

# THE ARCHITECTS' JOURNAL



## standard contents

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

## DIARY

## NEWS

from AN ARCHITECT'S  
Commonplace Book

## ASTRAGAL

## LETTERS

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## INFORMATION

## CENTRE

Physical Planning      Lighting  
Structure      Heating & Ventilation  
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## SOCIETIES & INSTITUTIONS

## PRICES

Architectural Appointments  
Wanted and Vacant

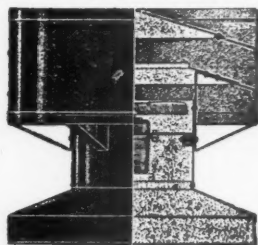
No. 2539] [Vol. 98  
THE ARCHITECTURAL PRESS,  
War Address: Forty-five The Avenue,  
Cheam, Surrey. Phone: Vigilant 0087-9

Price 9d.

Registered as a Newspaper

★ The war has both multiplied the number of Official Departments and encouraged Societies and Committees of all kinds to become more vocal. The result is a growing output of official and group propaganda. A glossary of abbreviations is now provided below, together with the full address and telephone number of the organizations concerned. In all cases where the town is not mentioned the word LONDON is implicit in the address.

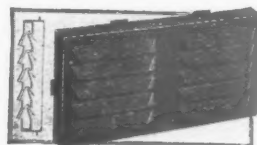
AA	Architectural Association. 34/6, Bedford Square, W.C.1.	Museum 0974.
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1.	Victoria 0447-8.
APRR	Association for Planning and Regional Reconstruction. 32, Gordon Square, W.C.1.	Euston 2158-9.
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Welbeck 9738.
ASB	Architectural Science Board of the Royal Institute of British Architects. 66, Portland Place, W.1.	Welbeck 6927.
BC	Building Centre. 23, Maddox Street, W.1.	Mayfair 2128.
BDA	British Door Association, Shabnall Road, Burton-on-Trent.	
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434.
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385.
BINC	Building Industries National Council. 110, Bickenhall Mansions, W.1.	Welbeck 3335.
BOE	Board of Education. Belgrave Square, S.W.1.	Sloane 4522.
BOT	Board of Trade. Millbank, S.W.1.	Whitehall 5140.
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246.
BSA	British Steelwork Association. 11, Tothill Street, S.W.1.	Whitehall 5073.
BSI	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333.
CEMA	Council for the Encouragement of Music and the Arts. 9, Belgrave Square, S.W.1.	Sloane 0421.
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.1.	Sloane 4280.
CSI	Chartered Surveyors' Institution. 12, Great George Street, S.W.1.	Whitehall 5322.
DIA	Design and Industries Association. Central Institute of Art and Design, National Gallery, W.C.2.	Whitehall 7618.
DOT	Department of Overseas Trade. Dolphin Square, S.W.1.	Victoria 4477.
EJMA	English Joinery Manufacturers Association (Incorporated), Sackville House, 40, Piccadilly, W.1.	Regent 4448.
FMB	Federation of Master Builders. 23, Compton Terrace, Upper Street, N.1.	Canonbury 2041.
GG	Georgian Group. 55, Great Ormond Street, W.C.1.	Holborn 2664.
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881.
IAAS	Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1.	Sloane 3158.
ICE	Institution of Civil Engineers. Great George Street, S.W.1.	Whitehall 4577.
IEE	Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2.	Temple Bar 7676.
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172.
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128-29.
ISPH	Committee for the Industrial and Scientific Provision of Housing. 3, Albemarle Street, W.1.	Regent 4782-3.
LIDC	Lead Industries Development Council. Rex House, King William Street, E.C.4.	Mansion House 2855.
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3767.
MARS	Modern Architectural Research. 8, Clarges Street, W.1.	Grosvenor 2652.
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400.
MOH	Ministry of Health. Whitehall, S.W.1.	Whitehall 4300.
MOI	Ministry of Information. Malet Street, W.C.1.	Euston 4321.
MOLNS	Ministry of Labour and National Service. St. James' Square, S.W.1.	Whitehall 6200.
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.2.	Gerrard 6933.
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Abbey 7711.
MOTCP	Ministry of Town and Country Planning. 32-33, St. James's Square, S.W.1.	
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611.
NBR	National Buildings Record. 66, Portland Place, W.1.	Welbeck 1881.
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041.
NFBTO	National Federation of Building Trades Operatives. 9, Rugby Chambers, Rugby Street, W.C.1.	Holborn 2770.
NT	National Trust for Places of Historic Interest or Natural Beauty. 7, Buckingham Palace Gardens, S.W.1.	Sloane 5808.
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245.
PWB	Post War Building, Directorate of. Ministry of Works, Lambeth Bridge House, S.E.1.	Reliance 7611.
RC	Reconstruction Committee RIBA. 66, Portland Place, W.1.	Welbeck 6927.
RCA	Reinforced Concrete Association. 91, Petty France, S.W.1.	Whitehall 9936.
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335.
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Temple Bar 8274.
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646.
TCPA	Town and Country Planning Association. 13, Suffolk Street, S.W.1.	Whitehall 2881.
TDA	Timber Development Association. 75, Cannon Street, E.C.4.	City 6147.
TPI	Town Planning Institute. 11, Arundel Street, Strand, W.C.2.	Temple Bar 4985.



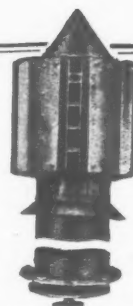
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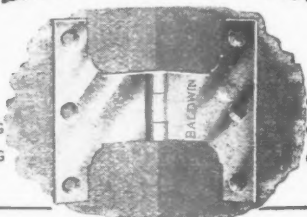
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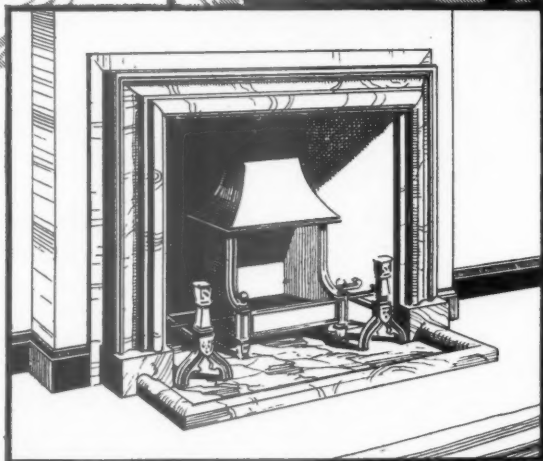
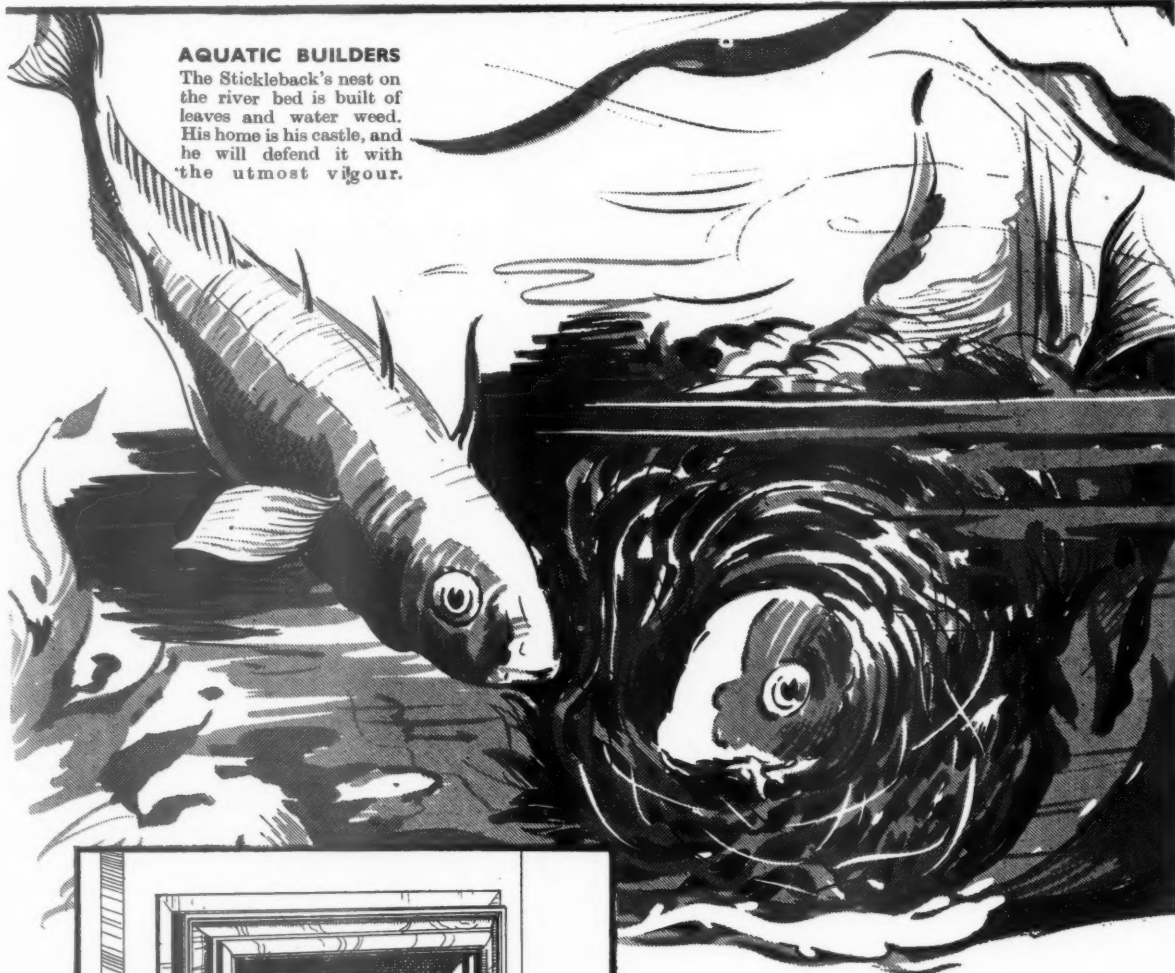
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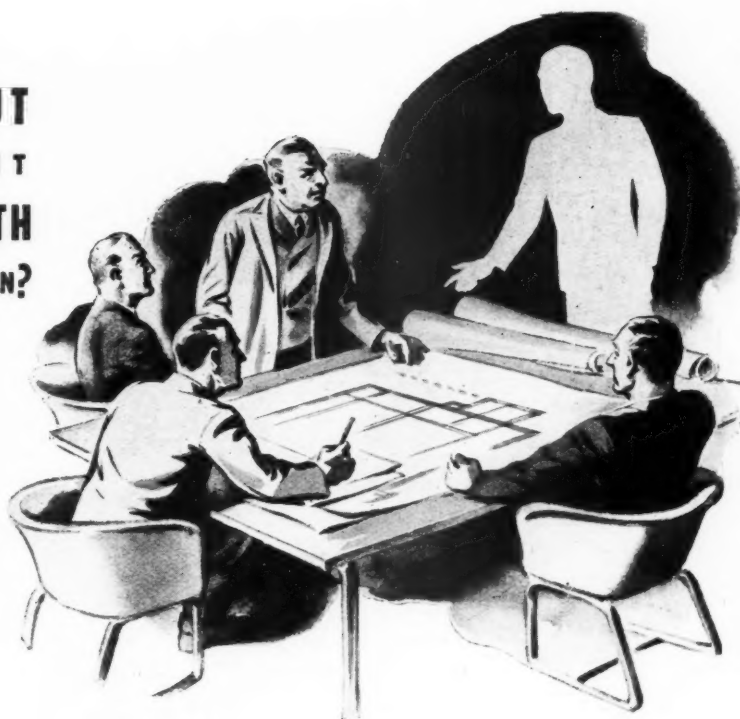
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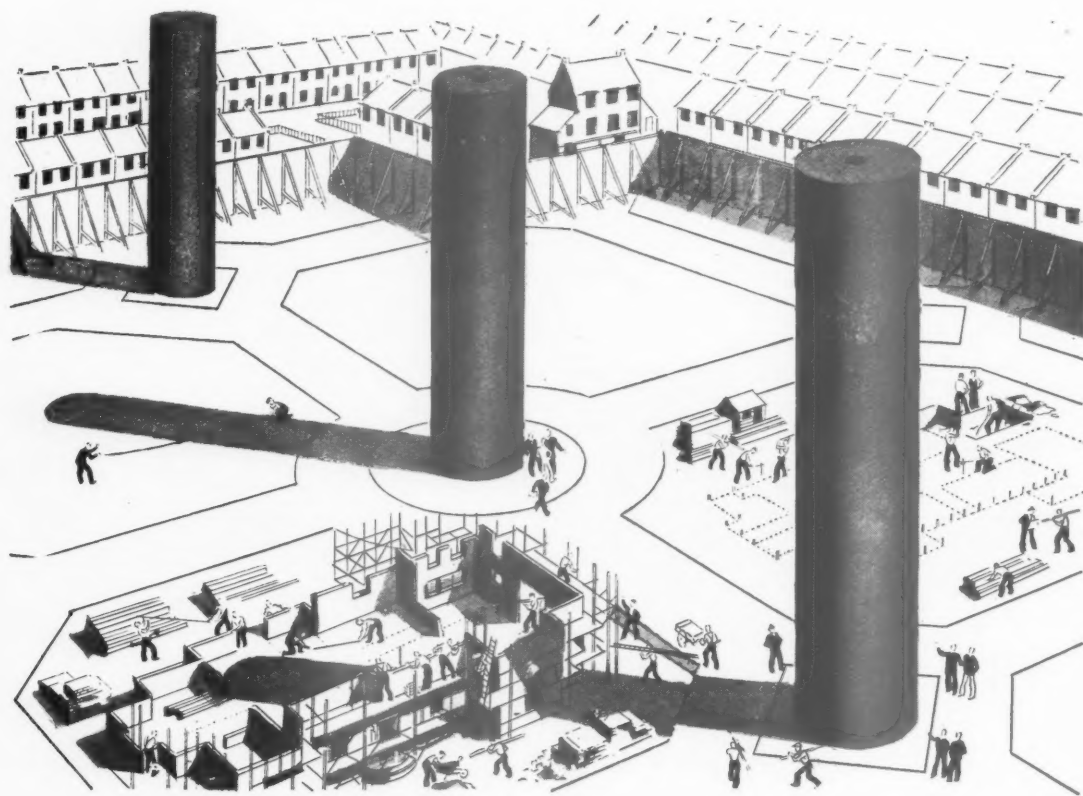
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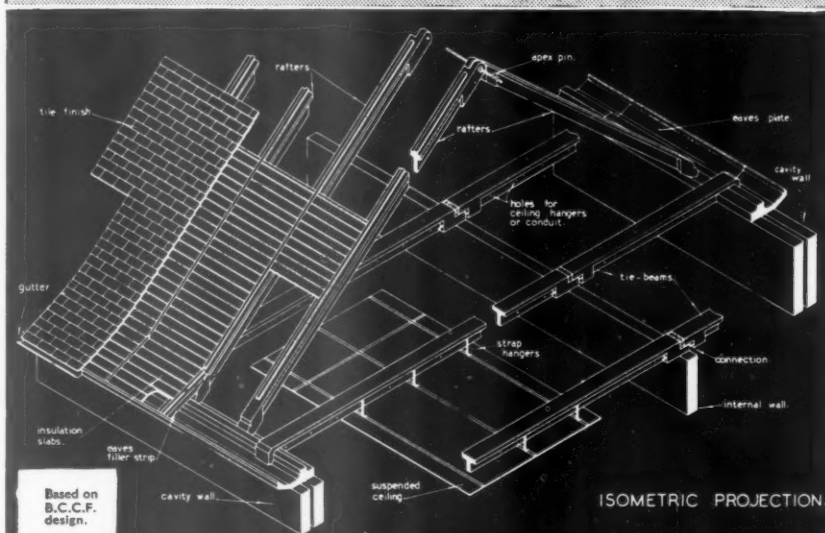
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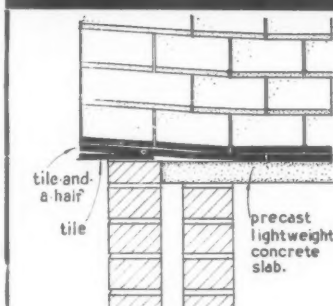
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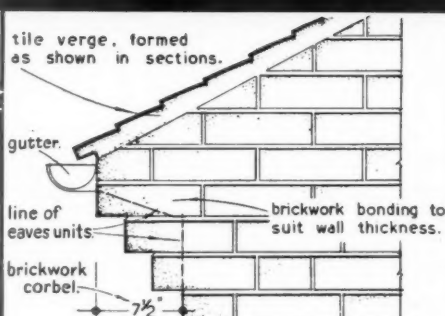
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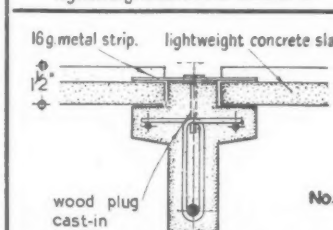
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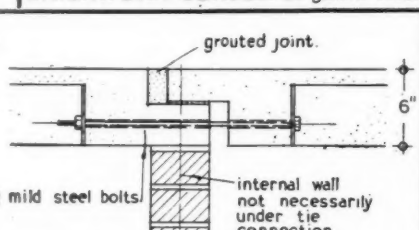
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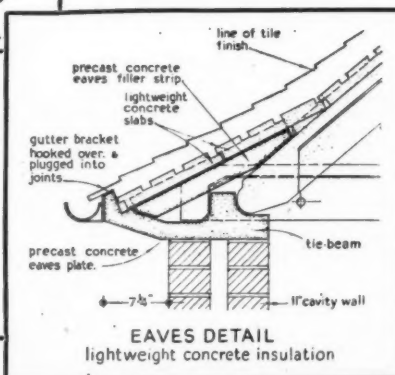
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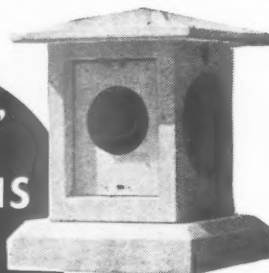
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**TURNERS  
ASBESTOS  
CEMENT  
CO. LTD.**

**TRAFFORD PARK  
MANCHESTER 17**



Cover Soaker of "EVERITE"  
Asbestos-cement, in place  
of lead, for use with  
"EVERITE" Asbestos-  
cement Extractors, etc.





## WHAT'S TO FOLLOW?

When the shops no longer need protection from splinters and blast, what sort of shops will be built? We know we shall have lots of new materials, new ways of lighting, and new ideas: and we shall be ready to put them to the service of architects who want well-built shops that work.

## Harris & Sheldon Ltd

MAKERS OF SHOPS

London Showrooms: 27 Berkeley Square, W.1. Telephone: Mayfair 2017. Works and Head Office: Stafford Street, Birmingham, 4.  
Glasgow Office: 94 Miller Street. Manchester Office: Fernleaf Street, Moss Side.

*for* STEEL EQUIPMENT **Sankey-Sheldon**

## AGA cooking for all



One of 3 British Restaurants at Bolton.

