottingham, as Assistant Area Officer. C. B. H. Fielding, Assistant Trade Production Officer, Chester—promoted Trade Production Officer, Chester.

On and after September 1 the address of the Head Office Sales Departments of The Cement Marketing Company, Limited, will be 192, Ashley Gardens, London, S.W.1. Telephone: VICtoria 6677 (25 lines). Telegrams: Portland, Sowest, London. The Accounts and Cashiers Departments will, until further notice, remain at Saxon Works, Coldham's Lane, Cambridge.

On and after September 1 the address of the Head Office Sales Departments of Alpha Cement, Limited, will be 192, Ashley Gardens, London, S.W.1. Telephone: VICtoria 6677 (25 lines). Telegrams: Alphacemco, London. The Accounts and Cashiers Departments will, until further notice, remain at Saxon Works, Coldham's Lane, Cambridge.

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 Friday 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

ACKWORTH SCHOOL, NEAR PONTEFRACT, YORKS.

Applications are invited for the post of CLERK OF WORKS, for the maintenance of the buildings and plant of this large Boarding School. There is as well an estate of 330 acres and considerable property. A good salary will be offered and a house is available. Full particulars may be obtained from the Bursar, to whom applications should be returned not later than September 30. 563

DORSET COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the undermentioned appointments to the staff of the County Architect's Department:—

(a) Six ARCHITECTURAL ASSISTANTS. Commencing salary £380 per annum, rising to £440 by annual increments of £15 and thence by £20 to £500.

(b) Two JUNIOR ARCHITECTURAL ASSISTANTS. Commencing salary £270 per annum, rising to £360 by annual increments of £15.

(c) Two IMPROVERS (ARCHITECTURAL). Commencing salary £160 per annum, rising to £235 by annual increments of £15.

Applicants for the foregoing appointments must:—

(a) Be Registered Architects, and preference will be given to Associates of the Royal Institute of British Architects.

(b) Have completed a full-time course at one of the recognised Schools of Architecture or articles of pupilage, have passed the intermediate examination of the Royal Institute of British Architects and, in addition, had at least two years' drawing office experinece.

(c) Must have completed a full-time course at one of the recognised Schools of Architecture or articles of pupilage.

The posts are (1) on the permanent assignment of staff but, in accordance with the County Council's wartime regulations, the appointments will be of a temporary nature in the first instance, subject to review, and (2) superannuable, each successful candidate being required to pass a medical examination.

Applications, stating age, education, qualifications and previous experience, together with copies of not more than three testimonials, must be delivered to the County Architect, Shire Hall, Dorchester, so as to be received not later than the 25th September, 1945.

C. P. BRUTTON,
Clerk of the County Council.

Shire Hall, Dorchester.
20th August, 1945. 602

LONDON COUNTY COUNCIL.

Appointment of SENIOR PLANNING OFFICER in the Town Planning and Building Regulation Division (Statutory Branch) of the Architect's Department, at a salary of £800 per annum, rising by annual increments of £50 to a maximum of £1,000 per annum, together with cost-of-living bonus, at present £60 per annum for men and £48 per annum for women.

The position is subject to the Council's Superannuation and Provident Fund, and will be temporary in the first instance; but the successful candidate will be eligible for consideration at a later date for appointment to the permanent staff. Candidates should possess appropriate professional qualifications and experience, and should be conversant with current town planning legislation. The duties of the position will include in particular work in connection with the development of the Council's town planning proposals, the drafting of scheme provisions, and the preparation of redevelopment proposals for large urban areas. The person appointed will be responsible also for the supervision of duties undertaken by the staff engaged on all branches of the Council's planning work.

Applications should be made to the Architect to the Council, County Hall, Westminster Bridge, London, S.E.1, for form of application (enclose stamped addressed foolscap envelope); to be returned by Saturday, 29th September, 1945. Canvassing disqualifies. 594

CITY OF PORTSMOUTH.

CITY PLANNING AND RECONSTRUCTION DEPARTMENT.

Applications are invited for the following appointments in the Office of the City Planning Officer and Reconstruction Architect, engaged on the preparation and administration of statutory planning schemes for the Authority's administrative area, and plans for the reconstruction and future development of the City and its environs.

(a) SENIOR ASSISTANT (ARCHITECTURAL). Applicants should hold Architectural and Planning qualifications, i.e., be Members of the Royal Institute of British Architects and/or Town Planning Institute, and to be experienced in Civic Design and Planning technique.

The salary is £515, rising by annual increments of 3 at £20 and 1 at £25 to £600.

(b) SENIOR ASSISTANT (STATUTORY PLANNING). Applicants should be Members of either the Royal Institute of British Architects, Chartered Surveyor's Institute or Institute of Civil Engineers and/or Town Planning Institute, and to be experienced in the preparation and administration of Statutory Planning Schemes.

The salary is £515, rising by annual increments of 3 at £20 and 1 at £25 to £600.

(c) Grade D. PLANNING ASSISTANT. Applicants should hold professional qualifications in Planning, and to have experience in Civic Design or statutory planning practice, and Interim Development Administration. The salary is £450, rising by annual increments of £20 to £510.

(d) Grade B. PLANNING ASSISTANTS (2). Applicants should have a knowledge of the technique of planning, and be experienced in Civic Design or statutory planning practice, and Interim Development administration. The salary is £330, rising by annual increments of £15 to £375. Preference will be given to the holders of the appropriate professional qualifications.

All increments take effect on the 1st April in each year, the first one on the above scales being payable 1st April, 1946, if the appointments are made before the 30th September, 1945.

