FLAT ROOF CONSTRUCTION

HY-RIB

The Combined Centering and Reinforcement . . .

- NO TIMBER SHUTTERING
- CONCRETE SLABS CAST IN SITU
- SPEEDY CONSTRUCTION
- EASY TO ERECT

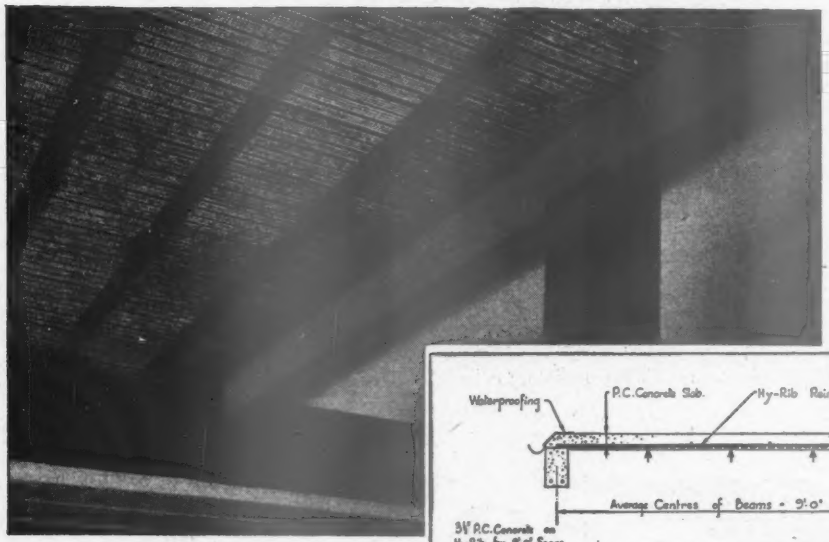
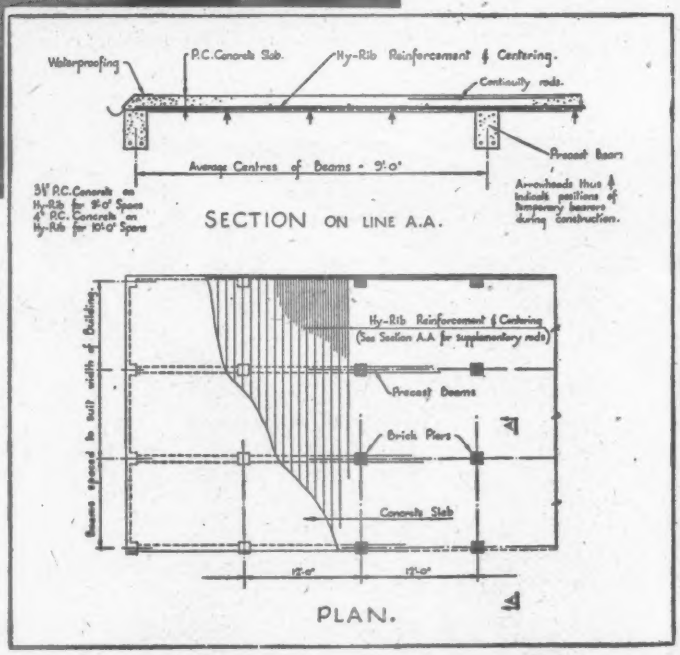


Illustration shows Hy-Rib centering and reinforcement after concrete of roof slab has set and temporary propping removed.

Typical details showing roof construction.



The use of Hy-Rib combined centering and reinforcement effects a double economy as timber shuttering is eliminated and the reinforcing steel is utilised in the constructional stages.

The use of Hy-Rib is a guarantee that the maximum strength is developed in the reinforcing steel. The sheets of Hy-Rib cannot "ride up" into the concrete during construction and become ineffective.

The Hy-Rib system of construction can be carried out by unskilled labour under the control of a competent foreman. Detailed working drawings are supplied for the guidance of the building staff.

HY-RIB SALES • 6 COLLINGHAM GARDENS

EARLS COURT • S.W.5 • PHONE FROBISHER 8141

HY-RIB
COMBINED CENTERING AND REINFORCEMENT

WE'VE GOT YOU COVERED . . . .

not a threat - but a promise!

The experience of the Wilkinson Research organisation covers practically every industrial field. Wilkinson products have made a big name for themselves for 20 years in Mining, Dredging, Quarrying, Railways, Aircraft, Shipbuilding, Iron and Steel, Electrical Engineering and many others no less important.

Many industrial firms are at this moment thankful for the extraordinary capacity of Linatex 95% Pure Rubber to fight the evils of High Abrasion, Corrosion, and Vibration. British Operational Aircraft were thankful for the Linatex self-sealing tank covering and the self-sealing flexible fuel hose. The Flexatex range of flexible hose completely revolutionised existing methods of hose construction, supply and assembly.

The firm of Wilkinson is run by Engineers *for* Engineers, and has got well covered the needs of Industry in the great constructive years ahead. We would like to cover *your* problem, either by research in our own laboratories or by working within your organisation. In either case, you will get the sort of advice that hits the mark.

WILKINSON RESEARCH COVERS ALL INDUSTRY

WILKINSON RESEARCH

WILKINSON RUBBER LINATEX LTD., FRIMLEY ROAD, CAMBERLEY, SURREY. *Tel: Camberley 1595.* Also in Canada, Australia, South Africa, U.S.A., India, etc.

FLAT ROOF CONSTRUCTION

HY-RIB

The Combined Centering and Reinforcement . . .

- NO TIMBER SHUTTERING
- CONCRETE SLABS CAST IN SITU
- SPEEDY CONSTRUCTION
- EASY TO ERECT

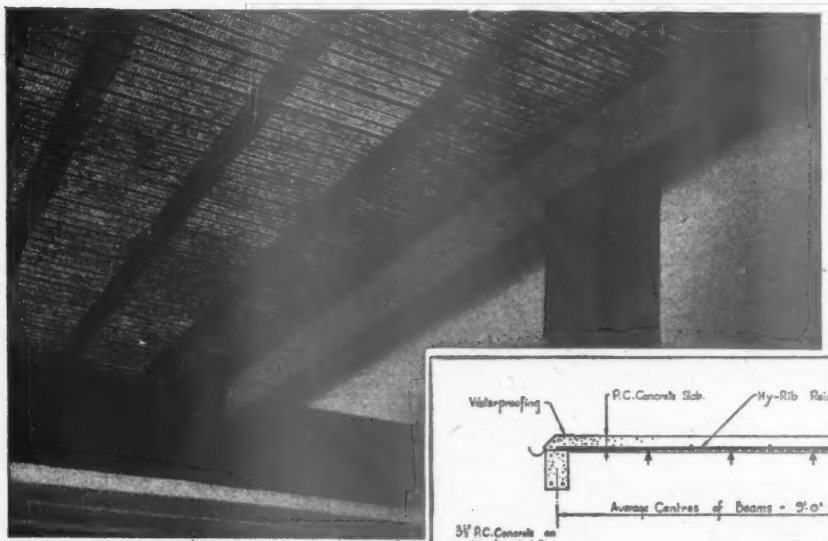
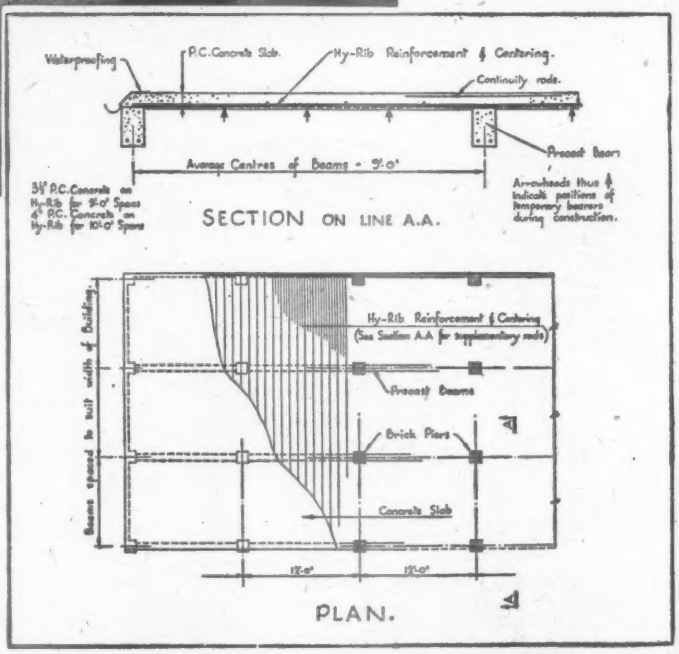


Illustration shows Hy-Rib centering and reinforcement after concrete of roof slab has set and temporary propping removed.

Typical details showing roof construction.



The use of Hy-Rib combined centering and reinforcement effects a double economy as timber shuttering is eliminated and the reinforcing steel is utilised in the constructional stages.

The use of Hy-Rib is a guarantee that the maximum strength is developed in the reinforcing steel. The sheets of Hy-Rib cannot "ride up" into the concrete during construction and become ineffective.

The Hy-Rib system of construction can be carried out by unskilled labour under the control of a competent foreman. Detailed working drawings are supplied for the guidance of the building staff.

HY-RIB SALES • 6 COLLINGHAM GARDENS

EARLS COURT • S.W.5 • PHONE FROBISHER 8141

HY-RIB
COMBINED CENTERING AND REINFORCEMENT

WE'VE GOT YOU COVERED . . . .

Not a threat - but a promise!

The experience of the Wilkinson Research organisation covers practically every industrial field. Wilkinson products have made a big name for themselves for 20 years in Mining, Dredging, Quarrying, Railways, Aircraft, Shipbuilding, Iron and Steel, Electrical Engineering and many others no less important.

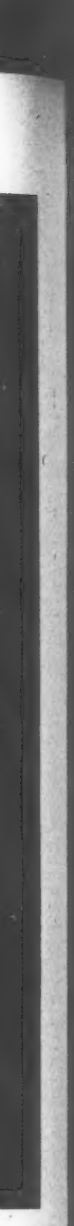
Many industrial firms are at this moment thankful for the extraordinary capacity of Linatex 95% Pure Rubber to fight the evils of High Abrasion, Corrosion, and Vibration. British Operational Aircraft were thankful for the Linatex self-sealing tank covering and the self-sealing flexible fuel hose. The Flexatex range of flexible hose completely revolutionised existing methods of hose construction, supply and assembly.

The firm of Wilkinson is run by Engineers *for* Engineers, and has got well covered the needs of Industry in the great constructive years ahead. We would like to cover *your* problem, either by research in our own laboratories or by working within your organisation. In either case, you will get the sort of advice that hits the mark.

WILKINSON RESEARCH COVERS ALL INDUSTRY

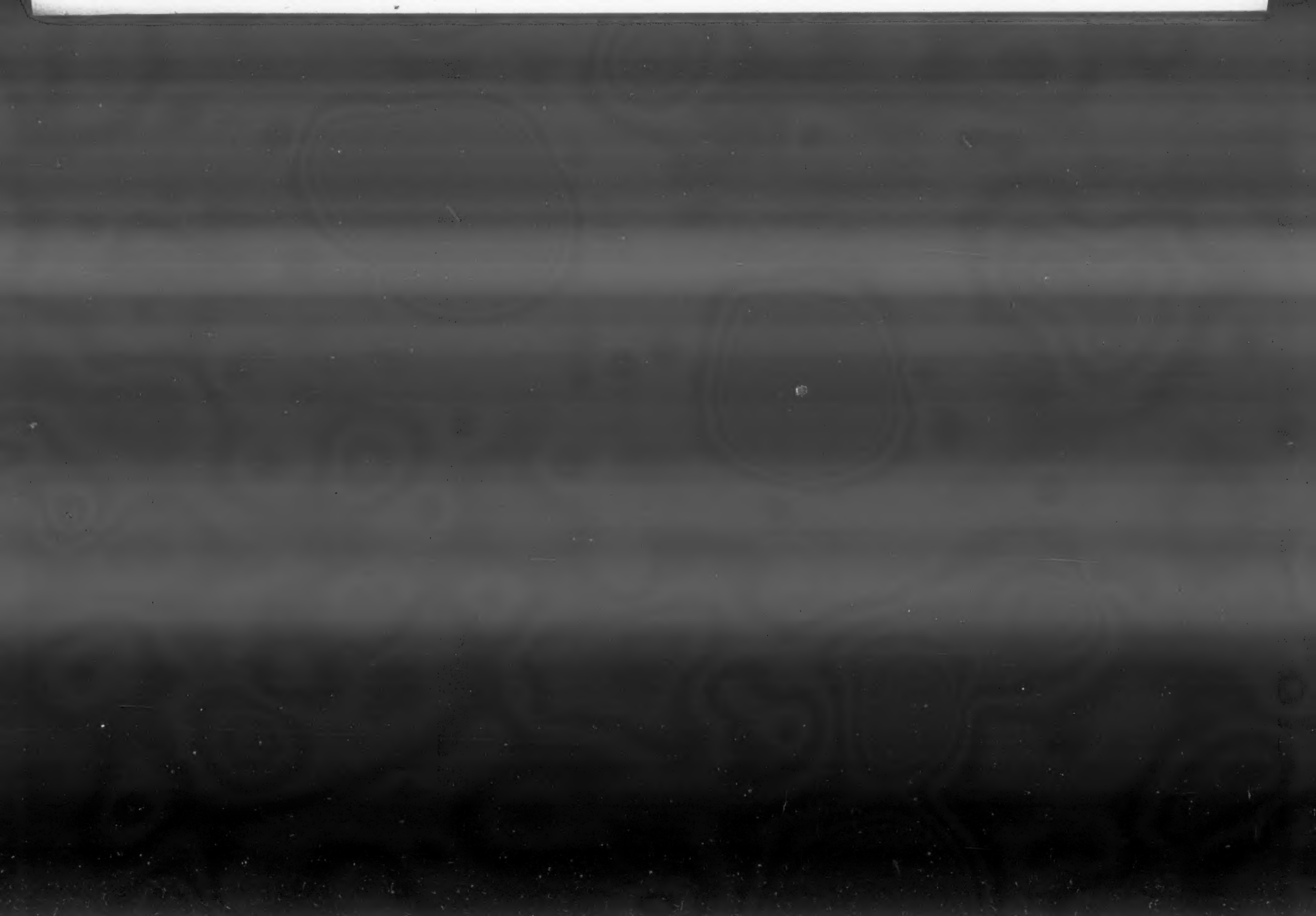
WILKINSON RESEARCH

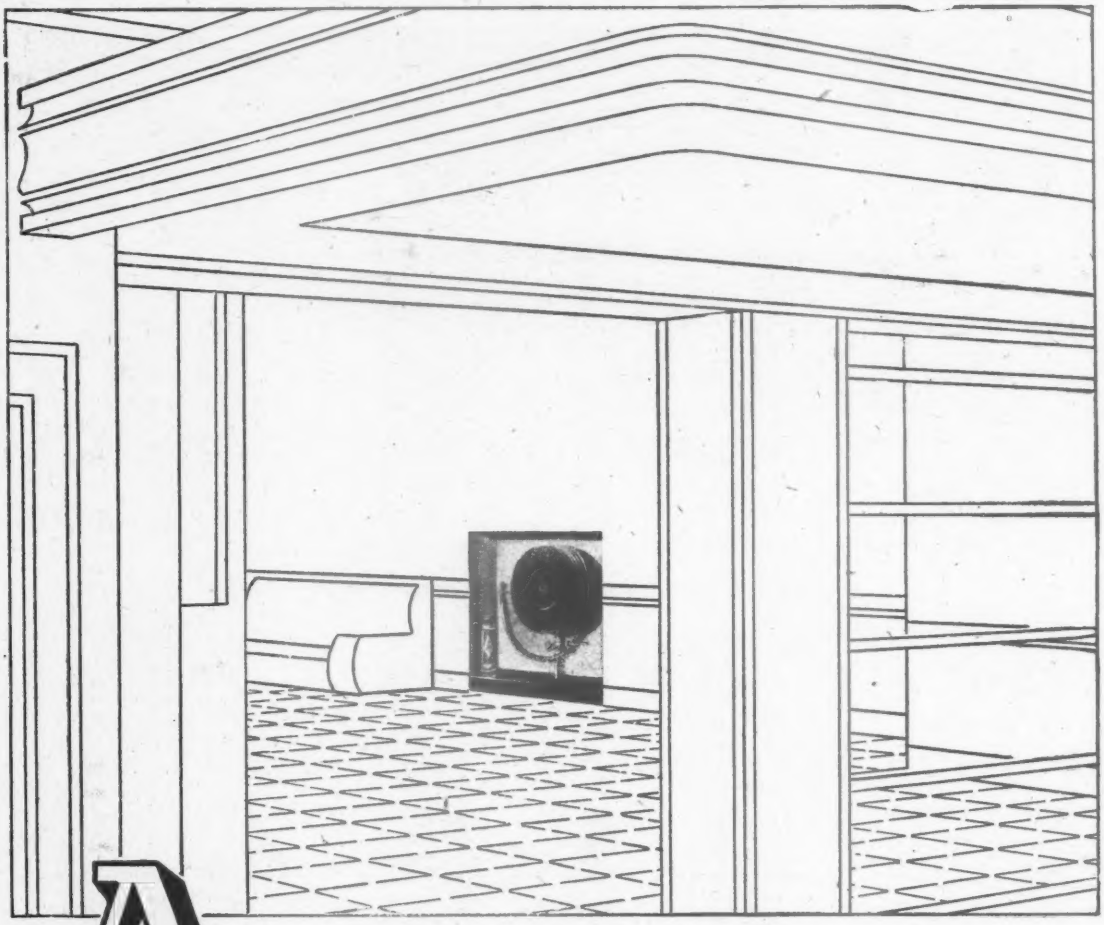
WILKINSON RUBBER LINATEX LTD., FRIMLEY ROAD, CAMBERLEY, SURREY. *Tel: Camberley 1595.* **Also in Canada, Australia, South Africa, U.S.A., India, etc.**



ical
low
ght-
ical
f it.

Vired
ment.
N.W.





Architects blackprint [*Information Sheet No* 951] on application

The Pyrene "Everyway" Hose Reel and the Conquest Soda Acid Fire Extinguisher—each is pre-eminent in its class—can be accommodated in a recess 14in. deep. Full dimensional details are given in Information Sheet 951 (105 Revised). New building calls for modern equipment and copies of the revised Information Sheet will therefore gladly be sent on request.

THE PYRENE COMPANY LIMITED
GREAT WEST ROAD, BRENTFORD, MIDDLESEX
Telephone: EALing 3444.

Pyrene

TOUGH OPPOSITION

It may be a stiff fight, but the elephant can take it, for, like the CROMALIN finish, the elephant's hide offers tough opposition.

No plating process can provide more stubborn resistance to wear and tear than CROMALIN—the finish that writes "finish" to frequent replating costs.

CROMALIN is unique in that it can be applied not only to Steel, Brass and Zinc Alloys, but also to Aluminium and its alloys.

Write to us NOW, and let us tell you more about it.

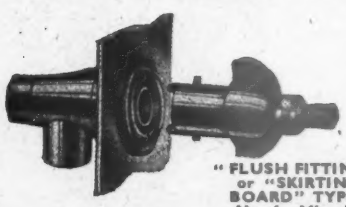
METAL FINISHES LTD., CROMALIN WORKS, NEW SPRING ST., BIRMINGHAM, 18

Plug in to GAS...

"ORDINARY" TYPE
No. 1. Mk. II.
Socket screwed ¾in. B.S.P.
Nose piece of Plug screwed ¾in. B.S.P.

"PEDESTAL" TYPE
No. 2. Mk. II.
With Flange for floor fixing
Socket screwed ¾in. B.S.P.
Nose piece of plug screwed ¾in. B.S.P.

"PEDESTAL" TYPE
with stem cock.
No. 3. M. II.
This only differs from No. 2. in that the stem cock is added.



"FLUSH FITTING" or "SKIRTING BOARD" TYPE.
No. 4. Mk. II.
This type has heavy brass plate 4 ins. long and 3 ins. wide with holes in corners for fixing screws.
Socket screwed ¾in. B.S.P.
Nose piece of plug screwed ¾in. B.S.P.

"THROUGH" TYPE
No. 5. Mk. II.
Socket screwed in ¾in. B.S.P.
M. & F. Threads.
Nose piece of plug screwed ¾in. B.S.P.

Gas automatically turned on

THE ever growing use of gas appliances, both in the home and industry, makes it essential that it should be possible to change them from point to point, easily and safely.

Edgar Flexible Plugs and Sockets are specially designed for this purpose, and being instantaneous in use, are a perfect safeguard against the accidental or careless turning on of the gas.

The neat design of the various types permit gas points to be installed in the most convenient places, unobtrusively and efficiently.

