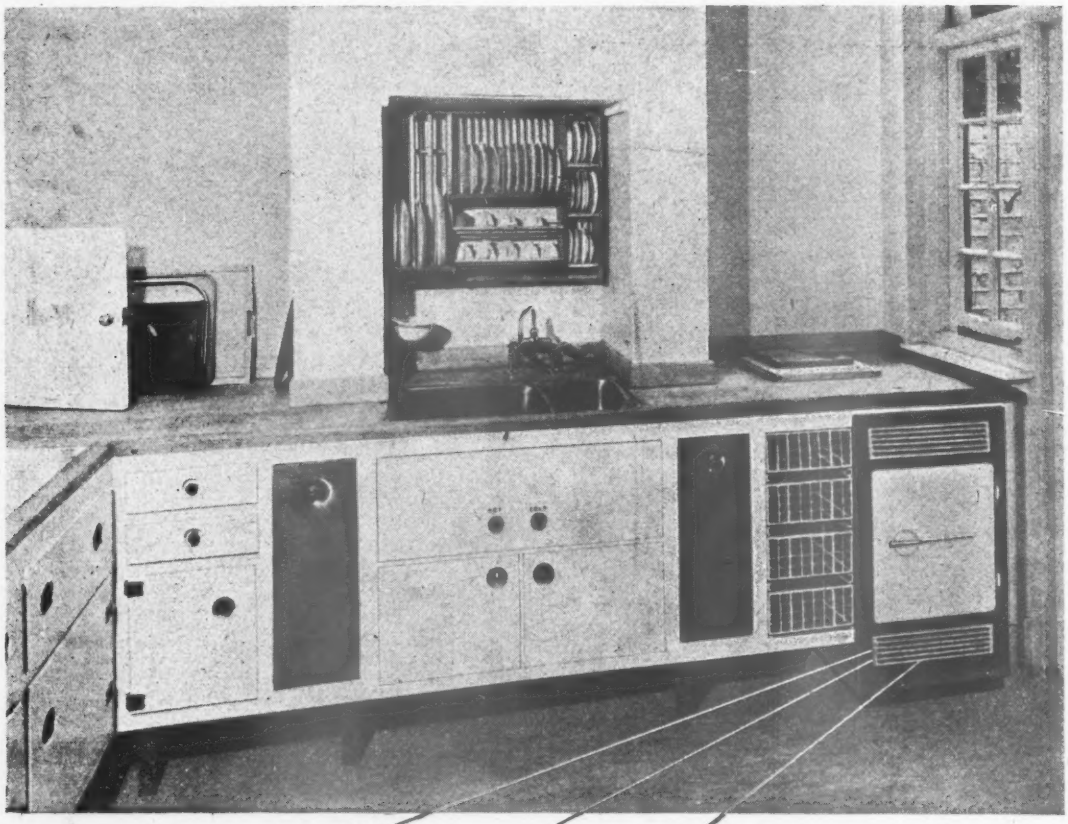
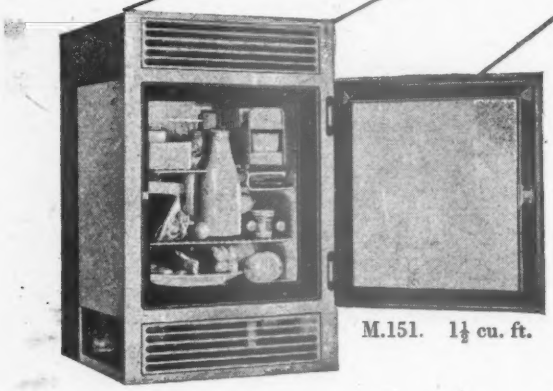


Bucks' Rural Demonstration Economy Post War Kitchen in conjunction with "Good Housekeeping."



M.151. 1½ cu. ft.

Kitchen equipment must satisfy the housewife's needs and, by its adaptability, meet the requirements of the kitchen planners. That is why Electrolux 'built-in' refrigerators are so popular. The M.151 shown fulfils the needs of the average small family, and like all Electrolux 'built-in' cabinets, fits in to any kitchen design. Moreover, it is noiseless, has no moving parts, and does not interfere with wireless reception.

Electrolux 'Built-in' Refrigerators operate equally well by Gas or Electricity. Free Standing Models operate by Gas, Electricity or Paraffin.

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REFRIGERATOR MAKERS TO H.M. THE KING

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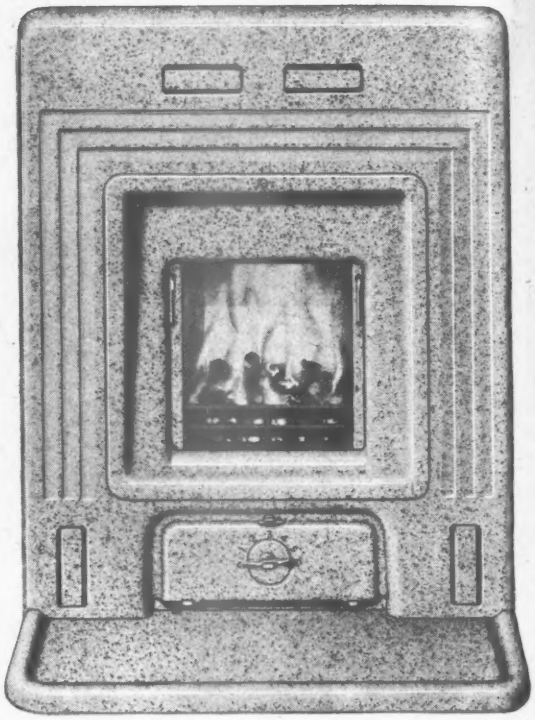
SUCTION CLEANER AND REFRIGERATOR MAKERS TO H.M. QUEEN MARY