The appointments will in every case be subject to the provisions of the Local Government Superannuation Act, 1937, and the successful applicants will be required to pass a medical examination. All appointments are subject to the Council's Sick Pay Regulations, a copy of which the successful candidates will be required to sign. All salaries are supplemented by a cost-of-living bonus in accordance with the Whitley Scale at the present time. All appointments will be terminable by one month's notice on either side. Applications, stating age, qualifications, experience, and position with regard to Military Service, together with the names of three responsible persons to whom reference may be made, must be delivered to the undersigned, clearly marked "City Planning Appointment," not later than the 4th September, 1945.

Canvassing directly or indirectly will be a disqualification.

FREDERICK SPARKS,
Town Clerk.

Municipal Offices, Royal Beach Hotel, Southsea.
18th August, 1945. 599

EBBW VALE URBAN DISTRICT COUNCIL.

APPOINTMENT OF TEMPORARY ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of a Temporary Architectural Assistant in the Engineer and Surveyor's Department of the Council, at a salary of £350 per annum, plus cost-of-living bonus, at present £59 16s. per annum.

Applicants must be Registered Architects, experienced in land surveying and levelling, building inspection, and the preparation of working and detail drawings, specifications and quantities for housing and other public buildings, and preference will be given to candidates who are members of the Royal Institute of British Architects.

The appointment will be terminable by one month's notice on either side, and will be subject to the Council's Regulations and Conditions of Service for the time being in operation.

Applications, stating age, qualifications, with full particulars of experience, and endorsed "Architectural Assistant," must be received by the undersigned not later than the 5th September, 1945, and should be accompanied by not more than three copies of recent testimonials.

Dater the 18th August, 1945.

R. F. HERBERT,
Clerk of the Council.

Council Offices, Ebbw Vale, Mon. 598

WOLVERHAMPTON AND STAFFORDSHIRE TECHNICAL COLLEGE.

Applications invited for appointment as HEAD OF THE BUILDING DEPARTMENT. Full particulars and conditions of appointment will be forwarded as soon as available.

Applications to the undersigned.

F. LONSDALE MILLS,
Clerk to the Governors.

Education Offices, North Street, Wolverhampton. 585

WEST SUSSEX COUNTY COUNCIL.

APPOINTMENT OF COUNTY ARCHITECT.

Applications are invited from Fellows or Associate Members of the Royal Institute of British Architects for the whole time appointment of County Architect, at a salary of £1,200 per annum, rising by annual increments of £100 to £1,700 per annum, plus bonus, travelling and subsistence allowance, in accordance with the Council's scales for the time being in force.

The appointment will be terminable by three months' notice on either side, and will be subject to the provisions of the Local Government Superannuation Act, 1937, and to a medical examination. Canvassing will disqualify.

Forms of application, together with particulars of duties and terms and conditions of appointment, may be obtained from the undersigned, to whom applications should be sent not later than the 29th September, 1945.

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

County Hall, Chichester.
August, 1945. 576

SUDAN RAILWAYS REQUIRE ASSISTANT ARCHITECT.

Applicants must be Registered Architects, and have been trained in an Architect's office, with at least 3 years' experience as Architectural Assistant. Age 25-35.

Commencing salary £E.480-600 per annum (£E.1 = £1 0s. 6d.), according to age, experience, and qualifications. Two years' probationary contract, after which, if accepted, will be confirmed in a pensionable capacity. Free passage on appointment. Strict medical examination. At present there is no income tax in the Sudan. Separation allowance or special war allowance payable when eligible.

Applications, giving full particulars as regards age, experience, and qualifications, together with copies of testimonials, should be addressed to the Controller, Sudan Government London Office, Wellington House, Buckingham Gate, London, S.W.1, marking envelope "Architect." 601

CITY OF CARDIFF.

APPOINTMENT OF ARCHITECTURAL ASSISTANTS.

Applications are invited for the following appointments in the Department of the City Surveyor.

(a) CHIEF GENERAL ARCHITECTURAL ASSISTANT. Salary £600, rising by two annual increments of £20 and one of £10 to £650 per annum.

(b) CHIEF HOUSING ARCHITECTURAL ASSISTANT. Salary £500, rising by annual increments of £20 to £600 per annum.

(c) CHIEF EDUCATION ARCHITECTURAL ASSISTANT. Salary £500, rising by annual increments of £20 to £600 per annum.

(d) CHIEF QUANTITY SURVEYING ASSISTANT. Salary £500, rising by annual increments of £20 to £600 per annum.

The salaries are exclusive of war bonus, which at present amounts to £59 16s. per annum.

Applicants for (a) should be Registered Architects, with considerable experience in the design and execution of general Municipal Architectural Works, including Civic Buildings and Markets, Hospitals and Clinics, Park and Recreational Buildings, Swimming Baths, Police Stations, etc. Experience in general municipal procedure will be an advatnage.

Applicants for (b) should be Registered Architects, with considerable experience in the design and layout of large scale Housing Schemes, including the design of various types of Council Houses, detailed and working drawings and contract procedure in connection therewith.

Applicants for (c) should be Registered Architects, with extensive experience in the design and erection of Education Buildings, including Nursery, Primary, Secondary and Technical Schools and buildings ancilliary thereto. Experience in Ministry of Education requirements and procedure will be an advantage.

Applicants for (d) should be Chartered Quantity Surveyors, with extensive experience in the preparation of Bills of Quantities, Specifications and Contracts, and the measurement of completed works in respect of a wide variety of Municipal Building Works. Experience in the analysis of building costs and estimating will be an advantage.

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

Applications, stating age, qualifications and experience, etc., together with the names of three persons from whom references can be obtained, should reach the undersigned not later than 14th September, 1945, suitably endorsed.

The permanent appointments for the above are vacant, but in order to comply with a resolution of the Council, the appointments when made will be regarded as temporary during the period of the present emergency.

S. TAPPER JONES,
Town Clerk.

City Hall, Cardiff. 603

CITY OF CARDIFF.

Applications are invited for the following appointments in the Department of the City Surveyor :—

(a) SENIOR TOWN PLANNING ASSISTANT. Salary £550, rising to £600 per annum.