Many British Restaurants are equipped with AGA Heavy Duty Cookers, which are demonstrating their economy and efficiency in day and night public service. AGA Cookers operate with a very low fuel consumption which is guaranteed by the manufacturers. Heat is kept stored for its job — the kitchen remains cool. Fuelling and riddling have to be done only three times in 24 hours. Aga Heat Limited, with their Associated Companies, will plan and equip complete cooking installations on any scale.

AGA HEAT LTD. (Proprietors: Allied Ironfounders Ltd.) MORTIMER HOUSE, 37-41, MORTIMER STREET, LONDON, W.1.

You know where you are  
with an **AGA**

*The word AGA is the registered trade mark of Aga Heat Limited*









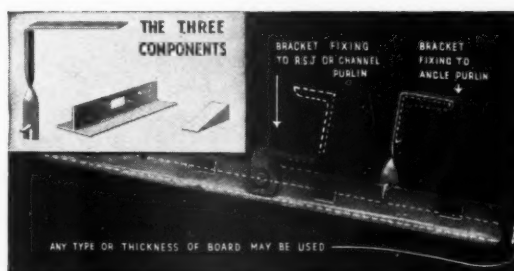
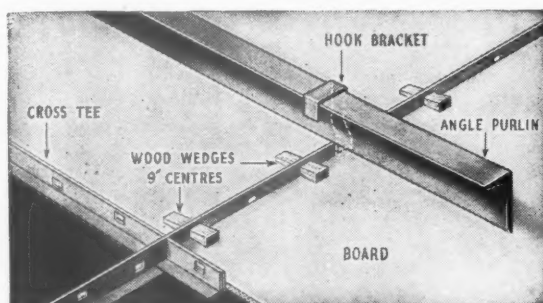
Patent No. 5174-0

## FOR APPLYING ANY TYPE OF BOARD TO CEILING & WALLS

The Wallboard is secured to sherardised, pressed steel, slotted T-section by wedges. Below are shown the methods of attaching the support to various forms of purlin.



Escalator Tunnel at St. John's Wood Underground Station. Architect: S. A. Heaps.



### 8 POINTS TO BE NOTED

1. Fixed to **UNDERSIDE** of purlins — steel or wood — covering unsightly hook bolts, clips, etc.
2. Assures the insulating value of air-space between roof and underside of purlins. No dust or dirt.
3. Can be fixed to steel or wood purlins of roofs and joists of flat ceiling.
4. No unsightly nail heads showing.
5. Can be applied to new or old buildings of any construction independently of the roofing contractor,

6. who proceeds with his work ahead of the AnD Wedge Method.
6. Any thickness of board can be used, from  $\frac{1}{8}$ " to  $\frac{5}{8}$ ".
7. This method can be used for applying linings to exterior walls.
8. The simplicity of application is such that any contractor can apply the AnD Wedge Method, and the materials making up this method can be purchased by the contractor.

Full particulars, specification and a typical layout will be sent on request

## C. F. ANDERSON & SON, LTD.

### Wallboards for Government Work

Send us your "certificate of requirements" and we will arrange for licence application to Control

HARRIS WHARF, GRAHAM STREET, LONDON, N.I. TELEPHONE: CLERKENWELL 4582



**THE VICTORIAN REVIVAL** of terra-cotta pottery produced some truly astonishing designs. A notable example is this pitcher, so elaborately embellished that it has the appearance of over-flowing with decorative devices.

In the contemporary interior generally, the art of titivation was lavishly employed. Decoration was applied in no measured terms to the furniture, the carpets, and all the multitudinous possessions with which the Victorians loved to surround themselves.

The one restraining note was provided by the steel engravings of Highland cattle, staring moodily at the assembled bric-a-brac. But this was offset by the wall decorations, on which enormous flowers bloomed with a profusion which dwarfed the choicest exotics in the conservatory.

Seventy years ago, when the above illustration first appeared, The Silicate Paint Company had just been founded. From its earliest days the Company was associated with the counter-movement towards simpler forms of decoration and a more mature appreciation of colour. These

principles are now universally accepted and give point to the reminder —

**DURESCO**  
for post-war painting

On all painting problems consult The Silicate Paint Company, J. B. Orr & Co. Ltd., Charlton, London, S.E.7.

## WROUGHT LIGHT ALLOYS

development  
association

### ADVISORY SERVICE BUREAU

THE handling and treatment of strong aluminium alloys is new to many architects.

The Advisory Service Bureau of the Association has been established for the purpose of dealing promptly with every question likely to arise in the use of aluminium alloys in the building industry.

Technical bulletins summarising the properties of wrought aluminium alloys are available for your information, on request.

## WROUGHT LIGHT ALLOYS DEVELOPMENT ASSOCIATION

UNION CHAMBERS, 63 TEMPLE ROW,  
BIRMINGHAM, 2.

TELEPHONE: MIDland 0721

TELEGRAMS: LIGHTALDEV, B'ham 2



A NEW AGE  
IS DAWNING

# The Railways Re-Awaken

FROM the discomforts of the horse coach to the smooth travel of the railways was but a single step—a stride that carried man into a new era of speed. Dazzling possibilities were within reach and men took up the task of achievement with enthusiasm. The world was made the background for a pattern of glistening steel tracks.

Such progress in a mere flick of time outpaced the urge of development and the railways slowly drifted into a period of complacency.

Now the re-awakening. Rising to the challenge of sea, road and air transport, the railways re-assert themselves and move forward with increasing momentum to usher in the age they have already helped so materially to build.

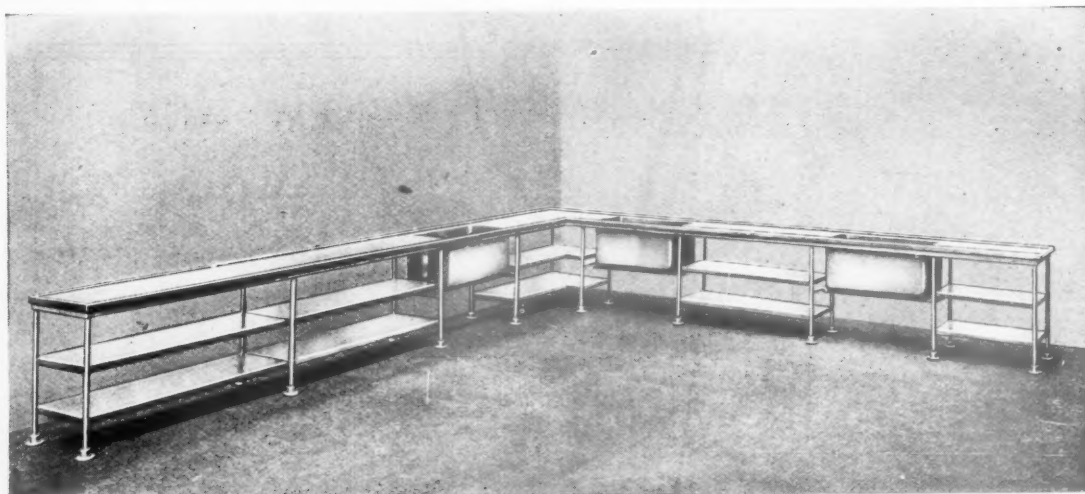
# C R A B T R E E

*A name synonymous with Progress in Accessories and Switchgear*

"Crabtree" (Registered)

C.380/195 Advt. of J. A. Crabtree & Co. Ltd., Walsall, England





## PRODUCTS **PLAND** IN STAINLESS STEEL

The manufacture of well-designed and sturdily built Stainless Steel Equipment is our job. Sinks and Sink Units we produce in a wide range of standard models for small domestic kitchens, for large hospitals and hotels.

UNDER PRESENT CONDITIONS STAINLESS STEEL IS ONLY AVAILABLE FOR ESSENTIAL WORK.

## STAINLESS STEEL SINK CO. LTD.

Head Office and Works:  
**LEEDS** : Ring Rd., Lower Wortley.  
Telephone : Armley 38711.

London Office and Showroom:  
**LONDON** : 14 Great Peter St., Westminster, S.W.1  
Telephone : Abbey 1575

## TVA

### adventure in planning

By *Julian Huxley*

(To be published in October)

An account of the reclamation of the Tennessee Valley, formerly one of the most backward regions of the U.S.A. Dr. Huxley, who has done long and detailed research into all aspects of the work of the Tennessee Valley Authority, has now produced a book which, for the first time, describes this gigantic enterprise for the benefit of English readers. There is a Foreword by the Hon. J. G. Winant, Ambassador of the United States, and notes on the illustrations by Gordon and Flora Stephenson. 144 pages with about 150 illustrations. Size  $8\frac{1}{2}$  ins.  $\times$   $5\frac{1}{2}$  ins.

PRICE 8s. 6d.  
postage 6d.

THE ARCHITECTURAL PRESS  
45 The Avenue • Cheam • Surrey

## THE

## INFORMATION BOOK

THIS book was originally prepared by Sir John Burnet, Tait and Lorne entirely for the use of their own office staff, but through their courtesy it is now made available to the whole of the architectural profession.

The first part explains all the details of how their office is run, showing the exact part played by each cog in their organisation, while the second and larger part consists entirely of Information Sheets in diagrammatic form. These sheets cover such subjects as: Kitchens and fittings, furniture, timbers, windows, coal, gas and electric fires, lighting fixtures, stairs, plumbing, waterproofing, restaurant seating, concrete floors, steelwork, electricity data, ventilation, heating, and much other general information—their object being to give in readily accessible form information of the sort which is constantly needed in the architect's office.

The book contains 216 pages, size 12 in.  $\times$  9 in., cloth bound. Price 25s. net; postage 8d. inland.

THE ARCHITECTURAL PRESS  
War Address: 45 The Avenue, Cheam, Surrey

# THE SHAPE OF THINGS TO COME

## AND THE SPIRIT AND TRADITION OF THE PAST.



MOMPESSON HOUSE, SALISBURY.  
THE SETTING TO A FINE EXAMPLE OF PERIOD WROUGHT IRON WORK. ~

REPRODUCTIONS OR ORIGINALS IN WROUGHT IRON, CAST LEAD, BRONZE AND CAST IRON, OF ALL CLASSES OF WORK, SUCH AS GATES AND RAILINGS, RAINWATER HEADS ETC., CARRIED OUT BY HIGHLY SKILLED ROSS CRAFTSMEN, FROM THE PLAINEST AND SIMPLEST TYPES UP TO RICHLY ORNAMENTED PIECES. ~ ARCHITECTS' DESIGNS RECEIVE THE MOST CAREFUL ATTENTION IN WORKING AND EXECUTION.

**S. GRAHAME  
ROSS Ltd.**

ARCHITECTURAL CRAFTSMEN & ENGINEERS.

BATH ROAD, SLOUGH.

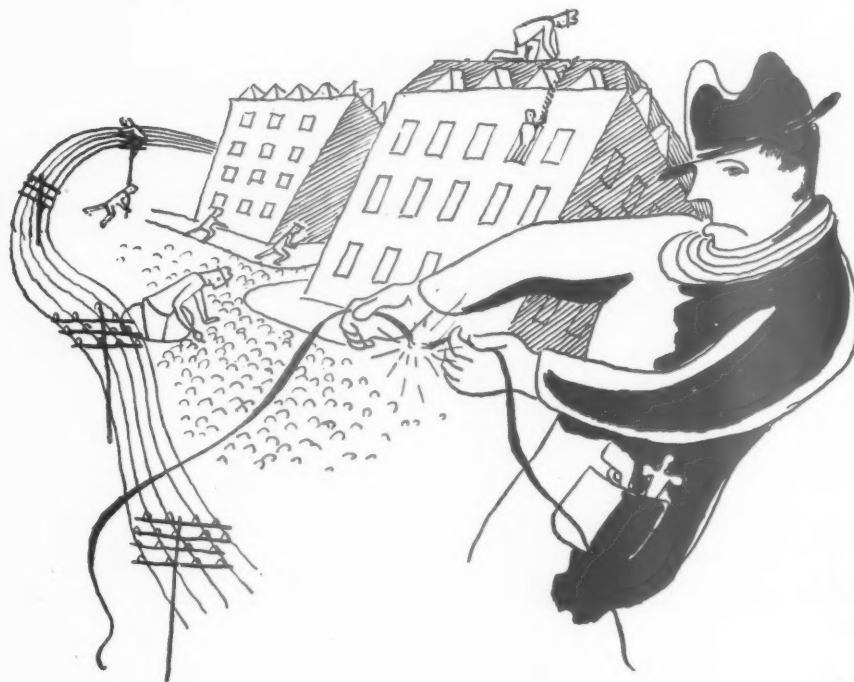
TELEPHONE: BURNHAM 686.

LONDON OFFICE: 47 DORSET ST W.I.

TELEPHONE: WELBECK. 8464.

# *Disbelieve It* *— Or Don't* BY TROUGHTON & YOUNG

*If all the electrical circuits that we have wired since war began were to fuse simultaneously at 11.42 (double summer time) on a wet Monday with the sun entering Virgo—it would prove that some men are cleverer saboteurs than we are electrical engineers. Which is absurd.*



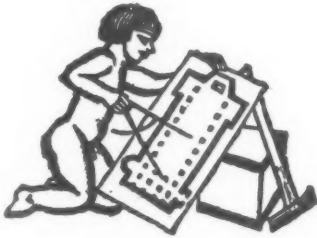
Of course, we have to remain silent about the actual electrical contracts that we have handled, but they make an impressive list and, without wishing to boast, we know that they have been well carried out.

**TROUGHTON & YOUNG LTD.**

ELECTRICAL ENGINEERS AND CONTRACTORS

IMPERIAL COURT, BASIL STREET, LONDON, S.W.3 · KENSINGTON 8881

In common with every other periodical this JOURNAL is rationed to a small part of its peace-time needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee that he will get a copy of the JOURNAL. Newsagents now cannot supply the JOURNAL except to a "firm order." Subscription rates: by post in the U.K. or abroad, £1 15s. 0d. per annum. Single copies, 9d.; post free, 11d. Special numbers are included in subscription; single copies, 1s. 6d.; post free, 1s. 9d. Back numbers more than 12 months old (when available), double price. Volumes can be bound complete with index, in cloth cases, for 15s. each; carriage 1s. extra. Goods advertised in the JOURNAL, and made of raw materials now in short supply, are not necessarily available for export.



## DIARY FOR SEPTEMBER OCTOBER AND NOVEMBER

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.

**BOURNEMOUTH.** *TCPA Conference.* OCT. 2

**BRISTOL.** *Rebuilding Britain Exhibition.* At the Art Gallery. (Sponsor, CEMA). SEPT. 23 to OCT. 6

**CARDIFF.** *Rebuilding Britain Exhibition.* (Sponsor, RIBA.) DEC. 20 to JAN. 17

**CARLISLE.** *When We Build Again Exhibition.* At Messrs. Binns Ltd. (Sponsor, TCPA.) OCT. 2-9

*TCPA Conference.* At the Town Hall. Speakers: Dr. Dudley Stamp, Percy Dalton and R. L. Reiss. OCTOBER 9

**DERBY.** *Recording Britain Exhibition.* At the Art Gallery. (Sponsor, CEMA). SEPT. 23-25

**EXETER.** *Rebuilding Britain Exhibition.* (Sponsor, RIBA.) OCT. 18 to NOV. 8

**GUILDFORD.** *New Homes for Old Exhibition.* (Sponsor, HC.) SEPT. 24-30

**HYDE.** *Englishman Builds Exhibition.* At Bayley Park, Hyde Park. (Sponsor, BIAE.) SEPT. 25-OCT. 9

**LEICESTER.** *Living in the Country Exhibition.* (Sponsor, HC.) SEPT. 23-OCT. 12

**LONDON.** *Recording Britain Exhibition.* At National Gallery, Trafalgar Square. Third and final exhibition of selected drawings under the Scheme for a Record of Changing Britain. (Sponsor, MOLNS and Pilgrim Trust). SEPT. 23-30

*Homes to Live in Exhibition.* At Geffrye Museum, Kingsland Road, E.2. (Sponsor, CEMA). SEPT. 23 to OCT. 2

*Institute of Housing Annual Conference.* At Friends' House, Euston Road, N.W.1. Speakers: George Hicks, M.P., D. E. E. Gibson and Miss Elizabeth Denby. 10 a.m. SEPT. 24

Percy J. Waldram. *Daylight Illumination in Factories and Workshops.* At 39, Victoria Street, S.W.1. Mr. Waldram will deal with light and illumination. Daylight and artificial light. Variations of daylight. Logarithmic visual reactions. The ratio system of measuring daylight. Daylight factors. Sky factors. Photometric and geometric methods of measuring and predetermining daylight. Contour plans. Legal and international grumble point for ordinary work. Urgent needs of standards of adequacy for fine work. Home-made sky factor gauges. Fenestration made easy. Skylights and monitor lights.

Windowless factories. (Sponsor, Junior Institution of Engineers.) 6.30 p.m. OCT. 24

Professor C. H. Reilly. *Citizen or Peasant.* At 1, Grosvenor Place, S.W.1. (Sponsor, TCPA). OCTOBER 28

*County of London Plan Exhibition.* At RA, Burlington House, Piccadilly, W. NOV. 3 to DEC. 1

**MERTHYR TYDFIL.** *Recording Britain Exhibition.* At Cyfarthfa Castle Museum. (Sponsor, CEMA). SEPT. 23 to OCT. 11

**MIDDLESBROUGH.** *When We Build Again Exhibition.* SEPT. 23-25

**NOTTINGHAM.** *Homes they Come From Exhibition.* (Sponsor, HC.) SEPT. 23-30

**RHYL.** *TCPA Conference.* Speakers: Clough Williams-Ellis and W. A. Eden. 11 a.m. OCTOBER 16

**SEVENOAKS.** *Your Inheritance Exhibition.* (Sponsor, HC.) SEPT. 27-OCT. 4

**SHEFFIELD.** *Design in Daily Life Exhibition.* At Graves Art Gallery. (Sponsor, CEMA). SEPTEMBER 23-OCTOBER 2

*Rebuilding Britain Exhibition.* (Sponsor, RIBA.) APRIL 4-25, 1944

**SOUTHAMPTON.** *Rebuilding Britain Exhibition.* (Sponsor, RIBA.) JAN. 28 to FEB. 18, 1944

**STOKE-ON-TRENT.** *When We Build Again Exhibition.* (Sponsor, TCPA, in conjunction with Cadbury Bros.) OCTOBER 18-23

*TCPA Conference.* Speakers: Dobson Chapman, Max Lock and Paul Cadbury. OCTOBER 23

**SWANSEA.** *Rebuilding Britain Exhibition.* (Sponsor, RIBA.) NOV. 20 to DEC. 11

*Living in Cities Exhibition.* At Deffett Francis Art Gallery. (Sponsor, CEMA). SEPT. 23 to OCT. 9

**WAKEFIELD.** *Design in the Home Exhibition.* At the City Art Gallery. (Sponsor, CEMA). SEPT. 25 to OCT. 16

**WARRINGTON.** *Living in Cities Exhibition.* At Museum and Art Gallery, Bold Street. (Sponsor, BIAE.) SEPT. 25 to OCT. 9

**YORK.** *Octavia Hill Exhibition.* (Sponsor, HC.) SEPT. 27-OCT. 4

*TCPA Conference.* Speakers: The Archbishop of York and Major C. W. C. Needham. NOVEMBER 13

## NEWS

THURSDAY, SEPTEMBER 23, 1943  
No. 2539. Vol. 98

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

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

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

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

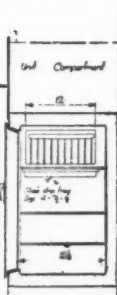
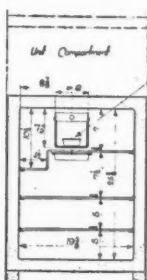
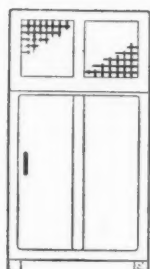
### Furniture firms are complaining that some shops are PUTTING AN EXTRA COAT OF POLISH on utility furniture.