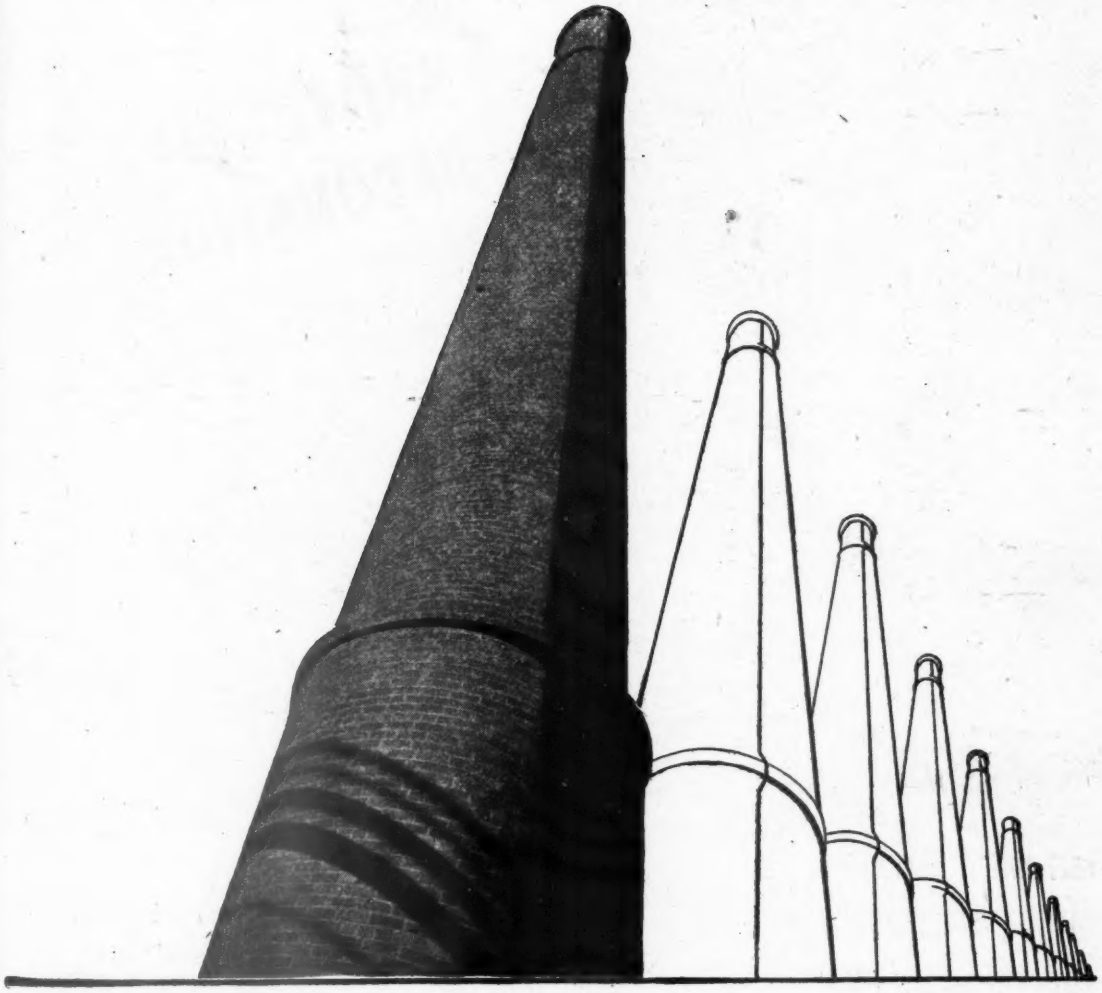
With Edgar Flexible Plugs and Sockets the connecting of a gas fire, poker, iron, blow lamp, or boiler, etc., is a simple one-handed job. Merely insert plug into socket, give a quarter turn and the gas is instantaneously turned on.

In all new buildings specify

EDGAR

FLEXIBLE PLUGS AND SOCKETS

WM. EDGAR & SON, LTD.
BLENHEIM WORKS, HAMMERSMITH, LONDON, W.6.
Telephone : RIVerside 3486



Chimney after chimney . . .
built with PHORPRES bricks..

For many years now the leading firms of industrial chimney specialists have preferred PHORPRES bricks, and one firm alone (Chimneys Limited) has built 259 industrial chimneys using PHORPRES bricks. This type of structure imposes more severe and fluctuating loads than any other. From footings to cap, a standard of performance must be maintained far in excess of that required in any ordinary building.

PHORPRES

LONDON BRICK COMPANY LIMITED

HEAD OFFICE: STEWARTBY, BEDFORD, BEDS. Telephone: KEMPSTON 3131
BIRMINGHAM OFFICE: PRUDENTIAL BUILDINGS, ST. PHILIP'S PLACE, BIRMINGHAM, 3. Telephone: COLMORE 4141
BRISTOL DEPOT: ASHLEY HILL GOODS DEPOT (G.W.R.) ASHLEY HILL. Telephone: BRISTOL 46572

NEWSUMS – *now on Home Service.*

The most modern of all labour saving devices!

The "NEWSUM" PATENT TRADESMAN'S HATCH has already been specified for Municipal and private building schemes in every part of the country.

It is a practical new fitment, and should be used in EVERY home. Perishable goods are kept free from all possible contamination.

The tradesman saves time when delivering and the housewife's frequent distractions to answer the door are abolished. Once the goods have been placed in the hatch they cannot be pilfered from the outside.

There are three compartments designed to receive Bread, Meat and Milk, and once these goods have been deposited from the exterior and the hatch closed, access can only be gained from the interior.

Two loose shelves and a tray for meat are provided, and these can easily be removed for purposes of cleaning.

The hatch is strongly constructed, the doors being faced with resin-bonded (weatherproof) plywood, and it incorporates the Patent Automatic Locking Device.

NEWSUMS

TRADESMAN'S HATCH

Patent in Great Britain. Foreign Patents applied for.

THE ESSENTIAL STANDARD UNIT OF DOMESTIC EQUIPMENT FOR EVERY HOME.

H. NEWSUM SONS & Co LTD.

LINCOLN

Telegrams : Newsums, Lincoln.
Telephone : Lincoln 812 (4 lines)

INEXPENSIVE TO INSTALL · ABSOLUTELY FOOLPROOF

For the homes of tomorrow

— being planned today

Ideal Boilers and Radiators Ltd., introduce the first of the new IDEAL products designed for the post-war home.

IDEAL NEOFIRE

No. 2

(Patent Applied for)

The Ideal Neofire No. 2 provides an open fire for the room in which it is installed and in addition the specially designed cast-iron boiler fitted at the back of the fire supplies warmth for radiators in other rooms and hot water for the usual domestic requirements. The boiler capacity is sufficient to heat approximately 40 square feet of radiation with an average amount of piping and to provide hot water by the "Indirect" method with the No. 00C Ideal Indirect cylinder which has a capacity of 20 gallons. A damper is provided which enables the boiler to be partly shut off when the full output is not required.

The Ideal Neofire burns coke and is fitted with a gas ignition burner. The platework is finished in black vitreous enamel with the gas cock and fitting in chromium plate. The Ideal Neofire is designed for installation in a suitable surround with a standard 16 inch opening.

AVAILABILITY

Whilst production of the Ideal Neofire No. 2 has not yet commenced, supplies will be available and reserved for housing to be erected under the National Housing Scheme.

Full particulars will be sent upon application.

IDEAL BOILERS & RADIATORS LTD · HULL · YORKS

POWER IN HAND

If you've a Van Dorn Tool in your hand, you're holding power, enough for the job, and some in reserve.

The Van Dorn Sander will finish woodwork, remove rust and scale, surface concrete and stone—and used with a cup wire brush it is ideal for removing rust and old paint from tanks and other large metal surfaces.

The Sander is one of the wide range of Van Dorn Tools, whose portable power will save hours of time, labour and operator fatigue.

"Van Dorn"

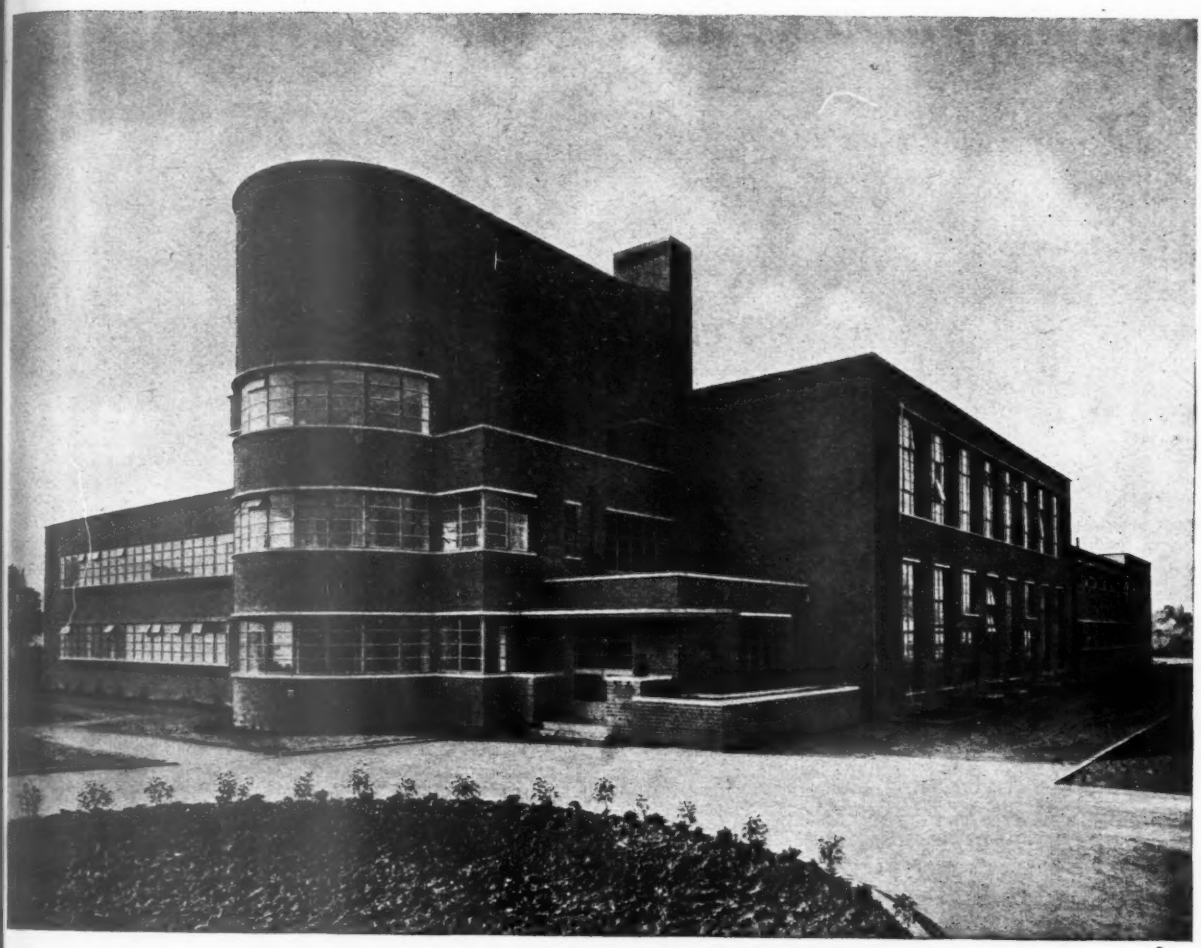
PORTABLE ELECTRIC TOOLS

Obtainable only from Van Dorn Distributors

VAN DORN ELECTRIC TOOLS

HARMONDSWORTH MIDDLESEX Phone: West Drayton 2681/6

Smee's



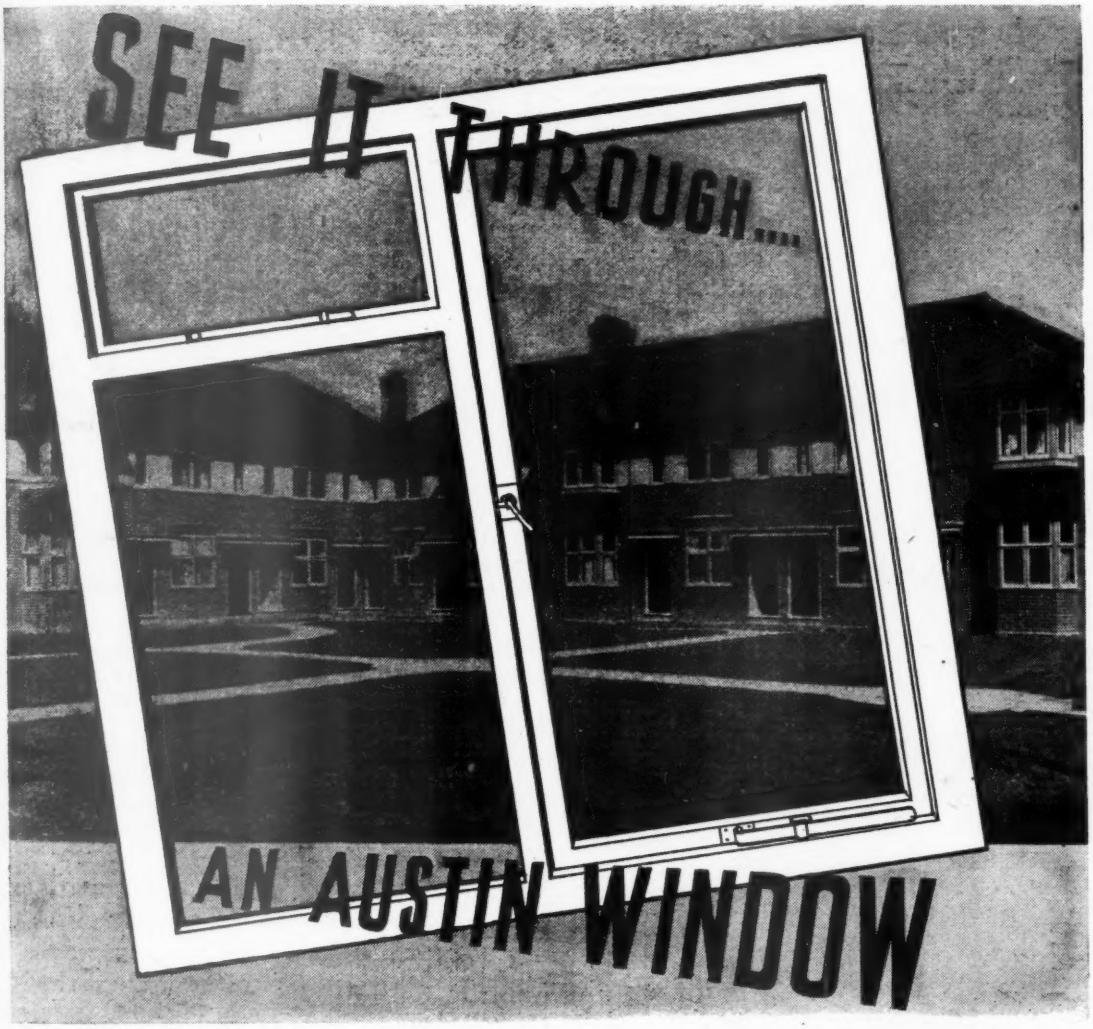
VISION

EVERYTHING was first a picture in the mind which vision developed in mass and line and detail. Today we are far from the blind ignorance which levied the window tax. We are in the age which demands the abundant enjoyment of light and air—the age of spacious and broad windows. BEACON have done much to further this idea, by providing a range of Metal Windows which give the widest possible scope to the architect for converting his "vision" into splendid reality.

JOHN THOMPSON BEACON WINDOWS, LTD.
BEACON WORKS WOLVERHAMPTON

Telephones: Telegrams:
Bilston 41944/7 (4 lines) Windows, Wolverhampton
London Office: Imperial House, Kingsway, W.C.2
Telephones: Temple Bar 3216 (3 lines)

BEACON
METAL WINDOWS



Good design and skilful seasoning make it possible to use window sections which are slighter than they used to be whilst still retaining the sturdiness for which Austins Windows have always been famous.

Our post war windows are made to the EJMA design which is simple to produce, good looking, uses a minimum of timber, and can now be supplied from stock against the appropriate timber licence.

AUSTINS
OF EAST HAM

LONDON, E.6. [LIMITED] GRAngewood 3444

Stoneham & Kirk

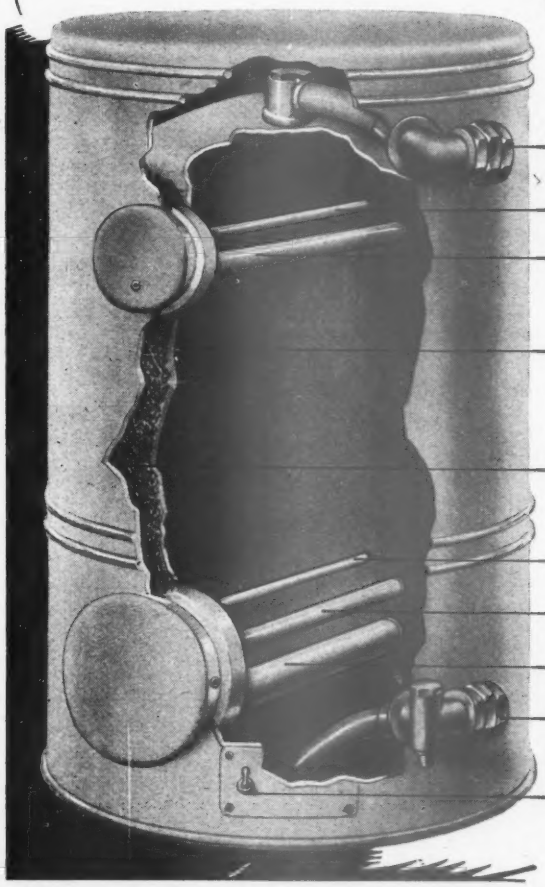
HOTRIC

Duplex Electric

THERMAL STORAGE HEATER

gives constant hot water from every tap

IN the 20 gallon Hotric Duplex, Architects and Builders find the answer to domestic water heating problems. As the name implies, two sets of thermostatically controlled heating elements combine maximum efficiency with exceptional economy of operation. One heating element is permanently connected for normal requirements, and the other switched on when required, for use where baths, etc., are wanted. Completely trouble free, robust and attractively finished, the Hotric Duplex fits well into pre-fabricated plumbing units and has been specially developed for all new Government Housing Schemes.



Odourless, Fumeless, Needs no Flue. The Hotric Duplex can be placed anywhere. No flues or vents are required and installation costs are light.

Negligible Maintenance Costs. Simplicity of construction ensures trouble free operation. The heater units will give years of service and can be removed without draining tank.

Water Always Steaming Hot. Steady constant control of water temperature is characteristic, the automatically operating thermostats ensuring this. Water temperatures are controllable between 80°F. and 190°F.

Minimum Radiation Losses. The cork insulation packing between the inner and outer tank is so effective that if no water is used for 24 hours, radiation losses can be made good by consumption of less than one unit of current.

HOTRIC LTD.

Head Office: Hotric Works, Broxburn West Lothian, Scotland

Sales Office: 198, Fore Street, Edmonton, London, N.18. *Phone:* Tottenham 1311

c Duplex,
find the
er heating
, two sets
heating
efficiency
operation.
ently con-
, and the
d, for use
d. Com-
ctractively
well into
has been
Govern-

no Flue.
nywhere.
installa-

s. Sim-
uble free
vill give
removed

Steady
rature is
perating
er tem-
en 80°F.

The cork
ner and
o water
sses can
ess than

D.

oxburn

reet,
nham 1301

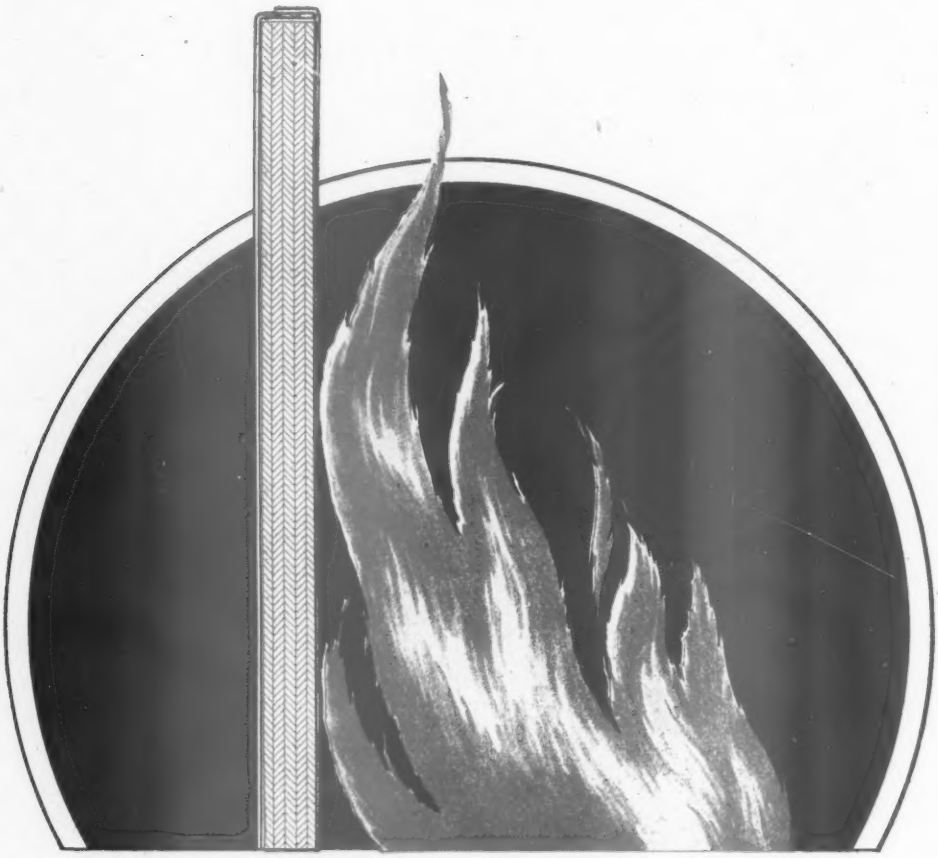
A New method of Building

The Wates precast concrete permanent houses are constructed with concrete units of which a specimen walling unit is shown on left. This system employs a widely distributed, cheap and well understood material, requires no steel frame, is capable of widespread production in existing factories and calls for no new machinery. The method of construction is extremely flexible and can be applied to almost any plan for houses or other buildings. Approved by H.M. Government for Local Authority Housing Schemes.