HOUSING SCHEMES

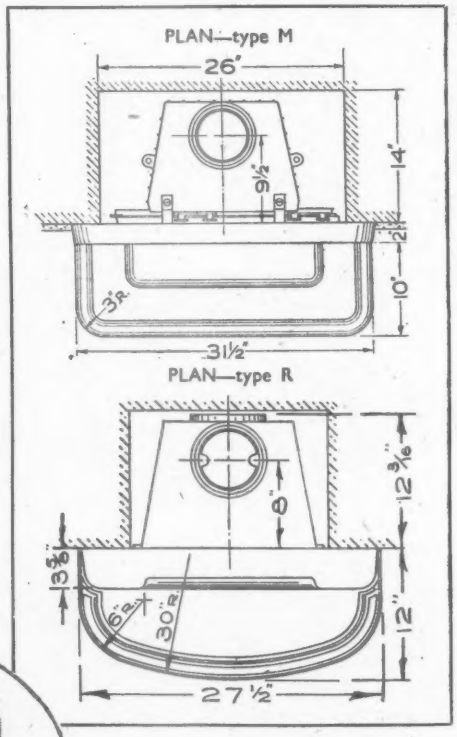
continuous warmth with the *ESSE-Q* . .



This latest self-setting ESSE Stove, open and closed fire, burning continuously, using any type of solid fuel, reducing smoke emission when bituminous coal is burned, is specially suitable for municipal and other mass housing projects. The ESSE-Q can be used in combination with an air duct to convey heat by convection to other rooms. It is fitted with tight-fitting, sideways sliding fire doors (obviating ugly appearance of inner side of fire doors when open). Fire doors are closed for overnight burning, or boosting. Standard exterior finish is oatmeal mottled porcelain enamel, but other mottled colours are available if desired. There are three types, R, S and M, detailed below.

three main types

Type M, illustrated top right, has mantel front with or without shelf and has hot and cold air louvres for convection heating. Type R, illustrated below, is designed for setting into a recess and front can be supplied with hot and cold air louvres. Type S (not illustrated) is similar to Type R but is fitted with surrounds to stand free from wall.



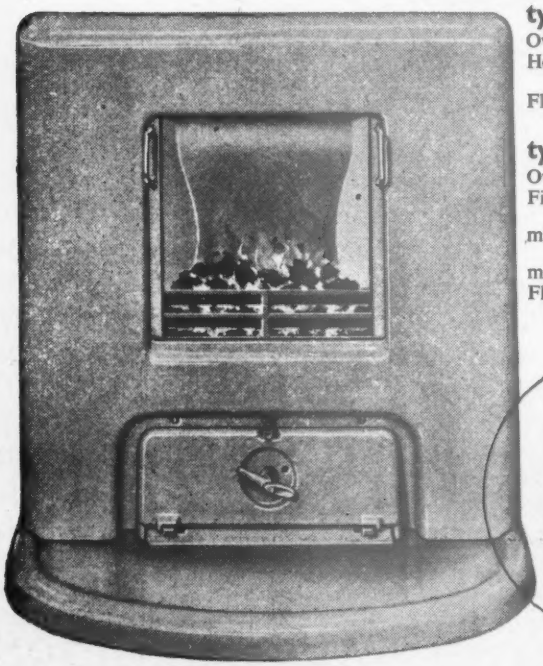
brief technical details

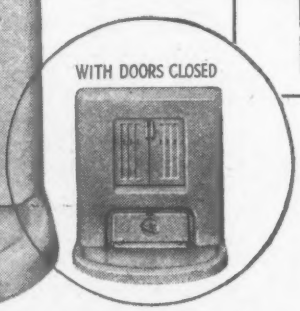
type M

Overall height 40″;
Height of Fire-place opening 33″;
Flue outlet takes 6″ cast iron pipe.

type R

Overall height 28½″;
Fire-place opening: height min. 27½″, max. 28″; width min. 18″, max. 24″.
Flue outlet takes 6″ cast iron pipe.





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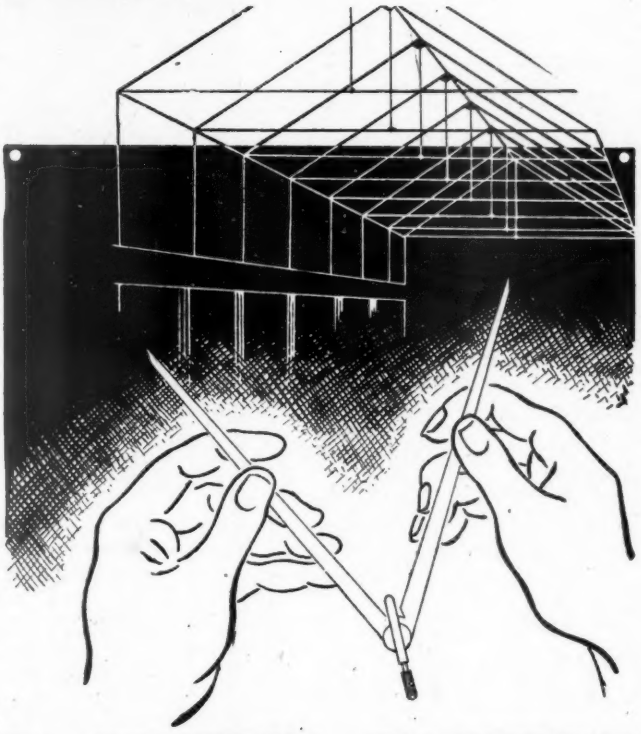

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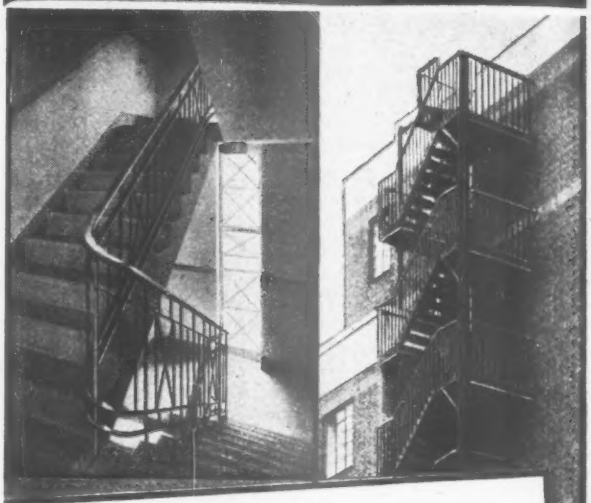