(b) CHIEF BUILDING AND ESTATES SURVEYING ASSISTANT. Salary £550, rising to £600 per annum.

(c) CHIEF MAIN DRAINAGE ASSISTANT Salary £500, rising to £550 per annum.

(d) SENIOR ENGINEERING AND SURVEYING ASSISTANT. Salary £500, rising to £550 per annum.

(e) ENGINEERING ASSISTANT. Salary £350, rising to £460 per anum.

(f) JUNIOR TOWN PLANNING ASSISTANT. Salary £300, rising to £350 per annum.

The annual increments in each case will be two of £20, followed by one of £10.

The salaries are exclusive of war bonus, which at present amounts to £59 16s. per annum.

Applicants for (a) should hold the qualification A.M.T.P.I., and should in addition have the farther qualification of A.M.I.C.E., A.R.I.B.A., or P.A.S.I. They must have had considerable experience in the preparation and administration of Town Planning Schemes

Applicants for (b) should be chartered Surveyors, and have had considerable experience in the organization and administration of Property Maintenance, and the preparation of plans and records in respect of the development of all types of landed properties.

Applicants for (c) should be Corporate Members of the Inst. of C.E. and/or hold the Testamur of the Inst. of M. & Cy. Engineers, and have had considerable experience in the design and execution of Main Drainage and Sewerage Works and works ancilliary thereto. Experience in general municipal engineering will be an advantage.

Applicants for (d) should be Corporate Members of the Inst. of C.E. and/or hold the Testamur of the Inst. of M. & Cy.E., and should have had considerable experience in general Municipal Engineering and Surveying.

Applicants for (e) should have passed the examinations of the Inst. of C.E. and/or the Inst. of M. & Cy. Engineers, and have had general experience in a Municipal Engineer's Office.

Applicants for (f) should have had some experience in Engineering, Surveying and Architecture as related to Town Planning.

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

Applications, stating age, qualifications, and experience, etc., together with the names of three persons from whom references can be obtained, should reach the undersigned not later than 14th September, 1945, suitably endorsed.

The permanent appointments for the above are vacant, but in order to comply with a resolution of the Council, the appointments. when made, will be regarded as temporary during the period of the present emergency

S. TAPPER JONES.
Town Clerk.

City Hall, Cardiff. 619

CITY OF NOTTINGHAM EDUCATION COMMITTEE.

COLLEGE OF ART AND CRAFTS.

Principal : ALFRED H. RODWAY, A.R.C.A.

Applications are invited from men and women holding recognised qualifications in Architecture, preferably the degree or diploma of a recognised school, for two full-time posts as STUDIO INSTRUCTORS in the School of Architecture of the College. The School is recognised for purposes of exemption from the R.I.B.A. Intermediate and Final Examinations, and in the Department of Town and Country Planning from the Final Examination of the Town Planning Institute. The successful candidates will be required to teach Architectural Design, Construction, and the technique of presentation up to and including 4th year Diploma Course Work. Possession of A.M.T.P.I. and/or approved qualifications in any branch of Surveying may be regarded as added recommendations in respect of these posts. Salary in accordance with the Burnham Scales for Art Colleges and Schools, viz. : £300 x £15—£525. In fixing the commencing salary allowance will be made for all previous full-time teaching service, and/or full-time professional experience after age 21 up to a maximum of ten years. Subject to the conditions governing full-time teaching, the successful candidates will be given such opportunities as may be practicable to maintain their professional practice. The persons appointed will be required to commence duty on 1st October, 1945, or the nearest date possible thereafter. The appointments will be terminable by notice of two months being given by either side. Application forms are obtainable from the Principal, College of Art and Crafts, Waverley Street, Nottingham, to whom applications and two recent testimonials should be returned by 14th September, 1945.

F. STEPHENSON.
Director of Education.

Education Office, South Parade, Nottingham. 587

WITNEY AND DISTRICT JOINT TOWN PLANNING COMMITTEE.

APPOINTMENT OF PLANNING OFFICER.

Applications are invited for the appointment of a Planning Officer, at a salary of £500 per annum (rising by annual increments of £50) to £600 per annum, the commencing salary, within this scale, according to qualifications, plus war bonus (at present amounting to £59 16s. per annum), and £150 per annum will be allowed for travelling and car allowance. The person appointed will be required to act as Town Planning Officer for two other Joint Planning Committees.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937.

Applicants should be experienced in the preparation of Planning Schemes, and in the control of development under Planning Schemes and Interim Development Orders, and should hold the diploma of the Town Planning Institute. An architectural qualification will be considered an advantage.

Applications, endorsed "Planning Officer," giving age and full particulars of experience and qualifications, and stating position in relation to National Service. accompanied by copies of not more than three recent testimonials, and stating when duties could be taken up, should be received by the undersigned not later than 22nd September, 1945.

R. A. G. RAVENOR,
Clerk to the Witney and District Joint Town Planning Committee.

The Hill, Witney, Oxon.
30th August, 1945. 603

BOROUGH OF WREXHAM.

TEMPORARY APPOINTMENT OF : (1) ARCHITECTURAL ASSISTANT. (2) PLANNING ASSISTANT.

Applications are invited for the following temporary appointments :—

(1) Architectural Assistant. Salary £400-£450 per annum, according to qualifications and experience, plus cost-of-living bonus.

(2) Planning Assistant. Salary £250 per annum, plus cost-of-living bonus.

The present cost-of-living bonus is at the rate of £59 19s. 3d. per annum.

For appointment No. 1 preference will be given to candidates who are A.R.I.B.A., and have had experience in housing, layout of housing estates, planning, and general architectural work.

For appointment No. 2 preference will be given to candidates with either parts of Testamur examination and/or Certificate in Town Planning of I.M. and Cy.E. or A.M.T.P.I., and having experience in layout of housing estates and general knowledge of planning work (required for a Neighbourhood Development Scheme).