WATES BUILD

WATES LTD., BUILDING AND CIVIL ENGINEERING CONTRACTORS

1258-1260 LONDON ROAD, LONDON, S.W.16. TELEPHONE: POLlards 4401 (15 lines)



Fire-resistant

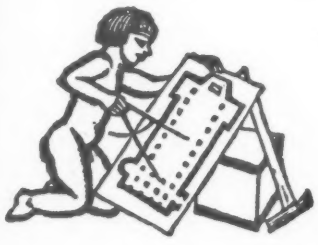
. . . not like asbestos, of course, but for all practical purposes. The metal skin protects the plywood, the plywood gives stiffness to the metal.

Ideal for partitions in all manner of installations: light, ledgeless, vermin-proof. Supplied in hygienically sealed panels ready for placing in situ, seldom needing supports or framework.

FLEXO PLYWOOD INDUSTRIES, LTD., SOUTH CHINGFORD, LONDON, E.4
Telephone: Silverthorn 2666 (7 lines) (Associated with Cork Manufacturing Co., Ltd.)

FLEXOMETAL

In common with every other periodical this JOURNAL *is rationed to a small part of its pre-war 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 DECEMBER JANUARY AND FEBRUARY

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. *Permanent House Plans.* Exhibition at the Art Gallery, New Street. The plans were selected in a National Competition organised by The House Building Industries Standing Committee. DEC. 7-22

LONDON. *Subject Matter in Liturgical Art,* by Miss Joan Morris. December 6 and 13. Seven shillings for a single lecture. All are at 5.30 p.m. (Sponsor, Church Artists' Agency.) DEC. 6-DEC. 13

British Building Stones. Small display of photographs and rock specimens, illustrating the main British building stones, their distribution and their uses. At the Ministry of Town and Country Planning, 32, St. James's Square. The display illustrates a single item in a survey of the national resources on which the Ministry's Research Division is engaged. It is an experiment in the presentation of research work in a form which would interest the public. (Sponsor, MOTCP.) DEC. 6-DEC. 8

Winter Exhibition of Water Colour Drawings and Paintings. By Henry S. Merritt and Laurence Clarke. At the Batsford Gallery, 15, North Audley Street, W.1. (Sponsor, B. T. Batsford, Limited). 10 a.m. to 4 p.m. Saturdays 10 a.m. to 12 noon. DEC. 6-DEC. 22

NALGO Exhibition. At the Geffrye Museum, Kingsland Road, E. (Sponsor, BIAE.) DEC. 6-15

G. L. E. Metz. *The Electrical Engineering Industry in After-War Economy.* At the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. (Sponsor, IEE.) 5 p.m DEC. 6

Gillian Harrison. *Heating and the Family Home.* At the Planning Centre, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) Buffet lunch 12.45 p.m. to 1.15 p.m. Talk and discussion 1.15 p.m. to 2.15 p.m. DEC. 6

John Farleigh, President, Arts and Crafts Exhibition Society. *Design and Book Production.* At the London School of Hygiene, Gower Street, W.C.1. Chairman, Francis Meynell. (Sponsor, DIA.) 7 p.m. DEC. 7

James Laurance. *Painting: An Exposition of the Ministry of Works Study Report No. 5.* Introduction by Dr. L. A. Jordan, of the Paint Research Station. At the RIBA, 66, Portland Place, W.1. (Sponsor, RIBA Architectural Science Board.) 5.45 p.m. DEC. 7

Arthur Ling. *Town Planning in Action: The Moscow Plan.* Fourth and last of a series of introductory lectures to the study of Soviet architecture. At the RIBA, 66, Portland Place, W.1. 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. DEC. 11

Exhibition of Hampstead Artists, Past and Present. At Studio House, Haverstock Hill, N.W.3. Works are being lent by Messrs. Colnaghi, Agnews, Lefevre, Frost and Reed, as well as private collectors and public galleries. Many of the pictures in the historical section have never before been exhibited. (Sponsor, Hampstead Artists' Council.) DEC. 16 onwards.

C. G. Stillman. *School Planning and Construction.* At the RIBA, 66, Portland Place, W.1. (Sponsor, RIBA.) 6 p.m. DEC. 11

J. F. Eccles. *The Creation of a New Town.* At the Livingstone Hall, Broadway, Westminster, S.W.1. (Sponsor, TPI.) 6 p.m. DEC. 20

Dr. H. Andrew of the Building Research Station. *Plastering.* ASB Lecture at The RIBA, 66, Portland Place, W.1. (Sponsor, RIBA.) 5.45 p.m. JAN. 2

Schools. Speakers, J. H. Newsom, County Education Officer of Hertfordshire, and others, and showing a film *Children's Charter.* At the AA, 34-36, Bedford Square. W.C.1. (Sponsor, AA.) 6 p.m. JAN. 8

W. R. Watson. *The Control of Electrical Installation Work.* At the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. (Sponsor, IEE.) 5 p.m. JAN. 10

Country Road Lighting. Discussion opened by C. R. Bicknell at the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. (Sponsor, IEE.) 5 p.m. JAN. 14

1945 AA Students Panto. *It's Out of All Proportion.* At the AA, 36, Bedford Square, W.C.1. December 11, 12 and 13, 7.30 p.m. December 14, 6.30 p.m. Tickets 5s., 3s. 6d. and 2s. 6d., must be booked in advance from Miss I. L. E. Griessmann, Panto Secretary. Cheques made payable to AA Students' Club. DEC. 11-14

Professor G. I. Finch, Scientific Adviser to the Ministry of Home Security. *The Need for Scientific Research into the Prevention and Extinction of Fires.* At the Royal Society of Arts, John Adam Street, W.C.2. (Sponsor, RSA.) 1.45 p.m. FEB. 13

Gordon Stephenson. *The Planning of Residential Areas.* At the RIBA, 66, Portland Place, W.1. (Sponsor, RIBA.) 6 p.m. JAN. 15

A. Ramsay Moon. *Shop and Site Welding.* At the Institution of Civil Engineers, Great George Street, S.W.1. (Sponsor, ICE.) 5.30 p.m. JAN. 15

NEWS

THURSDAY, DECEMBER 6, 1945
No. 2654. VOL. 102

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

★★★

Professor W. G. Holford, Director of Research, Ministry of Town and Country Planning, is to be released by the Ministry during his appointment as consultant, together with Dr. Charles Holden, on the CITY OF LONDON RECONSTRUCTION SCHEME.

The suggestion that town planning experts should be appointed was made in July by Mr. W. S. Morrison, the Minister of Town and Country Planning in the last Government, when he turned down the plan submitted by the City of London Corporation. See ARCHITECTS' JOURNAL, August 2, pages 75 and 76, and August 16, page 111.

Applications are invited from architects for the APPOINTMENT OF DEPUTY BOROUGH ARCHITECT OF NEWPORT, Mon., at a salary of £650 per annum, rising by annual increments of £50 and £100 to £800 per annum, plus cost of living bonus of £59 16s.

In the advertisement appearing in our issues for November 22 and 29, the salary to be reached eventually was incorrectly given as £600 instead of £800. The corrected advertisement appears on page L of this issue.

From AN ARCHITECT'S *Commonplace Book*

THE LOST GLORY OF WESTMINSTER HALL. [*From* The Houses of Parliament, *by Hans Wild and James Pope-Hennessy (Batsford).*] From the fourteenth century until the opening of the nineteenth, Westminster Hall had two chief uses. It was the recognised and only scene for coronation feasts and for other solemn festivities. It was also the place in which the Courts of Chancery and the King's Bench sat. . . . because of the presence of the Law Courts, Westminster Hall became a sort of shopping street. Bookstalls and law-writers' booths jostled each other along the walls, and by the late seventeenth century drapers and riband counters were briskly trading next to these . . . But with the withdrawal of the Law Courts to the Strand, and the banishment of shops and booths for ever, Westminster Hall was doomed to emptiness, since the English public do not rush to see and hear their representatives debate. Such apathy is evidently a cause for serious reflection or regret, but the inveterate romantic alone will repine over the lost glory and the present lifelessness of Westminster Hall. This stupendous Chamber, which with the Tower of London has seen more of the chief events and personages of English history than any other building in the country, is now used sometimes for a lying-in-state or for a luncheon to Dominion representatives. Its floors echo otherwise to the policeman's tramp, the tourist's shuffle or the smart step of the Member of Parliament in his black felt hat. Only to those who love to cultivate nostalgia's pallid blooms, only to those with a gleaming talent for evocation, could one recommend a series of visits to Westminster Hall.

Mr. Lewis Silkin, Minister of Town and Country Planning has appointed Mr. D. M. Lawrance, B.Sc., F.S.I., Barrister at Law, TO SERVE ON THE CENTRAL COMMITTEE ON ESTATE DEVELOPMENT and Management.

Mr. Lawrance was previously Secretary of the Committee, but was unable to continue owing to pressure of work at the College of Estate Management, where he is a Director of Studies. The new Secretary of the Committee is Mr. Myles Wright, A.R.I.B.A.

A plea for the consideration of HOUSING AS PART OF THE GENERAL BUILDING PROBLEM facing the country was made by Mr. J. S. Galbraith, President of the London Master Builders' Association, at a dinner in Hounslow.

Mr. Galbraith said that the actual problem of housing should be considered under the following headings:—1. The restoration or rehabilitation of those houses and other dwelling places damaged by enemy action. 2. The replacement of those properties destroyed by the same means. 3. The provision of living accommodation for those without it. 4. The replacement of obsolete property by new and the raising of the general standard. 5. The making-up of the arrears of maintenance, now long overdue in many cases, to prevent further decay. Had anybody, he asked, attempted to define the respective priority of these needs; if not, how could they be carried out in an orderly fashion? But other buildings had been damaged or destroyed by enemy action. These included factories, workshops, offices and shops, schools and other educational establishments, churches, libraries, and other similar buildings, hospitals, nurseries, clinics, etc., public houses, cinemas, theatres, Government and other public buildings, to say nothing of the House of Commons. Moreover, there were vast arrears of maintenance to these buildings to be carried out. Finally, the needs arising from the resiting of industry, replanning, and the normal expansion of the country, to say nothing of the considerable building works required to house the new departments which are constantly being set up, or were in prospect for the considerable extension of education establishments. These, said Mr. Galbraith, are the problems that face the building industry. Sooner or later they must be solved. He said: In the first place I should like to see the Government prepare a carefully considered and orderly programme of the building needs of the country during the next few years, based on the labour and materials immediately available and taking into account those likely to become available. Such a programme must be nation-wide in its scope, but it must take into account the particular needs of particular towns and districts. Obviously, London and other badly blitzed places present an entirely different problem from those which are undamaged. The plan should provide for the full employment of all the resources available, both employer and employee. It should be carried out under the direction of fully qualified professional and other properly trained individuals, and in its actual execution should be free of Government or local interference. There should be as little direction of labour as is possible. Once the plans were made the Government should not deviate from them, except in most exceptional circumstances.

★

A committee of experts has been appointed by the Minister of Town and Country Planning TO ADVISE ON HISTORIC BUILDINGS.

The Minister of Town and Country Planning has appointed a committee of experts to advise him upon all matters connected with the administration of Sections 42 and 43 of the Town and Country Planning Act, 1944, which deal with the preservation by local authorities of buildings of special architectural or historic interest. The chairman of the committee will be Sir Eric MacLagan, Director of the Victoria and Albert Museum, 1924-1945. Other members will be: Mr. G. H. Chettle, Inspector of Ancient Monuments, Ministry of Works; Sir Alfred W. Clapham, Secretary, Royal Commission on Historical Monuments (England); Mr. S. E. Dykes Bower, F.S.A., F.R.I.B.A.; Sir Cyril Fox, Director, National Museum of Wales; Professor V. H. Galbraith, Director, Institute of Historical Research; Mr. W. H. Godfrey, Director, National Buildings Record; Captain H. S. Goodhart-Rendel, F.R.I.B.A., 1937-9; Professor W. G. Holford, Director of Research, Ministry of Town and Country Planning; Mr. Marshall Sisson Member of Committee, Society for the Protection of Ancient Buildings; Mr. John Summerson, Curator of Sir John Soane's Museum; Professor Geoffrey F. Webb Slade Professor of Fine Art, Cambridge Secretary: Mr. Anthony R. Wagner, Richmond Herald.

★★

On Tees-side a new steel plant, THE FIRST UNIVERSAL BEAM MILL IN THIS COUNTRY, is to be built by Dorman Long and Co., at a cost of about £8,000,000.

Announcing details of the scheme, the company state: The new installation will be erected on a site of 650 acres between their existing Cleveland and Redcar works at the mouth of the river Tees. The universal beam mill will produce a broad flange section not hitherto rolled in Great Britain, and will revolutionize some 75 per cent. of the steel joist production of the country. The new sections give greater strength for an equivalent weight of steel and also reduce the man-hours required for fabrication, thereby effecting a considerable reduction in the erected cost of steel structures. Designed for a capacity of 350,000 tons of universal beams per annum, the new mill will be based on the latest American methods, but incorporating British practice essential to meet the special requirements of home consumers of structural steel. A large new open-hearth steel plant will be installed on the site so that the beam mill may be supplied with high quality constructional steels at minimum cost. The company has also approved an expenditure of over £1,000,000 at its Cleveland works for the installation of a central ore unloading, ore preparation and sintering plant. The company states: The installation will permit the largest ships engaged in the ore carrying trade to be expeditiously handled, and the time required for discharging ore cargoes will be halved. In addition, first-class facilities for dealing with rail-borne materials will be provided. The plant will be capable of handling over 2,000,000 tons of imported and local home ores per annum, and will serve the blast furnace units of the whole group, including those supplying the new steel works. Cheaper iron manufacture will be achieved by better preparation and more economical handling of the blast furnace materials in this new plant.

Sun Power Direct

A view from inside the Solar House, the prototype of a prefabricated flexible system now being developed in America. The chief interest of the house lies in the way it is heated. The rays of the winter sun are used direct through the double-glazed panels to warm the house. In the summer, wide projecting eaves keep the sunlight out of the rooms, all of which face south. Supplementary heat is provided by hot air ducts in the floor, a new application of a very old method, the hypocaust. The house is fully described and illustrated on pages 411 to 414 of this issue.

★

Mr. Lewis Silkin, Minister of Town and Country Planning, has apppointed Mrs. Gerald Haythorne thwaite and Sir William Gavin, C.B.E., TO SERVE ON THE NATIONAL PARKS COMMITTEE.

The National Parks Committee was set up in July last, under the Chairmanship of Sir Arthur Hobhouse, to consider the proposals made by Mr. John Dower in the Report on National Parks in England and Wales (Cmd. 6628), of May, 1945. Mrs. Gerald Haythornthwaite is Honorary Secretary of the Joint Committee for the Peak District National Park, and of the Sheffield and Peak District Branch of the Council for the Preservation of Rural England, and a member of the Executive Comittee of the CPRE, and of the Standing Committee on National Parks. Sir William Gavin, C.B.E., is Chief Agricultural Adviser and Chief Liaison Officer to the Ministry of Agriculture and Fisheries, Member of the Potato Marketing Board, the Agricultural Mortgage Corporation, and the Council of National Institute of Agricultural Botany. He was awarded the Gold Medal for Research, Royal Agricultural Society, 1912.

★★

The Competition, promoted by the Thistle Foundation, for designs for the proposed buildings of the Foundation at Edinburgh has been WON BY STUART R. MATTHEW of Edinburgh.

The other awards were: Second, G. Hamilton Gould and Bevil Greenfield, London; third, John Needham, Dundee. The designs of John P. Tingay, of Eastcote, Middlesex, and W/O. Christopher Pearce, R.E., and W/O. Robert Slater, R.E., of Paiforce, are commended as having points of special interest and merit. The Assessor was Mr. A. G. Henderson, of John Keppie and Henderson, architects, of Glasgow. All the designs are on exhibition at the Royal Scottish Academy, Princes Street, Edinburgh, until December 16. Week days, 10 a.m. to 5 p.m.; Sundays, 2 p.m. to 5 p.m.

Mr. L. Silkin, Minister of Town and Country Planning, has appointed Mr. T. Alwyn Lloyd, F.R.I.B.A., and Mr. Herbert Jackson, F.R.I.B.A., to prepare a co-ordinated outline PROVISIONAL PLAN FOR SOUTH WALES and Monmouthshire Development Area (with the exception of the Borough of Pembroke).

Tunbridge Wells Civic Association has published A SEVEN POINT PLAN for the development of the town.

The Association urges: A green belt, better schools and community centres, more modern hotels, more impressive buildings and streets, better theatre and music facilities, and brighter amenities for young people.

PREFABRICATION AND THE BUILDER

WE have already pointed out that very many architects have little to say in favour of prefabrication. Among the builders there is much talk of the virtues of private enterprise and traditional materials, though at the same time it is freely admitted that the number of houses required is so large that there will not be enough craftsmen to go round. Several of the prefabricated houses are not put forward as a *better* method of building than bricks and mortar, but simply as a method of building houses without employing bricklayers and plasterers. Why then is it generally assumed that builders are even more opposed to prefabrication than architects? To tell the small builder that the brick is a prefabricated unit and that he has therefore been building prefabricated houses all his life is too grossly superficial to carry any weight. If we are to understand the problem we must look more deeply into the structure of the building industry as a whole.

The latest date for which accurate statistics are available is October, 1943, a time when it was very generally being said that the small builder was being overlooked and that all the work was being done by the large firms. Yet at this date, out of a total of nearly 41,000 firms in the industry, nearly 37,000 firms were employing less than 20 men each, the *average* number of men employed by them being 4·2. And at the same time they were carrying out about one quarter of the amount of work done—£7·1 out of a total of £28·9 millions per month. In peace time most of these small firms would be earning their livings through repairs and small house building, and it is necessary to understand why they should be opposed to new methods of building.

Looking through a list of the various methods of prefabrication which have so far been suggested, one finds one or two new firms, and a few more who have made reputations in other industries, but by far the greater proportion of them are the work of builders. It is not likely, then, that they are unpractical from a building point of view. The explanation seems to lie in the fact that the majority of the systems are being sponsored by the bigger builders, who are accustomed to using mechanical plant on a fairly large scale. Wall panels weighing up to half a ton, and the cranes to handle them, are mere routine for the firms who have been on such work as Mulberry, but for the small man they are impossible.

It seems, therefore, that the small builder most needs a system of prefabrication in which the units are not too heavy to be erected by hand, say two hundredweight as a maximum. This system may be based on a standardized house and allow no flexibility of planning whatever, but it will be of much greater use to the builder if it is a system of *building* which can be applied equally well to shelter of all kinds. For many small builders this system would mean little or no change

in their normal methods, for it has always been quite a common practice to subcontract the majority of the work to small gangs of craftsmen who, working regularly together, will give a price for the brickwork or for any other part of the structure or finishes. But in approaching a problem of this kind the builder tends to think in terms of the trades to which he is accustomed; he thinks in terms of brickwork and does not realize that he is merely subcontracting the walling. If a prefabricated walling unit will do the job as well and save him money it should not be impossible to persuade him to use it. The main reason, of course, is fear of the unknown and the desire to revert to the well-known and safe methods of the inter-war years. But prefabrication in one form or another is inevitable. Builders are now in much the same stage as were the livery stable proprietors at the invention of the horseless carriage. If they do not exploit new methods other firms will be attracted to the industry, and ultimately the more enterprising firms who have learnt about prefabrication will be the ones to survive.

Mr. Bevan, quite rightly, is looking for a system of prefabrication which will suit the small man, and the small man, in his turn, must be co-operative enough to make use of it.

The Architects' Journal

War Address: 45, The Avenue, Cheam, Surrey

Telephone: Vigilant 0087-9

NOTES & TOPICS

HOUSING MANAGEMENT

There is one reproach that can never be levelled against our present system for the management of municipally owned housing estates. It does not suffer from too much uniformity. On the contrary, there is about it a spacious air of freedom, a feeling that, if your qualifications for priority in being given a house are negligible in one area, a move across a local government boundary may well bring you near the top of another council's list.

*

On the whole that is a good thing. A housing estate cannot be managed like a calculating machine, and if Whitehall laid down too many rules the local officials would soon unconsciously become machine-minders, not men with the direct responsibility for human well-being.