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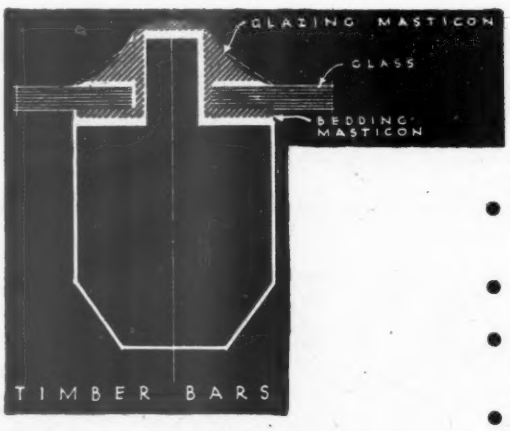

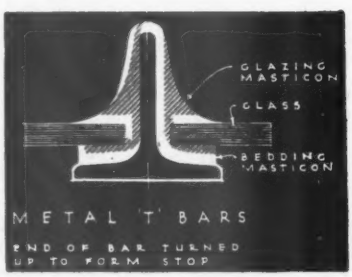

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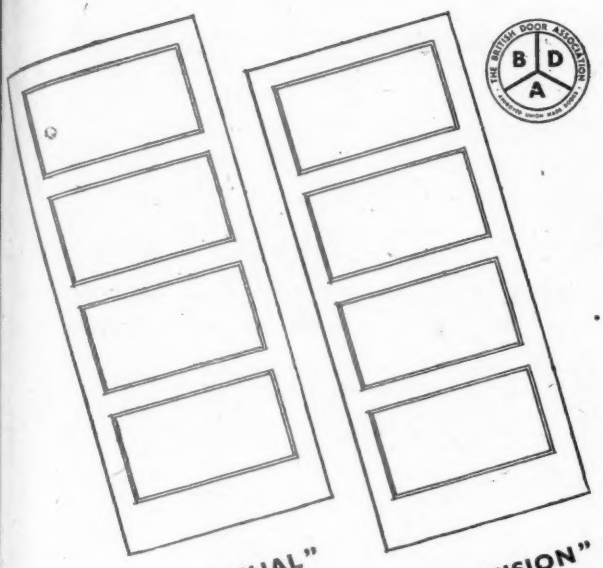

ALIKE AS PEAS IN A POD

—BUT APPEARANCES ARE DECEIVING

"Casual" has been made in a general joinery shop which yesterday was making windows and to-morrow may be making stairs. "Precision" has been made by a specialised mass production door plant which has made doors day in and day out for many years. Consider the accumulated experience that is behind it—the selection of suitable timber, its kiln drying, the glue used, the workers—who have made so many good doors that they would find it difficult to make a bad one. Whether panelled or flush WE SUPPLY ONLY "PRECISION" DOORS—backed by years of experience. During the war we have supplied many thousands for camps, factories, hostels, air raid shelters, etc., and now we are supplying thousands more to the Ministry of Works for the repair of bomb damaged houses. But the happiest job is the one ahead—to co-operate with you in getting those houses up—good houses and quickly.

A NOTE ON FLUSH DOORS.

The B.S.S. 459 puts severe limits to the amount of timber and plywood that can be used in a flush door. It is not easy to design a satisfactory flush door with such little material. One method stands out above all others—"REZO" PATENT No. 314356. We can let you have a blue print if you would like one.

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CARPENTER'S ROAD
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Branches at LIVERPOOL, BRISTOL and PAIGNTON.

THE GLIKSTEN BUILDING MATERIALS DIVISION ARE SPECIALISTS IN MODERN INSULATION, PLASTER-BOARD, HARD BOARD, WALL BOARD, ETC.

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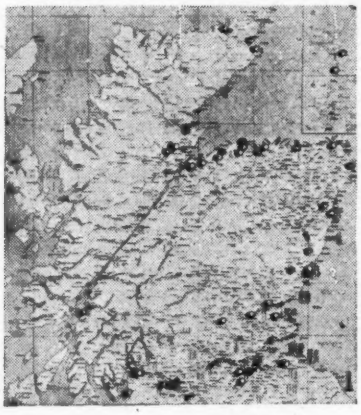