The appointments are subject to the successful candidates passing a medical examination; to the Corporation's Sickness Regulations and Conditions of Service, and to determination by one month's written notice on either side.

Forms of application and particulars and conditions of the appointment may be obtained from the Engineer and Surveyor, 1, Grosvenor Road, Wrexham. Completed applications, with three recent testimonials, to be delivered to the undersigned in a sealed envelope, not later than 17th September, 1945.

PHILIP J. WALTERS,
Town Clerk.

Guildhall, Wrexham.
22nd August, 1945. 611

CITY OF OXFORD.

Applications are invited for the appointment of a temporary ARCHITECTURAL ASSISTANT in the Department of the City Estates Surveyor and Architect to the Education Committee; applicants should be Associate Members of the R.I.B.A. and have had experience of school work.

Salary will be from £400 to £450 per annum, according to experience, plus war bonus, at present £59 16s

Applications, stating age, qualifications, and details of experience, and accompanied by copies of two recent testimonials, should be sent to the Architect to the Education Committee, Town Hall, Oxford, not later than 10th September, 1945. 609

BATTERSEA BOROUGH COUNCIL.

Applications are invited for the appointment of two ARCHITECTURAL ASSISTANTS and two TECHNICAL ASSISTANTS in the department of the Borough Engineer and Surveyor.

The appointments are temporary, and subject to one month's notice on either side. The salary to be paid will be according to qualifications, but will not exceed £8 per week, plus cost-of-living bonus (at present 23s. per week).

Application to be made on a form to be obtained from the Borough Engineer and Surveyor, Municipal Buildings, Lavender Hill, S.W.11, and returned to him, together with copies of three recent testimonials, not later than 12 noon on the 10th September.

R. G. BERRY.
Town Clerk.

Town Hall, Battersea, S.W.11.
22nd August, 1945. 607

CITY OF CANTERBURY.

HOUSING ARCHITECTURAL ASSISTANT.

Vacancy in City Architect's Department for permanent Housing Architectural Assistant—£365 by £15 to £410 per annum, plus cost-of-living bonus, at present 23s. per week.

Preference given to candidates trained in a recognised School of Architecture, and who are A.R.I.B.A. Previous experience of municipal housing work desirable, but not essential.

Successful candidate will be required to pass medical examination for Local Government Superannuation Act, 1937.

Applications, endorsed "Housing Architectural Assistant," to be received by Mr. L. H. Wilson, A.R.I.B.A., A.M.T.P.I., City Architect, by not later than 12th September, 1945.

J. BOYLE,
Town Clerk.

Municipal Buildings, Canterbury. 588

LONDON COUNTY COUNCIL.

Vacancies for planning staff in the Architect's Department.

Applications are invited for a number of positions in the following grades :—

TEMPORARY PLANNING OFFICERS, Grade II : £500—£25—£650 per annum.

TEMPORARY PLANNING OFFICERS, Grade III : £380—£20—£500 per annum.

(Cost of living additions, at present £60 a year for men, and £48 for women, are added to all salaries).

Successful candidates will be subject to the Council's Superannuation and Provident Fund. When permaennt appointments are resumed, temporary staff with satisfactory service will receive consideration on merit basis.

Candidates should possess appropriate professional qualifications and experience, and should be conversant with current town planning legislation.

Application should be made to the Architect to the Council, County Hall, Westminster Bridge, S.E.1, for form of application (enclose stamped addressed foolscap envelope), to be returned by Saturday, 29th September, 1945. Canvassing disqualifies. 595

STOKE-ON-TRENT CORPORATION.

APPOINTMENT OF ASSISTANT ARCHITECTS.

Applications are invited for the above appointments in the City Architectural Department as follows :—

(a) Assistant Architect. Salary £500 per annum, plus cost-of-living bonus, £59 16s.

(b) Assistant Architect. Grade D. Salary £385-£430, plus cost-of-living bonus, £59 16s.

Applicants for both appointments must be members of the Royal Institute of British Architects.

Applicants for appointment (a) must have experience in the planning and design of buildings for Education purposes, and of the planning and layout of land for Playing Fields.

Applicants for appointment (b) should have experience in the planning and design of buildings normally required by Local Government Authorities.

The appointments will be subject to one calendar month's notice on either side, and to the provisions of the Local Government Superannuation Act, 1937, and the successful passing of a medical examination.

Applications, stating age, qualifications, experience and position with regard to military service, together with copies of three recent testimonials, should be received by me not later than Wednesday, 12th September, 1945, and endorsed "Assistant Architect—(a) or (b)."

HARRY TAYLOR,
Town Clerk.

Town Hall, Stoke-on-Trent.
23rd August, 1945. 617

NANTWICH URBAN DISTRICT COUNCIL.

ARCHITECTURAL ASSISTANT.

Applications are invited for the above appointment in the Engineer and Surveyor's Department, at a salary of £400 per annum, plus bonus, at present £59 16s.

Applicants must be Associates of the Royal Institute of British Architects, or hold equivalent qualifications, and are Registered Architects.

Candidates must have had experience in the design, preparation of working drawings, specifications, etc., for housing and other architectural work normally carried out by a Local Authority, under the direction of the Engineer and Surveyor.

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

Applications, on forms obtained from the Engineer and Surveyor, Mr. E. H. Bailey, F.S.I., M.Inst.M. and Cy.E., Council Offices, Barker Street, Nantwich, stating age, qualifications and experience, accompanied by three recent testimonials, and endorsed "Architectural Assistant," must be received not later than 8th September, 1945.

D. TUDOR EVANS,
Clerk of the Council.

21st August, 1945 616

CITY OF CARDIFF.

APPOINTMENT OF ARCHITECTURAL PRINCIPAL.

Applications are invited from suitably qualified Registered Architects for the appointment of Architectural Principal in the City Surveyor's Department.