*

On the other hand, there are times when local rules and conventions must conform to a broad national standard. The pressure of the demand for municipally built houses now, and that to be expected for some time to come, makes the present one of those occasions when a lack of basic uniformity would in fact result in a lack of basic justice. It is, therefore, very appropriate that there is now available a Report on the Management of Municipal Housing Estates, prepared by a sub-committee of the Central Housing Advisory Committee and adopted by the Ministry of Health itself. It is equally fortunate that this Report itself is a common-sense document. It contains a number of statements that verge on the platitudinous, but then common sense so often does just that.

*

The bulk of the Report has, very naturally, what might be called a short-term approach. Its main concern is to see that steps are taken to ensure that the moet deserving, using that term in its widest sense, do get such houses as are available now. There are some. There are some temporary houses; some requisitioned houses; there are even some vacancies through natural causes. The Report blesses the points system adopted by many Councils but rightly emphasises that points should be used to classify applicants into groups, not to determine the final choice of tenant.

*

In fact, the urge that the Report shows in favour of a direct personal relationship between landlord and tenant, both in the selection of the tenant and in the training of managers who will subsequently represent the landlord in the eyes of the tenant, is all to the good. As the Report says, "A human problem is involved which needs the human touch." Platitude or not, this is a truth that can too easily be overlooked.

*

From the point of view of the planning of new building, one of the most important sections of the Report is that which deals with the use of existing accommodation. A certain proportion of houses (although a remarkably small one) are in fact under-occupied, and there the problem at the moment is to find alternative accommodation to enable the small family, or perhaps single person, to move, and so free a house which will take a larger family.

*

The Report does well in emphasising the desirability of local authorities assisting, both financially and otherwise, local housing associations to help in meeting this demand for blocks of one- and two-roomed flats. Local housing associations can be of the greatest practical value to a community. Not only do they supply a need. They can, in design and administration, set a standard.

RAILROAD TO DEMOCRACY

Subduing an irresponsible eyebrow which raised itself at the very thought of a railway company practising democracy, I am agreeably surprised to hear of the way in which the LNER has been canvassing public opinion on the design of new passenger coaches.

*

This revolutionary step was taken by presenting passengers with a pictorial questionnaire very much on the same lines as the American example illustrated in these columns of June 29 last year. Alternative features which might be embodied in new coaches were illustrated, and passengers were asked to show which of these alternatives they preferred.

*

Over 17,000 people responded—no doubt elbowing each other violently in their struggles to extract pencils from waistcoat pockets without falling off the suitcases and kitbags on which they were sitting in the corridor. In other words, 80 per cent. of the questionnaires were completed; not only did people give direct answers to the direct questions asked, but, says the LNER, they made "many helpful additional suggestions."

*

Now the evidence is being sifted, and soon the designers of LNER rolling-stock will know whether their customers want saloon coaches or separate compartments, level or sloping seats, restful colours or gay colours and pattern for interior decoration, and other relevant facts. It seems, though, that the realisation of these facts is a matter for the not-very-near-future, as the LNER has already produced designs for a New 1945 Standard Coach without waiting for the answers to the questionnaire.

The plans of this coach show several changes from pre-war design which will be generally regarded as improvements. The windows are larger and better spaced in relation to the compartments, and the doors have been moved towards the centre, with transverse passages dividing the run of compartments into blocks.

*

This innovation cuts down the average distance between one's seat and the nearest door, while the transverse passages make convenient passing-places for those people who *will* walk up and down the corridor even when they don't have to.

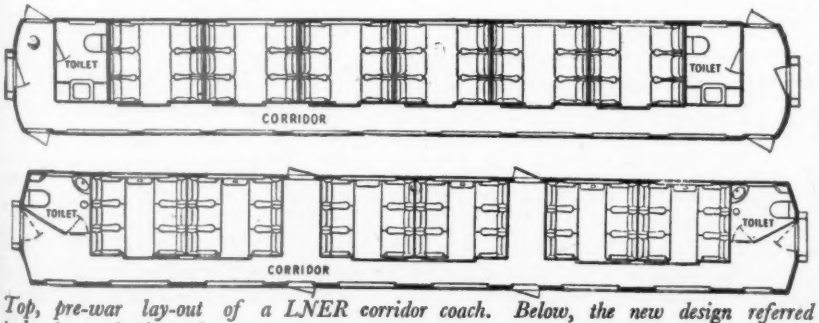
*

Most people have had some pretty hard thoughts about rail travel in wartime. Perhaps the LNER's newly-demonstrated interest in what its passengers want is a sign that even a smoke-blackened soul is never beyond redemption.

STOP PRESS

The following figures on the LNER questionnaire have come to hand at the moment of going to press: 58.2 per cent. voted in favour of compartment coaches as against 40 per cent. who preferred the open saloon coach and 1.8 per cent. (probably standing in the corridor) who didn't give a damn either way. Other preferences: 88 per cent. for bigger windows, 72 per cent. for individual lighting control, 75 per cent. for restful colours in interior decoration. On the question of *Ladies Only* compartments, 46.1 per cent. wanted them, 47.9 per cent. didn't. Among those who wanted them, men outnumbered women by two to one. Vive misogyny.

ASTRAGAL



Top, pre-war lay-out of a LNER corridor coach. Below, the new design referred to by Astragal this week.

LETTERS

Stuart D. Lay, F.I.E.S.

Howard M. Robertson, M.C.; F.R.I.B.A., S.A.D.G. President, The Building Industries National Council

C. H. Barnett

J. L. Musgrave, M.Inst.C.E., M.I.H.V.E.

Electric Light

SIR,—Misunderstanding by architects and illuminating engineers of one another's problems and ideals is, I feel sure, due to incomplete knowledge on both sides, and is detrimental to all concerned.

In your leading article I think I can detect that annoyance with apparently obtuse unreasonableness which is usually a product of misunderstanding.

Your criticisms are severe—and most of them are true—but I think they are misdirected.

Illuminating engineers have not been responsible for the horrid examples of lighting to be seen on every hand, any more than architects are to blame for the preponderance of ugly and inconvenient houses.

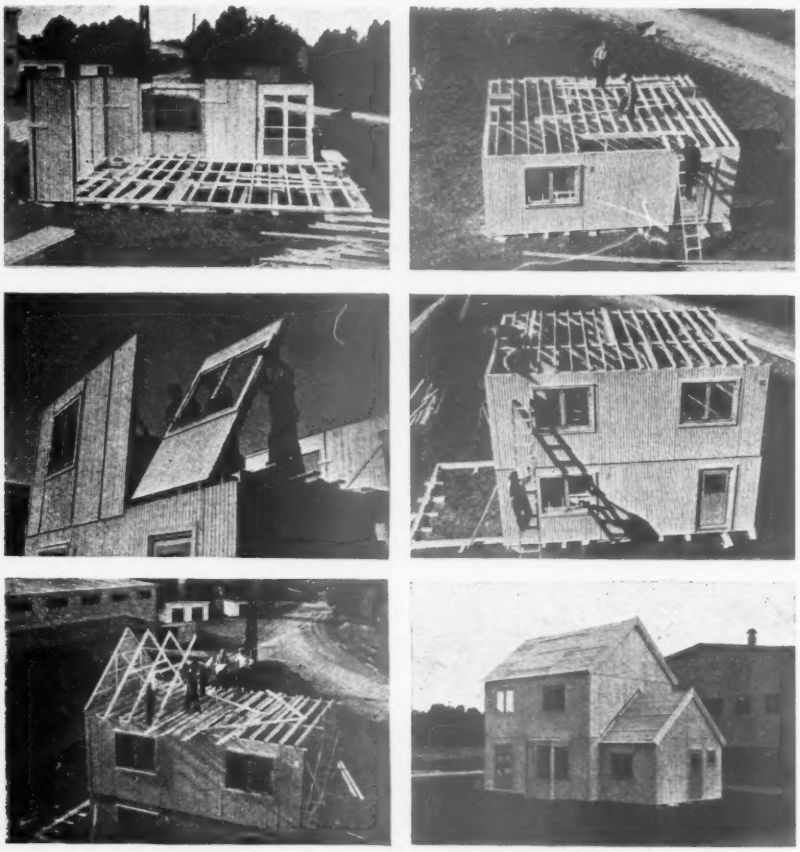
If I build a house and do not employ a qualified architect, I cannot blame your profession for the result; nor can you blame ours if you do not employ a qualified illuminating engineer for your lighting schemes.

We willingly bow to your superior ability in the design of buildings. May I ask that you do the same for us in the realm of lighting, and allow us to co-operate with you to abate the horrors you mention.

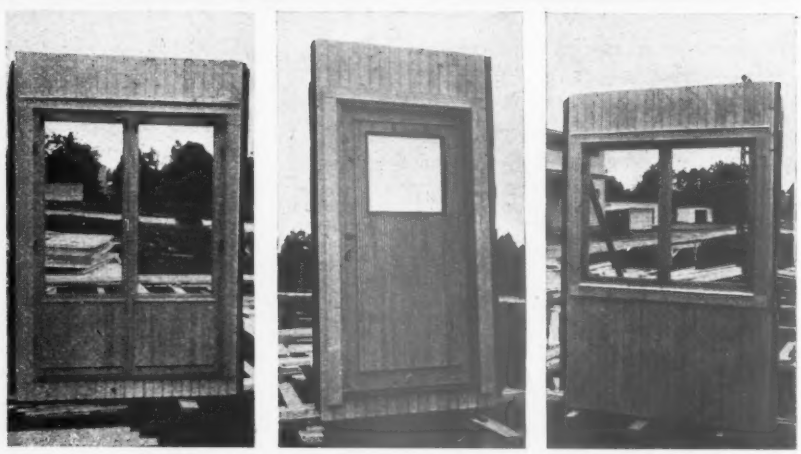
Lighting is not as simple a subject as it seems at first sight, and I would like to correct some misapprehensions about fluorescent lighting evident in your article.

In the first place fluorescent lamps must usually (though not always) be shielded to avoid glare.

BUILDING A SWEDISH PREFAB



Progress photographs showing the trial erection of one of the Swedish timber prefabricated houses—Type A for English rural areas—now being imported by the Ministry of Works. Below, three typical wall units.



This is not opinion, but well documented fact.

If it is decided to use bare, unshielded lamps it is necessary to provide the right surroundings.

Secondly, I am willing to demonstrate that specular reflections can, in certain circumstances, be more annoying with fluorescent than with ordinary gas-filled lamps.

It is true that the stroboscopic effect can be mastered, but not yet by the phosphorescence of the luminescent powders as you suggest.

Replacements of fluorescent lamps can hardly be called frequent, as their average life is about three times that of gas-filled lamps; and as for these replacements outweighing in cost the saving in current, I shall be happy to prove to your satisfaction that in the majority of cases fluorescent lighting is cheaper than a comparable installation using any other source of light.

Stocksfield. STUART D. LAY.

BINC Congress

SIR,—*Apropos* of Astragal's comments, I would like to say that the absence of definite resolutions was intentional on the part of the Congress Committee. It did not denote a lack of planning beforehand, indeed the question of how best to make use of the subject matter presented to the Congress was given much prior thought.

BINC, after its experience in the 1943 Congress, decided to formulate its programme and policy *after* the Congress, and not *during* it, and to sift the contributions made before producing its findings. This seemed to us a more effective method, and liable to produce more considered results, as resolutions are apt to be moved and debated in an atmosphere of emotion (and warm air) not always conducive to clear thinking.

HOWARD M. ROBERTSON,

London President, BINC

Salaries

SIR,—I have read an advertisement for the appointment of a technical assistant with qualifications, etc., by the Skipton Urban District Council. The salary offered is the amazing sum of £240-£300.

I would like to point out to any other local authority that the minimum wage a man has to earn in order that his son may collect a full grant in any major scholarship is now £7 10s. a week.

Like so many other people have said before, I would like to repeat:—It is time something was done.

C. H. BARNETT,

Liverpool Second Year Student

Space Heating

SIR,—May I refer to your valuable leading article on Space Heating and suggest that the heating engineers' alternative aim should be to maintain structures at such a temperature that the occupants are comfortable. As stated in your leading article, the human body must lose heat at a proper rate; for this reason it is desirable that the body should be surrounded by relatively cool air; radiation from the slightly warmed structure will regulate the rate of cooling.

To warm the structure of a building by space heating is not economical, and, as by this method the air necessarily must be warmer than the structure, body cooling is retarded and dryness of breathing passages occurs.

It is simpler and less expensive to warm the structure by embedded hot-water pipes as in the embedded-panel system, than by heated air circulated through flues as suggested in the latter part of your article. Providing the temperature of the internal face of the structure is right, about 63° to 65° Fah., whether water or air or electricity is used is immaterial. With such conditions consistently maintained, comfort is possible in air temperatures of 55° to 58° Fah., colds and sore throats would rarely occur, and the incidence of rheumatic diseases would almost disappear. Thermostatic regulation is essential.

As water circulating temperatures 75° to 80° Fah. will produce the conditions outlined above, the Heat Pump becomes a practical and an economical proposition.

For the dwelling house of the future a fabric temperature throughout of about 58° Fah. with supplementary radiant warming when required, appears to represent the ideal conditions for health, comfort and economy.

Totteridge J. L. MUSGRAVE

The south side of the house showing the eaves projection which allows the sun's rays to penetrate into the rooms in winter but keeps them out in summer.

SOLAR HOUSE

OF FLEXIBLE UNIT CONSTRUCTION

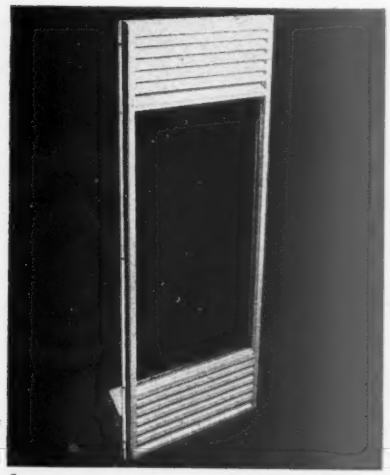
DESIGNED BY GEORGE F. KECK

GENERAL.—This house has been sponsored by the firm of Green's Ready-Built Homes of Illinois and the prototype illustrated here has been built on a site at Rockford, Illinois. The object of the venture is to provide a prefabricated system of house construction in which standard parts can be applied to variable plans for a one-storey, solar-orientated, panel-floor heated house with no basement at a cost of 6,000 to 7,000 dollars excluding land. This is a new approach in that the emphasis in the USA has hitherto been on the 3,000 dollar prefabricated home.

All main rooms face south. Almost the whole of the south wall of the house is glazed and has a projecting eave overhang of 3 to 4 feet. This eave shuts out the direct rays of the high summer sun and keeps interiors cool, but in winter the sun's low swing fills the rooms with warmth and light, supplementing the mechanical heat of the house. It is claimed that fuel bills can be reduced by as much as 30 per cent. by this method.

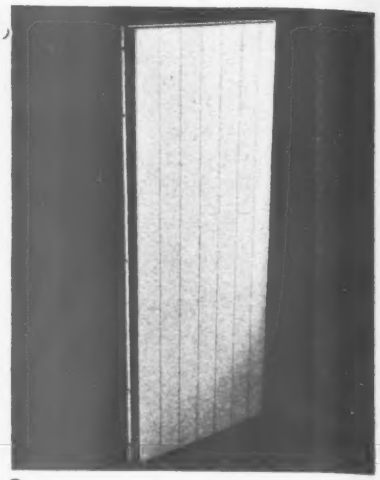
The method has, of course, greatest application to sunny climates like the middle-west of the USA where more than half the winter days are sunny. Nevertheless even on cloudy days some heat from the sun can be captured.

PLANNING.—Planning is flexible, being restricted only by the modular width of the wall units. A very great variety of plans is possible and additions can easily be made to existing houses. The plan of the prototype illustrated here has a pleasantly free and spacious quality marred only by



1

2



3

4

5

6

7

8

9

The various wall units based on a modular width of 3 ft. 3 in. *1, exterior glazed panel with top and bottom ventilating louvres having a flap hinged at the bottom for closing off the louvre. 2, solid exterior panel with top louvre. 3, solid exterior panel. 4, exterior panel with fixed double glazing. 5, exterior glazed panel with bottom louvre. 6, exterior door panel. 7, sun louvre used between rooms externally under eaves. 8, interior door panel. 9, interior partition.*

SOLAR HOUSE OF FLEXIBLE UNIT CONSTRUCTION

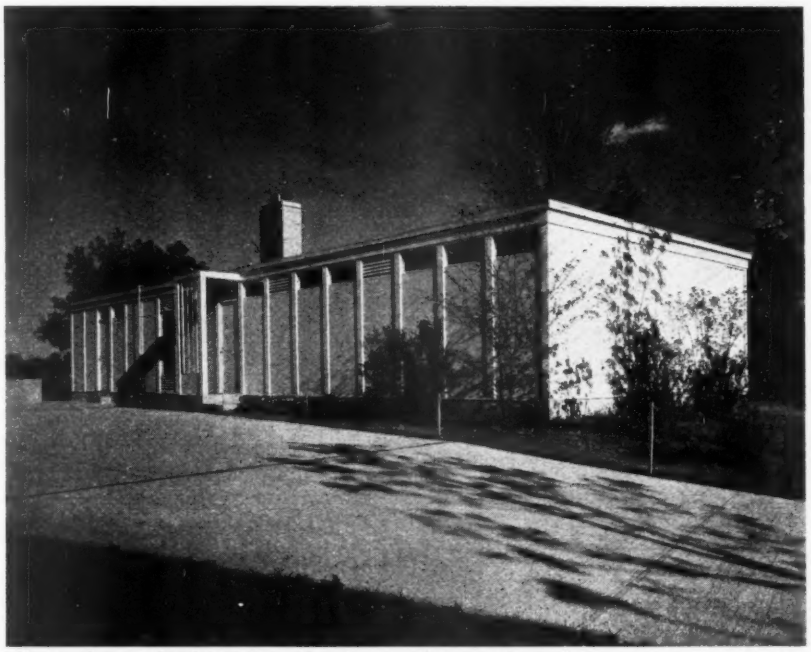
the meanness of the entrance corridor. Folding walls can be pulled out to form an extra bedroom or to separate the living room from the dining room.

CONSTRUCTION. — This is mainly of timber and plywood units having a modular width of 3 ft. 3 in. The house is erected on poured concrete foundation walls extending below the frost line, and having a 12 in. wide base graduated to 8 in. and then to 4 in. for the section above ground. The wall panels are bolted to these foundation walls. In the space which they enclose is laid a layer of gravel on which rest the main supply and return ducts of the heating system. The area between the ducts is filled in with concrete, a screed is laid and finally the floor finish of tiles. The tiles themselves are hollow and contain secondary heating ducts. They are jointed in mortar with a sand finish and along the joints in both directions run reinforcing rods.

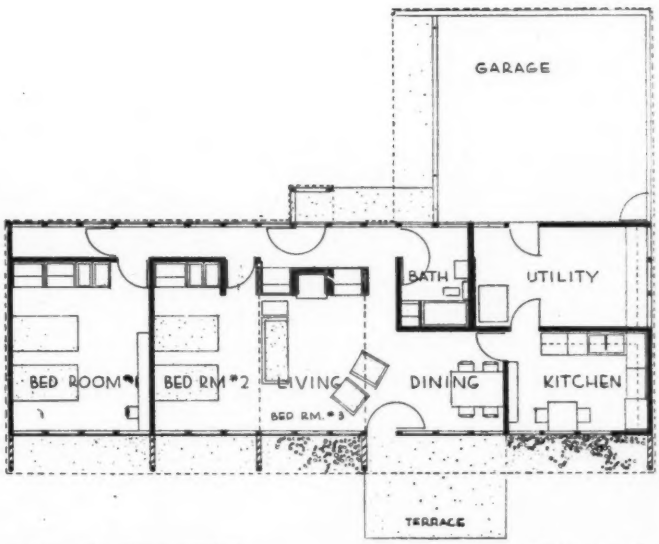
The standard glazed external panels serve a dual purpose; they provide solar heat and also insulation from heat loss, being composed of two thicknesses of glass with a sealed ½ in. air space. Ventilation is controlled by top and bottom louvres which are screened and storm-proof.

The slag-topped roof is level and in the summer months it holds a thin sheet of water to help coolthe house. The total weight of the wall and roof units for this model is 34,000 lb. exclusive of the floor which consists of 1,200 hollow tiles weighing 35 lb. each or a total of 42,000 lb. The tiles are transported direct to the site by the tile manufacturer. Roof panels weigh about 550 lb. each.