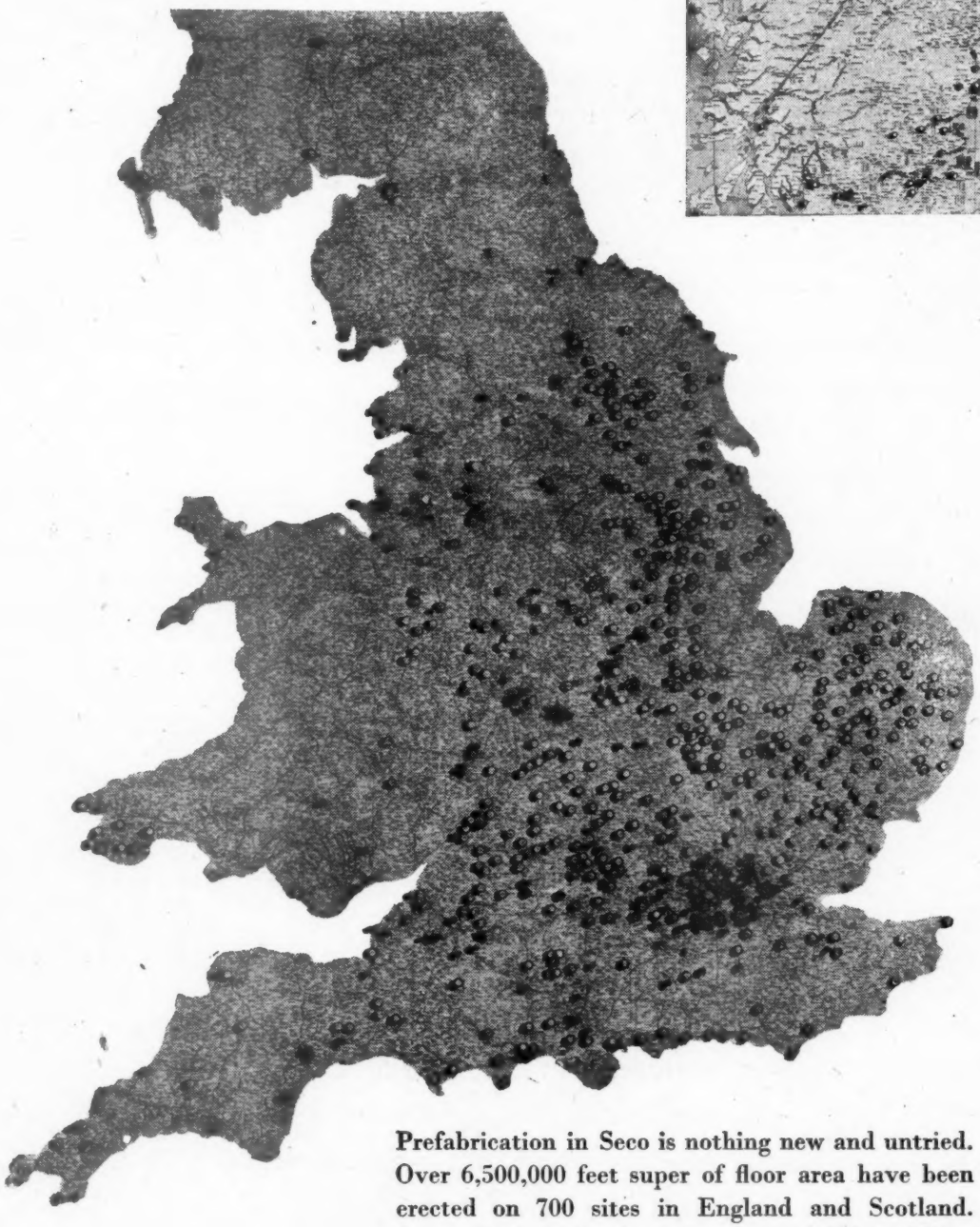

Prefabrication in Seco is nothing new and untried. Over 6,500,000 feet super of floor area have been erected on 700 sites in England and Scotland. Some of these sites have as many as 250 buildings of different types and sizes.

"Seco" and "Uni-Seco" are the Registered Trade Marks.

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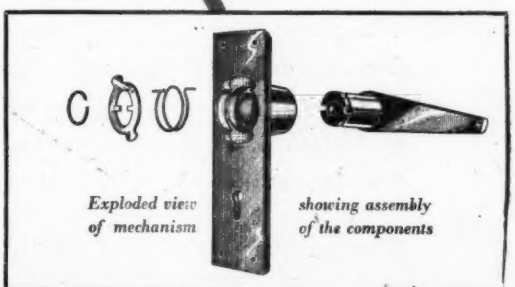
HANDY

OF course it's handy — that's the essential idea in making door furniture. But Lacrinoid door furniture is something more than handy; it embodies entirely new principles. Consider this lever for instance. It operates on the 'roller' principle, the neck being moulded in one piece with the back plate and the shank of the lever rotating within the neck. The spindle floats, thus automatically compensating for variations up to 1 inch in door thickness. There are no grub screws at all. There is no risk of rattle or looseness. The spring is so made that an even pressure is exerted throughout the turn of the lever. These handles are being made at present in black and brown only, but later a full range of colours will be available.



Exploded view of mechanism showing assembly of the components

LACRINOID

LACRINOID PRODUCTS LTD · 90 REGENT STREET · LONDON W.1 *Regent 5061*

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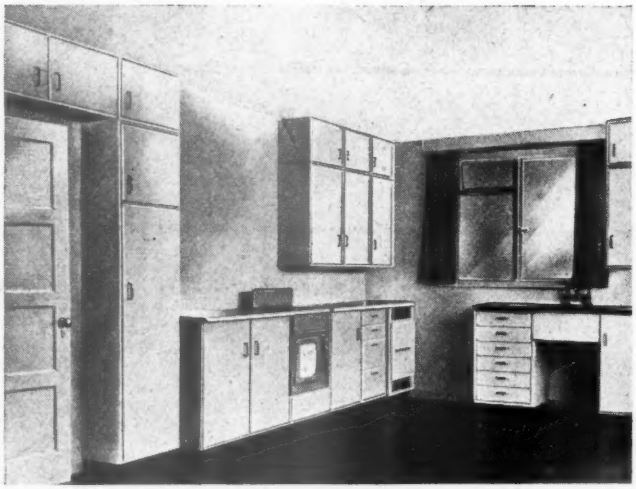


Illustrating a model kitchen specially built in our factory for your inspection.