Salary £1,000 per annum, plus cost-of-living bonus (at present £59 16s. per annum).

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

List of duties and form of application may be obtained from Mr. E. C. Roberts, City Surveyor, City Hall, Cardiff, and should be returned endorsed "Architectural Principal," to reach the undersigned not later than Friday, the 14th September, 1945.

S. TAPPER JONES,
Town Clerk.

City Hall, Cardiff.
18th August, 1945. 618

CITY AND COUNTY OF BRISTOL.

CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following temporary appointments:—

Eight ASSISTANT ARCHITECTS, with experience in the carrying out of Educational buildings.

Two ASSISTANT ARCHITECTS, with experience in the carrying out of Hospital buildings.

The salaries offered will be in the neighbourhood of £450 per annum, plus war bonus.

QUANTITY SURVEYOR'S ASSISTANT, at a salary of £250 per annum, plus war bonus.

Applications, stating age, qualifications and experience, together with the names of three persons to whom reference can be made, are to be delivered to the undersigned not later than Saturday, the 15th September, 1945.

The appointment will be subject to one month's notice on either side.

J. NELSON MEREDITH, F.R.I.B.A.,
City Architect.

Eagle House, Colston Avenue, Bristol, 1. 612

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.

TWO ARCHITECTURAL ASSISTANTS wanted in London Office of Staff Architect to large industrial company; well trained; good draughtsmen; able to handle large and small jobs from sketch plans to finish; salary £400-£500, according to qualifications. Apply Box 986.

ARCHITECT requires capable Assistant; London West Central district; state experience and salary required. Box 543.

MANCHESTER.—Architectural Assistants required for industrial and housing work; good prospects. Write fully, stating age, experience, qualifications, and salary required, Ernest A. Newton, Leach & Booker, Chartered Architects, 28, Kennedy Street, Manchester, 2. 614

ARCHITECTURAL DRAUGHTSMAN required in Drawing Office in Maidstone district; position offers good prospects for suitable applicant. Write, stating age, experience, and salary required, to Box 613.

ARCHITECT'S ASSISTANT required for small provincial town; principally Rural Housing and Commercial buildings; experience in all scale drawings and details, specifications, surveys, etc. Write, with experience, salary required, and when available, to Sheppard, Lockton & Saunders, 24, Castlegate, Newark-on-Trent. 590

QUANTITY SURVEYING ASSISTANT required for Architects' Office. Apply by letter, giving full details of qualifications and training, and state age and salary required, to J. Amory Teather & Hadfield, Mazda Buildings, Campo Lane, Sheffield, 1. 597

JUNIOR ASSISTANT required; should be interested in exhibition and industrial design, in addition to normal architectural work. Write Misha Black, Design Research Unit, 12, Bedford Square, London, W.C.1. 596

PROGRESSIVE Firm of Architects, with fifty years' standing in the Midlands, have vacancies for one or two experienced Architectural Assistants; good salaries paid to suitable applicants, who must be first-class draughtsmen and well trained for important large scale work; a similar vacancy occurs in our London office. Please state qualifications, age, and experience to Box 600.

ARCHITECT'S ASSISTANT required. Apply, stating age, experience, and salary, to Henry C. Smart & Partners, architects and surveyors, 251-3, Finsbury Pavement House, 120, Moorgate, E.C.2. 591

LONDON SURVEYORS require Architectural Assistant, for preparation of plans for reconstruction of totally destroyed houses, alteration and adaptation schemes. Write fully to Box 519.

A VACANCY occurs for two Architectural Assistants, with a minimum of at least 5 years' experience of preparing plans, details, specifications, etc., in the Architect's department of London office or multiple company; salary £400-£450 per annum, according to grade. Write, stating age, experience, and when available, to Box A.V.8944, 10, Hertford Street, W.1. 608

ARCHITECT'S SENIOR ASSISTANT required in N.E. London; experienced in design of industrial and commercial buildings; state age, experience, and salary required. Box 604

Architectural Appointments Wanted

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

R.A.F. Officer (air crew), with pre-war experience as Architectural Representative, wishes to contact progressive firm with view to engagement on release from H.M. Forces. Box 81.

ASSOCIATE, Public School and University education, able designer and draughtsman, with 20 years' varied practical experience London and country, desires position as Architect. Reply Box 91.

CONTINENTAL ARCHITECT, qualified, many years' experience (steel reinforced concrete), seeks employment as Assistant in London. Box 90.

ARCHITECT (39), A.A. Dipl., A.R.I.B.A., 22 years' extensive, varied experience municipal, county, and private practice, contemporary work, for 5 years (pre-war) control of modern London office, desires senior appointment with firm or group of architects, view partnership, or architect to modern commercial firm; at present serving R.E., India, due release and demob. September. Write BM/DNKR, London, W.C.1, for collection by advertiser end of September. Letters cannot be forwarded India. 87

YOUNG ENGINEERING DRAUGHTSMAN seeks position as a Student Assistant, with view to career in Architect's office. Box 88.

STUDENT, R.I.B.A. (aged 31) requires position Architect's Assistant; South Coast preferred. Box 89.

ASSOCIATE, Dip.Arch. (Major R.E.), extensive general experience, specialising in perspective work, offers services to Architects and Town Planners in England and Northern Ireland; own studio. Box 92.

REGISTERED ARCHITECT, fully qualified (34), seeks post as Architectural Assistant in a London office; quick, neat draughtsman. Box 93.

REGISTERED ARCHITECT, aged 33 years, with good knowledge of quantities, requires position with London or South-East Coast firm of Architects or Surveyors; capable of taking complete charge of small architectural practice. Box 94.

ARCHITECT, 40 (Major R.E., Group 15), pre-war office manager to well-known London architects, considerable experience large scale office and flat buildings in London, and of L.B.A., and contract and building law, offers services in similar capacity; salary £1,000 p.a., or arrangement with view to partnership. Box 95.