They assert that such firms are competing unfairly with dealers who offer it as it comes from the manufacturers. It has not yet been declared strictly illegal, states the Furniture Review, but any retailer who does have the polish applied may find himself the subject of a court case. There is nothing, it states, to prevent utility furniture brought back for repair being given a coat of polish in the course of the repairs.

### Mr. C. U. Peat, M.P., Joint Parliamentary Secretary to MOS and Mr. Gerald Lenanton, Director of Home Timber Production, visited units of THE NEW ZEALAND MILITARY FORESTRY GROUP.

Mr. Peat expressed the gratitude of the Ministry for the splendid work which the units have done and are doing. He stressed the vital necessity for skilled forestry units, and the shortage of man power and timber for supplying the war effort. He thanked the New Zealand units for the magnificent way in which they had helped to solve these problems.





#### ADVANCE INFORMATION

Here are engineering drawings of a built-in Prestcold refrigerator supported on bearers with a storage capacity of 4½ cu. ft. — enough for a family of four and sufficient to render larder space unnecessary. Dry non-perishable goods would be kept in a kitchen cabinet or ordinary cupboard. This model would be mass produced, economical and more efficient than any other type of home refrigerator. The refrigerator door could be waist-high and the space above and below would be fitted for normal cupboard storage.

Because these islands lie within what is called (by courtesy) the temperate zone, a refrigerator has always been regarded as an 'extra.'

But even a gentle warmth is enough to start food on the downward path and whatever may be happening out doors, it's seldom winter in kitchen or larder. Moreover food deterioration sets in some time before the symptoms become obvious. Damp and steam simply speed the process.

Yet this humid warmth is pretty much the climatic condition in which food *has* been kept in thousands of homes all over the country.

In our view—and yours too, we believe—that isn't good enough for the future. *Food storage requires mid-winter conditions every day of the year.* These conditions are our study. It is one of our post-war aims to see simple and economical domestic refrigeration accepted as a necessary service in every home.

for post-war homes

**PRESTCOLD  
REFRIGERATION**

A PRODUCT OF PRESSED STEEL COMPANY LIMITED



# from AN ARCHITECT'S Commonplace Book

FUNCTIONALISM IN 500 B.C. [*From the Tao Tè Ching of Lao Tze*]. We put thirty spokes together and call it a wheel ; But it is on the space where there is nothing that the utility of the wheel depends. We turn clay to make a vessel ; But it is on the space where there is nothing that the utility of the vessel depends. We pierce doors and windows to make a house ; And it is on these spaces where there is nothing that the utility of the house depends. Therefore just as we take advantage of what is, we should recognize the utility of what is not.

★  
*A list of suitable properties now being compiled by the Ampthill R.D.C. to find accommodation for inadequately housed families will include LONDONERS' WEEK-END COTTAGES.*

One member of the Council, Mr. R. B. Burton, speaking at the last meeting, said: It is known some cottages are being used as week-end accommodation. Such a practice is getting scandalous. Asked by another member if the MOH circular about scheduling property concerned only houses of a certain rateable value, the Clerk said it covers all houses except those earmarked by the Government. This is a question that will cause more heartburn than anything. The Ministry's Order may not be so valuable as has been proclaimed. There are loopholes, and the Order might enable us to obtain possession of only those cottages that are partly occupied.

*MOW Committee on Building Materials Standardization has issued an addendum to the economy memorandum concerning the use of LEAD AND PLUMBER'S SOLDER in building and plumbing work for X-ray protection.*

Lead may be used for doors and frames of windows and doors only. For partitions between treatment and other rooms barium sulphate plaster must be used. In the addendum are given the best mixture to use, the names of the firms from whom the material can be obtained, the precautions necessary to secure good adhesion, and two finishing materials for the completed work. MOH has issued the addendum as a circular to joint hospital boards, joint boards for tuberculosis, joint sanatorium boards, mental hospital boards, and visiting committees with hospitals in the emergency hospital scheme.

*The Mayor of St. Albans, Councillor C. V. Dumbleton, has declared that the REQUISITIONING OF EMPTY HOUSES IS USELESS.*

At a meeting of the City Council he declared that the circular to local authorities, extending powers of requisitioning of empty houses, contained limitations and qualifications which make it quite useless as a contribution to their general housing needs. He felt it his bounden duty, he said, to call upon the Government, as a most serious and urgent matter, at once to review the circular, so that it may be a real help to our distressed fellow citizens and not, as at present, completely illusory. We have begged the Ministry to allow us to proceed with a small emergency building scheme. This has been refused. He said: Towards post-war housing the Government attitude is most unsatisfactory. Five hundred houses is our absolute need, and we

need them urgently. I hope that St. Albans and all similar housing authorities will keep pressing the Government for a more realistic appreciation of the housing needs of the people.

*Wandsworth Ratepayers Association WANT TENANTS TO PAY HIGHER RENTS on the housing estates owned by London's local authorities.*

The ratepayers feel that London's local authorities should not pay any more housing estate subsidies. Their association has passed a resolution to this effect which will be submitted to the local council and the LCC. They want Council tenants to pay higher rents and suggest instances of hardship should be treated individually. Alderman E. P. Martin said the average man in a council house is probably earning twice as much as he did before the war. The cost of living is down. People cannot buy many things they want. My household expenses are lower than before the war. If people were willing to reveal their incomes when they want houses they should have to reveal them now. Alderman Heath said these houses were originally intended for people with incomes below a certain level. There were about 3,000 such houses in Wandsworth, costing the country £50,000 a year. In many instances the families in them had incomes of £10 to £12 a week.

★  
*Mr. J. Hubert Worthington, Imperial War Graves Commission's principal architect for the North African area, has returned to England after a 3,000 miles tour of the BATTLEFIELDS AND CEMETERIES to study and report upon the sites for ultimate permanent construction.*

*An estate in Dorset, just bought by the Ministry of Agriculture, may be the HOME OF THE NATIONAL STUD.*

It is known as the Sandley Estate and consists of 150 acres near Gillingham, Dorset. The property, offered by the executors of Viscount Furness, was bought by the Ministry for £16,500, according to the *Daily Telegraph*. The National Stud at present is at Tully, Co. Kildare. It was given to Britain in 1916 by the late Lord Wavertree, and has made a profit of over £86,000. Among the famous horses bred at the National Stud are Sun Chariot and Big Game, who were leased to the King, and between them won four of the five classic races last year.

*A London firm has achieved a 75 per cent REDUCTION IN PAPER CONSUMPTION by progressive economies since the outbreak of war.*

One member of the staff is employed full time devising ways of saving paper in the design and printing of new stationery and new ideas in paper economy suggested by the staff are submitted to him. A loading schedule has been reduced to one-fifth its pre-war size by cutting out unnecessary wording, reducing the size of print and devising a more economical lay-out. Very little new paper is being used for the printing of forms. For these the backs of obsolete forms are employed. Desk blotting pads have been reduced in size and wherever possible copies of replies to letters are typed on the back of the incoming correspondence.

*A nursery at which boys will be paid TO TRAIN AS SKILLED WORKERS is being considered by Westminster City Council.*

It is proposed to train boy apprentices as electricians, carpenters, artisans and possibly gardeners for the Council's services. Preference will be given to sons of Westminster and sons of Council employees, and age limits will be 14 to 16½, extended to 17 when boys remain in secondary or post-elementary schools. Apprenticeship will be five years—four years for secondary schoolboys—and wages, to be decided by trade unions, will probably be: First year, £1; second year, £1 2s. 6d.; third year, £1 10s.; fourth year, £2; fifth year, £2 10s.

*Numbers of Wandsworth Council's tenants have no right to be LIVING IN COUNCIL PROPERTY and are preventing those whose income entitles them to the houses from moving in.*

This allegation was made by Lieut.-Col. G. Doland, M.P., twice mayor and now an alderman, in revealing that the Council has a waiting list of 3,422 for houses and flats.

*The first term of the new session of the Edinburgh College of Art, School of Architecture and Department of Town Planning BEGINS ON OCT. 1.*

The school is associated with the Heriot-Watt College in so far as a portion of the technical training is concerned, and a joint board of studies governs the relations between the two institutions. The school is recognized by the RIBA. Students who successfully pass the qualifying examination for the certificate



## Two Large Building Societies Amalgamate

Last Friday the proposed amalgamation of two of the biggest of London's building societies—the Abbey Road and the National—was ratified by the shareholders. Known as the Abbey National Building Society, the new organization will have assets of £80,000,000, shareholders numbering 390,000 and nearly 140,000 borrowing members. Sir Harold Bellman (Abbey Road)—left-hand photograph—is Chairman, and Mr. Stanley C. Ramsey, F.R.I.B.A. (National) deputy chairman of the new society. Sir Harold Bellman, until now chairman and managing director of the Abbey Road Society, is a director of various other companies, Governor of the London School of Economics, and a member of the Ministry of Health Central Housing Advisory Committee and the Interdepartmental Committee (Board of Trade and Ministry of Health) on Prices of

Building Materials. Mr. Stanley C. Ramsey, Chairman until the amalgamation of the National, is better known to architects as one of the twin pillars in the celebrated architectural partnership of Adshead and Ramsey. The Abbey Road Society was established sixty-nine years ago by members of a church in St. John's Wood, the National at a meeting in a tavern in Bishopsgate. The origin of the National was political, the object being the purchase of land to enable members to qualify as voters by acquiring a plot of ground. Among the founders were Richard Cobden and John Bright. On the facing page our leading article begins an analysis of the position and objectives of the building society movement and an inquiry into what the movement has to offer to the solution of post-war housing and reconstruction.

are eligible for exemption from the Intermediate examinations of the RIBA, and students who obtain the Diploma of the School are eligible for exemption from the Final examinations. After spending a period of not less than one year in practical experience outside the school, students who hold the Diploma are eligible for election as Associates RIBA if of British nationality. The Diploma (Final examination) of the school is recognized as a qualification for registration under the Architects (Registration) Act, and for the designation Registered Architect.

### *A useful method of SAVING BLOTTING PAPER has been adopted by a Letchworth firm.*

Only a single layer of blotting paper is placed in each blotting pad and under this is placed several sheets of newspaper which absorbs any ink which seeps through. After it has served its turn the newspaper is still good for salvage.

*Mr. David W. Smith, general manager of the Halifax Building Society, addressing the Halifax and District Property Owners' Association, said that the State acquisition of development rights in land as recommended by the Uthwatt report would STRIKE A HEAVY BLOW even a mortal one, at the principles and ideals of home ownership.*

He said: Planning is essential if the mistakes of private enterprise in the past are to be avoided, but it must be sensible planning. The State acquisition recommendation is nationalization pure and simple, camouflaged though it might be. It left untouched the problem of controlling the land values spiral in built-up areas. State acquisition of development rights implies State retention of those rights, and instead of individual free-

holders of homes there will be mere leaseholders, whose properties will ultimately revert to the State. Far from curing the evil of inflation in urban areas or accelerating post-war house-building, the recommendation will have just the opposite effect. Private enterprise, which alone rescued this country from the chaotic housing conditions which arose after the last war, thereby probably averting a serious social upheaval, will be hampered and stultified by the dead hand of officialdom. The public will be loth to buy properties which are subject to a substantial State ground rent, and which can never be acquired in fee simple. Estate development companies will hesitate to engage in large-scale building for letting, fearing lest fixed property might become subject to further Government and local authority control and interference. Worse still, there will, he feared, be such competition for existing freehold properties in both urban and rural areas as will cause prices to rocket and ultimately land mortgagees and mortgagors in financial difficulty. He had, he said, no hesitation in stating that, in his opinion, the first essential to the successful solution of post-war housing is dependent

almost entirely on the rejection of the development rights recommendation contained in the Uthwatt report. For these reasons the building societies should lose no time in linking up with every interest that feels itself threatened by the Uthwatt report and oppose tooth and nail this concealed measure of nationalization. The building society movement would make a psychological blunder if it failed to come out boldly into the open and express its views clearly and forcefully on such matters as the economics of housing and the principle of individual ownership and property rights.

★

### **After the war, BUILDERS MUST BE DEMOBILIZED quickly from the Services if re-housing is to start without delay.**

This was said by Mr. Leslie Wallis, president of the NFBTE at a meeting in London. He agreed with the principle of first in first out, but declared that in the ten years following the war, 4,000,000 houses would have to be built. He was confident that we can do it provided preparations are made now. The only material which may be in short supply for a while is timber, but he saw no reason why this should continue, and his views, he said, are supported by all the timber importers.

### **In some industrial centres where girl workers cannot go to baths, the BATHS COME TO THE GIRLS.**

This happens where girls have been transferred to centres where there is a shortage of billets with baths. The bathroom-on-wheels is a mobile unit paying regular visits to its customers. According to the *Evening Standard* it can provide up to 2,000 baths a week. There is no charge, and soap and towels are also supplied free. One of these mobile bathing units—which were all originally intended for bomb victims—is still being used in Norwich, one of the last towns to be blitzed. There are 15 mobile bathrooms operating throughout the country. Although they are being used in factory areas chosen by the MOH and MOL, they are always on call for bomb victims.

### **Sir Harold Bellman, chairman and managing director of the Abbey Road Building Society, regards the Government's target of 4,000,000 houses during the first 10 post-war years as BEYOND THE STATE'S CAPACITY to produce.**

Speaking at a luncheon of the Valuers, Surveyors and Estate Agents Association in London, he declared that, after assessing the man-power and material which will be available, he estimated that, far from the yearly target of 400,000 being produced in the first year, there will not be 40,000. In the second year there might be 160,000 houses, he continued. That means that in two years the maximum will be 200,000, or a quarter of the Government's estimate. Unless the Government gives facilities for private enterprise to supply the people's need for houses it will fail abjectly in its duty and its mission.

## BUILDING SOCIETIES

**I**N the *Building Societies Year Book, 1943*, recently published, we read: "Preliminary official statistics for 1942 show that building societies have once more increased their assets after a period of contraction due to war conditions. The total funds of the movement at the end of the year stood at £753 millions, against £749 millions at the end of 1941. Of this sum £608 millions represented mortgage assets, £109½ millions investments, mostly in Government securities, and nearly £35 millions other assets (at least £25 millions of which is estimated to be in cash)." The Year Book contains an alphabetical list of the names and addresses of the 931 building societies in Great Britain, and another list of the 144 largest societies in the country each of whose assets exceeds half-a-million pounds.

The building societies movement is one of the large vested interests in the country. It is therefore important to analyse its position and objectives, and to see what it has to offer to post-war housing and reconstruction.

The movement was started by working men and women and the first co-operative building societies were founded in Britain on working people's donations; rather on the lines of the smaller friendly societies, with the worthy object of mutual and co-operative financial help. But the movement in this country has since suffered a sea change.

In the years immediately before the war, houses were being built in Great Britain at the rate of some 350,000 a year, most of these by private enterprise. The greater part of these houses erected by private enterprise were built to sell and not to let. Few of those who bought these houses were able to do so outright and they borrowed the money mainly from the building societies. Between 1913 and 1939 the total amount advanced by building societies rose from some £60 millions to over £700 millions, and in 1937, at the height of the building boom, new advances were being made at the rate of £137 millions a year. Another large sum was advanced by insurance companies and the joint stock banks, but these concentrated on financing the building of flats and larger dwellings.

A superficial view of the building societies movement therefore gives the impression that here is a very useful organisation, however altered since its inception, a great thrift agency which allows some to invest their savings safely and well, and others of moderate means to acquire their own homes. This they can do by paying down a sum usually one-third of the estimated capital value of the property they are acquiring and thereafter a monthly sum over a maximum period of twenty years which includes a 5 or 5½% interest plus amortisation.

Next week the JOURNAL proposes to examine the position of building societies (within the existing economic structure), tabulating some of the major criticisms which have been



made against them in order to discover to what extent, from the point of view of the common man, they are desirable institutions. Here we have room to mention only the first and most frequent criticism which is that one has to pay dearly for the privilege of borrowing money through their agency. Broadly speaking, building societies, it is said, use money to make money, that is by what would have been described in the Middle Ages as usury. The method is simple but ingenious. Money is borrowed from investors at, say 3% and reissued to borrowers at 5% on the best possible security—property. And as a result of their absorption in the financial end of the business it is claimed that building societies while being *in fact* responsible for the creation of a national utility—housing—have remained ignorant of, or indifferent to, its social implications.



*The Architects' Journal*

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## N O T E S & T O P I C S

### THOSE RURAL COTTAGES—

A photograph on page 214 shows a pair of cottages with a cluster of people in front. Mr. Ernest Brown is seen at Hildenborough opening the first of the 3,000 agricultural workers' cottages to be completed. It's not quite clear how many will be ready this autumn, but 1,300 haven't been started yet. This pair took eleven weeks to complete, and they will rent at 14s. 6d. a week after the war.

Speakers at BINC's reconstruction conference referred to this whole episode as a sample of what we may expect to happen after the war. Mr. Brown in particular made capital out of the relative time taken to plan the cottages and build them, and argued in favour of the

building industry being freed from control.

In doing so he overlooked the fact that ability to complete 2, or for that matter 2,000 cottages spread over a year and scattered up and down the countryside doesn't prove ability to complete a much larger number of houses—500,000 in a year say—concentrated in a few towns for the same number of man-hours per house. In this respect the episode of the 3,000 cottages may prove to have been misleading.

### —HALF A CENTURY AGO

A JOURNAL reader has sent me some comments on an article which he has discovered in a copy of the *Journal of the Royal Agricultural Society* for the year 1904, rescued from a pile of old books and magazines ready for the salvage van. The article concerns *Cottages of Rural Labourers* by a Mr. Dudley Clarke. This article is of some interest in view of the present importance of farm workers' cottages.

The article shows that fifty years ago the housing of farm workers was of concern to the Government, for in 1893 a Royal Commission on Labour was set up, and cottage accommodation for agricultural labourers formed one of the subjects of the inquiry. The reports before the Commission were summarised by a Mr. William Little. "The supply of cottages is not now generally defective in respect of numbers, owing partly to the decrease in the rural population, and partly to the large number of

cottages which have been built by large landowners and others who can afford to build without an expectation of a profitable return for their outlay. The distribution of cottages is irregular, and their situation often inconvenient for the inhabitants. The accommodation provided in respect of the number, size and comfort of the rooms, the sanitary condition, and the water supply are lamentably deficient generally and require amendment. The rent which is received for cottage property in rural districts is not sufficient to make the building of good cottages directly profitable."