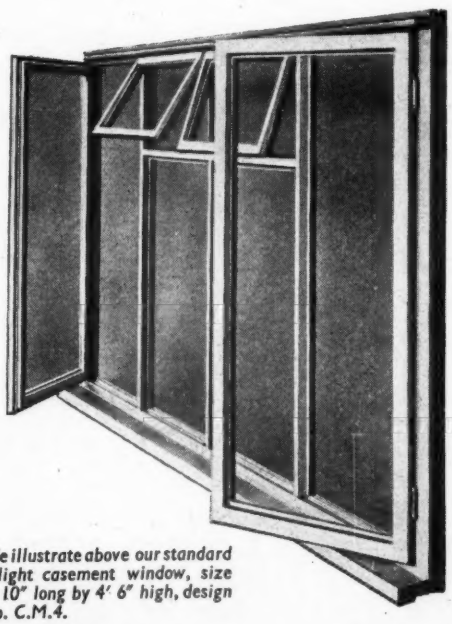
HALLS of PADDOCK WOOD offer the fully approved range of Ejma kitchen units to British Standard Specification standard as approved by the Ministry of Health and the Ministry of Works. Our kitchen units will make old kitchens new and new kitchens the last word in utilisation. 16 individual units combine into 50 different arrangements and every unit is interchangeable with A.B.C. simplicity.

For equipping kitchens small or large specify kitchen units to the approved standard by HALLS of PADDOCK WOOD, one of Britain's finest and greatest joinery plants.

HALL'S Ejma standard windows provide more than twice the daylight area per cubic foot of timber than that afforded in the pre-war standards. They are designed with extremely strong laminated joints and are specially machined to avoid the bugbear of binding windows. The sizes have been co-ordinated with brickwork dimensions thus saving many man hours on site. They are weather, draught and dust resisting.

We have an ample range of standardised units and you cannot do better than SPECIFY HALLS Ejma windows and doors.

Whatever you need in KITCHEN UNITS, WINDOWS, DOORS AND FRAMES MANUFACTURED TO THE Ejma STANDARD, REMEMBER the name is HALL the mark of QUALITY for the RIGHT STANDARD at the RIGHT PRICE.



We illustrate above our standard 4-light casement window, size 7' 10" long by 4' 6" high, design No. C.M.4.

EJMA THE HALL MARK OF QUALITY

Ejma is the Certification Trade Mark of the English Joinery Manufacturers' Association.

ROBERT H. HALL & Co. (KENT) LTD.

PADDOCK WOOD KENT *TELEPHONE:* PADDOCK WOOD 105. 107. 108. 3 LINES

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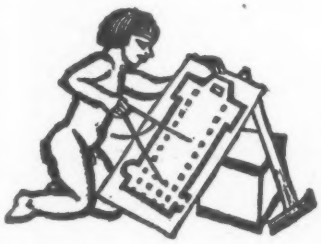


DIARY FOR DECEMBER JANUARY AND FEBRUARY

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

GLASGOW. *Other People's Jobs.* Exhibition at the Scottish Building Centre, 425, Sauchiehall Street, Glasgow, C.2. Designed to emphasise the importance of coal in industry, transport and home, and to remind the public of the need for the efficient and careful use of every type of fuel; the exhibition includes a number of up-to-date domestic appliances, including open coal fires, solid fuel cookers and stoves, as well as some of the latest designs of gas and electric cookers and other domestic appliances. (Sponsor, Ministry of Fuel and Power.) DEC. 27-29

LEICESTER. *Country Life and Country Needs.* Exhibition at the Museum and Art Gallery. (Sponsor, BIAE.) DEC. 27-30

LIVERPOOL. Film *Steel.* At the Liverpool Technical College, Byrom Street, Liverpool, 3. (Sponsor, Institute of Welding, Liverpool Branch.) 7 p.m. JAN. 16.

LONDON. *Exhibition of Hampstead Artists, Past and Present.* At Studio House, Haverstock Hill, N.W.3. Works are being lent by Messrs. Colnaghi, Agnews, Lefevre, Frost and Reed, as well as private collectors and public galleries. Many of the pictures in the historical section have never before been exhibited. (Sponsor, Hampstead Artists' Council.)
DEC. 27 onwards

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

H. G. May. *Town Planning Interim Development and the Repair of War Damage.* At the Chartered Surveyors' Institution, 12, Great George Street, S.W.1. (Sponsor, C51.) 5.30 p.m. JAN. 7.

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

S. C. Mount. *A Factory in a Railway Tunnel.* At the Institution of Heating and Ventilating Engineers, 72-74, Victoria Street, S.W.1. (Sponsor, IHVE.) JAN. 9

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

G. Scott Williamson. *Health Centres.* At the Town and Country Planning Association, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) 1.15 p.m. JAN. 10.

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

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

R. L. Nicholas. *The Manchester Plan.* At the Town and Country Planning Association, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) 1.15 p.m. JAN. 24

Two Day Conference. *The Family and Its Needs.* At BMA House, Tavistock Square, W.C.1. Speakers include F. J. Osborn, Miss E. E. Halton, Professor F. A. E. Crew, and Sir Montague Barlow. Conference fee 5s. (Sponsor, TCPA in conjunction with the British Social Hygiene Council.) JAN. 24-25.

Max Lock. *Surveys and Their Practical Application to Planning.* At the Livingstone Hall, Broadway, Westminster, S.W.1. (Sponsor, TPI.) 6 p.m. FEB. 21

Maurice B. Reckitt. *The Polls and the Citizen.* At the Town and Country Planning Association, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) 1.15 p.m. MAR. 7.

National Federation of Building Trades Employers' Dinner. At The Dorchester Hotel. Guest of honour, Mr. Aneurin Bevan, Minister of Health. JAN. 30

Kenneth Holmes, Principal of the Leicester College of Arts and Crafts. *The Place of the Art School in the Life of the Community.* At the Royal Society of Arts, John Adam Street, W.C.2. (Sponsor, RSA.) 1.45 p.m. JAN. 30

H. M. Llewellyn, of the Building Research Station. *Painting Plastered Surfaces.* ASB Lecture at the RIBA, 66, Portland Place, W.1. (Sponsor, RIBA.) 5.45 p.m. FEB. 6

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

Miss Jacqueline Tyrwhitt. *Planning in Canada.* At the Town and Country Planning Association, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) 1-15 p.m. FEB. 21.