A. R.I.B.A. (32), available part-time; London; town planning or modern work. Box 96.

Other Appointments Vacant

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

ARCHITECT'S SECRETARY required; interesting and varied work. Apply Box 545.

Other Appointments Wanted

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

ARCHITECT, in North-West district, offers part-time services, as free lance, in the preparation of schemes, surveys and levelling (own level); car available. Box 573.

EXPERIENCED MECHANICAL DESIGNER desires post in building industry; can design for special purpose or large quantity production; sound knowledge of rotary and reciprocating machines, air and hydraulics, valves, etc.; well versed in modern materials and practice. Box 592.

EXPERT Stress Analyst and Structural Designer, B.Sc., degree, with outstanding record in structural design, offers technical assistance or consultant service to Architects and Structural Engineers, especially those engaging in bold design projects; specialist in welded steel frameworks, reinforced concrete, curved beams, bridges and portals; excellent knowledge of the properties and economic use of light alloy materials; thoroughly conversant with technical literature here and abroad. Box 593.

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 Ministry of Agriculture's Clean Milk Bill, when passed, will mean a large increase in the number of new or modified farm buildings required. The position will be affected also by the findings of the English and Scottish Commissions on this important subject. The service of our Technical Department is available to any Architect who may be consulted in these matters. Write in confidence to: Gascoignes (Reading), Ltd., Berkeley Avenue, Reading.

For Sale

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

ELECTRICITY FOR COUNTRY HOUSE.—Complete equipment for Sale, including 10 h.p. Oil Engine, Electric Generator and Booster Set, Switchboard, Battery, and Motors, 200 volts supply; in good running order; inspection.—Apply Baily, Grundy & Barrett, Ltd., Electrical Engineers, Cambridge. 546

4-SCREW Dumpy Level, by Abraham, Liverpool, complete with carrying case and tripod; also 18-ft. Staff; both in good condition. Offers to Greenland, Shaftesbury Street, Fordingbridge. 'Phone 2287. 576

Property for Sale

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

OFF KINGSWAY.—Cleared site for erection of Shops, Offices and Showrooms; frontages to two streets, 62 ft.; area 7,750 sq. ft.; let temporary tenancy, £125 p.a.; freehold, £18,500. Plan and particulars from Box 589.

HAMPSTEAD—GREENAWAY GARDENS.—Modern Georgian town house; architect designed on spacious lines; 5 principal beds, 3 bath, 3 reception, galleried hall and staircase; ample domestic quarters and garage; temporary occupation by War Dept.; a most attractive house, for early occupation; £9,500, freehold. Box 605.

ABERDEEN PARK, HIGHBURY, N.5.—Exceptional site on private estate, with all services, for good class Houses or Flats; only 3¼ miles City; frontage 355 ft., area 45,500 sq. ft.; major portion vacant possession; freehold, £5,000. Box 606.

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, Gt. Marlborough St., W.1. Gerrard 4223-4224-4225.

F. J. BAYNES, LTD., established over 100 years. Heating, Ventilating and Sanitary Engineers. 99/101, St. Paul's Road, N.1. Canonbury 2552. 584

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

PLASTICS Technologist and Consultant wishes to contact live organisation needing technical assistance on application of synthetic materials. Box 967.

WANTED.—One set of "Arts Et Matiers Graphiques. Please reply to Box 5.

WELL-KNOWN SPECIALIST on building materials re-opening consulting practice, closed during war, is now able to undertake a few non-competitive additional research and technical market investigations; well equipped chemical and physical laboratories. Inquiries to Box 410.

CENTRAL HEATING OIL BURNERS.—Insist on the British-made Parwinac—no stoking, clean, trouble free; no waiting for coal or coke deliveries; available now if oil permit obtainable. Parker, Winder & Achurch, Ltd., Makers, 80, Broad Street, Birmingham, 1. 992

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

CONSIDERABLE Surplus Funds available, at low interest rates, for building finance, property mortages, ground rents, or any similar sound security in sums preferably of not less than £10,000. Chas. B. Buxton, Ltd., Local Authorities' Loans Brokers, 9, Clements Lane, Lombard Street, London, E.C.4. 581

ARCHITECT'S Two-room Office; low rent; next door Trafalgar Square. Write Box 615.

Educational Announcements.

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

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.

MANCHESTER MUNICIPAL SCHOOL OF ART,
CAVENDISH STREET,
ALL SAINTS,
MANCHESTER, 15.
Telephone: Ardwick 3480.

ARCHITECTURE, INDUSTRIAL DESIGN, AND DRAWING AND PAINTING.

SCHOOL OF ARCHITECTURE.
Head of School: A. DOUGLAS JONES, A.R.I.B.A., Dip.Arch.(Liverpool), Athens Bursar.

COURSE—Intermediate: Three years' full-time (inclusive of Probation Year) leading to the Studentship of the Royal Institute of British Architects.

Final: Five years' full-time (including Probationer and Intermediate years) leading to the School Diploma (D.A.Manc.), to the examination for the Associateship of the Royal Institute of British Architects (A.R.I.B.A.), and Registration under the Act.

Part-time Day and Evening Courses for pupils and junior and senior assistants in offices lead to the examinations of the Royal Institute of British Architects.

Fees: £12 12s. for one year's full-time day attendance. Part-time day and evening courses' fees according to scale.

SCHOLARSHIPS, PRIZES, ETC.: Free Entrance, Continuation, and Senior Art Scholarships; School Prizes; Travelling Scholarships.

Session begins 24th September.
Prospectus from the Registrar. 610

THE POLYTECHNIC, REGENT STREET, LONDON, W.1.

SCHOOL OF ARCHITECTURE.