Suggestions for adjustments in the reports are summarised as follows :—

"(1) To reduce the original cost by the adoption of the best plans for economising space and construction and the use of materials most readily available.

"(2) By loans at a low rate of interest.

"(3) By an adjustment of rent in proportion to the character and amount of accommodation afforded.

"(4) By the attachment of larger gardens than are now usual, to cottages where such a course is practicable."

Mr. Clarke wisely comments that bad dwellings furnished at least one reason for the deplorable depopulation of our villages and he emphasizes how seriously this affects not only agriculture, but the nation at large. He goes on to say that he does not think it matters to the general public in rural areas whether houses are built of wood, iron or any other material; if cheap materials are used, the occupiers can still have healthy houses although the construction may not be durable. He would clearly not to-day oppose mass-production of houses or the erection of temporary buildings, which many are now demanding.

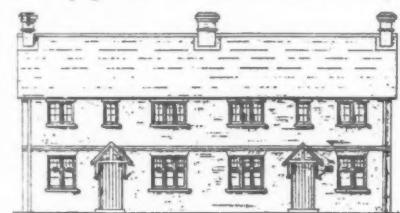
In discussing the planning of cottages Mr. Clarke has some interesting observations to make, and he illustrates his article with some typical cottage designs. The ideal accommodation laid down is more or less the same as that provided in the recently issued standard plans, though the room sizes are



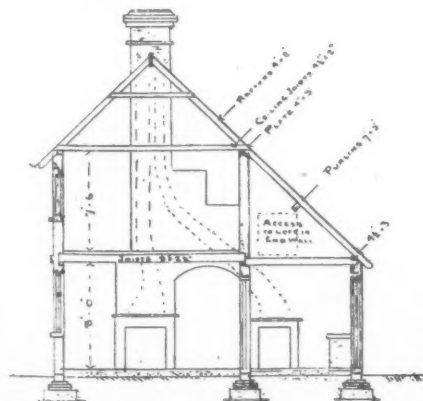
in some cases smaller, and after forty years a bathroom is now considered essential. Three bedrooms are considered a desirable minimum, though where a number of cottages are to be built he makes the sensible suggestion, which should not be overlooked at the present time, that a proportion of these could have only two bedrooms. Newly married couples, old couples whose families have married, or childless couples would find this lesser accommodation adequate, would have less rent to pay and one room less to furnish and maintain.

The estimate of the cottages illustrated is illuminating in these days of rising building costs. A block of four houses, having a floor area of 1,190 feet super on each of the two floors, plus outbuildings, and a well and pump, and including cost of land at £40 per acre, works out at £150 per house.

"Finally," writes Mr. Clarke, very sensibly, "I will emphasize that the provision of better dwellings will, at the best, be only a partial remedy for rural depopulation. Another help will be to provide large gardens attached to the cottages, and in suitable places a small grass orchard to serve also as a pig-run. These involve only



FRONT ELEVATION



SECTION AB

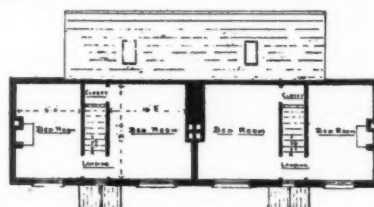
One of the designs for rural cottages illustrating an article in the Journal of the Royal Agricultural Society for 1904. See Astragal's note.

a small outlay and are aids to a labouring man's income. They afford him interest, pleasure and some instruction, and undoubtedly assist to make him and his family more contented with country life."

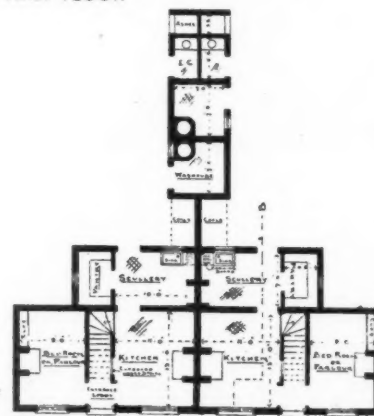
In his conclusion, the author refers to a Cheap Cottage Exhibition, which was to be held the following year (1905) at Hitchin. I do not know if this exhibition ever took place, but if so, it was no doubt the forerunner of our Ideal Homes Exhibition, which in recent years attained so gigantic a size.

At the beginning of the century, the housing of farm workers seems to have aroused some interest even in Government circles, but a comparison between the present position with that existing when Mr. Clarke expressed his views nearly forty years ago reveals that interest did not progress very far beyond the paper stage. Now we have in the Scott Report another Government publication on rural reconstruction, and a far more general, radical and imaginative one than that prepared in 1893. Let us pray that it, too, will not be cast into that vast and dusty limbo, packed tight with countless Government Reports long issued, folded, filed and conveniently forgotten.

ASTRAGAL



FIRST FLOOR



GROUND FLOOR



## LETTERS

(Percy Waldram, F.S.I.

T.H.C.

R. H. Harvey.

### Daylight Factors

SIR.—In your issue for September 9, Mr. H. J. Reifenberg suggests that the measurement of daylight factors (or rather the main constituent of daylight factors, standardised internationally in 1939 as sky factors) could be simplified by superimposing a grid of quadrilaterals of equal sky factor value on a projection on plan of windows or skylights and of whatever can be seen through them, whether sky or obstruction.

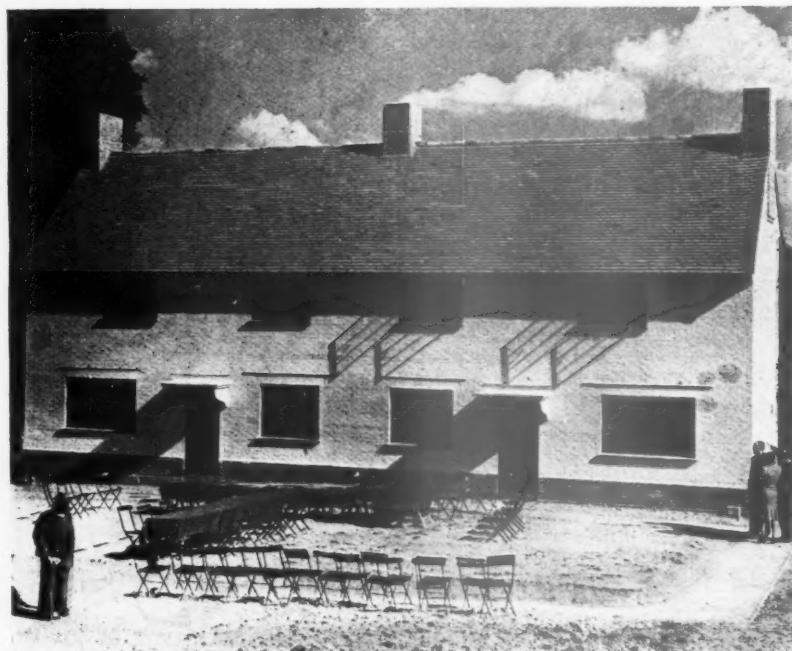
Although the projection of the grid of quadrilaterals is detailed, the description of the picture upon which the grid is superimposed is so brief that I, at least, have been unable to visualise the process. It would appear to be made upon a flat projection on plan of the angular co-ordinates of a hemisphere, usually termed a radial measuring diagram, in contradistinction to the rectangular measuring diagram recommended in the well-known DSIR report on the penetration of daylight and sunlight into buildings (Illumin. Research Tech. Paper, No. 7, 2nd ed., HMSO., 9d.), in which it is pointed out (p. 23) that the somewhat unnatural picture given by the radial diagram is less convenient than that given by the rectangular diagram.

Your correspondent claims, however, that upon the diagram which he uses, but does not describe, horizontal lines, e.g. the heads of rectangular windows, plot to straight lines. On the radial diagram, which is merely Lambert's cosine law in graphic form, and was so published on the Continent over a century ago, they plot to ellipses.

The tedious labour of which your correspondent complains is involved in the operation of plotting windows or skylights with their aspects on any diagram. It is therefore not clear how that labour is reduced, especially as the measurement of sky areas on the rectangular diagram is often less laborious than counting quadrilaterals on a superimposed grid.

Your correspondent is clearly unaware that the device for measuring sky factors by superimposed grids is protected by my patent No. 38885, in which it is applied, not to flat projections of spherical angular co-ordinates, but to perspective projections thereof for superimposing over perspectives,

# THE BROWN WAY COTTAGES, 1943



On Wednesday of last week Mr. Ernest Brown, Minister of Health, formally opened the first pair of the 3,000 farm workers' cottages. The two houses are situated in Riding Lane, Hildenborough, Kent, and were built at a cost of £935 each by the Tonbridge Rural District Council. They are of red brick, with the upper half cream-washed, and with red clay-tiled roofs. Interior walls are cement, faced with plaster finish. The accommodation comprises living room, parlour, kitchen and larder on the ground floor and three bedrooms and bathroom above. The living room extends the whole depth of the house with windows back and front. Gas lighting has been installed. The tenants for the two dwellings (there have been over 50 applicants) will be selected by the Kent War Agricultural Committee. Rent will be 14s. 6d. per week, including rates and water charges. The photographs show: Top, general view of the main front; left, Mr. Brown speaking at the opening ceremony; right, Mr. Brown hanging the board bearing the name and year "the Brown Way Cottages, 1943" on the wall between them. See Astragal note on page 212.

photographs, or the pictures formed on the ground glass focusing screen of a camera, which of course avoids all tedious labour.

Full particulars, together with directions for circumventing the patent, were given in articles by my son and myself in the Journal RIBA in 1933 and 1934, since reprinted by Messrs. P. S. King & Son, of Great Smith Street, Westminster, in a brochure entitled *The Use of Photographs in Town Planning and Design*. London.

PERCY WALDRAM.

## The Pyramidal Structure for Town Planning

SIR,—I submitted Dr. Ernst Fuchs' letter in your issue for August 12 to a person outside the profession. His comment was that, "provided this idea, i.e. the pyramidal structure for town planning by means of local units," could be extended to the whole country, so that no one could contract out, it would be of the greatest possible value in encouraging emigration, as the one desire of everyone would be to flee from such an outrageous tyranny.

I would like to suggest that all planners and reconstruction experts make a careful study of James Thompson's poem, *The City of Dreadful Night*, one of the not so minor glories of English literature, which portrays in mordant phrases the mortal end of all utopias, "The Melancholia that transcends all wit."

This condition is caused by the assumption that the end of man is known, so that every portion of our lives can be planned and organized in every part of the earth in pursuance of that end, eventually producing that soul destroying monotony known as the planned state, and nowhere is this portrayed more vividly than in the aforementioned masterpiece.

As another writer has expressed it however, "The end of man while unknown is something towards which most rapid progress is made by the free expansion of individuality." Birmingham. T. H. C.

## Employment or Leisure

SIR,—I am glad my short letter was useful to Astragal in his notes. I have discussed his recent writings with architect friends, and the matter appears to us of such vital importance that I am writing this second letter.

It is obvious that Astragal has the philosophy clearly in his mind and I do not propose to deal with that beyond saying that it is the only philosophy which challenges the totalitarianism we are fighting, and that he is right as to its origins. My letter was intended to suggest that 1919 was the date of its classification in the economic sphere.

I would, however (at the risk of bringing "coals to Newcastle"), like to emphasise another aspect of the question.

The ideals which Astragal is putting forward are dynamite. There is an organized, worldwide opposition to them for the reasons so well put by Richard Jeffries. This opposition has in the past operated through finance, but it is becoming increasingly obvious that the financial citadel has been undermined to such an extent that the control is being passed to a safer position. Hence the moves towards a completely centralised world government from which there is no redress.

Many famous men, who have become conscious of this opposition and have attempted to expose it, have been in various ways discredited and silenced.

My friends and I, while hoping to see Astragal follow up his excellent beginning, are anxious that unawareness of the existence of this organized opposition does not jeopardise his chances of helping to establish the sane society, only in which, in common with those of other callings, architects can do themselves justice.

Birmingham.

R. H. HARVEY.

## THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

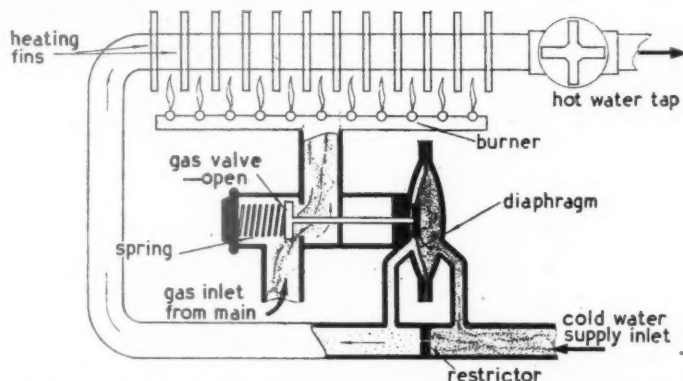
## • DOMESTIC WATER HEATING 9: INSTANTANEOUS GAS WATER HEATERS (B)

**AUTOMATIC CONTROLS FITTED TO INSTANTANEOUS GAS WATER HEATERS.**

Instantaneous gas water heaters are entirely automatic in operation, and require no attention by the user. To achieve this several control devices must be fitted:

**(1) AUTOMATIC GAS VALVE:<sup>1</sup>**

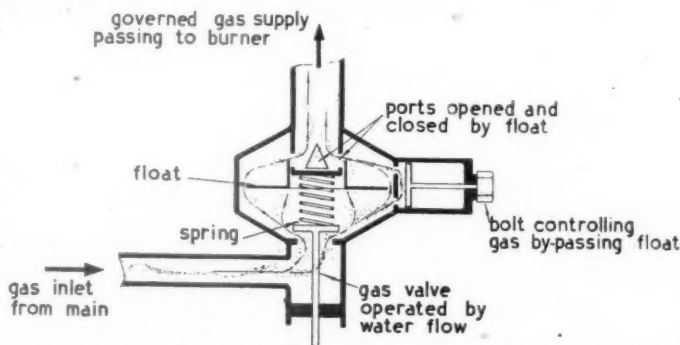
The general principles underlying the design of the device have become standardised on the better appliances, although the actual arrangement may differ.



The diagram above illustrates the general principle. With no water flowing the pressure each side of the restrictor will be the same. When the tap is turned on the pressure will be reduced after the restrictor.<sup>2</sup> There will then be a higher pressure on the side of the diaphragm connected before the restrictor, causing it to move against the force of the spring<sup>3</sup> and open the gas valve.

**(2) GAS GOVERNOR:**

It is impossible to guarantee constant pressures in a gas main at all times. Therefore, to ensure reliable service a gas governor is often fitted. This may either maintain a constant pressure, or govern the gas flow to a set value.<sup>4</sup>



The diagram above illustrates the layout of a typical constant volume gas governor. The gas flowing round the light metal float causes it to rise<sup>5</sup>—partly closing the outlet ports. The float will rise and fall slightly with variations in pressure, maintaining a constant flow of gas. The by-pass allows an overriding adjustment to be made to the volume allowed to pass.<sup>6</sup>

1. The instantaneous heater comes into operation automatically whenever a hot tap connected with it is opened. The automatic valve opens the gas valve as soon as sufficient water is passing through the heater to prevent overheating. This quantity is termed the minimum flow, and it is usual for the increase in temperature of the water at this flow to be 100°F. (i.e., 50°F. to 150°F.).

2. In Ascot appliances the restrictor is replaced by a venturi. The principle is identical, but a lower total head of water is required to open the valve.

3. By the use of a venturi the pressure difference either side of the diaphragm for any given flow of water will be greater than with a simple restrictor. The force available to compress the spring is the product of the pressure difference and the area of the diaphragm. The spring itself should be as strong as design will permit to ensure the valve closing rapidly and to reduce the possibility of dirt obstructing its closing.

4. With a constant gas pressure the rate of flow depends on the size of the burner holes, any alteration due to temperature or dirt will modify this. A constant volume gas governor makes allowance for these factors and maintains a constant rate of flow. (Ascot Types NEA 32M6, NEA 32MT1 and SG32MI).

5. The float acts as a throttle in the gas passages. As the gas flows upwards round the edges of the float the pressure is less above the float than below. If the product of this pressure difference and the area of the float exceeds the weight, then it will rise, partly closing the outlet for the gas. This will have the effect of decreasing the pressure difference lifting the float. Any given float has a fixed characteristic, and will govern the flow past it to a constant volume.

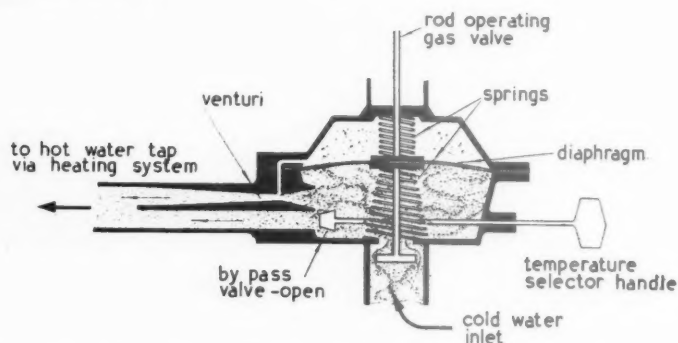
6. The governor without the adjusting bolt would have a fixed characteristic, and be suitable for one type of coal gas only. By means of the adjustment a set rate of flow with any type of gas can be predetermined. When ordering an appliance the manufacturer should be informed where it is to be installed so that no adjustment need be made after installation.

[TURN OVER



### (3) WATER GOVERNOR AND TEMPERATURE SELECTOR :

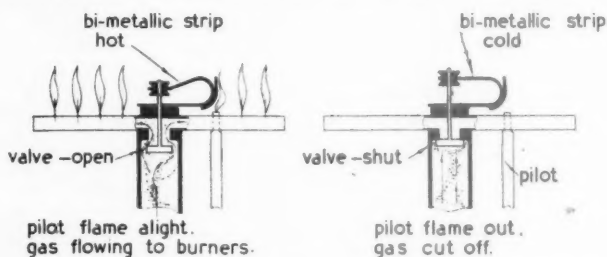
Where no supply tank is available, instantaneous heaters may generally be connected direct to the cold water main.<sup>7</sup> As mains pressure cannot be maintained constant, fluctuations will alter the water flow and the hot water temperature unless a governor is fitted.<sup>8</sup>



The diagram above illustrates the arrangement of a typical water governor and temperature selector. The water pressure is governed to a constant value and a variable by-pass to the venturi is incorporated. Any flow between the minimum and the maximum may be selected and will be maintained. In combination with a gas governor a constant water temperature is obtainable.<sup>9</sup>

### (4) PILOT SAFETY DEVICE :

A very small<sup>10</sup> pilot flame is provided on instantaneous water heaters to ignite the main burner when hot water is drawn off.



A typical arrangement of pilot light, and bi-metallic" safety device is shown above. The pilot flame heats the "U" strip, causing it to bend and open the gas valve. Should for any reason the pilot flame become extinguished, the strip cools and unbends, closing the valve and preventing the escape of unburnt gas.

7. Most Water Authorities permit the connection of approved water heaters direct to the main where no suitable tank supply is available. Formal permission should, however, be obtained before doing so. Advice regarding local by-laws may be obtained from the gas company.