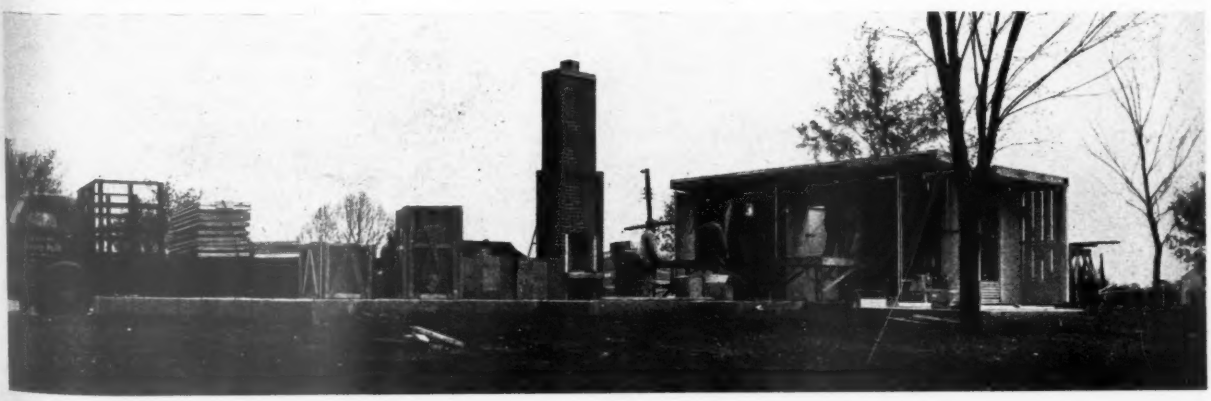
The prototype house was built in April of this year. When foundation, heating system, floor, rough plumbing and chimney were ready, the trucks arrived with roof and

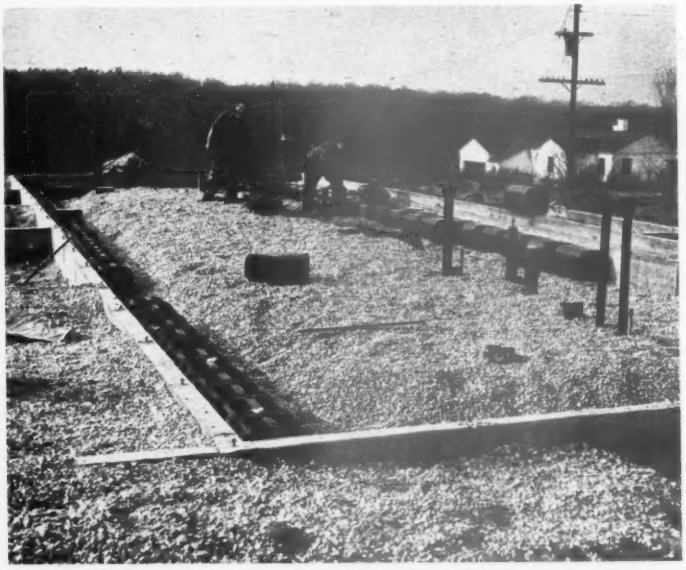


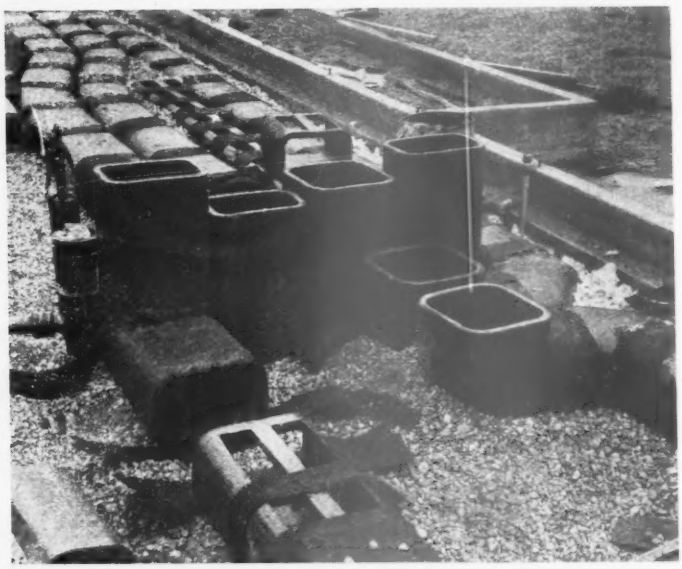
Above, the north elevation and entrance. Below, plan of the prototype and view during erection of a roof unit.

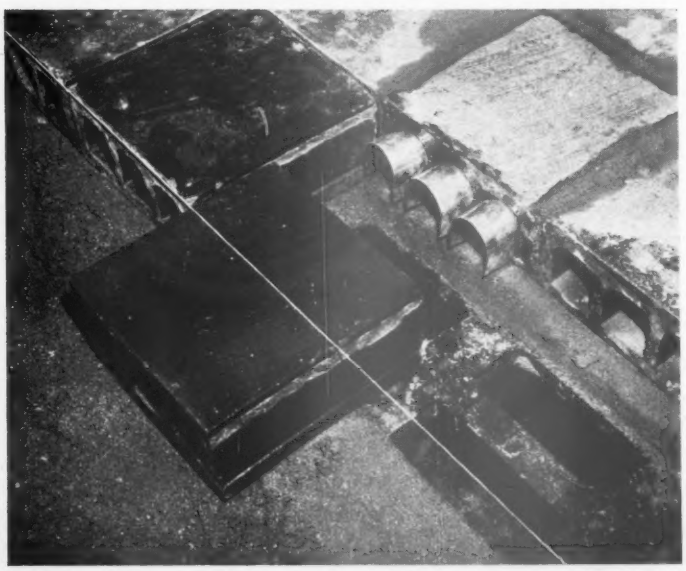


PLAN OF PROTOTYPE [Scale: $\frac{1}{16}$" = 1' 0"]









wall panels and erection was completed in 14 hours. The day was bitterly cold and it is claimed that if the weather had been better, it could have been completed in daylight hours.

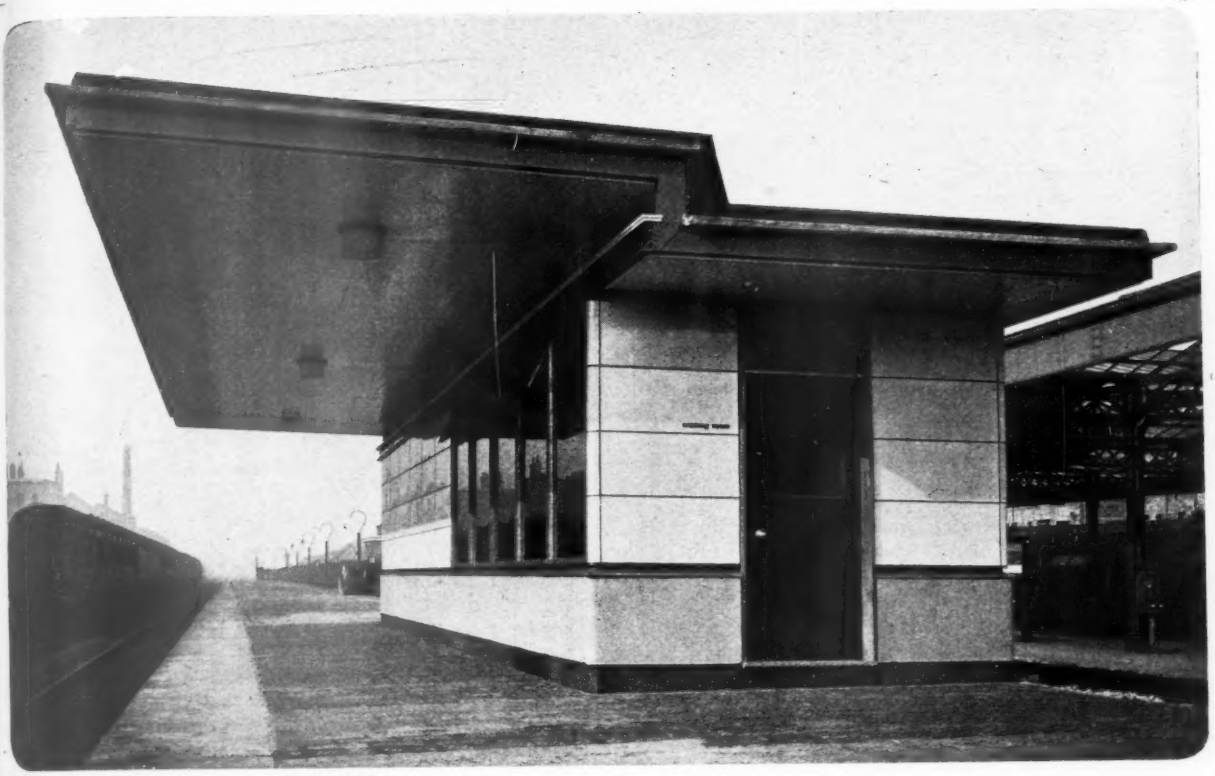
HEATING.—A gas-fired heating unit, in the utility room (it could be fired by oil or coal) forces warm air through ducts in the tile floor, giving radiant floor heat. The heating is thermostatically controlled and the temperature of the floor will never rise above 85° F. and this high only in very cold weather.

Main supply ducts leave the heater and extend along the north side of the floor. At intervals these ducts are perforated on top, allowing the hot air to pass from them into the ducts in the hollow floor tiles. The hot air passes along these secondary ducts across the house from north to south. Here they enter the return main duct back to the heating unit where the air is reheated and recirculated.

Mastic is applied to the joints of the duct units, tar-paper wrappings being used as temporary ties. In this first house, short metal inserts have been used to join the ducts between tiles to prevent mortar dropping into the ducts.

Above the gas-fired heating unit in the utility room. Left top; the concrete foundations showing the main feed and return hot-air ducts laid on gravel. Left centre, close-up of the hot air ducts; in the right foreground are the ends of the main flow and return ducts of the closed recirculation system. Left bottom, a point where the main supply duct is perforated, allowing the hot air to pass into the hollow tile floor ducts; the metal joints prevent mortar falling into the tile ducts.

SOLAR HOUSE OF FLEXIBLE UNIT CONSTRUCTION



Above, a general view of the finished job. Below, the jointing of the steelwork at the top of one of the steel columns, showing the cranked rolled steel channels. The building has been erected at Queens Park Station

EXPERIMENTAL STATION BUILDING

DESIGNED BY THE LMS ARCHITECT'S OFFICE

GENERAL—The design of this experimental station is the result of some years of development work in the office of the Company's Architect Mr. W. H. Hamlyn, F.R.I.B.A. The idea of the prototype station building originated from a number of reports on the technical requirements of railway stations prepared between 1940-2. These investigations brought out certain desirable characteristics for station buildings which may be summarized as :—

(1) Flexibility of construction in order to meet changing conditions or increases or modifications of accommodation.

(2) Speed of erection in order to interfere as little as possible with traffic.

(3) Materials with special qualities of finish, thermal insulation, etc., but not necessarily making high calls upon building labour.

(4) Strength sufficient to withstand special conditions of vibration and atmosphere and generally of robust character.

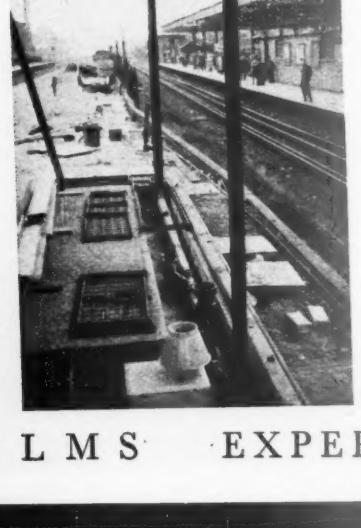
(5) Low maintenance costs with ease of replacement of parts and the retention of a smart appearance by simple cleaning.

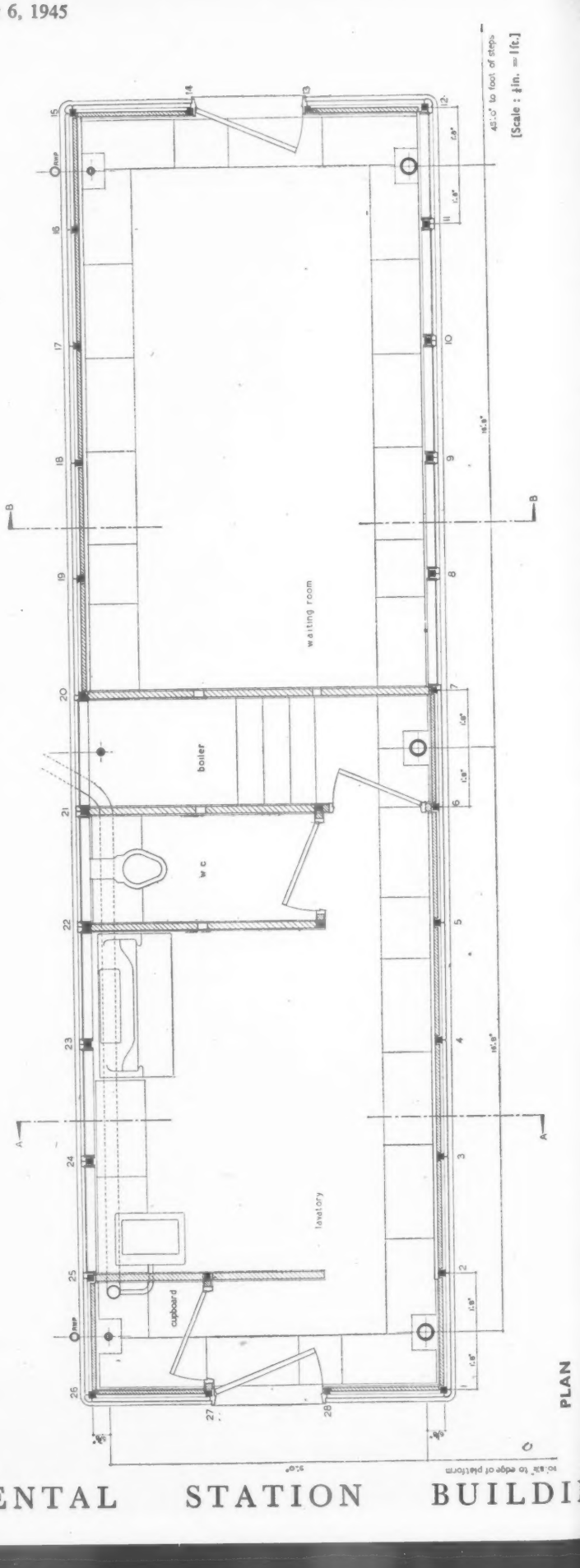
These general requirements are not easy to combine and in fact are not all met with in any structure so far in existence. The requirements under the first three headings have been combined in some types of prefabricated building, but such buildings have usually been of a light, temporary or flimsy character. The requirements under the last two heads are easily met by permanent materials, but raise new problems if they are required in connection with flexibility and pre-fabrication. It was decided that an effort should be made to attempt to solve this problem and the Company's Building Research Committee, on which there were Scientific, Engineering and Medical representatives undertook the work. The Architect members of the Committee were W. H. Hamlyn, J. L. Martin and R. Ll. Davies, the latter acting as Secretary to the Committee. The Engineer's Department was responsible for calculations of the awning construction and the Research Manager for all testing.

CONSTRUCTION — *Dimensional Grid :* After a good deal of study it appeared that a dimension of 3 ft. 4 in. provided the best solution.

Foundations : The introduction made in the unit station is the inclusion of a continuous duct running right round the building. This duct is intended to accommodate the hot and cold water services, heating mains and drains and to provide a continuous level surface for fixing wall posts. The pre-cast

Below, the continuous duct running round the building accommodates hot and cold water services, heating mains and drains.





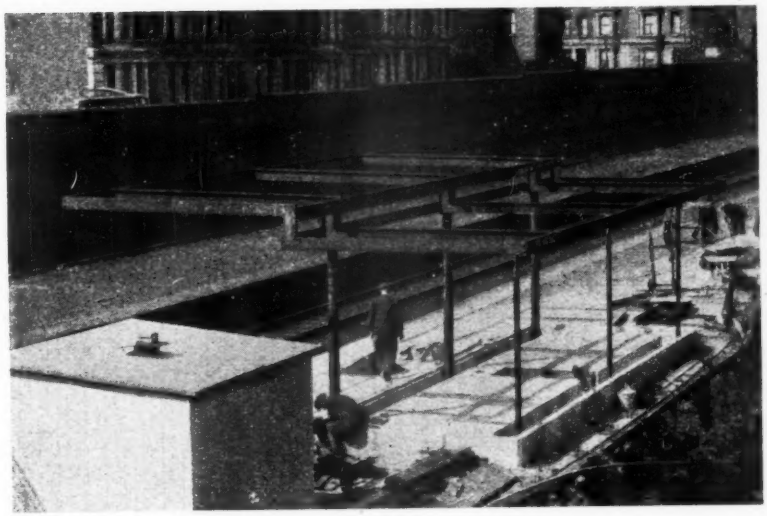
L M S EXPERIMENTAL STATION BUILDING

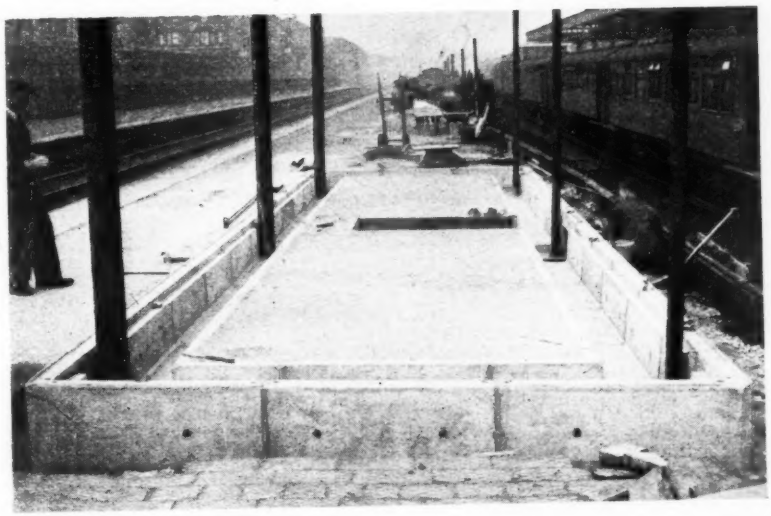
concrete units used to form the duct have holes which give the correct spacing for these posts.

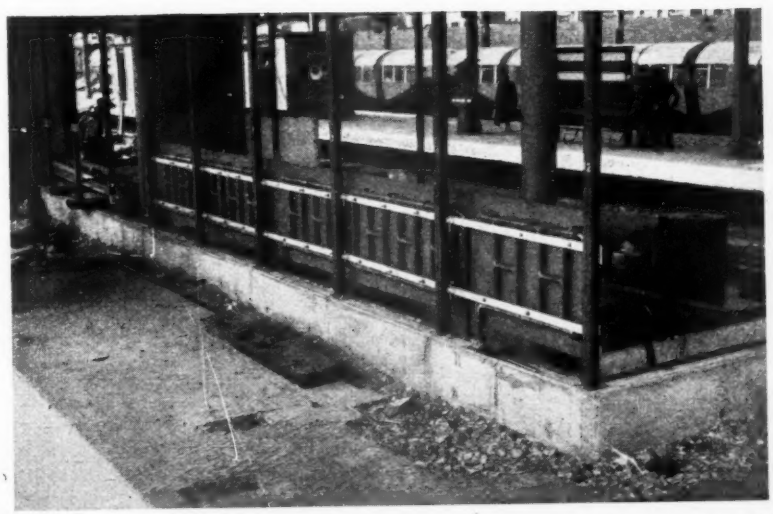
Awning: The dimensions of the awning are conditioned by the structure gauge which fixes the requisite height of the edge of the awning over the track and by the desirable height of the waiting room. The type of awning used consists of three main tubular supports carrying cranked beams. The arms of these beams over the platform and waiting room are balanced, but on the waiting room side provision is made for an unbalanced load (which would occur should the platform arm require extension for a wider platform) by the introduction of a 3 in. diameter circular steel column. The cranked beams themselves consist of two 7 in. by $2\frac{1}{8}$ in. rolled steel channels spaced 8 in. apart. The space between the channels takes electric wiring and allows for a slight splay to be introduced on curved platforms. Between each pair of cranked beams the roofing is provided by stressed skin plywood boxes which give a flush ceiling to both awning and the platform building. The system is easily adapted to form the balanced awning required for buildings on island platforms.

Wall Posts: Wall panels, windows and door frames are attached to wall posts spaced at 3 ft. 4 in. centres around the building. The section of posts finally agreed consisted of two steel boxed channels welded back to back. This post gave the necessary strength and convenient section for fixings whilst only occupying a space 2 in. × 2 in. in plan. The fixing on to these posts is accomplished by three types of friction clip. One clip allows fixing to the face of the post, the other to the side and a third is employed at the corners of the building. The clips are mass produced from strip steel and each clip has an aircraft type lock nut rivetted to it. Screwing to the clips can be carried out without holding the nut from the back and once the screw has been tightened the fixing cannot shake loose from vibration.