President of the School: SIR BANISTER FLETCHER, D.Lit.(Lond.), P.-P.R.I.B.A., M.Arch., F.S.A., F.R.S.L., F.S.I.
Head of the School: JOHN S. WALKDEN, A.R.I.B.A., M.T.P.I., F.R.I.A.S.

DAY SCHOOL.

The Day School of Architecture is fully recognised by the Royal Institute of British Architects and by the Town Planning Institute. The Final Diploma Examination of the School is a qualification for registration under the Architects (Registration) Act.

The course includes all aspects of Architectural Education, including Town Planning, Interior Design, Structural Design and Equipment, and the Science of Building Materials.

There are also full-time courses in Building, Quantity and Valuation Surveying, Building Technology, Interior Design, and Landscape Architecture.

Session commences 18th September, 1945.

EVENING SCHOOL.

A wide range of professional courses are open to pupils and assistants in the Architectural, Town Planning, and Surveying professions and in the Building Industry.

Prospectuses, giving full particulars of courses, fees, etc., may be obtained on application to the undersigned.

J. C. JONES,
Director of Education.
The Polytechnic, 309, Regent Street,
London, W.1. 562

UNIVERSITY OF MANCHESTER

Faculty of Arts—School of Architecture.

A DEGREE Course extends over a period of five years, and leads to the Degree of B.A., with Honours in Architecture. There is also a Diploma Course and a Part-time Professional Course. Examinations of the School are accepted by the Royal Institute of British Architects as equivalent to the Intermediate and Final Examinations for the Associateship R.I.B.A., and by the Architects' Registration Council (United Kingdom) as a qualification for admittance to the Parliamentary Register established under the Act of 1931.

Division of Town and Country Planning

The Division provides a Preliminary Course, a Certificate Course, and a Diploma Course. The Preliminary Course requires one year of part-time (evening) study, the Certificate Course two years of part-time (evening) study, and the Diploma Course one year of part-time (day and evening) study. Alternatively, under certain conditions, the Diploma Course may be taken over two years of part-time (evening) study. Whilst only qualified candidates are permitted to proceed to the University Certificate or Diploma, the Lecture courses which may be taken separately, are available to members of the various professions and others interested in Town Planning. The Diploma Examination of the School is accepted as equivalent to the Final Examination of the Town Planning Institute.

Prospectus, giving full particulars, may be obtained on application to the Registrar. The Session commences on Thursday, 4th October. 586

NORTHERN POLYTECHNIC
HOLLOWAY, LONDON, N.7.

Principal: T. J. DRAKELEY, D.SC., PH.D.(London), F.R.I.C., F.I.R.I.

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

DAY SCHOOL OF ARCHITECTURE

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

School year begins 24th September, 1945.

Fees—£20 per annum, or £7 per term.

EVENING SCHOOL OF ARCHITECTURE

(Five years' Course recognised by the R.I.B.A. for exemption from the Intermediate Examination.)

New Session begins 24th September, 1945.

Fees from 10s. to 50s. per course according to age of student.

Special Design classes, and lectures on the Theory of Structures, Hygiene, Materials, Specifications, and Professional Practice in preparation for the Final Examination of the R.I.B.A.

ENTRY TO THE SCHOOLS. Intending Day Students are interviewed at any time by appointment. Intending Evening Students will be interviewed from 5.30—7.30 p.m. on 17th and 18th September, 1945, or on any subsequent evening.

Prospectus post free on application.

Telephone: NORth 1686.

Alphabetical Index to Advertisers

	PAGE
Accrington Brick Co.	—
Acoustical Manufacturing Co., Ltd.	xl
Aero Pipe & Glass Co., Ltd.	—
Aldas Electric, Ltd.	—
Air Conditioning & Engineering Ltd.	—
Airscrew Co., Ltd.	—
Aluminium Development Assoc.	—
Anderson, C. F., & Sons, Ltd.	—
Anderson, D., & Sons, Ltd.	—
Ashley Accessories	—
Bailey, Sir W. H., & Co., Ltd.	xviii
Baker, W. A., & Co., Ltd.	xli
Baldwin, Son & Co., Ltd.	—
Barton, Wm., & Sons, Ltd.	—
Bath Cabinet Makers & Artcraft, Ltd.	xlvi
Belling & Co., Ltd.	—
Benjamin Electric, Ltd., The	—
Berry, J., & Sons, Ltd.	xxviii
Birmingham Guild, Ltd., The	xxv
Black & Decker, Ltd.	xxx
Blackburn, Thomas, & Sons, Ltd.	—
Bolton Gate Co., Ltd.	xlv
Braithwaite & Co., Engineers, Ltd.	—
Braby, Fredk., & Co., Ltd.	—
Bratt Colbran, Ltd.	—
Brightside Foundry & Engineering Co.	—
British Aluminium Co., Ltd.	—
British Electrical Development Assoc.	—
British Trane Co., Ltd.	xxxii
Broadcast Relay Service, Ltd.	—
Bull Motors (E. R. & F. Turner), Ltd.	—
Carrier Engineering Co., Ltd.	xlvi
Cattle, R., Ltd.	—
Cellactite & British Uralite, Ltd.	xxxi
Cement Marketing Co., Ltd.	—
Cheecol Processes, Ltd.	xii
Clarke, T., & Co., Ltd.	xlvii
Clarke & Vigilant Sprinklers, Ltd.	xlix
Clark & Fenn, Ltd.	—
Colt Ventilation, Ltd.	xlvii
Constructors, Ltd.	xli
Copperad, Ltd.	v
Cox & Co. (Watford), Ltd.	—
Crittall, Richard, & Co., Ltd.	—
Cutting, R. C., & Co., Ltd.	li
Dawnays, Ltd.	—
Docker Brothers	—
Dreyfus, A., Ltd.	—
Dunlop Rubber Co., Ltd.	xv
Durasteel Roofs, Ltd.	viii
Duresco Products, Ltd.	xx
Dzus Fastener (Europe), Ltd.	—
Electrolux, Ltd.	—
Ellis (Kensington), Ltd.	xix