8. Ascot types NEA 32TI and NEA 32MTI. The heat input to an instantaneous gas water heater is constant. The temperature of the heated water, therefore, depends on the quantity flowing in a given time. The larger the flow the lower the water outlet temperature.

9. The pressure of the water entering the appliance is governed at the point of entry and maintained at a constant pressure. The rate at which water at a constant pressure flows through an orifice is dependent on the size of the orifice. This fact is made use of in heaters embodying a water governor and temperature selector. All water flowing through the heater must pass through two orifices, one fixed—the venturi—the other variable at will and controlled by the temperature selector handle. The temperature of the heated water from an instantaneous heater varies inversely as the rate of flow through the heater, because the heat input to the water per unit of time is constant, but the quantity of water to be heated in the same unit of time is varied, hence the larger the quantity of water, the less heat any given amount of water will absorb, and consequently the lower the final temperature and vice versa.

10. The pilot flame consumes 1/5th cu. ft. per hour. If left on 24 hours a day, it would consume 5 therms per annum, at 8d. per therm=3s. 4d. If the pilot is turned off at night, the cost would be approximately 2s. 6d. per annum.

11. The action of this strip depends on the expansion of metals when they are heated. Different metals expand unequally for the same temperature increase. If two strips of different metal are joined together and then heated, the combined strip will bend with the most rapidly expanding metal outermost. The strip will also regain its former shape if allowed to cool.

Issued by Ascot Gas Water Heaters Ltd., North Circular Road, Neasden, N.W.10. Telephone: Willesden 5121 (14 lines).

Information from Research & Development Department, Ascot Gas Water Heaters Ltd.



# PHYSICAL PLANNING

## 8

## i n d e x

### The bogies

5. Freedom  
Dr. Karl Mannheim
6. Democracy  
E. M. Nicholson
7. Economics  
F. Schumacher
8. Land Ownership  
Part I. E. S. Watkins
9. Land Ownership  
Part II. E. S. Watkins
10. Democracy  
Harold Laski

### Problems

11. Local Government  
Part I. Dr. W. A. Robson
12. Local Government  
Part II. Dr. W. A. Robson

*E. S. Watkins, author of this week's article, gained LL.B. (Hons.) at Liverpool University in 1922, and holds the gold medal for conveyancing. He practised in London as a solicitor from 1923 until the outbreak of the war, and drafted the Parliamentary Bill which became the Hire Purchase Act 1938. He is a member of the Council of Toynbee Hall, an author, and is now a Captain in the R.A.*

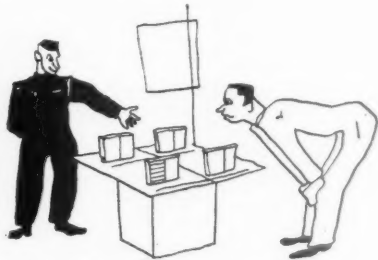
The last bogie of the physical planner is private property. The lawyer's attitude to property is that a man may do as he likes with his own except in so far as the law prevents him. This is the basis of private enterprise which has made so many of us so rich, and also of that freedom of conscience with which the less wealthy of us console ourselves.

Land is not the only kind of private property the physical planner has to deal with, even when the term is used as the lawyer uses it to include buildings as well as the ground they stand on. Industrial plant is another kind of property which is immensely significant—particularly, as Mr. Schumacher has pointed out, in times when jobs are scarce. Owners of industrial plant, because they are in a position to give employment to large numbers of people, are also in a position to dictate where people live, where houses shall be built, where roads and supply services shall be provided. These again are another type of property which singly and together offer many tempting opportunities to the physical planner. So long as property owners are allowed to do as they like with their own, physical planning is not possible—at least it cannot give that positive direction to the use made of the nation's natural and artificial resources that is necessary if we are to make planning pay. So long as property owners are restricted only by regulations designed to ensure fair play between them and their struggles with each other planners will be unable to seize the opportunities they see and able only to incur additional cost—the cost of clearing up mess resulting from selfish exploitation, neglect and collective mismanagement. The cost of tidying up derelict areas, reinstating land ruined by mineral workings, clearing slums and providing services piecemeal which could have been provided more efficiently and more cheaply if the extent of the need had been foreseen and planned.

Land is not the only form of property with which the physical planner is concerned. But it is the most obvious. The problem of land ownership is important for this reason and doubly so because the landowner is more strongly entrenched in his property than any other type of property owner. Land is the prime security. Landowners as a class have merely to hang on to their property to be sure of an income which increases as fast as the national income—or even faster as an increasing population puts increasing pressure on the land. The landlord is the type of property owner it is most difficult and also most necessary to tackle. Land is a test case. If our legal machinery is capable of devising a system which will leave management of land to individual initiative and enterprise, and at the same time guarantee that the combined operations of estates developers and farmers will result in conservative exploitation of the land as a whole in the best interests of the people as a whole, then we're well away. Less obstinate problems arising in connection with other types of property can certainly be solved. Mr. Watkins outlines such a system based on the Uthwatt report, in an article the first part of which is printed overleaf.

**THE BOGIES** *No taxation without consent? Parliament itself grew from the idea that owners have a right to do as they like with their own property. Does planning mean that we are to be reduced to a nation of civil servants owning nothing and therefore never able to act without an order? Or is this just another bogie? A lawyer's view of the case is given below. Mr. E. S. Watkins' article falls into three sections (1) a review of the law governing land ownership as it stands. (2) A comparison of amendments that have been suggested. (3) Proposals for reform based on the Uthwatt report. Sections 1 and 2 are published this week. Section 3 will appear next week.*

## BOGIE NUMBER FOUR



## PLANNING WILL END PRIVATE PROPERTY

by E. S. Watkins

### SECTION I.

#### THE EXISTING SYSTEM

The law relating to land in England is sometimes described as confusing. The allegation is an unfair one. It is true that an account of its nature, and of the accompanying procedure, when given by a lawyer to a layman, may create an impression of extreme complexity, nor is its comprehension made any the easier by the employment of a number of words no longer in common use. But to lay the blame for that on the legal system is to take too superficial a view. Fundamentally, the principles are straightforward, sensible, and, in many ways, practical.

#### FREEHOLD

An interest in land may be either freehold or leasehold. A freehold interest is an absolute interest in the fee simple. To convert that into current English, a freehold interest is absolute ownership, of the kind that results when you buy a toothbrush or a suit of clothes. You own it. If you die, leaving no will or a near relation who can inherit your property under the intestacy laws, freehold land escheats to the Crown. Your toothbrush is sold by a Government Department for the benefit of the State. The practical effect of both processes is identical. But, if words are to be used with strict accuracy, a freehold interest in land is not absolute in the sense that no one can ever deprive the owner of his ownership. The very fact of the possibility of escheat deprives it of its absolute qualities. But the probability of escheat is so small that, for practical purposes, we may consider the ownership as absolute.

The only relevant complication in this straightforward system is that land may be held not absolutely but in tail. This expression means that a person in whom the land is vested in tail is only entitled to it during his life. He cannot dispose of it by his will. There is nothing in this that is peculiar to land. Furniture is often dealt with in the same way, given by a testator by will to his widow for her to use during the remainder of her life and then passing on to some other beneficiary. Furthermore, in the case of land, there is always someone who can sell the land outright to a purchaser. It may be that the person who sells may only have a life interest in the proceeds of the sale, but an absolute interest in the land has in fact been transferred.

One other point may be disposed of now. In law, the term "land" means both the land itself and everything built into it. In transferring land, there is no need to mention separately the buildings standing on it; in law they form part of the land itself.

#### LEASEHOLD

Leasehold interests are, in essence, equally simple. A lease is an agreement. By it, one individual, usually the owner of the land, but in any case a person who has power to make such an agreement, contracts with some other individual to allow him to occupy the land for a period of time. The terms on which he may occupy it are all contained in the agreement. If the period is for less than three years, the contract is usually termed a tenancy agreement. If it is for a longer period, and it may be for any definite period of time, it is known as a lease. The result of this agreement

is obviously to give the person who becomes the tenant an interest in the land, because he has the exclusive right to occupy it so long as he carries out the other conditions he has accepted in the contract. The conditions under which land is let in this way may vary as the parties wish and according to what use the land will be put. There is usually some rent to be paid, and very frequently the owner bargains that certain things shall or shall not be done on the land. The variety of these conditions is considerable, but it is important to remember that they all arise in the first place from an agreement.

#### OTHER PEOPLE'S RIGHTS

One other aspect of the ownership of land should be mentioned. Particular individuals, or the public generally, may have rights over land without owning any of the land itself. The most obvious example is that of a right of way. It is, theoretically, possible for an individual to make an agreement with the Governors of the Bank of England that he shall have the right to walk through their main premises when he likes and as often as he likes. But that right will be personal to the man who made the agreement and will be dependent on the conditions agreed when the agreement was made. But neither that individual, nor the public, need any such agreement when they walk over the right of way in Piccadilly Circus Underground station. Everyone has that right, whether they know of the existence of the London Passenger Transport Board or not. Such rights, then, can be either public rights, such as the right to walk down the Strand, or rights privately contracted, such as the right to walk into the Athenaeum Club.

#### IMPORTANCE OF POSITION

It would, however, be reducing the problem to a fictitious simplicity if we did not point out one essential difference between the ownership of land and the ownership of a tooth-brush. Each piece of land is, in fact, unique. True, it may be argued that, as each separate flat in a certain building may be identical in size, shape, and contents with every other flat in the building, it is immaterial which you rent, for no one flat is unique. But no one flat is, or can be identical, with another, for at least they are on different floors, and that may be a point of importance to some. It may be argued, too, that each tooth-brush is unique, in the sense that, even when mass-produced, each may have some slight variation from its fellows.

But, practically, it matters little which tooth-brush you pick from the conveyor-belt, whilst it matters very much if you do or do not get the piece of land that has that charming view over the Weald of Kent or the Sound of Mull or where you will. It is this quality of uniqueness that colours so very strongly the reactions of the majority of people to the ownership of land.

#### RESTRICTIONS

We must start with the general statement that there are no restrictions on what a man may do with his own property. It is not true, but it represents the natural approach of the legal mind to the benefits of the ownership of land. In theory, a man may do what he likes with his own, unless there is some definite Act of Parliament, rule of law, or private agreement providing otherwise in specific terms. Restrictions of this kind arise in many different ways. For example, it may be to the public interest that land should be properly farmed in peace as well as in war, but the regulations to this end are a temporary war-time measure only. It may be equally to the public interest that land shall not be used for the purposes of gaming. That, however, is illegal in both peace and war. Any comment on the social practices exhibited by these two examples should not be directed at the legal profession. They are the creation of the law-makers.

As we have said, restrictions on the use of land may arise from an Act of Parliament, from a rule of law, or from a private agreement. It is obviously impossible to list all the restrictions on the use of land which Parliament has, from time to time, imposed. They vary enormously in scope and intention. There are the London Building Acts, which prescribe in considerable detail the conditions under which the owners of land in the County of London may build on their property. They have their counterparts in other Acts of Parliament of local effect, passed at the request of local authorities and applicable only to the areas governed by the local authorities promoting them. There are the pre-war Ribbon Development Acts, and there are the innumerable war-time regulations (made under authority of Act of Parliament) which prescribe how land of one kind and another shall be used. And there is the Town Planning Act which we will consider later. All these regulations are independent of ownership, in the sense that it does not matter at all who owns the land to which they apply. He or she is equally bound.

Restrictions imposed by private agreement are usually known as

restrictive covenants. They are most common when an estate is being developed as a whole for sale piecemeal. To preserve the amenities of the estate (and, of course, to maintain or improve the market value of the land the estate developers have still to sell), each person desiring to buy land on that estate is told that he may only do so if he agrees to bind himself, and all owners who succeed him, to observe certain regulations relating to the use of the land. Although his agreement to this contract may be procured by a species of duress, in the sense that he cannot buy land there at all unless he accepts these conditions, in law it is a voluntary agreement, and it is quite true that, if he does not like the restrictions, he is under no compulsion to buy land on that estate at all.

The actual effect of these restrictive covenants in law is hard to summarize. Obviously they can be enforced by the actual parties to the agreement, but, in addition, they can in certain circumstances be enforced by other owners on the estate who are not parties to the agreement imposing them. In short, something rather unique in law has been created, that is, an agreement conferring rights on an unknown and fluid number of strangers, simply because they have, or will have, an interest in land in a particular defined area.

There is one other aspect of the use of land which should be mentioned. The common law of England, that is to say, the body of legal authority which exists independently of Act of Parliament, and consists of certain general principles and their application to the facts of particular cases that have come before the Courts during the last five hundred years, contains the principle that if a landowner does certain things on his land which cause damage to adjoining land he may be liable to pay for any damage that results. The classic case on this principle is that of a gentleman who built a reservoir on his land. Unfortunately, the water did not stay in the reservoir, but escaped, to cause damage to others. For that damage the owner of the reservoir had to pay. It will be noted that the common law embodied a rather practical compromise. It did not say, "you shall not bring dangerous things on to your land, be they drops of water or man-eating tigers." It says, "if you do, and they escape, you must pay for the damage caused." The result is that, while no one who really needs a reservoir on his land is prevented from building one, he is considerably influenced towards making a good one whilst he is at it. On the other hand, the dilettante, who does not need a reservoir but who has toyed with the idea of building one, is definitely discouraged.

To summarize these possible restrictions, and to take them in their reverse order, the common law has taken the line that you may do what you like, but that you may have to pay if damage results to someone else. It has also said that if you agree to use your land only in a certain way, that is an enforceable contract and one which may, too, be enforced against you

by people of whose existence you did not know when you made the agreement. And, finally, Parliament, as the supreme law-making body, has always the power, if not always the inclination, to make any regulation it will as to how you may purchase, use, sell, give away or bequeath the land of the Kingdom.

## COMPULSORY ACQUISITION OF LAND

So far we have dealt with the various rights that may exist in land and the restrictions to which land in the hands of the private individual may be subject. In addition, there is the possibility that he may be dispossessed of the land itself.

There is no restriction on the freedom to transfer land by agreement between individuals, but a statutory body, such as a municipal corporation or a trading company, can only hold land if its particular charter of incorporation specifically authorizes it. We are concerned principally with municipal bodies, and, in brief, their position is that they may purchase and hold land for any of the purposes for which they are established. In other words they may buy land necessary for running their borough, for example, for the site of a police station or for a public park, but they may not buy land as an investment.

But, since the land they do need is needed for the community as a whole, local government bodies have generally the power to acquire land compulsorily. This power may be given in the Act of Parliament which authorizes the work to be carried out, or it may be given in a Provisional or Ministerial Order.

The subject of the procedure by which land is compulsorily acquired is dealt with so clearly and concisely in the Uthwatt Report that no space need be wasted on dealing with it here. It is sufficient to say that the present procedure is unnecessarily slow and expensive, and can be amended without imposing any injustice upon the landowner.

Whether the compulsory powers for acquisition are given by Act of Parliament, Provisional Order or Ministerial Order, the existing procedure has two principal defects. These are:

- (a) service of a notice upon each individual owner is required, and
- (b) the title to each piece of land must be investigated and the land conveyed by deed to the acquiring authority.

Both these requirements must be observed before the acquiring authority can take possession of the land, and, of course, whatever they wish to do with the land is delayed in consequence.

The procedure suggested by the Uthwatt Report is that publication of a notice that the land will be acquired is substituted for service on the individual owners, that the individual owners have then to lay their claims to whatever compensation is due to them and, finally, the land itself is automatically vested in the authority as soon as the formalities attendant on the publication of the

notice have been completed. The more general use of the Land Registry of their series of complete and accurate maps of the whole country will simplify any problem arising out of disputes as to boundaries and areas, which, at the present time, are one of the most fruitful causes of delay in the effective completion of any such schemes.

## SECTION II.

### THE FUTURE.

So much for what exists. We have a machine consisting of many parts, some working satisfactorily, others not so well, but all working largely independently of each other, loosely governed by the Ministry of Health through their power over the purse strings. Clearly there is some room for improvement.

Now we come to what should be changed. This is not the place for argument on that. We are concerned with the legal machinery by which change may be effected. But at least we must have some premises, and the first and most important must be that the interests of the community as a whole shall prevail over a minority who disagree, even when they are landowners. There is nothing new in that principle. The thief is denied the right to steal because the interests of the community demand it, and in time of war the interests of the community have demanded the suppression of a great many more harmless activities than that of stealing. It is rather a question of degree. Is land, and its use, so important to the community that the community must be prepared to disregard what the owner of a particular portion of it wants? The answer to that question must be "yes." It is essential to the community that agricultural land should be properly farmed. The economic necessity for that will be much more apparent after the war than ever it was before. It is equally essential that afforestation should proceed, that mines be properly worked, transport made more efficient, all of which activities now have the support of compulsory powers to support their work.

If it is not equally important that industry should be properly sited, that the population should be properly housed and that recreation in decent surroundings secured for them, then our society is insane and will perish.

### CONTROL OF DEVELOPMENT BY OWNERSHIP

A decision as to the best use of land is best implemented by the person who owns the land concerned. Hence the strong theoretical case for the public ownership of all land. But it is not our intention to discuss here the political arguments or considerations which must be resolved before any such method of land control is adopted. All we desire to do is to look at the legal methods which any particular political decision may involve.

### NATIONALIZATION

(a) Since all land "belongs" ultimately to the Crown, nationalization of land does not strictly involve a transfer of ownership. It is rather a question of an alteration in the terms under which the land is held from the Crown, or, to put it in another way, it involves in essence a variation in the time when possession is lost to the individual and reverts to the State.

It is suggested, therefore, that, if nationalization is adopted as public policy, the legal means by which it is carried out be on the following lines:

(i) the legal estate known as "fee simple" should be abolished; (ii) new legal "estates" should be created to correspond with the conditions under which different types of land should be held. But, whatever use is being made of the land, there are certain features in an "estate" in land that are common to all, namely, the user wants security of tenure, whilst the State is concerned to see that the land is utilized in a way advantageous to the community.

It is suggested that the differing "estates" should correspond to the differing uses to which land is put, that is,

Industrial land, including offices and shops.  
Residential land.  
Agricultural land.  
Recreational land.  
Indeterminate, to include all land not falling within one of the other classes. This would range from abandoned slag heaps to tidal marshes.

The features common to all "estates" are as follows:

- (a) Financial conditions. These would be completely flexible, depending on whether the State compensated by cash, stock, terminable annuities or some other method, or, alternatively, on whether the individual was acquiring an interest, the State already being owner.
- (b) The term over which the interest was to extend.
- (c) The conditions relating to the use of the land to which each party was to be made subject.
- (iii) Provisions would have to be laid down under which one type of "estate" could be converted into another, in other words, how permission could be obtained to change the use being made of the land. The machinery for this kind of control is discussed later.

It should be noted that the Government has already accepted the principle that the titles to all land shall be registered in the Land Registry. That substitutes a single, simple certificate for a mass of old title deeds which are completely intelligible only to a lawyer. Such a step would simplify the method by which any change of "estate" could be effected. The Land Certificate already issued to each owner of registered land contains within it, not only full particulars of the land, but also of all conditions and restrictions to which the land is subject. The creation of a new series of "estates" is as simple as deciding to print the Land Certi-



ficate for each in a different colour.