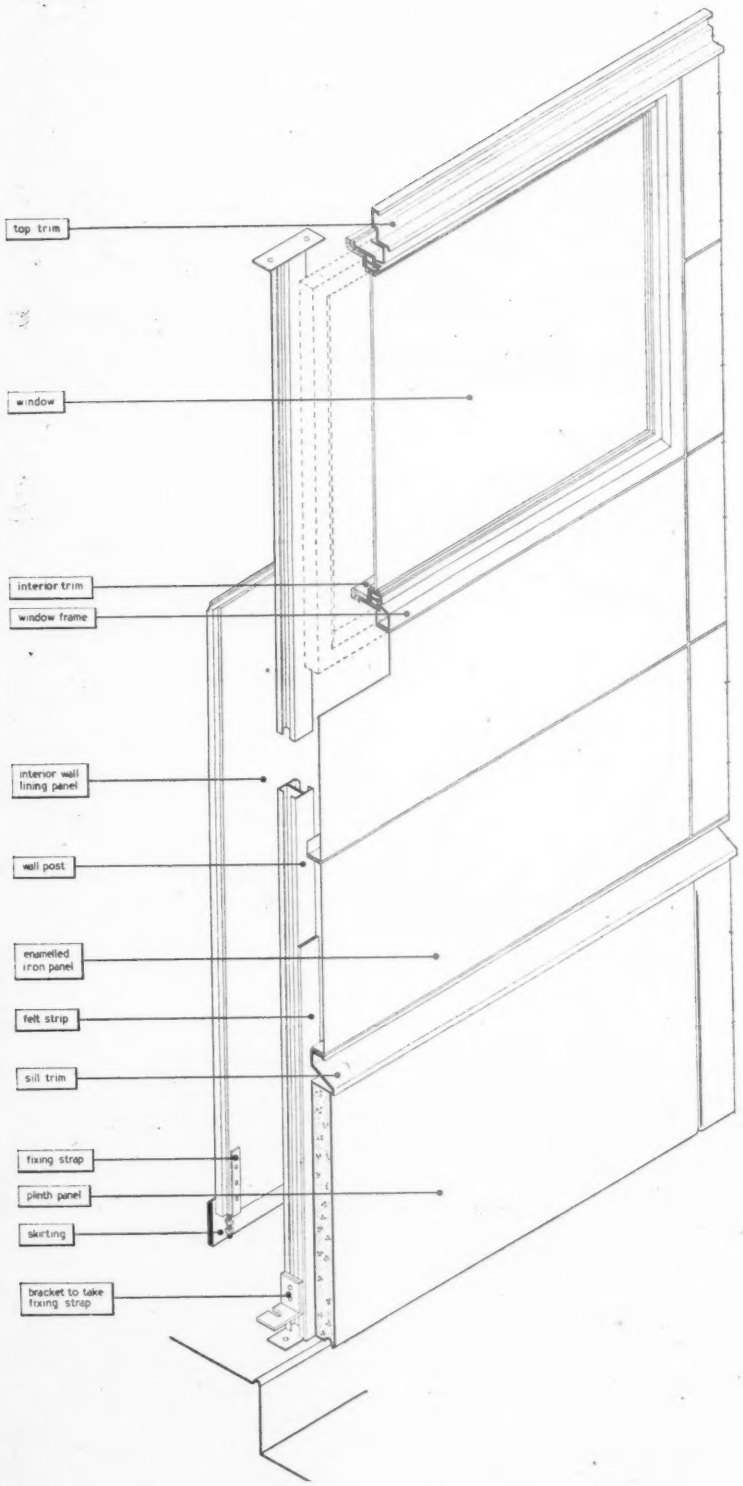
Exterior Wall Panels: The exterior wall panels required very special consideration. Materials which weather pleasantry under normal conditions are badly affected by smoke and deposit on stations. The wall also required two different treatments below and above cill level. Below cill level there is a risk of heavy damage from luggage barrows; above it, the over-riding consideration is an easily cleaned surface. After considering a number of materials, it



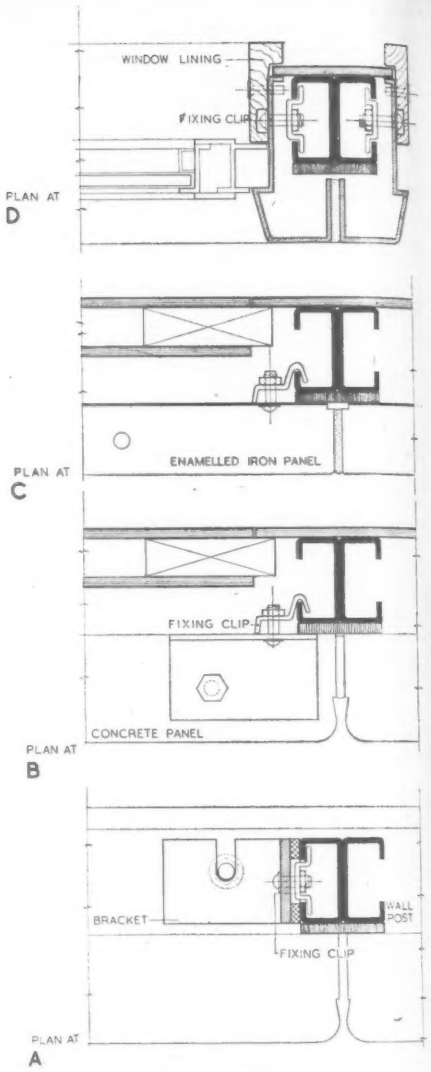




Top, the steel framework completed. Centre, the circular steel columns and the concrete foundations with the encircling service duct. Bottom, the wall posts of steel boxed channels back to back at 3 ft. 4 in. centres with heating panels fixed.

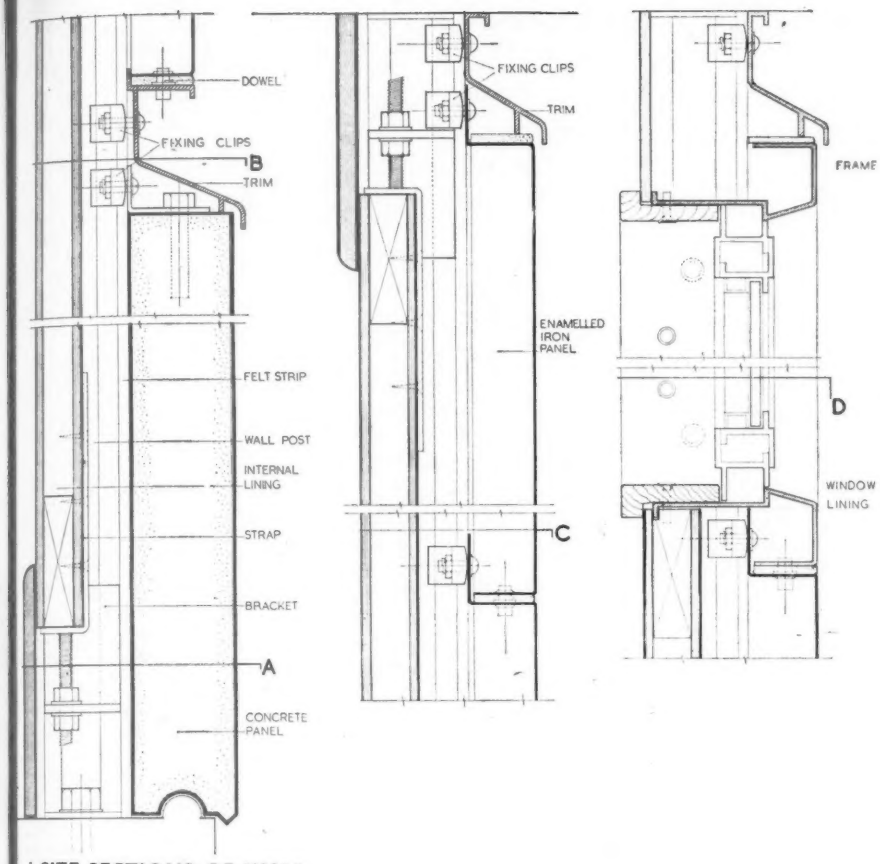


ISOMETRIC DETAIL OF WALL CONSTRUCTION



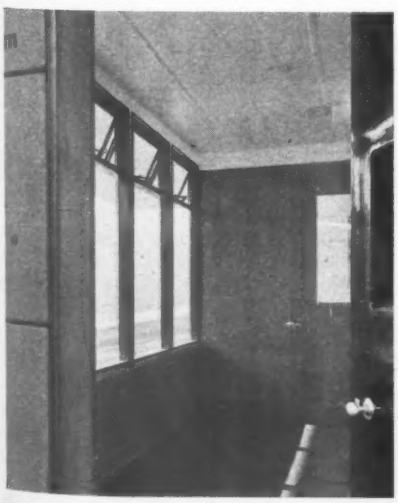
¼ SIZE PLANS OF WALL

was finally decided to use for the base a precast concrete panel with a granite aggregate, although other types of panel are under consideration. Above cill level it was known from early experience that vitreous enamelled panels had decided advantages. What needed further investigation was the enamelling and the design and methods of fixing which would avoid passing screws through the panels themselves. The final design consists of a tray with a special upstand along its top edge to act for both fixing and flashing. Vertical alignment between panels is ensured by specially designed brass dowels. A special trim is used between the upper and lower panels and a resilient pad of felt coated with polyvinyl chloride has been used between wall panels and wall posts. The general idea underlying the external treatment of the wall has been to provide a serviceable finish free, as far as possible, from dirt-holding ledges and readily



½ SIZE SECTIONS OF WALL

Above, ¼ full size details of wall. Below, left, the interior of the waiting room with partition panels of plywood fixed at top and bottom. Below, right, an exterior view showing the back; the wall below cill level is of precast concrete panels with a granite aggregate; above cill level are vitreous enamelled panels.



obtainable in a range of pleasant and even light colours.

Windows: These have a specially designed section which has been produced for experimental purposes both in aluminium alloy and bronze. This section allows the window to fit flush with the wall surface externally. The internal trim forms a combined glazing bead and surround.

Jointing Materials: The joints between enamelled panels, windows and door frames are sealed with two alternative types of material. The one used between the enamelled iron panels consists of a strip of extruded mastic which is unrolled off the drum and laid as the work proceeds. The other type of mastic is applied by a gun.

Wall Linings and Partitions: The design of wall linings is based on the requirements of thermal insulation and a coefficient of not more than 0·25 B.T.Us. per square foot per hour per degree difference has been aimed at. Different linings to give the precise result were tested in the Company's Laboratories by building up a 7-ft. cube with the various materials in a temperature controlled room. The linings used are metal faced plywood panels on a timber frame with a glass silk backing. Several alternative linings are to be tried out in further tests. Partition units provided a completely flexible method for dividing buildings up into rooms and have only top and bottom fixing.

SERVICES—The heating system consists of a gas-fired boiler which serves radiators placed under the windows from a ring main running in the floor duct. This duct also takes the drainage which makes use of a single horizontal cast iron drain connected to each fitting by suitable traps, only one external manhole being required.

ERECTION STUDIES — The BRS undertook a time study of the erection of the building. From this it has been possible to make an accurate comparison with normal methods of construction and to review those operations which have taken an excessive number of man-hours. The time studies have shown that the building is very economical in erection time and it has been proved that it is possible to provide a demountable system of construction, capable of replacement or extension, in materials and methods which generally improve upon the performance of those normally in use. The building will now be subject to further tests and design study.

LMS EXPERIMENTAL STATION BUILDING

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

2237 *Plan for Belfast*

A PLAN FOR BELFAST. *Report of the Northern Ireland Planning Commission. Reviewed by J. Roy McKee.* (Planning proposals for the Belfast Area. [*HMSO*, 2*s*. 6*d*.].) (*Architects' Journal, May* 3, 1945, *Physical Planning Supplement, pp.* 331-334.) Report described as carefully considered opinion of body of unbiased experts. Based on surveys prepared by Planning Advisory Board Recommendations made for location of industry, housing, transport, etc. Suggestions for industry and housing based on Barlow Report.

Location of Industry: 1. Heavy industries, on unsuitable sites, to be re-located in new harbour area as premises become obsolete.

2. Certain existing light industries to continue to be located near central commercial zones, but to be grouped in flatted factories.

3. New light industries depending on electric power and road transport to be located away from central area in seven existing small towns, 8 miles from city centre.

Housing: Derelict premises, lack of accommodation and high density render necessary:

1. Emigration to the existing seven small towns 8 miles from city centre.

2. Provision of new satellites by building up small existing centres, and directing light industries there.

3. Location of smaller housing groups just off main roads and on the three main railways.

4. Provision of four-storey flats and two-storey houses in central area to re-house two-thirds of population.

Transport: To be co-ordinated in unified scheme covering transport by road, rail, sea and air.

Recommendations include: New by-pass to the south; extension of existing by-pass to the east; ring road system in central areas to relieve congestion and preserve centre as business and shopping precinct; enlarging airport to double its size, making it suitable for sea- and land-based planes.

2238 *Plan for Norwich*

ARCHITECTS' PLAN FOR NORWICH. *Designed by C. H. James and Rowland Pierce.* (*Architects' Journal, August* 16, 1945, *Physical Planning Supplement, pp.* 115-118.) Planning of precincts of central area by architects of Norwich's new Town Hall opened in 1938. Emphasis on three-dimensional aspect of town planning. Recommendations for improving appearance without recourse to drastic surgery.

The plan is therefore mainly concerned with town tidying, conservation of amenities, and cleaning up war-damaged and slum areas.

Parts of the city will be built around the new civic centre. Built-up areas will have much reduced gross density. Neighbourhood unit principle of planning is adopted for residential areas. Generous allowances are made for school sites and playing fields.

Alternative road systems are proposed by the authors of plan and by the City Engineer. Both adopt inner and outer ring roads. The architects, in trying to preserve charms and peculiarities of Norwich, avoid disturbing existing street pattern within city walls. Radial roads in their plan begin, therefore, at the inner ring. The City Engineer's outer ring is placed further out with radial roads beginning at city centre in the interest of better transport efficiency, thereby involving destruction of more property.

Statistics from surveys on which town plan is based are not given.

2239 *Plan for Plymouth*

THE PLYMOUTH PLAN. *Designed by J. P. Watson and Sir Patrick Abercrombie. Reviewed by Sir Charles Reilly.* (*Architects' Journal, September* 13, 1945, *Physical Planning Supplement, pp.* 187-189.) Description of new city centre and precincts with comments on proposed architecture, community centres and neighbourliness.

The plan is described as the first plan of a town which is a regional plan, too. Access to sea front is the dominating idea. A wide pedestrian avenue of grass and gardens connects station with the Hoe, flanked by a cultural and residential area and three large shopping precincts with ring roads on their far sides. Each precinct contains four large groups of stores, with a parking space in the centre to serve not only the town, but also the whole region. Further precincts along the main avenue are reserved for banks, hotels, and boarding houses. There will be a new entertainment centre along the sea front, with open-air theatre, stadium and marine pavilion. The old town and Barbican are left untouched except for some clearing up of the outline of its roofs. The architecture of the shopping precincts—as shown by perspective drawings—is criticized, also the planning of the Devonport area as a suburban layout without real neighbourliness and with a "community centre dropped from heaven."

2240 *Plan for Sheffield*

SHEFFIELD. REPLANNING PROPOSALS. *Designed by J. M. Collie and H. Foster, City Engineers. Reviewed by Cecil Stuart.* (*Architects' Journal, August* 23, 1945, *Physical Planning Supplement, pp.* 133-135.) Proposals for a general framework of zoning. Proper grouping of various uses of land. Removal of much heavy industry from central area. Provision of new civic centre. Readjustment of road system.

The plan includes a layout for an inner ring road to relieve congestion around the proposed civic centre. Proposals for outer areas follow the lines indicated by existing land use. Industry is to continue along Don Valley, any new industrial development within the central area being prohibited.

The report is described as a realistic approach to the problem of Sheffield. It is, however, stressed that the detailed layout seems unlikely to promote either good street architecture or a satisfactory solution to the traffic problem. The transport proposals seem to have been made without adequate survey of traffic volumes and flow. Neither is there a sufficient green link between the central areas and the nearby hills.

2241 *Plan for Manchester*

MANCHESTER. TOWN AND REGIONAL PLANNING PROPOSALS. *Designed by R. Nicholas. Reviewed by Justin Blanco White.* (*Architects' Journal, September* 6, 1945, *Physical Planning Supplement, pp.* 169-172.) Based on extensive surveys of region. Proposals include: re-housing on vast scale; green belt defining region from surrounding towns; grouping of industries in zones; decentralization of lighter industries with overspilling of population; efficient transport.

Housing and Open Space: Housing standards are to be based on a generous interpretation of the Dudley Report, with a gross neighbourhood density of 30-45 people per acre, based on detailed calculations of the site areas needed.

Provision of open space in the region is on the basis of 8 acres per 1,000 people, including parks and adults' sports fields.

Industry: Re-siting and grouping of old, scattered industries as extensions of existing main industrial sites will make the rebuilding of central housing possible.

Transport: The proposals follow a valuable survey of road traffic flow and estimate of future traffic flow volumes. Inner and intermediate ring roads will free the region's commercial and shopping centre from through traffic. Railway stations will be grouped.

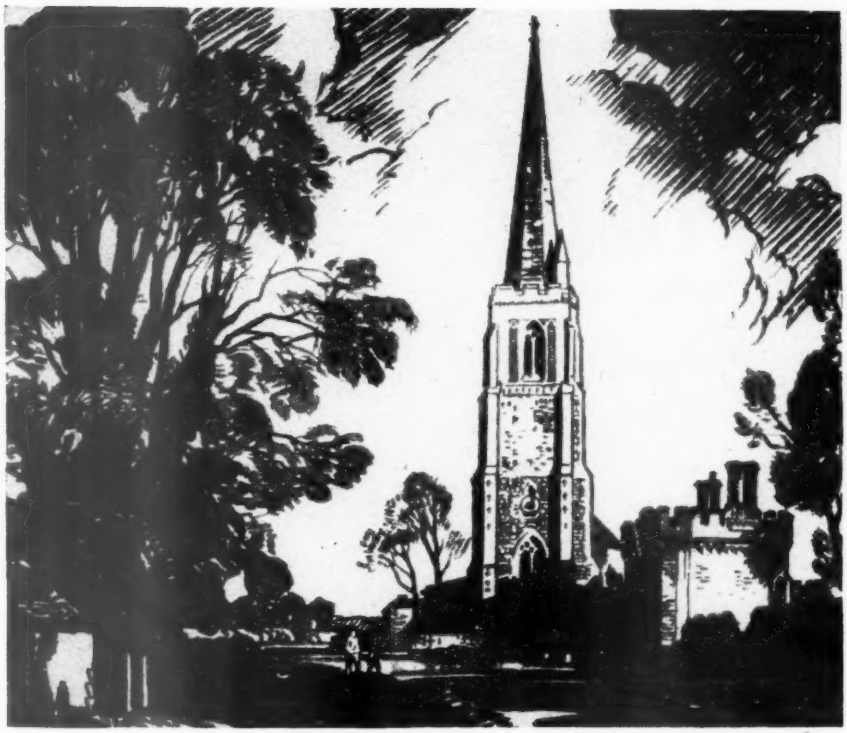
STRUCTURE

2242 *School Buildings*

SCHOOL BUILDINGS FOR SCOTLAND. *Post-War Building Studies, No.* 21. (*HMSO*, 1*s*.) Sites. Sizes of schools. Delays in erection. General survey of detailed requirements. Improvements to existing buildings. Appendices on heating, visual aids, wiring for broadcast. Illustrations of plans.

The scope of this report is very different from that of the second report of this post-war building series which confined itself to a consideration of the possibilities of standard construction.

Sizes of schools are dealt with at some length and the effect of possibility of full usage of practical rooms influences recommendations in favour of large schools. Site sizes are suggested and appear to be somewhat higher than in the Regulations which now apply to schools in England and Wales. Standard plans for schools are deprecated.



OXBOROUGH CHURCH, NORFOLK.
Founded Circa 1280.

OXBOROUGH, called Oxenburgh in Domesday Book, stands on a tongue of high ground that thrusts into the fenland, and was a fortified town even before Roman times. In the church, founded in the reign of Edward I, is a monument to Sir Henry Bedingfield, Governor of the Tower under Mary I, and jailor to the Lady Elizabeth who, notwithstanding some hard words when she came to the throne, visited him at "Oxburgh" in 1578. Hard by the church is Oxborough Hall, a moated manor house built by his father, Sir Edmund Bedingfield, under patent from Edward IV in 1482, and held to this day, in unbroken succession, by his heirs.

but some standardization of units is favoured and steel frame construction said to be likely to give good results, although some systems of timber or concrete are also considered practicable, especially for one-storey blocks.

The section on Essential Details of Buildings is not particularly comprehensive and individual items are dealt with very briefly. It is interesting to notice that, bearing in mind natural lighting requirements, it is recommended that classrooms of 12 ft. high should not exceed 22 ft. in width from window to opposite wall. Large schools may well have two-storey classroom blocks in order to economize on site area. Some general recommendations are made on heating, lighting, wiring for broadcast, furniture and internal finishes.

The building of temporary schools is not generally favoured. There is a brief reference to Technical Colleges, Special Schools and Youth and Community Centres.

Heating is dealt with at some length in Appendix II. Standards are given, and it is stated that low-pressure hot water and electrical heating are most suitable. Underfloor heating is said to be most suitable for infant classrooms. Installation costs of electrical heating will be low, but running costs may be high.

In Appendix III there are some useful notes on the use of visual aids in Schools and Appendix IV gives information on Wiring of Schools for Broadcast Reception.