	PAGE
Ellison, George, Ltd.	xlix
English Joinery Manufacturers' Assoc.	—
Etchells Congdon & Muir, Ltd.	xliii
Evertaut, Ltd.	—
Expanded Metal Co., Ltd.	—
Franki Compressed Pile Co., Ltd.	—
Freeman, Joseph, Sons & Co., Ltd.	xvi
Froy, W. N., & Sons, Ltd.	—
Fullwood & Bland, Ltd., R. J.	xlvi
Fyvie Gate Co.	xxxii
Gaze, W. H., & Co., Ltd.	xlii
General Cable Mfrg. Co., Ltd.	xviii
Gray, J. W., & Son, Ltd.	xlix
Greenwood's & Airvac Ventilating Co., Ltd.	—
Guest, Keen & Nettlefolds, Ltd.	xxxiii
Haden, G. N., & Sons, Ltd.	—
Harvey, G. A., & Co. (London), Ltd.	liii
Hayward-Tyler & Co., Ltd.	xxvii
Hilton, James, & Son (Leigh), Ltd.	—
Hobdell Engineering Co., Ltd.	—
Hope, Henry, & Sons, Ltd.	xxxvi
Hopton-Wood Stone Firms, Ltd.	—
Hunting Aerosurveys, Ltd.	xli
Ilford, Ltd.	—
Imperial Chemical Industries, Ltd.	xvii, xxvi
International Correspondence Schools, Ltd.	ii l
Jenkins, Robt., & Co., Ltd.	ii
Kautex Plastics, Ltd.	—
Kerner-Greenwood & Co., Ltd.	—
Kerr, John, & Co. (M/r), Ltd.	—
Ketton Portland Cement Works	ii
Kingfisher, Ltd.	—
Lacrinold Products, Ltd.	—
Lead Industries Development Council	—
Limmer & Trinidad Lake Asphalte Co.	—
Linden Doors, Ltd.	—
Lockerbie & Wilkinson (Tipton), Ltd.	ii
London Brick Co., Ltd.	xxix
McCall & Co. (Sheffield), Ltd.	iv
McKechnie Brothers, Ltd.	xliv
Magnet Joinery, Ltd.	xxi
Mallinson, William, & Sons, Ltd.	—
Matthews & Yates, Ltd.	xliv
Mavitta Drafting Machines, Ltd.	—
Mellor Bromley & Co., Ltd.	liii
Metropolitan-Vickers Electric Co.	—
Midland Electric Mfrg. Co., Ltd.	—
Midland Woodworking Co., Ltd.	—
Mills Scaffold Co., Ltd.	liv
Moler Products, Ltd.	xlvii
Morris Singer Co.	xxviii
Newalls Insulation Co., Ltd.	xxiv

	PAGE
Newsum, H., Sons & Co., Ltd.	—
Nobles & Hoare, Ltd.	xliii
North British Rubber Co., Ltd.	—
Northern Aluminium Co., Ltd.	—
Oliver, Wm., & Sons, Ltd.	xlix
Peglers, Ltd.	xxiv
Pilkington Bros., Ltd.	xxxvii
Positive Flow Ventilators, Ltd.	—
Powell Duffryn, Ltd.	iii
Pressed Steel Co., Ltd.	—
Prodorite, Ltd.	vii
Range Boilers, Ltd.	—
Redfern's Rubber Works, Ltd.	xli
Restall, Fredk., Ltd.	xvi
Rheostatic Co., Ltd.	xxxviii
Robinson & Kershaw, Ltd.	xxii
Ross, S. Grahame, Ltd.	—
Rownson, Drew & Clydesdale, Ltd.	—
Rubery, Owen & Co., Ltd.	xxxiv
Rushton, J. V., & Co., Ltd.	—
Rustproof Metal Window Co., Ltd.	—
Sadd, John, & Sons, Ltd.	xxiii
Sankey-Sheldon	xiv
Sanders, Wm., & Co. (Wednesbury), Ltd.	—
Sankey, J. H., & Son, Ltd.	—
Scaffolding (Gt. Britain), Ltd.	xxxix
Semtex, Ltd.	—
Sharman & Sons	xlix
Smith & Wellstood, Ltd.	—
Smith's Fireproof Floors, Ltd.	—
Smith, Henry (Constructional Engineers), Ltd.	xlix
Sumerling & Co., Ltd.	—
Sundeala Board Co., Ltd.	—
Sutcliffe, Speakman & Co., Ltd.	xiii
Tentest Fibre Board Co., Ltd.	—
Telephone Rentals, Ltd.	xl
Thompson Beacon Windows, Ltd., John	—
Trussed Concrete Steel Co., Ltd.	—
Tubular Furniture, Ltd.	xlvii
Tudor Accumulator Co., Ltd.	ii
Turners' Asbestos Cement Co., Ltd.	—
Twisteel Reinforcement, Ltd.	ix
Universal Asbestos Mfrg. Co., Ltd.	xliii
Venesta, Ltd.	—
Vulcanite, Ltd.	—
Vulcan Products, Ltd.	—
Walker, Crosweller & Co., Ltd.	xxii
Wardle Engineering Co., Ltd.	—
Ware, W. C., & Sons, Ltd.	viii
Warerite, Ltd.	x
Wimpey, George, & Co., Ltd.	vi
Wood Wool Building Slab Mfrs. Assoc.	—
Zinc Alloy Rust-Proofing Co., Ltd.	liii

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

PAGE

xliii

xlix
xxiv
xxxvii

iii

vii

vii
xvi
xxxviii
xxii

xxxiv

xxiii
xiv

xxxix

xlix

xlix

xiii

xi

xlvii
ii

ix
xliii

xxii

viii
x
vi

iii