#### MUNICIPAL OWNERSHIP

It is only on nationalization of all land that we are likely to see any change in the basic estates in land that an individual may own. It is exceedingly difficult for the British political character to tolerate any change in fundamentals of this kind that goes further than the immediate need. The idea that a revolutionary change may, in fact, make things easier later on is never so attractive as the idea that, if we stop short of any logical plan, the resulting compromise will please all parties concerned. When we created an administrative County of London, we took care that it did not include the whole of the geographical area that, even then, was known as "London." When we first gave women the vote, we did not, of course, give it to all women. Doubtless there is some good reason for this odd trait.

In considering, then, the legal problems involved when the basic plan is something less than nationalization, we may assume that they will be problems arising out of the structure of the owning or controlling body rather than out of the thing controlled.

Municipalization of land is a solution referred to in the Uthwatt Report. There is nothing of great novelty in this. Already, many municipalities own quite large areas of land within their own boundaries. They were acquired at various times and for various purposes. The problems that arise there are the problems that confront any landowner. But first let us look very briefly at the municipality as landowner.

The principal difficulty that arises is really due to the structure of the local government machine. In large local government areas the machine was not designed to cope with the problems that it now has to tackle, nor has it been reformed in consequence. The local government machine was intended to enable the inhabitants of a locality to supply themselves with certain essential services common to them all on a basis of cost. It presupposed that these would be few in number, that they would all be within the common knowledge and experience of the inhabitants, and that they would need for their control only a small part of the spare time of those inhabitants chosen to form the supervising body, aided by a skeleton technical staff.

At the present time, in any large county borough, all those conditions have long since ceased to operate. The local citizens cannot know all that their local council does, the local councillors have not sufficient time to follow both a gainful trade and the equivalent detail of their Council's affairs, while the full-time staff has become a miniature civil service. The whole structure is so complex that it takes most councillors the full period of their nominal term of office to learn all the machinery by which any one committee functions. It is ridiculous to say that a large Council, running

several full-scale businesses, from transport undertakings to municipal banks, is governed by its councillors. It is governed by its officials, who are in turn guided by chairmen of committees, who are in turn influenced by the governing bodies of the local party machines. That type of organization may run a successful property management business. It would probably equally well run a successful insurance business. But it is difficult to see why it should be regarded as a suitable body for running either.

The fundamental point is that the task of deciding the best use to be made of land and the task of managing successfully what property you own are quite different. In the first, the public is vitally concerned with the ideas governing the actions of those doing the job. In the second, it is concerned with their business efficiency. Business efficiency can be hired. Men with practical ideals and civic sense are not so easily found.

The number of municipal estates which are efficiently managed is much greater than the number that are recognised as crowning examples of land development.

If municipal ownership of land is adopted as a solution, any plan is likely to fall into one of three categories:

- (a) all land in the local government area will be transferred to the municipality;
- (b) the land transferred will comprise only land to be re-developed or as yet unbuilt upon, or
- (c) only areas to be re-built, including areas damaged by enemy action, will be transferred.

In any of these three cases, the municipality may decide either to sell or lease off portions of the land to private individuals or companies, in which case the problem is simply control of the subsequent development, or it may decide to carry out the development itself. In that case, it will be its own judge of the plan of development, and it may well be argued that it is wrong in principle for any body, having responsibilities to the public, to be the sole judge of its own actions in such an important and permanent step as the re-planning of a large section of a town.

#### POOLED OWNERSHIP

A third solution proposed is that of the pooling, under private control, of the ownership of all land within a defined area. This proposal is considered, and rejected, in the Uthwatt Report, and does not demand detailed treatment. The simplest legal method of carrying this out would be for the compulsory transfer of all land in the chosen area into the ownership of a company formed for that purpose, the original owners receiving shares or stock in the new company to the full value of the land each transferred. The original owners would then cease to have any rights over or interest in the land transferred; they would hold instead shares in a company to represent their original capital interest and would

receive dividends instead of rents.

In effect, this would place the responsibility for the future development of the land upon those individuals who happened to constitute the directors of the owning company, and any such scheme would stand or fall by the methods adopted to choose these directors. Such a scheme is the modern equivalent to the ancestral family estate, admirable when the estate owner happens to be an intelligent and enlightened individual and quite otherwise most of the time. It has all the democratic appeal of the constitution of the Bank of England.

#### SUMMARY

To summarise this section, we may say that there are two methods by which we can change the "ownership" of land in order to secure our desired control over its future.

(i) We can devise a new type of ownership and apply it to all land. Ownership of this kind will confer on the owner the same rights over the property as against all other individuals, as such, that he now possesses but, as between the owner and the State, the owner will be subject to certain conditions, and disregard of these conditions will result in the loss of his ownership. This is the basic idea behind nationalization.

(ii) Alternatively, we may divorce ownership from control, so that the legal ownership is vested in a small body of people, having the status and outlook of trustees, whilst the former owner has only a financial interest (as ratepayer, taxpayer or shareholder in a company) in the land which he once owned. The body of people owning the land may be a Council of a local governmental body, the governors of a public company formed for the specific purpose of carrying out this duty (as the London Passenger Transport Board was formed to own and operate all passenger transport in the London area), or the directors of a company similar to any other trading company. In this case our problem would be to determine what is the best method of securing that governing body, whatever it is, obtains and is guided by public opinion so far as the general lines of its policy are concerned.

It would not be out of place to conclude this section by a reference to the problem of the divorce of ownership from control. Land has never been considered purely as an investment. The ownership of it has often brought social as well as financial satisfactions. This has had the result that the landowner tends to expect that he can do anything on his land and with his land that is not explicitly forbidden. The investor in company shares expects to have just enough rights in the company to secure his investment and no more. Often he does not get that much. He does not expect to have any say in the detailed policy of the company. Advance in the best utilization of our national capital land would be more easily secured if the landowner could be induced to adopt the more humble attitude of mind of the ordinary investor.

(To be continued)

## CURRENT EVENTS

#### Trade Union Plan

On September 8, the third day of the 75th Trades' Union Congress, held this year at Southport, the Congress was asked in a composite resolution on post-war reconstruction to authorize a general plan for the post-war reconstruction of the industries of the country, with specific regard to the maintenance of full employment; the degree of national ownership or control to which each industry shall be subject; the extent to which the supply of raw materials, the output of finished goods, prices, standards of quality etc., shall be subject to public control and direction; and the place and responsibility of Trade Unions and the TUC in such a plan. The resolution was carried unanimously.

#### Land Legislation

Lord Astor, as Lord Mayor of Plymouth, has suggested to nine other Lord Mayors, 8 Mayors and the LCC, that they should combine in a move to ensure early legislation to defeat land exploiters and get on with rebuilding at reasonable prices. He urges that Parliament should pass a small measure enabling a council, or some other public body, to acquire by speedy methods blitzed property at a maximum of 1939 (pre-war) values. He points out that time is the important factor, and that if this bill is debated separately rather than in an omnibus Housing and Town Planning Bill, it will make it difficult for land exploiters to oppose it in Parliament without pillorying themselves.

Mr. David W. Smith, general manager of the Halifax Building Society, addressing the Halifax and District Property Owners' Association on September 9, said that the State acquisition of development rights in land as recommended by the Uthwatt Report, would strike a heavy, even a mortal, blow at the principles and ideals of home ownership.

## NEW BOOKS

*Housing Problems*: Report of Conference—Association of Building Technicians, 5, Ashley Place, S.W.1.

*Country Towns in a National Planning Policy*: Statement by the Executive of the Town and Country Planning Association, 13, Suffolk Street, S.W.1.

*Post-War Planning for the Electricity Supply Industry*: Part I, Technical and Social Organisation as a public service: The Electrical Power Engineers Association, 102, St. George's Square, S.W.1. 1s.

*The Gas Industry in War Time*: Planning No. 210. PEP., 16, Queen Anne's Gate, S.W.1. Free to subscribers.

*A View of Industry*: Notes on Industrial, Commercial, Economic and Financial Trends. Aims of Industry Ltd., 10, Carteret Street, S.W.1.

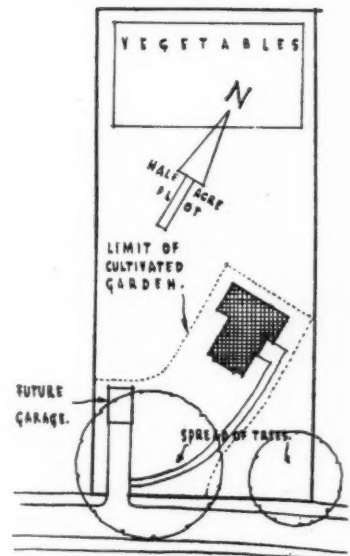
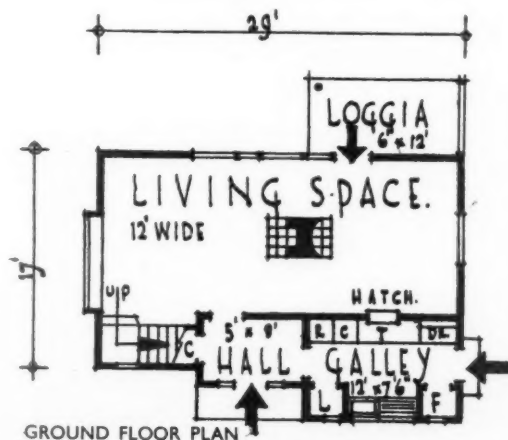
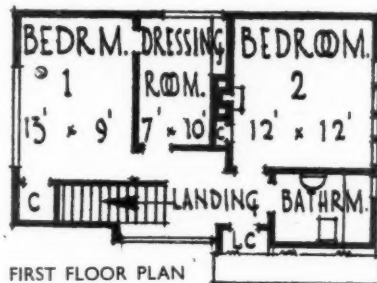
*Food and Agriculture*: Report and Summary of the Liberal Food and Agriculture Sub-Committee, 8, Gayfere Street, S.W.1. 4d.

*Looking Ahead*: First Interim Report of the Agricultural Sub-Committee of the Conservative Committee on Post-War Reconstruction, 24, Old Queen Street, S.W.1. 6d.





# EXPERIMENTAL HOUSE IN KENT BY MICHAEL COLT



**GENERAL**—House at Pluckley, Kent, built for the architect as an experiment in methods of construction. It is not possible to give an accurate cost, but on the pre-war basis it would be about £600. The house was originally designed as a £350 house in a timber housing competition some years ago. As built, the design has been modified and slightly enlarged.

**CONSTRUCTION**—The house is made up from prefabricated sections. Most of the sections are standard, about 25 per cent. only being specially made. The timber framework is of 2 in. by 4 in.



*Above, front door; right, landing window; below view from south-east. Facing page: top, in the living space, looking from the sitting to the dining side; bottom, staircase leading from living space and staircase window at first floor level.*



Columbian pine with merchantable cedar underboarding. Covering this is a layer of building paper and Western Hemlock weatherboarding left untreated. The roof is cedar shingled. Windows are metal in wood frames, direct glazing being used in the large sheets of glass. The flush front door is covered with Lancaster cloth. Door knockers are antique and are from a demolished house in Ashford.

**INTERIOR FINISH**—The living space is panelled in vertical boarded honey-coloured Hemlock untreated. There is an open fire in the sitting side and a small inset boiler in the dining side. This is augmented by an electric immersion heater in the tank for use in summer. In the small hall the panelling is oak plywood, flush jointed and left natural. The wallpapers used on the ceilings and upstairs were all specially printed. In the kitchen the walls are covered with Lancaster cloth. All splash backs and the bathroom dado are carried out in wall linoleum. Walls throughout are lined with  $\frac{3}{8}$  Gyprok, ceilings with Insulwood. To overcome the shortage of heavy joists due to the war the wooden joists are made on the principle of a latticed bridge. Only very light timber is used and off-cuts are utilized for the braces. It was found that although the same size joist was, theoretically, as strong as a solid one as all the stresses ran with the grain of the timber in the latticed ones, in practice an additional 2 in. was desirable on spans of about 12 ft. Double joists were used instead of trimmers. The joists were bowed slightly to allow for settlement. Floors throughout are 4 in. tongued and grooved Columbian pine.

**EXPERIMENTAL**



HOUSE IN KENT: BY MICHAEL COLT

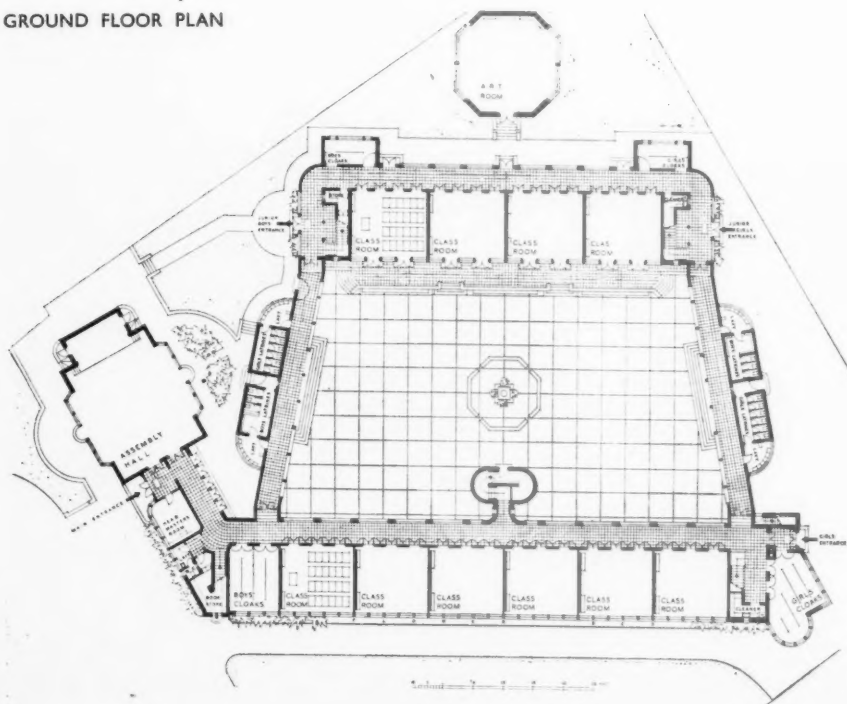


# SCHOOL

AT BELFAST

*B Y R. S. W I L S H E R E*

GROUND FLOOR PLAN



**GENERAL**—Built to serve a district under rapid development before the war, the school replaces an older one known as the Oldpark P.E. School. Accommodation is for 800 senior and junior pupils in sixteen classrooms, with additional special rooms fully equipped for housewifery, woodwork, science and art. Originally designed for junior pupils, special rooms were added after the plans had been prepared. Completed shortly after the outbreak of war, the school cost £26,750, including £1,300 for low-pressure hot-water heating, and £420 for electric lighting.

**SITE**—To meet the requirements of the Northern Ireland Ministry of Education, all the classrooms face south. This determined the layout of the buildings in relation to the site, which is between two roads. This layout gives a much greater sense of space to the school grounds than would have been provided by the usual rectangular plan placed symmetrically on the limited site, in this case two acres in area. It further reduced to a



minimum the obstruction to the extensive view available to the adjoining houses. The site has a fairly steep cross fall. To overcome the difference in levels the two main blocks are connected by sloping covered ways. The infants' classrooms open on to a raised terrace.

The girls' and the boys' latrines are grouped in pairs and distributed to serve each block. A large concrete paved playground is provided to the main road frontage.

The school's internal courtyard is paved with coloured concrete slabs and serves as a playground for the junior pupils. The remainder of the site is turfed and provided with flower beds.

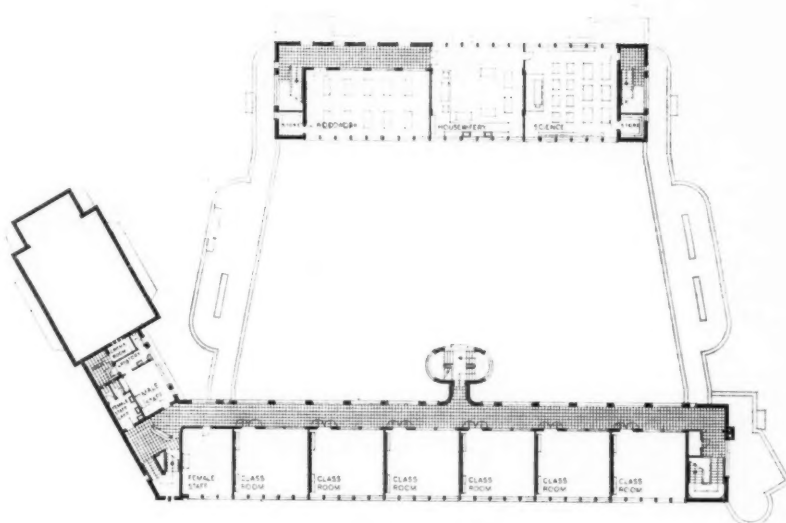
#### CONSTRUCTION AND FINISH

—Rustic brick facings with a limited amount of artificial stone dressing, the reinforced concrete structural supports between the windows being used as a feature in the general design. Windows extend the full width of the classrooms and those to the corridors slide into the wall supporting them, leaving clear unobstructed openings. Externally, windows are painted cream, all doors being chrome yellow, with grey metal-work.

Externally there are metal grilles with characters from Walt Disney's Mickey Mouse films, enamelled in their correct colours.

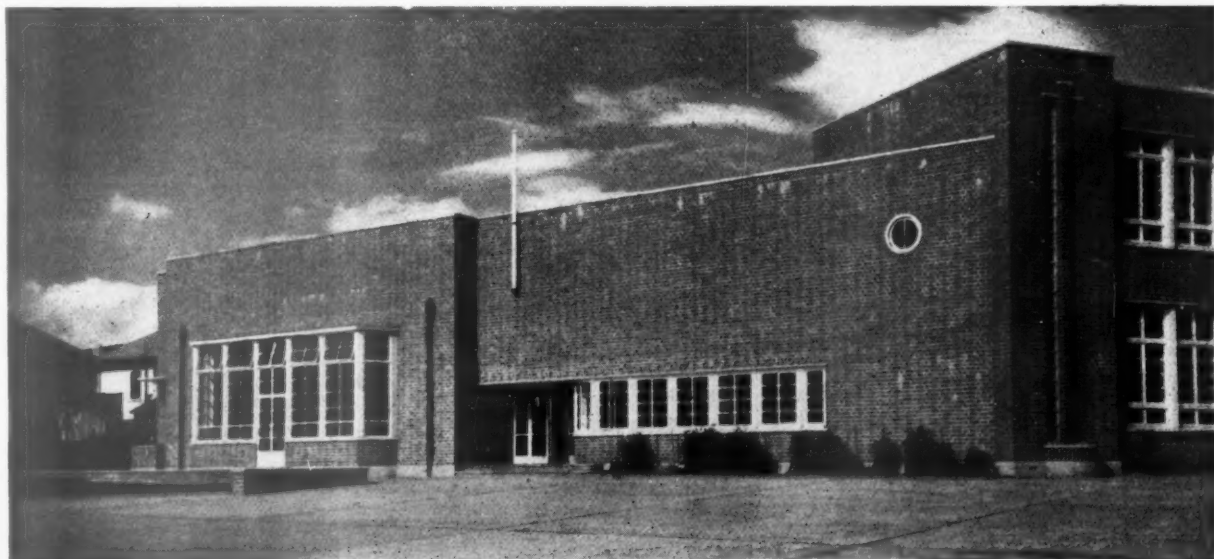
#### INTERNAL FINISH—

Internally, the colour scheme generally is cream walls with beige dadoes and woodwork, the fixed presses in classrooms having flush panel doors picked out in Ostwald theory colours, the chrome yellow of the external doors being repeated in the internal colours.