J. F. Bickerton and Petros Protopapadakis. *Layout of Passenger Stations.* At the Institution of Civil Engineers, Great George Street, S.W.1. (Sponsor, ICE.) 5.30 p.m. FEB. 26

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

NEWS

THURSDAY, DECEMBER 27, 1945
No. 2657. VOL. 102

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

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

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

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

★

The Council, has REORGANISED PART OF THE RIBA STAFF arrangements and made some new appointments.

Mr. Gerald Essame, B.A., has been appointed Assistant Secretary and is taking up his duties in January. Mr. Essame was educated at Magnus School, Newark, and at Selwyn College, Cambridge, where he was exhibitioner in History, obtained honours in History and English and a post-graduate diploma in Education. Afterwards he took a course in business administration at the London School of Economics, subsequently becoming personal assistant to the chairman and managing director of the Abbey National Building Society. Joining the Territorial Army in 1938, he was commissioned in 1939, and had a distinguished army career, becoming a staff officer in 1942 and attaining the rank of Lieutenant-Colonel in 1944. The Council has decided to make separate departments of the Library, the RIBA Journal and Public Relations. The work of the Library has increased so much that it has become necessary for the Librarian-Editor, Mr. E. J. Carter, B.A., A.A.DIPL., A.R.I.B.A., to devote his whole time to it. The editorship of the Journal is being taken over by Mr. Eric L. Bird, M.C., A.R.I.B.A., who before the war was Technical Editor and Secretary to the Public Relations Committee and who has recently been released from war-time service with the Ministry of Home Security. The new Public Relations Officer is Mr. George E. Marfell, B.A. He has recently been demobilised from the Army and is to take up his duties in January. Before the war Mr. Marfell was exhibition organiser at the RIBA.

THIS **built-in Prestcold refrigerator, installed in the model kitchen at the British Electrical Development Association Exhibition "Electricity looks forward," has the following important advantages:**

Storage capacity of approximately 4½ cubic feet, which will hold all the perishable foodstuffs for a family of four.

Larder space rendered unnecessary. Dry goods and non-perishable foodstuffs would be kept in kitchen cupboards.

Waist-high door, allowing access to interior without stooping. Height adaptable by varying position of supporting frames.

It can be built into kitchen fitments with cupboard space above and below it.

Design provides for adequate ventilation of mechanism without the necessity for special air-bricks or ducting.

Ice making and 'cold cooking' facilities.

Most important too, is the fact that this Prestcold refrigerator provides the food storage temperatures necessary for the proper safeguarding of perishable foods — for instance 35°F for fresh fish and poultry; 40°F for milk — and even the lower temperatures needed to store the frozen foods which will be available later on. In addition, it will be most economical in current consumption, using only one unit a day.

PRESTCOLD *Refrigeration*

A PRODUCT OF THE PRESSED STEEL COMPANY LIMITED · COWLEY · OXFORD

From AN ARCHITECT'S *Commonplace Book*

ON THE JAPANESE HOME. [*From* An Autobiography *by Frank Lloyd Wright* (*Faber and Faber*).] I saw the native home in Japan as a supreme study in elimination—not only of dirt but the elimination of the insignificant . . . I saw nothing meaningless in the Japanese home and could find very little added in the way of ornament because all *ornament* as we call it, they get out of the way the necessary things are done or by bringing out and polishing the beauty of the simple materials they used in making the building . . . Nothing is allowed to stand long as a fixture upon the sacred floors of any Japanese home. Everything the family uses is designed to be removed when not in use and be carefully put in its proper place. It is so designed and made. Beautiful to use only when appropriate and use only at the right moment. Even the partitions dividing the floor spaces are made removable for cleaning. And strangely enough, I found this ancient Japanese dwelling to be a perfect example of the modern standardizing I had myself been working out. The floor mats, removable for cleaning, are all three feet by six feet. The size and shape of all the houses are both determined by these mats. The sliding partitions all occur at the unit lines of the mats. And they all speak of a nine, sixteen or thirty-six mat house, as the case may be. . . . For pleasure in all this human affair you couldn't tell where the garden leaves off and the garden begins. I soon ceased to try, too delighted with the problem to attempt to solve it.

★★

Westminster City Council invites architects to submit in COMPETITION designs for the layout of about 31 acres in Westminster, and for the design of flats to be erected on the site.

Assessor: Mr. Stanley C. Ramsey, F.R.I.B.A., Premiums: 700 guineas, 500 guineas, 300 guineas and 200 guineas. Last day for submitting designs: March 31, 1946. It is the intention of the Promoters to proceed forthwith with the erection of the buildings on one section of the area covering about 8 acres and subject to the Conditions of the Competition to employ for that purpose the author of the winning design at fees calculated in accordance with RIBA scale of architects' fees for State-aided multi-storey flats. Conditions of the competition may be obtained on application to Sir Parker Morris, LL.B., Town Clerk, Westminster City Hall, Charing Cross Road, W.C.2. Deposit, 3 guineas.

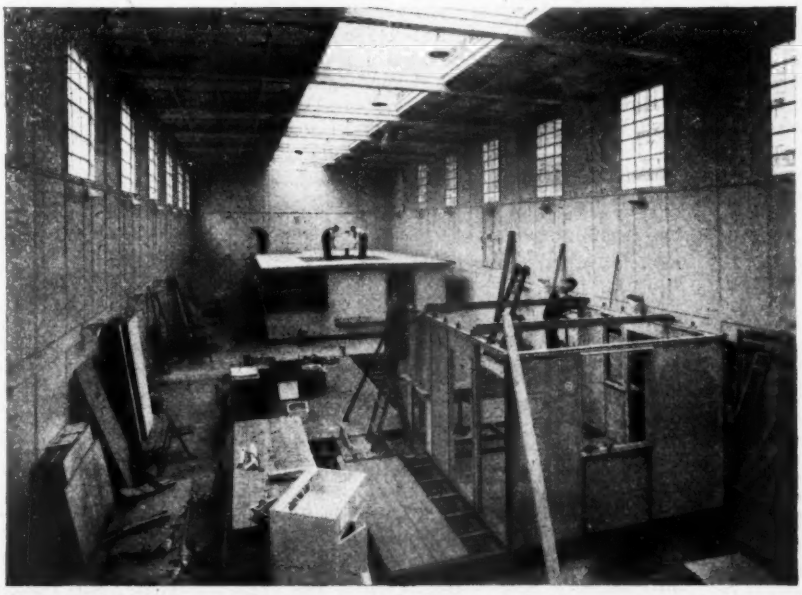
Bristol complains of lack of Government information as to date and delivery rate of temporary houses, lack of labour, delivery of TEMPORARY HOUSES WITH VITAL PARTS MISSING, and delay by the Ministry of Works in carrying out site works.