2243 *Specification*

SPECIFICATION FOR HOUSES. *B. Price Davies.* (*The Building Estimator Publications, Western Mail and Echo, Lt., St. Mary Street, Cardiff,* 15*s. post free.*) Recast fourth edition of value to architects concerned with housing. Standard General Specification to be read in conjunction with Conditions of Contract, and Supplementary Specifications for amendments and Index.

This is an excellent work which should be of the greatest value to all architects concerned with housing, and particularly those returning from war-time employment who have not been able to keep up to date with recent developments.

The 1938 edition has been entirely re-cast, and has been brought into general harmony with the Housing Manual Technical Appendices issued during 1945, and the new and revised British Standard Specifications issued up to September, 1945.

The book constitutes a standard General Specification to be read in conjunction with the Conditions of Contract, and a Supplementary Specification; the latter being used to alter and amend the General Specification as necessary for the particular contract.

The book commences with Preliminaries and continues with Materials, and then with descriptions of work, in great detail, under the usual trade headings. It is carefully indexed, and finally an example is given of the method of setting up a Supplementary Specification.

It is ungenerous to find fault with a good publication such as this, but it is questionable whether the book suffers by containing too much information. It appears not only to fulfil the requirements of a Specification, *i.e.*, to inform the Contractors how the work shown upon the drawings is to be carried out, but also to inform the Architect what to show upon his drawings. It would have been valuable if a greater distinction could have been made between orthodox Specification clauses and what may be regarded as hints to the Architect responsible for the design.

There is also room for some improvement in the preliminaries, and Contract Clauses. The legal profession frequently reminds us that (in the words of Clause 10 of the RIBA Conditions of Contract) "Nothing contained in the said Contract Drawings or Specification shall override, modify or affect in any way whatsoever the application or interpretation of that which is contained in these Conditions," and that the appearance in the Specification of Contract Clauses, slightly differently worded, may cause confusion but cannot strengthen the Architect's hand. As this is so often overlooked, it would have been better for a standard reference book of this description to refer to the Clauses in the Conditions dealing with Defects after Completion, Third Party Risks, etc., instead of rewording the clauses in the text.

The criticisms are minor ones, and there is no question that the book is well worth the attention of every architect dealing with housing.

2244 *Cottages*

COTTAGES AT ONGAR. *Architect: J. E. M. Macgregor.* (*The Architect and Building News, October* 19, 1945, *pp.* 42-43.) Built in 1936. Walls in Heraklith, forming the centering of reinforced concrete stanchions, cement rendered externally, plastered internally. First floor: 2 in. solid timber spanning between reinforced concrete beams without joists, faced below with wall boards. Construction successful except for occasional condensation on concrete stanchions not plastered.

HEATING and Ventilation

2245 *Electrode Boilers*

HEATING BY ELECTRODE BOILERS WITHOUT THERMAL STORAGE. *James Jamieson.* (*Journal of the Institution of Heating and Ventilating Engineers, July/August,* 1945.) Experience of heating by electricity without thermal storage. Reliance upon heat capacity of buildings to enable current to be taken between power station peaks. Paper of importance to architects as affecting choice of method of heating. Useful discussion follows paper.

The author bases his case for electrode boiler heating without thermal storage upon two assumptions. First that most power station load curves show considerable valleys between peak periods of short duration, and second upon the fact that many buildings have sufficient heat capacity to carry over the short power station peak periods. He claims reduced capital cost to consumer and better power load to the supply undertakings. Power station curves are shown for undertakings having very different supply demands. The author has had experience of a number of actual installations, and describes some in general terms, in particular he refers to a highly successful hospital installation.

Some interesting facts are given about an installation in greenhouses where maintenance of a steady low temperature gave better results to the grower than temperatures varying from high to low. The paper deals with this type of installation in general terms only.

A criticism raised in discussion was that modern buildings might not have such high heat capacities as those described by the author, and that as it is now agreed that optimum comfort conditions were obtained by a combination of radiant heat plus mechanically moved air, the electrode boiler system could not be cut off even for short peak periods. A further criticism was that cost figures were not quoted. Also if adopted widely the valleys in the supply companies' load curves would quickly be filled out.

2246 *Combined Power and Heat*

COMBINING POWER AND HEATING. *Fuel Efficiency Bulletin No.* 40. (*Ministry of Fuel and Power, August,* 1945, *free.*) Intended for managing executives and engineers at plants where electric power and heat required on any scale. Shows importance of surveying heat and power requirements. Describes various types of plant suitable for particular circumstances. Combines simple explanation of principles with considerable amount of more technical detail.

2247 *Fuel Saving*

FUEL SAVING BY THERMOSTATIC CONTROL. *A. Leslie Longworth.* (*Journal of the Institution of Heating and Ventilating Engineers, July/August,* 1945.) Need for control. General problem of estimating probable fuel saving. Detailed consideration of problem of space heating control. Relative effects of length of heating season and indoor temperature on heating load.

2248 *Using Waste Heat*

THE RECOVERY OF WASTE HEAT FROM FLUE GASES. *Fuel Efficiency Bulletin No.* 42. (*Ministry of Fuel and Power, September,* 1945, *free.*) Specialist knowledge of subject applicable to large furnaces. Not concerned with use of waste heat from domestic chimneys, etc.

2249 *District Heating*

THE POSITION OF DISTRICT HEATING IN BRITAIN. (*Architect and Building News, September* 28, 1945.) Short general article with analysis of three proposed schemes in terms of costs and fuel consumptions compared to individual heating installations. Concludes that district heating unlikely to show much saving in cost, but has other appreciable advantages.

2250 *Radiant Heating*

RADIANT HEATING IN A THEATRE. (*Plumbing and Heating Journal* (USA), *September,* 1945.) Very brief description of floor panel heating in theatre at Jewell Valley. System said to be very successful.

2251 *Condensation*

CONDENSATION IN PREFABRICATED CONSTRUCTIONS. *C. W. Glover.* (*Building, July,* 1945.) Discusses thermal insulation values recommended in recent official publications. Draws attention to importance of thermal capacity on condensation and possibility of condensation occurring within wall and therefore need for vapour barriers. Does not distinguish between "permanent" and "temporary" condensation. Includes some calculations and tables.

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.*

2252 USA Steel Design

Q *I shall be pleased to receive from you any comparative data which you have on the relationship of design loading for steel structures in America and this country, particularly with a view to floor loading, wind pressure and the allowable stresses in steel-work, also if you could give me some idea as to the factors of safety used in American design.*

A Reference is made to the following specifications:—

(1) LCC By-laws, 1938.
(2) BSS 449-1937. The use of Structural Steel in Building.
(3) British Standard Code of Practice CP4/1944. Chapter V. Loading.
(4) Building Code of the City of New York, 1938.
(5) Building Code for California, 1939.
(6) National Building Code of Canada.

A.—Floor Loads.

		(1)	(2)	(3)	(4)	(5)	(6)
Rooms for residential purposes ..	lb./sq. ft.	50/40	50/40	30	40	50	40
Offices, floors above entrance ..	,,	80/50	80/50	50	50	50	50
Class rooms ..	,,	—	80/70	60	60	50	50
Flat roofs ..	,,	50/30	50/30	30	40	25	20/40

Note: Where two figures are given, *e.g.*, 50/40, the upper figure indicates the load for slabs, the lower for beams. (1), (2), and (3) specify higher loads for short spans, which cannot be reproduced here in detail. The reduction of loads for the lower storeys of multi-storey buildings is very different in the various specifications. See also No. 1075: 25.2.44.

B.—Wind.

(1) & (2) 15/lb./sq. ft. on the upper two thirds of the vertical projection with an additional 10 lb./sq. ft. upon all projections above the general roof level. If the vertical projection of a building is less than twice its width, wind pressure may be neglected.
(3) puts the wind loads on an entirely new basis. Research has proved that assumptions made in the past led to error not only in the magnitude but also in the direction of wind pressure. The suggestion contained in (3) cannot be characterized by a few figures, they must be studied as a whole. (See also No. 1776: 1.2.45.)
(4) In general, wind pressure on structures less than 100 ft. high may be neglected. When the height of a structure is over 100 ft., the assumed wind pressure shall be 20 lb./sq. ft. of exposed surface from the top of the structure down to the 100 ft. level.
(5) For buildings not more than 60 ft. in height 15 lb./sq. ft., for buildings higher than 60 ft., 20 lb./sq. ft. for the portion of the building above the 60 ft. level.
(6) For the first 300 ft. above ground 20 lb./sq. ft., for any part of the building more than 300 ft. above ground the wind force shall be assumed to increase by .025 lb./sq. ft. for each ft. of height in excess of 300.

C.—Permissible Stresses.

The following stresses refer to pure tension or bending only. The specifications for columns, combined bending and compression, rivets, welding, etc., are too complicated for a simple comparison.

(1) 8 t/sq. in.
(2) 8 t/sq. in. raised to 10 t/sq. in. by War Emergency Revision of May, 1940.
(4) 18,000 lb./sq. in.
(5) 20,000 lb./sq. in.
(6) 20,000 lb./sq. in.

Note: In general, 33⅓ per cent. higher permissible stresses are allowed if the influence of the wind is included.

The War Production Board (USA) raised the max. stress to 24,000 lb./sq. in. in Emergency Specifications of September 10, 1942. (See No. 1030: 28.1.44.)

D.—Factor of safety

The factor of safety depends on the yield stress, which is not guaranteed in British Specifications. In USA a minimum of 33,000 lb./sq. ft. is specified, and it may be assumed that this limit is practically maintained also in this country.

$$\text{Factor of safety} = \frac{\text{yield stress}}{\text{permissible stress}}$$

Further details about the question of the factor of safety are in *Interim Report on Yield Point of Structural Steel and Steel Rods for Reinforced Concrete*, issued by the Institution of Structural Engineers, 1944.

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

Scale of Fees

The following letter and statement on THE SCALE OF FEES FOR THE EMERGENCY CONVERSION OF DWELLING HOUSES INTO FLATS BY LOCAL AUTHORITIES has been issued by the Secretary of the RIBA.

"Dear Sir,—In May, 1944, the Council of the RIBA, after consultation with the Ministry of Health, approved a scale of fees for the Emergency Conversion of Dwelling Houses into Flats by Local Authorities. Discussions with the Ministry have recently taken place on the question of the revision of Clause 1 of this scale, which deals with the charge on a time basis for the survey of the premises for the purpose of preparing drawings. The Ministry has now agreed to the revision of Clause 1 and this was approved by the Council on October 16, 1945, as follows:—

(1) For making detailed survey of the building:—

Principal's time ... £7 7 0 a day
Senior Assistant's time £3 13 6 a day
Junior Assistant's time £2 12 6 a day

Note: Senior assistants to mean assistants receiving £8 8s. 0d. a week and upwards; junior assistants, those receiving up to £8 8s. 0d. a week.

The above time basis is in respect only of the time taken to measure up the dwelling or dwellings on the site and the preparation of plans and, if necessary, sections to a scale of ¼ inch to 1 foot. Other technical work where instructed is recompensed by the percentage scale of fees.

I enclose for your information a copy of the scale as now revised.

With reference to this revision the Council also decided to revise Clause 7 of the RIBA Scale of Professional Charges by raising the minimum charge from five guineas a day to seven guineas a day. This decision will be ratified by the Council at its meeting on January 15, 1946, subject to comments received from members of the Institute.

C. D. SPRAGG,
Secretary"

The scale referred to in the above letter reads as follows:—"After consultation with the Ministry of Health, the Council of the RIBA has approved the following scale of fees for the emergency conversion of dwelling houses into flats by local authorities.

(1) For making detailed survey of the building:—

Principal's time ... £7 7 0 a day
Senior Assistant's time £3 13 6 a day
Junior Assistant's time £2 12 6 a day

Note: Senior assistants to mean assistants receiving £8 8s. 0d. a week and upwards; junior assistants, those receiving up to £8 8s. 0d. a week.

The above time basis is in respect only of the time taken to measure up the dwelling or dwellings on the site and the preparation of plans and, if necessary, sections to a scale of ¼ inch to 1 foot. Other technical work where instructed is recompensed by the percentage scale of fees.

(2) For preparing working drawings and specifications of the works (or equivalent document); where necessary, obtaining tenders and/or arranging a contract; for general supervision of the execution of the works and certifying for payments and completion:—

10 per cent. on works costing up to £500 with a minimum fee of £10 10s. 0d.
9 per cent. on works costing between £500 and £1,000 with a minimum fee of £50.
8 per cent. on works costing between £1,000 and £1,500 with a minimum fee of £90.
7 per cent. on works costing between £1,500 and £2,000 with a minimum fee of £120.
6 per cent. on works costing over £2,000 with a minimum fee of £140.

(3) The above fees are exclusive of travelling expenses and other reasonable disbursements and the fees under (1) are in addition to those under (2).

(4) The above fees are exclusive of the wages of a clerk of works.

(5) The above fees are exclusive of those for quantity surveying services. If such services are required, fees will be allowed, in addition, on the normal professional scale.

Fees for quantity surveying services will be allowed where the works cost more than £1,000, and where these services are rendered by a Quantity Surveyor or a firm of Quantity Surveyors practising as such, not being the person or firm rendering the services described in paragraph 2 of the scale above.

Provided only that where the person or firm who has rendered the services described in paragraph 2 of the scale above in the capacity of Architect, is also in regular practice as Quantity Surveyor, fees for Quantity Surveying services may also be allowed where the certificate that these latter services have been performed is signed by the person (stating his qualifications) who has actually rendered such services, and also by the principal or firm with which he is connected.

(6) The above fees are inclusive of the fees of any consultant or specialist engineer by whom the architect or surveyor may wish to be advised.

(7) The fees are to be calculated on the cost of the building work carried out to a property or properties for which one set of drawings and one specification have been prepared. In the event of a group of similar properties being dealt with by the same Architect and where one set of drawings and one specification are supplied for the whole of the properties, then the scale may be applied by reference to the aggregate cost of the work.

(8) The fees for abandoned work for which professional services have been rendered shall be calculated by reference to the RIBA Scale of Charges, Clause 2 (e) (i), (ii), (iii) and (iv).

Announcements

Messrs. Geoffrey Denham & Son, F.I.A.A. & S., have moved to their pre-war address at 41, Jewry Street, Winchester, and would be glad to receive Trade Lists, etc.

Messrs. H. V. Ashley & Winton Newman, FF.R.I.B.A., chartered architects, have opened offices at 3, Verulam Buildings, Gray's Inn, London, W.C.1. Telephone: Holborn 2804/5.

Mr. Cyril Sweett, F.S.I., Chartered Quantity Surveyor, has been released from the Army, and has resumed practice at 15, Robert Adam Street, Portman Square, London, W.1. Telephone: Welbeck 9224.

Mr. B. C. Westall, Chairman of Thomas De La Rue & Co., and Mr. Cyril Ashton, Vice-Chairman of that Company, have joined the Board of Thomas Potterton (Heating Engineers), of Cavendish Works, London, S.W. Mr. Leopold Friedman has been appointed Managing Director, Mr. T. F. C. Potterton will continue to act as Chairman and Mr. A. B. Potterton as Vice-Chairman, and Mr. Herbert P. Bridge will also continue as a director.

Mr. N. Edgar, A.R.I.B.A., has been appointed Chief Assistant Architect in the office of the Borough Engineer of Tynemouth.

Messrs. Lanchester & Lodge, chartered architects, have moved to 10, Woburn Square, London, W.C.1.

For greater convenience of location, the Sales Department of P.I.M. Board Co., Ltd., has been transferred from their works at Sunbury-on-Thames, Middlesex, to Aldwych House, London, the new address being Sundeala Board Co., Ltd., Aldwych House, Aldwych, London, W.C.2. Telephone: Chancery 8159. The above entails no alteration in staff arrangements of P.I.M. Board Co., Ltd. Mr. H. Rixon has been appointed manager of the Sales Department at Aldwych House. All P.I.M. Board Co.'s products in future will be known under the one trade name of Sundeala, the range including hardboards, medium hardboards and insulation and building boards.

Mr. C. Brown, A.R.I.B.A., P.A.S.I., A.M.T.P.I. has taken up an appointment as Architect and Planning Officer to the Kingsbridge Rural District Council, and would be glad to receive trade catalogues with particular reference to Housing, addressed to the Council Offices, Manor House, Kingsbridge, Devon.

Mr. Edwin A. Jackson, F.R.I.B.A., and Mr. J. E. Jackson, A.R.I.B.A., have taken into Partnership their Chief Assistant, Mr. Thomas W. Harrison, L.R.I.B.A. The firm will continue practice under the title of Jackson & Jackson, with offices at Ashford, Folkestone and Hythe.

Mr. David Booth, A.R.I.B.A., and Miss Judith G. Ledeboer, A.R.I.B.A., have resumed partnership and are in practice at 3, Southampton Place, W. C.1 (Telephone: Holborn 2514), and would be glad to receive trade catalogues.

Mr. John W. Wilkinson, F.F.A.S., having obtained his release from war service, has resumed practice at Martins Bank Chambers, Westborough, Scarborough (Telephone 591), pending the release of Mr. E. Morris Smith, L.R.I.B.A.

Mr. John E. Sterrett, A.R.I.B.A., has taken into partnership Mr. D. M. Blouet, A.R.I.B.A., of 7, Little Turnstile, Lincoln's Inn Fields, W.C.1. The practice will be known as Sterrett & Blouet, A/A.R.I.B.A., and will be carried on from Mr. Sterrett's existing offices at 17, Ashley Place, Westminster, S.W.1. Trade catalogues and information about new materials will be appreciated.

Mr. Denzil Nield, A.R.I.B.A., has opened an office at 310, Upper Regent Street, London, W. 1. Telephone: Langham 4017.

How do you visualize plastics?

If you think of a thin, dull material, rather brittle and rough at the edges, you are not fully acquainted with recent achievements in this field. Plastics cover a wide range of materials. Here are some of their properties:

LIGHTNESS · STRENGTH · RESILIENCE · ELASTICITY · HARDNESS SOFTNESS · BRILLIANT COLOURS · PASTEL SHADES · TRANSPARENCY ELECTRICAL INSULATION · RESISTANCE TO HEAT, COLD, ACIDS, ALKALIS, MOISTURE, OIL, PETROL, OXYGEN AND WEATHERING

It needs expert knowledge to select the best type of plastic material for a particular application, especially when a combination of the foregoing properties is required. Our service★ may be valuable to you.

★ *Manufacture of Products in Plastics, Rubber and Synthetic Rubbers*

LORIVAL PLASTICS

UNITED EBONITE & LORIVAL LTD · LITTLE LEVER · NEAR BOLTON

TELEPHONE FARNWORTH 676 (FOUR LINES) TELEGRAMS EBONITE LITTLE LEVER

U E L

TIMBER MERCHANTS AND SAWMILLERS

Modern sawmill and transport facilities.
Architects' and Builders' Specifications efficiently and promptly executed.

W. C. Ware
AND SONS LIMITED

6-8. KENNINGTON LANE, S.E.11. *Phone:* Reliance 1864/2647
11. MANETTE STREET W.1. *Phone:* Gerrard 2621
138-140 SAFFRON HILL, E.C.1. *Phone:* Holborn 2326

SOFTWOODS · HARDWOODS · WALLBOARDS · PLYWOOD · PLASTERBOARD

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

EAST BARNET URBAN DISTRICT COUNCIL.

ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the following permanent appointments:—

(a) A CHIEF ARCHITECTURAL AND TOWN PLANNING ASSISTANT, at a commencing salary of £465 per annum, rising by annual increments of £20 to a maximum of £505 per annum, plus cost-of-living bonus, at present £59 16s. per annum. Applicants must have Architectural and/or Town Planning Certificate by examination, with previous experience in Local Authority work.

(b) A SENIOR ENGINEERING ASSISTANT, at a commencing salary of £405 per annum, rising by annual increments at £15 to a maximum of £450 per annum, plus cost-of-living bonus, at present £59 16s. per annum. Applicants must have had considerable general experience of Municipal Engineering, and should be corporate members of the Institute of Civil Engineers or hold the Testamur of the Institute of Municipal and County Engineers.

(c) An ENGINEERING ASSISTANT, at a commencing salary of £345 per annum, rising by annual increments of £15 per annum to a maximum of £390 per annum, plus cost-of-living bonus, at present £59 16s. per annum. Applicants must have had good general experience of Municipal Engineering, and should be corporate members of the Institute of Civil Engineers or hold the Testamur of the Institute of Municipal and County Engineers.

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

Application, endorsed "Chief Architectural and Town Planning Assistants," "Senior Engineering Assistant," or "Engineering Assistant," as the case may be, stating age, qualifications, present and past employment, experience, and position in relation to National Service, and accompanied by copies of three recent testimonials, must be delivered to the undersigned by not later than Friday, 14th December, 1945.

Canvassing, directly or indirectly, will be a disqualification, and applicants must disclose whether to their knowledge they are related to any member or senior officer of the Council.

This advertisement is published by permission of the Ministry of Labour and National Service, under the Control of Engagement Order, 1945.

C. M. BARNES, M.Inst.M. & Cy.E.,
Engineer and Surveyor.

Town Hall, Station Road, New Barnet. 911

ROBERT GORDON'S TECHNICAL COLLEGE, ABERDEEN.