FIRST FLOOR PLAN

*Facing page, general view of the school and the caretaker's house; below, assembly hall and main entrance to the school. The exterior has rustic brick facings with a limited amount of artificial stone dressing, the reinforced concrete structural supports between the windows being used as a feature in the general design. Above, the Old Park P.E. School, which has been replaced by the new school.*



# 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

### 1237 Town for 21,000

**PLANNING A COUNTY.** *Gordon E. Payne* (*Journal of the Town Planning Institute*, July-August, 1943). Contents and costs of a new town for 21,000 people on 5,500 acres of land of which 720 would be used for the town site. The scheme to be financed by a county council and a housing association.

Initial purchase price of 5,500 acres, £165,000. First Period: Senior School, Junior School, Infants' and Nursery School, Crèche, Swimming Pool—£98,200; Grants, £36,366; Net Expenditure, £61,834.

Income from rents of 5,365 acres land and ground rents from 1,554 houses, 20 shops and 1 industry, £79,784. N.B.—Population, 6,000.

Second Period: Art, Technical and Secondary School, Junior School, Infants' and Nursery School, Senior School, Community Centre—£155,300; Grants, £66,151; Net Expenditure, £89,149.

Income from rents of 5,185 acres land and ground rents from 2,959 houses, 32 shops, 2 industries and 1 cinema—£117,777. N.B.—Population, 11,000.

Third Period: Police Station, Fire Station, Library, Crematorium, Infants' and Nursery School, Hospital, Sports Stadium—£144,000; Grants, £16,425; Net Expenditure, £127,575.

Income from rents of 5,025 acres land and ground rents from 4,023 houses, 44 shops, 3 industries and 2 cinemas—£142,367. N.B.—Population, 15,000.

Fourth Period: Junior School, Infants' and Nursery School, Bandstand and Garden—£36,700; Grants, £16,339; Net Expenditure, £20,361.

Income from rents of 4,760 acres land and ground rents from 5,675 houses, 60 shops, 4 industries and 2 cinemas—£178,687. N.B.—Population, 21,000.

### 1238 Town Planner Defined

**DEFINITION OF THE TOWN AND COUNTRY PLANNER, ARCHITECT, CIVIL ENGINEER AND LANDSCAPE ARCHITECT.** (*Journal of the Institute of Landscape Architects*, April, 1943). Tentative definition prepared by Education Committee of Institute of Landscape Architects.

The Town and Country Planner as such is concerned with the right use of land, both general and detailed, and with the appropriate communications and public services. He provides the broad pattern within which operate the architect, the civil engineer and the landscape architect; he is not an executive in physical construction. His particular knowledge must be sociology, geography, law and economics, as applied to physical planning. His general knowledge must embrace the work of the following professions:—

The architect is responsible for the detailed layout, design and erection of all buildings. In addition to the civil engineer and landscape

architect, his particular consultants are the structural and mechanical engineer, etc.

The civil engineer is responsible for the detailed layout, design and construction of all transport routes, public services, industries and utilities. In addition to the architect and landscape architect, his particular consultants include the sanitary engineer, electrical engineer, etc.

The landscape architect is responsible for the detailed layout, design and execution of all open spaces not covered by the above. In addition to the architect and civil engineer, his particular consultants are the forestry expert, the horticultural expert, the agriculturist, the agrostologist, etc.

The appointment of these three professionals is essential from the earliest inception of a project.

1. The education of the Town and Country Planner by itself does not qualify him for the detailed planning of a town or a countryside.

2. To design a built-up area he must also have the qualifications of an architect: to design a landscape he must have the qualifications of a landscape architect.

3. The basic education of architect, civil engineer and landscape architect should give a common understanding not only of these professions, but also that of the town and country planner. This basic education would not fit any one of them to be a Town and Country Planner. (Signed) Gilbert H. Jenkins, Chairman; Joseph Addison; Madeleine Agar; Brenda Colvin; G. A. Jellicoe; Thomas Sharp.

## STRUCTURE

### 1239 Use of Materials

**NOTES ON THE AMERICAN SOCIETY FOR TESTING MATERIALS MEETING.** (*Engineering News Record*, July 16, 1943, pp. 89-91.) War-time development in the use of timber, soil investigation, soil-cement mixture, slow-curing asphalts, concrete.

Greater aid for the war effort was the theme of the 46th annual meeting of the American Society for Testing Materials at Pittsburgh, June 28—July 1. Many new specifications were acted upon to permit the manufacturing industries to use familiar materials in new ways and to substitute for more critical materials.

L. J. Markwardt, chief of the division of timber mechanics in the Forrester Products Laboratory, told of the extensive use of timber for the war programme in what he termed the renaissance of wood. Markwardt said it had occurred because of the following factors: (1) Improvement in joints and fastenings; (2) better structural grades, affording more precise strength evaluation and uniform quality; (3) improvement in glue and glueing technique, including the development of synthetic resins that afford essentially waterproof joints; (4) extensive developments in plywood production, making available a large variety of constructions with moisture-resistant properties, if desired; (5) advent of chemical seasoning methods, which not only result in quicker drying, but in the

elimination of drying defects; (6) increased facilities for wood preservation, affording opportunity for increased life and serviceability and reduced maintenance costs; (7) composite constructions, using wood with other materials, and employing to advantage salient properties of each; (8) improved wood, plastics and paper-base laminates involving chemical conversion or resin-impregnation; (9) a wide variety of fibreboards with properties designed to meet particular requirements; and (10) new developments in moulding and lamination techniques, permitting the bending, forming and assembly of complicated and intricate structural parts.

A number of lecturers dealt with a new classification of soils, new methods of determining the true shear resistance of soils and of saturating cohesive soil for strength tests, tests for soil-cement mixtures, slow-curing asphalts.

One of the most interesting papers in the sessions on concrete and cementitious materials described an accelerated test procedure for the detection of adversely reactive cement-aggregate combinations. Considerable research has been carried out in California to determine how the excessive expansion of concrete is traceable to some chemical reaction between the cement and the aggregate. A simplified test of the effectiveness of concrete mixers was also described.

"Variations in the Strength of Portland Cements Conforming to the same Specifications and the Relation of such Variations to Concrete Control," was the title of a paper based on 14,000 cement acceptance tests obtained in purchase of 5½ million barrels of low-heat cement from ten different mills for one dam project, an equivalent number of tests for cement supplied for a second project, 20,000 control tests of concrete cylinders at two projects, and 4,000 concrete tests on various types of cement under varied conditions at the Denver laboratories. The tests indicated a wide range in strength of the cement coming from a single mill, and a somewhat greater variation between the cements of different mills. Conclusions were that: With respect to structural and concrete-mix design, where minimum strength specifications must be met, average strength by itself is not an adequate criterion to decide on the suitability or the quality of the concrete for the work in hand. With the coefficients of the strength of the cement from a single mill varying from 10 to 17 per cent., average strength levels must be kept from 20 to 50 per cent. above the minimum strength specification requirement if safety margins are to be maintained over a long period. Increased attention to variability factors, both on the job and in test reports, will help to cut down these margins.

### 1240 Experiments in Steel

**UNORTHODOX HOUSING CONSTRUCTION, 1920-1939. A Critical Survey by George Fairweather, F.R.I.B.A.** (*The Architect and Building News*, June 25, 1943, pp. 193-200). Experimental houses in steel and timber after the last war.

The big demand for houses immediately after the last war could not be satisfied with the trained labour available, nor could the building costs be lowered to the required level. Unemployment in shipyards and other steel industry suggested an experiment with prefabricated steel houses. The result was a number of highly interesting types of houses, developed and built in Scotland and, almost at the same time, in England. Timber was used as an alternative but the possibilities of prefabrication were not fully exploited. The article gives a survey of the more successful experimental houses in their present condition (the photographs were taken in June, 1943), with description of the different types and notes on their constructions.

The houses were designed so that the main structural fabric could be quickly assembled



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Early in this century, another important man, Dr. Baekeland, gave his name to a material invented by him.

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from factory prepared parts. In every case the houses were built very much more quickly than was possible by normal building methods.

Regarding cost, maintenance, thermal insulation, fire risk, the houses compare favourably with other houses built at the same time. Sound insulation is generally poor.

The steel houses survived bombardment unusually well; repair offered no serious difficulties.

## QUESTIONS

### and answers

**T**HE 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.

#### 1241 Excessive Condensation

**Q** I have to deal with a building, the ground floor of which is used as a cold store; the temperature in the store is 18 deg. F. all the year round. The basement ceiling is subjected to excessive condensation and this is what I wish to cure.

The ground floor, which forms the basement ceiling, consists of an ordinary filler joist and concrete floor with a layer of cork slabs on top and a further layer of concrete. It would seem that the cold is conducted by the RSJs and thence to the lower slab of concrete. Owing to the presence of the lift shaft at each end, the warm outside air enters freely.

The mean temperature of the basement is about 48 deg. F. and I should be glad to know whether you think a false ceiling of insulating board such as Tentest on wood joists, would effect a cure of the trouble.

**A** It is impossible for us to guarantee a complete cure as the average temperature of the basement does not give any definite indication of the surface temperature of the beams and concrete. However, the best method is an air space with an insulating material below and your suggestion is, therefore, a reasonable one. If you find in due course that the cure is not complete you could always fix an additional layer of insulating board.

You will find that the manufacturers of insulating board have a good deal of practical experience on these matters and may be able to give you a very good indication as to whether one board would be sufficient.

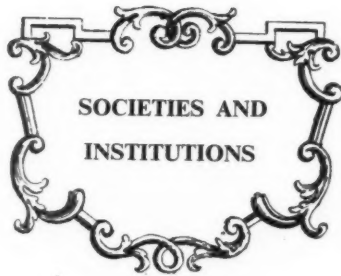
#### 1242 Repairing a Geyser

**Q** I am the tenant of a house, which I have taken on a lease for a period of years. The house contains as a fitment a geyser over the bath, and this geyser is now out of order. The owner of the house refuses to have it replaced and insists that the cost should be borne by me. Would you please tell me if this is correct? According to my agreement, the owner is responsible for structural repairs and I am responsible for internal decoration.

**A** The position depends upon the exact wording of the lease. If the landlord only covenanted to execute structural repairs, he cannot be called upon to repair a geyser.

In the same way, if you, as tenant, only covenanted to decorate, you cannot be called upon to repair a geyser.

It appears that neither party has covenanted to repair the geyser and that you are at liberty to hand it over at the end of the tenancy in its present condition. If you wish it to be repaired, for your own convenience, you must have it done at your own expense.



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

## TCPA

### R. L. Reiss

September 16, at 1, Grosvenor Place, S.W.1. Lunch-time meeting of the Town and Country Planning Association. Lecture by R. L. Reiss on *Satellite Towns in Relation to the County of London Plan*.

**R. L. Reiss:** The L.C.C. plan for London is based upon the assumption that the population of the county should be reduced by half a million. As Mr. Osborn pointed out in the first of these talks—granted this assumption, the plan has many excellent features. Nor is it easy to see how the plan could be materially improved if this assumption is adhered to. But the fact remains that if it were fully carried out there would still only be 4 acres of open space per 1,000 of the population compared with 20 per 1,000 in the ultimate development of the Wythenshaw Estate of the Manchester Corporation and of Welwyn Garden City. Moreover, even this modest increase of open space can only be achieved by replanning the residential areas at densities from 100 to 200 per acre and housing the overwhelming majority of the people in flats—many of them 10 stories high.

This is not merely destructive of family life but seriously militates against health—before the war the tuberculosis death rate and the infant mortality rate in London was 50 per cent. higher than the average of the boroughs and urban districts in Hertfordshire. This was despite the highly developed and efficient health services in London.

If the London plan is the best that can be done, granted that the population is only to be reduced by half a million, the question arises: "Is this assumption a necessary one? Is there no alternative?"

In a London newspaper in January, 1936, Mr. Herbert Morrison, then leader of the London County Council, outlined this alternative: "Not only," he said, "would I wish

the solid urban sprawl of London to be checked but I would like to see contiguous London cover a much smaller area than it does at present. . . . I would take the industries and businesses that need not be in the heart of London . . . right out into the home counties. . . . I would plan in association with those industries new self-contained independent satellite townships. . . . It would be my endeavour to secure that the people who worked in those towns lived in them. That they could walk to and from their employment and that the Garden Cities all possessed open spaces and were surrounded by agricultural or other land unbuilt upon, so that residents could easily walk to the open country."

Mr. Osborn suggested that the population of the County of London should be reduced not by half a million, as in the new London plan, but by 1½ millions. I suggest that the bold adoption of a satellite town policy as outlined by Mr. Morrison could be achieved within a reasonable space of time.

To show how it could be done, let me remind you of a few facts and figures:

- (1) The area of London County is 74,000 acres.
- (2) Its population declined from 4½ million to 4 between the two wars, and as a result the over-all density fell from 60 to 53.
- (3) If the London Plan proposals were adopted the over-all density would be reduced to about 47, but if the population were reduced to 2½ million it would be brought down to 36.
- (4) How modest such a proposal is can be seen by the fact that even then London's density would still be 30 per cent. higher than that of Manchester, Liverpool and Chicago and nearly twice as high as Birmingham.

That it is perfectly practicable to move both industry and population has been shown by the rapid decentralization which has taken place under the stress of war conditions.

Let me examine more closely what happened in London in the twenty years between the wars. In 1919 there was a considerable amount of building land in London, particularly in such Boroughs as Wandsworth, Lewisham and Woolwich. Although London was woefully short of open spaces, most of this land has since been built upon partly by private enterprise, but more particularly by the London County Council itself, in developing new housing estates. The L.C.C. developed such cottage estates as Roehampton in Wandsworth and Bellingham, Downham and Mottingham, mainly in Lewisham. The density of population on these estates, as also on the cottage estates outside the L.C.C. boundaries, was only 50 or 40 persons to the acre. But in the more recent years, because of the shortage of land not merely in central London but even at places like Dulwich, the density of the L.C.C. housing estates has been over 200.

The significant fact is that although the population of London declined half a million between the wars, the total number of dwellings in London increased by, approximately, 8 per cent. Yet in 1938 there were practically no empty working-class dwellings. What is the reason for this apparent contradiction? Partly by abating overcrowding in rooms, but mainly because in London, as elsewhere, the average size of the family has declined. While the population has decreased the number of separate families has increased. A largely increased proportion of all families are now living in flats. Under the London Plan that proportion would be still further increased but even after a further half million people had left London, the additions to open spaces would still leave London far shorter per thousand of the population than other towns. Moreover such other evils as the traffic congestion and waste of time in getting to and from work would be nearly, if not as great, as before. But probably the greatest evil of the plan would be the destruction of family life and perpetuating unsatisfactory housing conditions. Councils of smaller towns develop their housing estates with a population density

not exceeding 50 and usually more like 25 or 30. Clearly this is the policy which would be pursued by the L.C.C. if the land was available. Admittedly the proposals to re-develop at a density as high as 200 is only justified as making the best of a bad job in order to secure more open space and on the assumption that it is necessary to pack people like sardines.

Now in the outer ring of the London region, between the 15-mile and 25-mile radius from Charing Cross, there is an area of 721,000 acres. In 1939 there was a population of about 1,100,000. This represents a density of about  $1\frac{1}{2}$  persons per acre.

If there were moved from London County over a period of twenty years  $1\frac{1}{2}$  million people together with a corresponding quantity of industry and even if a further half-million people were located in this outer ring, partly through natural increase of population and partly through migration from elsewhere, the average density would only be brought up to four persons per acre, which would still be only one-third of the density of those portions of Middlesex, Kent, Surrey and Essex and Hertfordshire, which are outside London County but within the 15-mile radius, or the Metropolitan Police District.

Even if this outer ring had the whole increase of 2 million people with its proportionate industry, it would be perfectly practicable to plan it so that, at least four-fifths of it would remain rural, and the remaining one-fifth would consist of towns of from 5 to 50,000 population, each having an over-all density of no more than  $1\frac{1}{2}$  people to the acre.

It has been found at Welwyn Garden City that when the town is completely developed the density will be under 12, about one-third of the whole town as open space and the industrial areas will be adequate for the employment of the whole population. The residential areas will not have a density of more than 20.

It is important to emphasize that satellite town policy would involve, in the main, the development of existing small towns and villages suitably situated and only in a limited number of cases, entirely new towns. It would be important to complete the excellent work already done by the L.C.C. in conjunction with the other County Councils of the London green belt and also to ensure that each of the satellite towns was surrounded by its own protective belt. And it is, of course, vital that each of the towns should be planned for industry as well as healthy living and should have full provision for community life.

There is, of course, no reason for the whole  $1\frac{1}{2}$  million to go in the 15 to 25-mile ring. Certainly none should go inside the 15-mile radius, but many satellite towns could be outside the 25-mile radius. The above figures show that even if all the migration were within the 25-mile ring, four-fifths of the land could remain rural with a density of 1 person per acre, and that at least a quarter of the remainder would remain urban open space.

London County could re-plan for the  $2\frac{1}{2}$  million people which remained—not to give ideal conditions but at any rate far better than is possible on the assumptions of the London plan.

## ABT

## Council Meeting

September 5, at 5, Ashley Place, S.W.1. Quarterly meeting of the general council of the Association of Building Technicians.

**Housing.**—The general council noted with satisfaction that the recent instructions of MOH giving greater powers to local authorities to requisition, repair and convert empty properties implement proposals made at the ABT Conference on Housing Problems in June. At the same time the general council reaffirmed its belief that these are only partial solutions and will need to be supplemented by new building in some areas. In addition

it stressed once more the demand made at the conference that the Government should "take the following additional steps now towards meeting post-war problems:

### 1. Statements of Policy.

- (a) A declaration that housing, schools and essential services will be given priority in the building programme.
- (b) A declaration of policy on planning the location of industry and the distribution of population, based on complete nationalisation of land."

### 2. Legislation.

- (a) Finance for local authorities to acquire land for a five-year housing programme, pending the nationalisation of the land.
- (b) Maintenance of war-time controls over materials and prices."

**Trade Union Work.**—The report of the industrial committee was given by the acting general secretary, Mrs. E. V. Penn. It included results of negotiations for members in Lewisham Borough Council; the Air Ministry, Malta; Bristol Corporation and the C.W.S.

The national organiser reported that during the quarter he had visited 41 branches, sites and offices. Seven new branches had been formed, and it was hoped in the near future to set up active branches in Birmingham, Edinburgh, Newcastle and Leeds. In spite of the effects of the call-up among technicians favourable opportunities for recruitment to the ABT still existed.

**Finance.**—After discussion it was felt that members would prefer an increase in the subscription to the raising of a levy. It was pointed out that never in the course of its history had subscriptions to the Association been sufficient to cover expenditure, and in order to establish a sounder basis and to build up reserves it was decided to put before the annual general meeting on December 4 two alternative proposals—either a subscription of 42s. a year or one of 48s. a year.