The Minister of Health, Mr. Aneurin Bevan, accompanied by representatives of the Minister of Works, received a deputation from the Bristol Housing Committee consisting of Alderman C. R. Gill, Chairman of the Housing Committee, Councillor G. T. Bullock, Vice-Chairman of the Committee, and Councillor K. A. L. Brown, a member of the Committee, together with Mr. A. Pickard, the Town Clerk, Mr. J. N. Meredith, the City Architect, and Mr. R. J. Allerton, the Housing Manager. The deputation told the Minister that they have done and are doing everything possible locally to speed the provision of houses but are being held up by difficulties beyond their control. These difficulties include lack of information from the Government as to the date and delivery rate of temporary houses, lack of labour, including the non-arrival of German prisoner-of-war labour as promised, delivery of temporary houses to site with vital parts missing, and delay by the Ministry of Works in carrying out site works. They suggested that the local authority be made responsible for all work in connection with the erection of temporary houses, that the requisite labour be made available, that temporary houses arrive on site complete in all respects, that the issue of licences be regularised and that a decision be arrived at on the question of subsidies. The Minister said that he recognised the vigorous way in which Bristol has set about their housing programmes and regretted the difficulties that have occurred. He outlined the steps being taken to improve the labour force available, and said that the question of subsidies is about to be discussed with the local authorities.

Builders were successful at Maidstone, Westminster and Malden and Coombe in the MUNICIPAL ELECTIONS.

Among builders who have become councillors in the recent Municipal Elections are Mr. Leslie Wallis, former President of the National Federation of Building Trades Employers (Maidstone); Mr. W. E. Rice, former President of the London Master Builders' Association (Westminster); and Mr. J. Leslie Whitehead, a member of the Administrative Committee of the LMBA (Malden and Coombe). Mr. Wallis's father was three times Mayor of Maidstone.

Mr. W. W. Andrew has relinquished his duties as SENIOR REGIONAL OFFICER, MINISTRY OF HEALTH, London Region, on his retirement from the Civil Service. His successor is Mr. A. H. King, the deputy Senior Regional Officer.



The Uni-Seco Training Centre in Park Lane. Regular courses are held on the Uni-Seco methods of construction. The photograph shows prototypes of the houses, which are erected for demonstration purposes.

Trees Create Street Unity—III

The third example in our series illustrating the æsthetic value of trees in street architecture is this charming scene in the Keishigawa residential area in Tokyo draped with overhanging wisteria. The subject has a certain topical interest in that Frank Lloyd Wright in his autobiography, just published by Faber & Faber (35s. 0d.), gives a vivid first-hand account of the true Japanese culture as expressed, for example, in the Japanese home and in the streets of Yedo, the old Tokyo. The Land of the Rising Sun, as he points out, has a genius for linking its art with nature, particularly between house and garden. In this picture buildings are not only linked by the organic repetition of trees but by the repetition of the highly decorative characters of the street signs, which avoid the cacophony of Western publicity.

A Bill has been introduced to provide financial assistance for WATER SUPPLIES IN NORTHERN IRELAND.

The Government of Northern Ireland has introduced a Bill providing for financial assistance to local authorities or statutory water undertakings in connection with water supply or sewerage schemes. It places upon local authorities the duty of providing a supply of water for domestic purposes in all parts of their districts, and enables them to make water supplies available for non-domestic purposes. The Bill also seeks to ensure that new houses and existing occupied houses are provided with an adequate water supply. The Ministry of Health and Local Government is given certain powers in the event of default by a local authority or statutory water undertaking in carrying out its duties. That Ministry is also empowered to vary by order the district of supply of a local authority or statutory water undertaking, and also to authorize a statutory water undertaking to construct or acquire and maintain waterworks and ancillary works, or to borrow money for capital expenditure. The Bill also places a statutory water undertaking in the same position as a sanitary authority in regard to the compulsory acquisition of land, by applying the machinery of the Local Government Act (Northern Ireland), 1934, for that purpose.

At Oadby, near Leicester; Eastcote; Ardingly, in Sussex; Wilmslow and Sale Moor, near Manchester; Wakefield; Walsall and Norwich, DEMONSTRATION PAIRS OF HOUSES, built from plans selected in the National Competition organised by the House-Building Industries' Standing Committee, are now in course of building.

When completed the houses will be open to public viewing and criticism. They are architect-designed, and are being built by members of the National Federation of Registered House-Builders, membership of which automatically binds the builder to have each house examined by an independent authority five times during construction, and ensures that should any defect occur in the house within two years of completion, it is made good without charge to the purchaser. Other pairs of demonstration houses will shortly be commenced in twenty-two other areas.

Liverpool City Council is asking the Minister of Health to authorise the production of the LIVERPOOL TEMPORARY HOUSE.