SCHOOL OF ARCHITECTURE AND DEPARTMENT OF BUILDING.

Head: E. F. DAVIES, B.Arch.(Lvpl.), F.R.I.B.A., F.R.I.A.S.

LECTURER AND STUDIO INSTRUCTOR IN CONSTRUCTION.

Applications are invited for the post of Full-time Lecturer and Studio Instructor in Constructional Subjects, including Steel and Reinforced Concrete.

The School is recognised for purposes of exemption from the R.I.B.A. Intermediate and Final Examinations.

Candidates must be Fellows or Associates of the Royal Institute of British Architects, and should possess the Degree or Diploma of a recognised School of Architecture. Teaching and professional experience are desirable qualifications.

The commencing salary will be determined, according to the experience of the successful candidate. The salary scales are under review at the present time.

Conditions of appointment and forms of application may be obtained from the undersigned, to whom completed applications should be returned by Monday, 7th January, 1946.

A. C. WEST,
Director.

951

NOTTINGHAMSHIRE COUNTY COUNCIL.

ARCHITECT'S DEPARTMENT.

Applications are invited for the appointments of QUANTITY SURVEYORS, at salaries of £350 to £400 per annum, according to experience, plus cost-of-living bonus, which at present amounts to £59 16s. per annum.

The posts will be subject to the Local Government Superannuation Acts, 1937 and 1939, and will be terminable upon one month's notice on either side at any time. The successful candidates will be required to pass a medical examination.

In accordance with the general decision of the County Council, all appointments made during the present emergency are of a temporary character in the first instance.

Forms of application may be obtained from the County Architect, Shire Hall, Nottingham.

K. TWEEDALE MEABY,
Clerk of the County Council.

Shire Hall, Nottingham.
16th November, 1945. 925

BOROUGH OF SOUTHALL.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the appointment (Temporary) of a JUNIOR ASSISTANT in the Architect's section of the above Department.

Applicants should have had some previous experience in an architect's office, and the salary will be fixed in relation thereto.

Applications, stating age and experience to be addressed to the Borough Engineer, Town Hall, Southall, Middlesex.

22nd November, 1945. 920

ANGLESEY EDUCATION COMMITTEE.

EDUCATION ARCHITECT'S DEPARTMENT.

APPOINTMENT OF ARCHITECTURAL ASSISTANTS.

Applications are invited for the following appointments in the Education Architect's Department:—

(1) CHIEF ASSISTANT ARCHITECT.
Salary, £550—£25—£600 per annum.

Candidates should be Registered Architects and Members of the Royal Institute of British Architects, and have had good experience in general architectural work, especially schools, and in the preparation of working drawings and specifications.

(2) SENIOR ASSISTANT ARCHITECT.
Salary, £400—£25—£450 per annum.

Candidates should be Registered Architects and Members of the Royal Institute of British Architects, and have had experience in general architectural work and in the preparation of working drawings and specifications.

(3) JUNIOR ARCHITECTURAL ASSISTANT.
Salary, £225—£25—£275 per annum.

Candidates should have had sound architectural training and experience in general architectural work.

Salary increments are subject to satisfactory service, and in the case of the Chief Assistant the appointment will be subject to three months' notice on either side; the other appointments will be subject to one month's notice on either side.

The appointments will be subject to the provisions of the Local Government Officers' Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination.

Applications in plain envelopes, endorsed "Chief Assistant Architect," "Senior Assistant Architect," or "Junior Architectural Assistant," stating age, qualifications, training, and experience, giving particulars of present and past appointments, accompanied by copies of three recent testimonials, or, in the case of applicants from H.M. Forces, the names of three referees, must be sent to the undersigned not later than Wednesday, 19th December, 1945.

E. O. HUMPHREYS,
Director of Education.

Education Offices, Llys Myfyr, Llangefni, Anglesey.
20th November, 1945. 933

COUNTY BOROUGH OF NEWPORT, MON.

APPOINTMENT OF DEPUTY BOROUGH ARCHITECT.

Applications are invited from properly qualified Architects for the appointment, at a salary commencing at £650 per annum, and rising by annual increments of £50 and £100 to £800 per annum, plus cost-of-living bonus of £59 16s.

The appointment, which will be held during the pleasure of the Council, will be subject to the appropriate Local Government Superannuation Act, and the successful candidate will be required to pass a medical examination.

Applications, stating age, qualifications, and experience, and of present and previous appointments, together with two recent testimonials and the names and addresses of two responsible persons of standing to whom reference may be made, must be delivered to the undersigned, endorsed "Deputy Borough Architect," on or before Monday, 10th December, 1945.

JOHNSON BLACKETT, F.R.I.B.A.,
Borough Architect.

Town Hall, Newport, Mon.
12th November, 1945. 892

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 £450 to £500 per annum, according to experience, plus war bonus, at present £59 16s.; arrangements can be made, if desired, for renting housing accommodation.

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 15th December, 1945. 931

CITY OF NOTTINGHAM.

HOUSING DEPARTMENT.

The Nottingham City Council invite applications for the appointment of HOUSING ARCHITECT, at a salary of £1,000 per annum, plus temporary cost-of-living bonus, which at present amounts to £59 16s.

The gentleman to be appointed must be a Fellow or Associate of the Royal Institute of British Architects, and must have had experience in the layout of estates, the design of dwelling houses, and in the letting of contracts for the erection of houses and the supervision of the constructional work under the contracts. Membership of the Surveyors' Institute will be regarded as an additional advantage, but is not an essential qualification for the appointment.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination and to live in the city.

The person appointed will be required to devote the whole of his time and attention to the duties of his office, and no private practice will be permitted.

The appointment will be subject to termination by three months' notice on either side.

Applications, stating age, qualifications, and experience, accompanied by not more than three recent testimonials, should be enclosed in an envelope endorsed "Housing Architect," and delivered to me not later than Monday, the 31st December, 1945.

Canvassing in any form will be a disqualification.

J. E. RICHARDS,
Town Clerk.

The Guildhall, Nottingham. 901

COUNTY OF KINCARDINE.

COUNTY ARCHITECT AND PLANNING OFFICER.

Applications are invited for the post of County Architect and Planning Officer. Applicants should be architects, preferably with a planning qualification, and should have had practical experience in the whole-time service of a Local Authority.

Salary will be on a scale rising from £600 to £850 per annum by annual increments of £50, plus J.I.C. war bonus. Placing on this scale may be granted in accordance with qualifications and experience. The post is superannuable, and medical examination will be required. A house will be available.

A statement of the duties, terms, and conditions of appointment, etc., may be obtained from the undersigned, with whom applications (12 copies, including copies of not more than three testimonials) should be lodged not later than 5th January, 1946.

JOHN SLEVIN,
County Clerk.

33, Evan Street, Stonehaven.
26th November, 1945. 999

NORTH RIDING EDUCATION COMMITTEE.

Applications are invited for the post of TECHNICAL ASSISTANT (Grade C) in the Buildings Department. The post is exempt from the age restrictions of the Control of Engagement Order. The salary is £225 a year, rising by annual increments of £15 to £300 a year, plus cost-of-living bonus, at present £60 a year. Under existing conditions, working hours are increased by one-seventh, and the payment for this is at the rate of one-seventh of the basic salary. The total commencing emoluments are therefore about £317. The post is subject to the provisions of the Local Government Superannuation Act. Applicants should have sound experience in carrying out surveys of sites and buildings, be neat draughtsmen, and be experienced in maintenance work and in dealing with builders' accounts. Further particulars and form of application may be obtained by sending a stamped addressed foolscap envelope, and completed applications, with copies of two recent testimonials, should be returned not later than 15th December, 1945.

F. BARRACLOUGH,
Secretary.

Education Offices, County Hall, Northallerton. 922

KENT EDUCATION COMMITTEE.

MEDWAY SCHOOL OF ART AND CRAFTS, EASTGATE, ROCHESTER.

DEPARTMENT OF ARCHITECTURE.

Full-time STUDIO MASTER required, in January next, for work in connection with the Intermediate Course. Applicants should be Associates of the R.I.B.A. Previous teaching experience desirable, though not essential. Salary, Burnham Provincial Technical Scale, in accordance with teaching and/or professional experience.

Applications by letter should reach the Principal as soon as possible. 934

FIFE COUNTY COUNCIL.

PLANNING ASSISTANTS.

Applications are invited for appointment of Planning Assistants to the County Council.

Preference will be given to candidates who hold the Associate Membership of the Town Planning Institute, and in addition have had practical experience in the preparation of Planning Schemes. The salary will be £400 per annum, inclusive of war bonus. Applications, stating age, qualifications, and experience, etc., and accompanied by copies of not more than three recent testimonials, should be lodged with the subscribers not later than 14th December, 1945.

J. M. MITCHELL,
County Clerk.

County Buildings, Cupar.
26th November, 1945. 938

CITY OF NOTTINGHAM.

HOUSING DEPARTMENT.

The Nottingham City Council invite applications for the appointment of ARCHITECTURAL ASSISTANT in the Housing Department, at a salary of £350 per annum, rising, subject to satisfactory service, by annual increments of £25 to £450 per annum. The appointment is subject to a temporary cost-of-living bonus, which at present amounts to £59 16s.

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

Applications, stating age, qualifications, and experience, accompanied by copies of three recent testimonials, enclosed in an envelope endorsed "Housing Department—Architectural Assistant," to be delivered to me not later than Monday, the 31st December, 1945.

Canvassing in any form will be a disqualification.

J. E. RICHARDS,
Town Clerk.

The Guildhall, Nottingham.
November, 1945. 945

BOROUGH OF SOUTHGATE.

APPOINTMENT OF ARCHITECTURAL ASSISTANT (TEMPORARY).

Applications are invited for the appointment of an Architectural Assistant in the Department of the Borough Engineer and Surveyor, at a salary of £375 per annum, plus cost-of-living bonus.

The appointment is temporary, and for a period not exceeding two years in the first instance, and is terminable by one month's notice on either side.

Preference will be given to candidates who are members of the Royal Institute of British Architects, or hold an equivalent qualification, and previous municipal experience will be an advantage.

Applications, stating age, education, experience, and qualifications, together with copies of not more than three recent testimonials, should be delivered to Mr. J. T. W. Peat, F.R.I.B.A., Borough Engineer and Surveyor, Town Hall, Palmers Green, N.13, endorsed "Temporary Architectural Assistant," on or before 14th December, 1945.

GORDON H. TAYLOR,
Town Clerk.

Southgate Town Hall, N.13.
30th November, 1945. 946

WEST SUFFOLK COUNTY COUNCIL.

Applications are invited for the undermentioned appointments in the County Architect's Department:—

(1) ARCHITECTURAL ASSISTANT. Salary £310—£15—£365 per annum, plus cost-of-living bonus (at present £60 per annum).

(2) BUILDINGS' INSPECTOR. Salary, £240—£15—£300 per annum, plus cost-of-living bonus (at present £60 per annum). Successful candidate will be required to provide a motor cycle, or car not exceeding 8 h.p. Travelling allowance in accordance with County Scale.

Both appointments will be on non-established staff, but may become permanent.

Forms of application may be obtained from the undersigned, by whom applications, accompanied by three recent testimonials, should be received not later than 21st December, 1945.

L. G. H. MUNSEY,
Clerk of the County Council.

Shire Hall, Bury St. Edmunds.
27th November, 1945. 947

RAWMARSH URBAN DISTRICT COUNCIL.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the above appointment, at a salary of £300 per annum, plus bonus, at present £59 16s. per annum.

Applicants must be Registered Architects, and have considerable experience in the preparation of drawings and specifications for Public Works and Housing in particular.

The appointment is permanent, and subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

Applications, stating age, qualifications, and experience, together with two recent testimonials, must reach the undersigned not later than 19th December, 1945.

J. R. S. CREIGHTON,
Engineer and Surveyor.

Rawmarsh Urban District Council, Council Offices, Parkgate, Yorks, W.R.
29th November, 1945. 953

BOROUGH OF GLOSSOP.

APPOINTMENT OF TEMPORARY ARCHITECTURAL ASSISTANT.

Applications are invited for the above appointment, at a salary of £450 per annum, plus war bonus (at present £59 16s. per annum).

Applicants must be Associates of the Royal Institute of British Architects, or hold some other appropriate qualification, and must have had considerable experience of housing work.

Applications, accompanied by copies of three recent testimonials, to be forwarded to the undersigned not later than first post, Monday, 17th December, 1945, endorsed "Temporary Architectural Assistant."

W. S. A. ROBINSON,
Town Clerk.

Municipal Buildings, Glossop.
29th November, 1945. 952

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 commencing salary of £350 per annum, rising by annual increments of £25 to a maximum of £400, 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 in writing 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 22nd December, 1945, and should be accompanied by not more than three copies of recent testimonials.

R. E. HERBERT,
Clerk of the Council.

Council Offices, Ebbw Vale, Mon.
28th November, 1945. 950

COUNTY OF LINCOLN—PARTS OF KESTEVEN.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of ARCHITECTURAL ASSISTANT in the County Architect's Department.

Salary, £390 per annum, rising by annual increments of £15 and £5 to a maximum of £400 per annum, plus cost-of-living bonus of 23s. per week on the Council's scale. Commencing salary will be in accordance with experience.

Experience in Education and general County work is desirable.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, to a satisfactory medical certificate, and to the termination of the appointment by one month's notice in writing on either side.

Applications, stating age, present appointment, experience, and qualifications, together with copies of two recent testimonials, should be sent to the undersigned not later than the 22nd December, 1945.

J. E. BLOW,
Clerk of the County Council.

County Offices, Sleaford, Lincs. 940

Partnership

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

CHARTERED ARCHITECT and SURVEYOR requires Partnership with progressive Architect; ex-officer, just released; excellent experience in G.P. work; preferably in South of England, or would take appointment with partnership in view.—Box 928

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.

SENIOR ASSISTANT required immediately in W. Riding, Yorks, office; for housing and other general work; experienced draughtsman; capable in levelling and surveying work, and knowledge of quantities; state age, experience, salary required, and when available. Box 906.

ASSISTANT required by Chartered Surveyor; general London practice; permanent and progressive post; salary £520 per annum. Write, with brief particulars of experience, to Box 910.

ASSISTANT QUANTITY SURVEYORS required by Midland Brewery Co.; all-round experience essential.—Apply, stating experience, age, salary required, to Box 930.

JUNIOR ARCHITECTURAL ASSISTANT required immediately in well-known East Midlands office. Box 927.

REQUIRED, by Brewery Company in the Midlands, Area Architect, for North of England; must be fully qualified, experienced in hotel and public house work, and capable of taking control of extensive rebuilding and reconstruction programme. Box 929.

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. 942

QUANTITY SURVEYOR required by large multiple organisation, having head offices in the Oxford Street area; permanent position, carrying good salary and expenses. Write in confidence, full details of experience and qualifications, Box QS.2417, Everetts Advertising, Ltd., 10, Hertford Street, W.1. 944

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.

WORKING DRAWINGS, Perspectives, etc., worked up from sketches; two Final Students offer spare-time services in the London area. Sharp, 23, Lisburne Road, Hampstead, N.W.3. 185

ASSISTANT ARCHITECT and SURVEYOR, age 34, intelligent and hardworking, University educated, trained at Senior School of Architecture, Building and Surveying, Northern Polytechnic, London, N.7, 2 years with firm of chartered architects and surveyors, due for demobilization during December, desires position, commencing January 14 or 21; £600. Please reply Box 184.

A. R.I.B.A., Dip. T.P. (30), experienced in official and private work, housing schemes, etc., requires responsible position, partnership, or part-time work in Dorset area. Box 193.

ASSOCIATE seeks part-time appointment (4 days per week) in Architect's Office; Central London area. Box 186.

A. R.I.B.A., demobbed Major R.E., age 39, desires responsible position; 16 years' all-round pre-war experience; domestic, hospitals, commercial; 5 years' works Services, home and abroad: airfields, hospitals, factories, sewage schemes, roads, electrical and water engineering; able to take full control of staff; partnership considered. Box 187.

QUALIFIED ARCHITECT, experienced in general and housing practice, requires part-time employment Telephone: Finchley 5137. Box 188.

A. R.I.B.A. (27), willing to undertake spare time architectural work; preferably in the Central or North London district. Please write Box 189.

ADAPTABLE and enterprising young man seeks position with "small" Builder or Architect re-commencing business; good all-round experience; own car; salary not main issue, as long as scope and prospects likely. Box 190.

JUNIOR ARCHITECTURAL ASSISTANT, school cert., age 20, seeks position in London architect's office; some experience in surveys; studying for R.I.B.A. exams. Box 191.

SECRETARY/SHORTHAND TYPIST requires post in London architect's office (preferably West End); several years' architectural experience; good references. Box 192.

ARCHITECTURAL ASSISTANT, willing to undertake spare-time work, working drawings, etc.; experience in most kinds of work, including surveying and levelling. Box 195.

EX-SERVICE WOMAN, University training to R.I.B.A. Intermediate Standard, seeks post in Architect's Office; Liverpool or Southport district. Box 196.

PROBATIONER, R.I.B.A., 1 year's experience, requires work in London Architect's Office; free January. Box 194.

DRAUGHTSMAN desires change; 8 years' varied experience, including Architects' and Civil Engineer's offices; 4½ years' Army service; capable preparing working drawings, details; field and property surveying, levelling; preparing all types plans; great interest cartography. Box 198.

SECRETARY, experienced architectural work, accounts, book-keeping, records, etc., seeks post; West End preferred. Box 197

Other Appointments Vacant

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

MANUFACTURERS of leading Wood Preservative Process require first-class man with selling and executive experience, preferably with knowledge of timber and building construction, with a view to appointment as Assistant Sales Manager; permanent position, with excellent prospects; apply, stating age, business experience, and salary required. Box 908.

For Sale

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

ELECTRICITY FOR COUNTRY HOUSE.—Complete equipment for Sale, including 20 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. 877

ARCHITECT'S Drawing Instruments, in case, together with Beam compass and accessories; pre-war quality; £10. Box 130, W. H. Smith & Son's Bookshop, 22, Broadwalk, North Harrow. 935

FULL Imperial Drawing Board and Tee Square, £5; Amsler Planimeter, £10; Winsor and Newton Oils, in black japanned metal case, 13½ in. by 8½ in., complete with pallet and brushes, £3; all as new; consider offers. Box 926.

The Practice of Chartered and Registered Architects and Surveyors, carried on by Mr. S. Grundy, F.R.I.B.A., A.M.T.P.I., and the late Mr. J. A. Grundy, B.Arch. (Liverpool), A.R.I.B.A., under the name of J. W. Grundy & Son, at Central Buildings, Ulverston, North Lancs.

The business was established in 1870, and was continued until recently. The present sale is on account of the illness of the Principal and the death on war service of his two sons.

Excellent office premises, specially built as architect's offices, are available either to purchase or lease.

Further particulars from :—
HART JACKSON & SONS,
Solicitors.
Ulverston. 949

Property for Sale

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

KENSINGTON PRIVATE HOTEL premises for Sale, with vacant possession; imposing corner building just off Kensington High Street, close Tube on Campden Hill Estate; accommodation comprises some 37 beds, 4 reception, usual offices and kitchens. R.V., £452; price, £15,000, freehold. Box 948.

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

FINANCE.—Ample supply of surplus funds available for Building Estates covering part purchase cost of land; then building finance; then permanent mortgage on very liberal scale. Chas. B. Buxton, Ltd., Local Authorities Loans Brokers, 9, Clements Lane, Lombard Street, E.C.4 747

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

WANTED.—A Copy of "The Architectural Review" for December, 1935. Box 182.

ARCHITECT, with practical experience in industrial design and factory production method, desires to co-operate with manufacturers in return for modest retaining fee. Box 163.

REG. ARCHITECT, A.R.I.B.A., Dip. T.P., age 30, desires free lance work in own home; fees by arrangement. Box 900.

SEVERAL Self-contained Suites of Five Offices each to Let; Central Westminster; light and quiet; immediate possession; rents from £360 to £450 per, annum. Apply Dunnet, 64, Buckingham Gate, S.W.1. 906

WANTED.—"Gothic Architecture in France, England and Italy" (2 volts.), by Sir J. G. Jackson. Box 937.

ARCHITECT requires Office Accommodation, consisting of one, two, or three well-lit rooms; Bloomsbury or Baker Street districts. Box 936.

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

TRACING accepted by first-class tracer; 10 years' experience; speed and accuracy guaranteed; all types of lettering done to suit requirements. For details ring STReatham 1815. 943

QUANTITIES taken off and draft bill prepared; northern method of measurement; fees by arrangement. Atkinson, 3, Glentilt Road, Sheffield, 7. 954

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 of Correspondence and Personal in Studio.
115, Gower St., London, W.C.1 (Tel.: Euston 3906), and at 23, St. James's St., Derby (Tel.: 45648).

R.I.B.A. and T.P. INST. EXAMS. Private Courses of Tuition by correspondence arranged by Mr. L. Stuart Stanley, M.A., F.R.I.B.A., M.T.P.I. Tutor, 161, West Heath Road, N.W.3. Tel.: SPE 5319. 415

Alphabetical Index to Advertisers

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