## RC

## Leslie Wallis

September 15. Leslie Wallis, President of the National Federation of Building Trades Employers, was the guest of honour of the Rotary Club of London in the Connaught Rooms. Malcolm Dunbar, President of the Club, presided.

**Leslie Wallis:** The history of a country, ours like every other, is written as much in its buildings as in its battles. What a responsibility, but what a privilege, to be a builder.

There is something very satisfying about being a builder. I wonder whether you can understand that feeling of pride that I have when, walking about this great City, I can point to a fine building and say to a friend: "My firm built that. Bill Jones was the foreman, and so-and-so were the foremen bricklayers and carpenters." The pity of it is that so few people know who designed or built any of our great master buildings. Who, for instance, built this great building in which we are meeting to-day?

The war period has been a demoralising time for builders, employers and operatives alike. No craftsman can take a true pride in erecting huts and temporary buildings. But I am sure that pride in craftsmanship, if dormant, remains, and will soon awake. And I believe that builders, both employers and operatives, are more concerned to-day than they ever were in the importance of good work and craftsmanship.

At one time the operatives were mainly concerned with wages and the builder with profit. To-day both sides are much more concerned with the social service they can render to the country.

I am hopeful that one day we shall have Chairs of Building at the Universities, in order that the leaders of our industry may have at

least equal status with other crafts and professions, which they lack at the moment.

What has the building industry done during the war? I wish I could tell you the number of aerodromes, arsenals, factories, hospitals, hostels and so on that the industry has erected, but for security reasons I cannot.

What is the building industry doing now? As far as work is concerned, the answer is "very little." As a builder I am naturally sorry that this is so, but as a citizen I am more than glad, because, if after four years of war there were still a lot to do in providing factories, aerodromes and the like, it would mean that our organization for securing victory had been far too slow. But we are not just sitting still and waiting for something to happen. We are preparing for the post-war period. We have agreed in recent months on a holidays-with-pay scheme by which next year every operative will be able to have a week's holiday, and if he has worked throughout the year, receive £3 16s. in respect of that week. We have introduced a national apprenticeship scheme, two of the chief features of which are that the boy is apprenticed to the industry instead of to an individual employer, and so, should the original employer run short of suitable work on which to train the lad, the local trustees will transfer him to an employer who is in a position to continue the training; and, secondly, the operatives have an interest in the training of apprentices, as the national scheme is part of our national working rule agreement. Then we are investigating the possibility of qualitative registration of builders. We feel that just as the public seek advice from a qualified doctor, solicitor, accountant or architect, so they should be able to seek the advice or service of a qualified builder.

The Government is looking to our industry to play a leading part in setting the country on its feet again after the war. They want us to increase our labour force of less than half a million to one and a quarter millions as quickly as possible after peace comes. There is no doubt that there will be sufficient work to employ these men for many years. But there is a serious doubt in the minds of employers and operatives alike, whether the working drawings will be ready in time for a good start to be made. It takes them six to twelve months to prepare plans before work is actually started. Why aren't the plans ready? Because the reports of the Committee, the Scott and Barlow and the Uthwatt, have neither been accepted nor rejected by the Government. All these reports have been in the hands of the Government for many months. But they are politically controversial, and that is the Government's difficulty. But lack of information is definitely delaying the necessary preparations.

Let me now come to housing. It is estimated that in the ten years following the end of this war four million houses will have to be erected, i.e., four hundred thousand each year, including the first year. In the first year after the last war ended something like 380 houses were erected, and in the peak year between the two wars about 375,000 houses were built. This means that we have to aim at averaging more than the peak production between the two wars. Quite a big task. Can we do it? I am confident that we can, provided preparations are made now.

Before this war began we had a labour force of something less than a million; to-day it is well under half that figure. When it comes to demobilization I absolutely agree with the principle of "first in first out." If, however, the task that has been set us is really vital, as I believe it is, then the Government must help us, as I am sure it will, by releasing our men as quickly as possible.

Will there be difficulties with regard to materials? The only material which may be in short supply for a while is timber. Personally, I can see no reason for this, and my views are supported by the timber importers. I am told that provided shipping and foreign exchange are available, the importation of timber from Russia, Sweden



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# EWART

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and Finland could restart in a few months after the war. And again there is the wonderful supply available from Canada. Bricks, cement and the other essentials can, I am sure, meet any demand we can make as soon as they get their manpower available.

I come to costs. I have taken out in detail the increase in costs of the various materials required to build a pre-war £750 house in my own area, Kent. These increases vary from about 22 per cent. for drain pipes to 190 per cent. for carcassing timber. The average increase on all the materials required would be about 60 per cent. I believe that these increases will gradually fall after the war, and may vanish altogether, although it may be that with labour costs up there will be a small permanent increase. Labour costs are up by 25 per cent. in the case of the craftsmen and 33 per cent. for labourers, which would average about 30 per cent. Again I am referring to my own area, but the figures I have given are an indication of the general position.

If we assume that 50 per cent. of the cost of such a house is labour and 40 per cent. materials then we shall get an increased cost of something under 45 per cent. The increase in overhead charges, insurances and the cost of the holidays scheme would add about 10 per cent., making our figure 55 per cent. Other items such as the increase in the cost of builders' plant, scaffolding, etc., and its maintenance, will add another 5 per cent., making our final figure 60 per cent. above pre-war. These figures are about as low as you will find anywhere in the country.

We must all agree that this increase in cost is too high, and must be got down if possible. The increase in labour costs is governed almost entirely by the cost of living figures, and will come down only as the cost of living figure comes down. The materials cost will, I am sure, come down considerably, but we can, I think, do something else. If some Government authority could agree with the manu-

facturers on such things as baths and basins, cooking ranges, locks, doors and windows, that only one or two types were to be standard and acceptable on all house construction, it would enable these manufacturers to mass-produce a standard article and would, I believe, reduce the costs by something like 50 per cent. If standard sizes were worked to it would greatly reduce the labour costs in fixing and again reduce costs. I also believe it would reduce costs if some inducement could be given to the operative and the builder to give maximum production and organization, and not just the average.

And various systems of prefabrication will reduce costs by reducing the cost of labour on the site, though in our natural desire for speed and cheapness we must guard against erecting the slums of to-morrow.

One last point on housing. Seventy-five per cent. of the houses erected between the last war and this were erected by private enterprise. If private enterprise is given the chance again, I am sure that it will achieve equally great results.

## ISE

### New Members

Following are the names of the successful candidates in the examinations held in July:—

*Graduateship Examination:* R. G. Allaway, S. A. Bradbury, F. P. Bridle, W. A. Caldwell, J. S. Colverd, J. Dickie, G. Drysdale, F. J. Fussell, J. T. Griffith, E. J. W. Henry, N. G. Hope, G. P. Martin, H. Mendus, J. N. Parkin, D. W. Portus, R. M. Purdie, D. R. F. Row, W. J. Shirley, A. G. Taylor, M. W. Tucker, J. Van Onlangs, F. Wastell, D. White and D. Woodland.

*Associate-Membership Examination:* R. H. J. Ansell, F. Bailey, F. E. Ball, N. K. Batchelor,

W. H. Booker, J. M. Bramfit, R. C. Brown, F. B. Bull, D. G. Buxton, H. Carr, E. R. E. Catchpole, S. Champion, W. D. Christie, A. H. Cole, J. E. Collins, J. H. Coombs, P. J. Downie, L. W. Elliott, F. K. Emerson, G. A. Flook, G. E. Garvey, M. Gee, R. Gilbert, L. Glover, E. M. Harvey, E. Heaton, J. M. Heron, F. A. Hill, H. V. Hill, F. Y. James, R. H. Johnson, I. N. Jones, L. Jones, F. J. Laws, J. W. Lord, I. M. K. Malik, J. G. Marsh, J. T. Marshall, M. Milne, H. Morris, G. A. Macdonald, F. L. Norris, J. D. Partridge, T. Pevitt, R. Phillips, R. M. Pitkeathly, E. R. Radway, B. Ratcliffe, J. Robinson, K. N. Sen, W. J. Shirley, J. Simon, J. Smith, J. E. Snowden, P. R. Steward, H. E. Stone, W. Sutton, G. Sykes, J. Thornton, M. W. Tucker, M. G. E. Wade, F. Walkden, T. C. Waters, H. Weatherall, S. H. Whitcroft and A. E. Williams.

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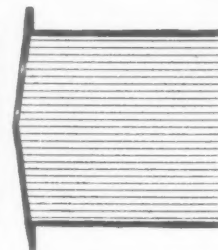
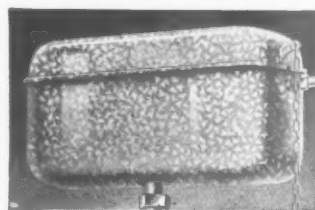
Service departments, having made their own tests and given their official approval to Resilitex, a new resilient to overcome the sponge-rubber shortage, are now following the plan recommended by the manufacturers to all Government contractors. They send articles, formerly made of sponge rubber, to the Resilitex laboratory, where a specimen replica is made up in the new resilient and tested for its specific purpose. In other cases the replica is made up from a blue-print. Firms employed on Government sub-contracts are now following the same procedure. The result is that a diverse output of articles and components made up in the new resilient is finding its way into all branches of industry.

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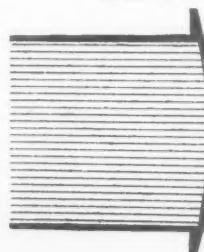


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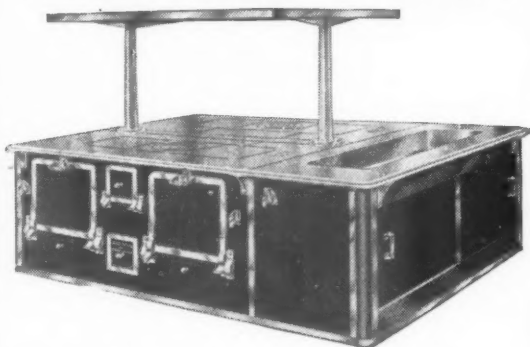


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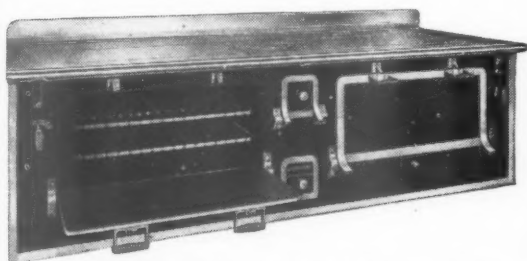


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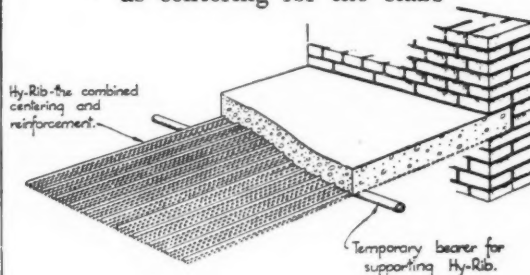
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Replies to Box Numbers should be addressed care of "The Architects' Journal," War Address: 45 The Avenue, Cheam, Surrey.

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**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

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Applications endorsed "Planning Assistant" stating age, salary required, result of medical examination for military service if this has taken place, qualifications and experience, should be delivered to the undersigned not later than Saturday, 2nd October.

R. H. ADCOCK,  
Town Clerk.

Town Hall,  
Manchester, 2,  
10th September, 1943.

954

**CITY OF MANCHESTER.****HOUSING COMMITTEE.**

Applications are invited for the appointment under the Housing Committee of Temporary Architectural Assistants. Applicants must be registered Architects and must be prepared to devote the whole of their time to the position.

The salary for these positions is £8 to £7 per week (plus cost of living bonus) according to experience, and after six months' service the successful candidates will be required to contribute to the Corporation's Super-annuation Fund.

Applications, stating age and experience, together with two testimonials, must be returned to the Director of Housing not later than 12 noon on Monday, the 16th October, 1943, and endorsed "Temporary Architectural Assistants."

Canvassing in any form, oral or written, direct or indirect, is prohibited, and copies of applications must not be sent to any member of the City Council.

R. H. ADCOCK,  
Town Clerk.

Housing Department,  
Town Hall, Manchester, 2,  
September, 1943.

956

**Architectural Appointments Vacant**

Advertisements from Architects requiring Assistants or Draughtsmen, and from Assistants and Draughtsmen seeking positions in Architects' offices will be printed in "The Architects' Journal" free

of charge until further notice. Other "Appointments Vacant" and "Wanted" will be found under later headings, and are subject to the charge given under each heading.

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 by firm of West End Architects engaged upon Government work. Very good prospects for suitable man. Apply, stating qualifications, experience and salary required to Box 158.

**JUNIOR ASSISTANT** required by firm of West End Architects engaged upon Government work, preferably under military age. Write stating qualifications and salary required to Box 159.

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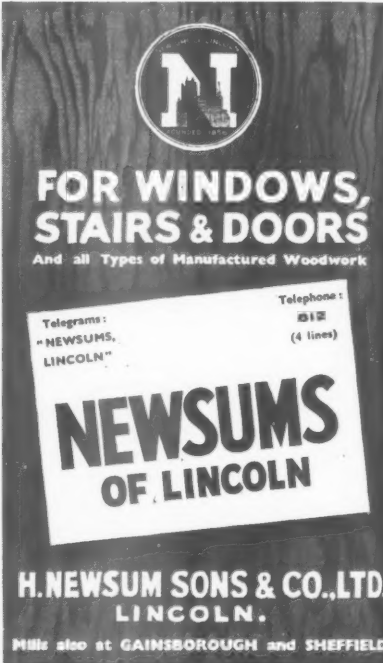
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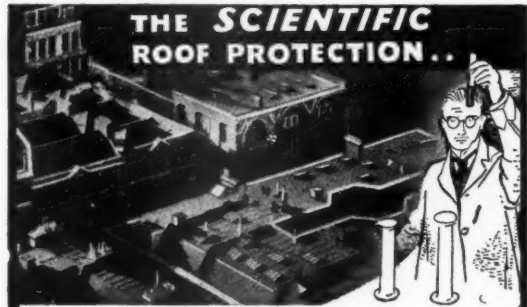
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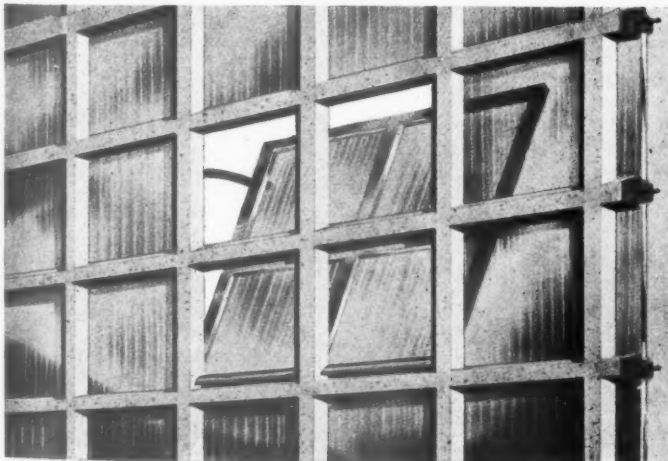
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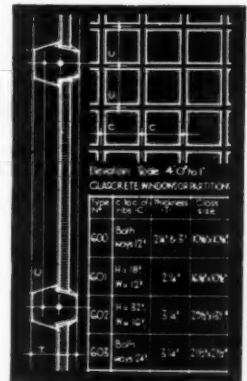
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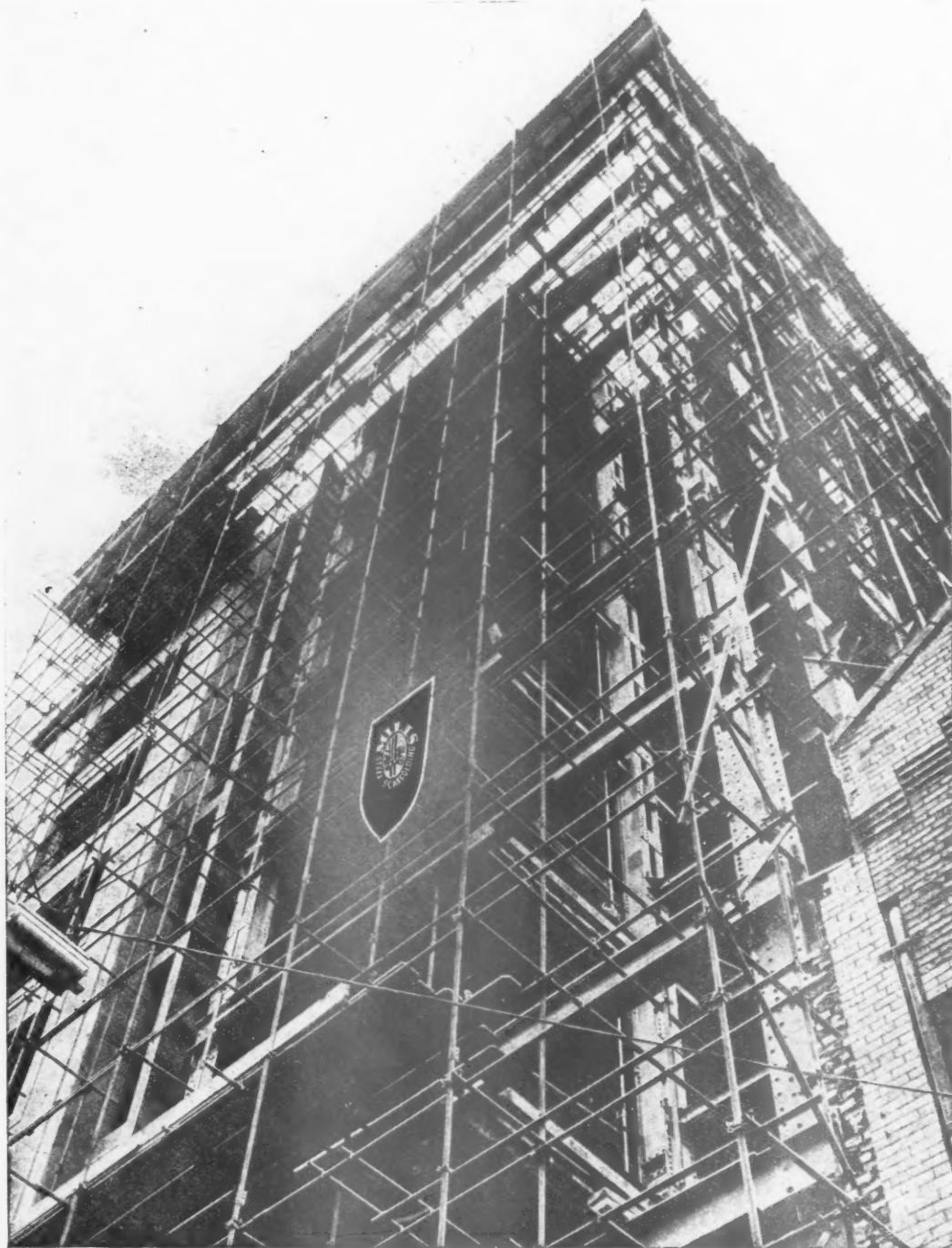
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