The Minister of Health received a deputation from Liverpool consisting of Councillor H. N. Bewley (Chairman of the Liverpool Housing Committee), Councillor J. Cresswell (Deputy Chairman), Councillor A. Hargreaves (Member), Messrs. L. H. Keay (City Architect and Director of Housing), and P. S. Harvey (Deputy Town Clerk), and the following Members of Parliament: Mrs. E. M. Braddock, Captain B. V. Kirby, and Messrs. A. S. Moody, G. Porter, W. Keenan, J. Gibbins, and R. Clitherow. The deputation put before the Minister the claims of the Liverpool type of temporary house, and asked him to authorise its production as an addition to the allocation of temporary houses already made to Liverpool. The Minister promised to give further consideration to the matter, but indicated the difficulties which would be involved. He added that he hoped to visit Liverpool as soon as his other engagements allowed.

The exhibition of the COUNTY OF LONDON PLAN IN RIO DE JANEIRO proved highly successful and had to be prolonged from the original week to a month —British Council Annual Report.

Other exhibitions of the County of London Plan, says the annual report, were in Sao Paulo, in Portugal, at Lisbon and Oporto, and in Sweden, at Stockholm, Gothenburg, and Malmo. Articles on the Plan, based on Council material, appeared in Swedish architectural journals. An exhibition of British architecture was shown in Turkey. The exhibition of photographs of British architecture of the eighteenth century presented to VOKS aroused lively interest among Soviet architects, and has been handed over to the Library of the Academy of Architecture in Moscow.

★★

His Majesty the King, on the recommendation of the RIBA has awarded THE ROYAL GOLD MEDAL for 1946 to Professor Sir Leslie Patrick Abercrombie.

The following notice has been issued with regard to the KNUTSFORD CIVIL SURVEY AND PLAN.

The Knutsford Urban District Council give notice to all intending developers within the Knutsford Urban District and their architects and consultants that a Civic Survey and Plan is now in course of preparation, the basic features of which, when implemented by the Statutory Town Planning Scheme, will have considerable effect on future development. They, therefore, invite all intending developers, their architects and consultants, before going to the trouble and expense of preparing plans, to confer with the Council's officials so that advice and guidance may be given with a view to cutting down expenses, saving valuable time and expediting development.—J. H. Yates, Clerk to the Council, Council Offices, Knutsford.

WE CAN AFFORD IT

THE unexpectedly strong opposition to the American loan and the Bretton Woods proposals in both Houses of Parliament and the headlines given to the debates in the daily Press are symptomatic of the growing public interest in the Dismal Science. It is an important and cheering indication that the laity is at last coming to realize the profound effect international financial affairs can have on our daily lives. Yet the general lack of understanding of the issues involved both among Members of Parliament and the Press is a less happy sign. Once embarked on discussion of finance the modern mind seems to lose all its common sense, and no doubt a minority seeks to maintain subtle control by adding an esoteric jargon to the confusion—a jargon which Beachcomber of the *Daily Express* has been known to parody so brilliantly that even experts, when asked, have been unable to distinguish between his nonsensical paragraphs and those of the City columns of a well-known daily newspaper.

Yet the basic issues are as simple today as they ever were. Those issues are : (1) How can we produce the food, clothes, houses and luxuries we want ? (2) How can we distribute them to the consumer ? The first is easy to solve with the means that modern technology provides. The solution to the second is equally obvious to anyone whose natural impulses have not become atrophied, that is to say to anyone who understands that a good square meal and a well-built house are intrinsically more valuable than a lump of gold hidden in the ground at Fort Knox, Kentucky, USA.

With the vast rebuilding job facing us, it is relevant to recall the Guernsey experiment of 1821. Then the Channel Island authorities were worried by the scarcity of money and the danger of increasing the taxation of an already overburdened population. In Guernsey public buildings, streets, houses and coastal works were greatly in need of rebuilding and repair, but to borrow the money needed to carry out these improvements was too " expensive."

The authorities solved their problem by creating their own credit, and began the experiment with an issue of 4,500 One Pound notes for the building of a new market. With the money, used locally only, they paid for labour and local materials and the Market House was opened within three years. In spite of attempts by the " authorities " across the water in London to forbid further resort to such a simple and direct solution, Guernsey continued successfully to develop its scheme throughout the century.

The creation of a heavily backed banking corporation, however, eventually forced a compromise whereby the issue of state money was severely restricted. Part of the money previously issued by the state was, accordingly, withdrawn and substituted by interest-bearing loans from the new bank. Guernsey had, nevertheless, accomplished the task originally embarked upon. St. Peter Port now had a market house, a larger court house and a record office, an improved college, wide streets,

modern sewerage, repaired harbours—all without creating any fictitious interest-bearing " debt," and being in financial bondage to none for these assets.

The solution to the present problem of " Where is the money to come from " was shown to us by Guernsey over a hundred years ago. So far as real wealth is concerned we are potentially a rich country. We can stand on our own feet if necessary. There is no need to crawl cap in hand like a defeated nation, to any foreign power (nor indeed to any internal power), if we will but accept the simple sloka : Make what you want, take what you want and keep account of what you make and take.

The Architects' Journal

War Address: 45, The Avenue, Cheam, Surrey

Telephone: Vigilant 0087-9

NOTES & TOPICS

DO RATES AFFECT ARCHITECTURE?

The latest of a series of publications on the problems of rates written by Professor and Mrs. Hicks and published by the Cambridge University Press, is called *The Incidence of Local Rates in Great Britain,* and the price is 6 shillings. It raises questions on the extent to which architects and architecture are influenced by our rating system and whether that influence is good or bad.

*

It is not an easy question to answer. The trouble about our whole system of rating is that it is a complete patchwork. Hardly any part of it is satisfactory. It is neither uniform nor fair over the country as a whole. Yet it is not so bad that it demands immediate attention. It is rather like an old car. It is not efficient, comfortable nor fully up to its job, but it does move and rarely works so badly that the desire to scrap it becomes irresistible. Further, in general the minor injustices seem to favour the owner, and to a less extent the occupier, of the small house as against the large, and the new house as against the old.

*

If one were designing a system of local taxation afresh there are many points in our present machine that one would discard, but then rating is not the only thing that teaches us that we live in an imperfect world. And at bottom it is difficult to see how any plan that departs from the basic pattern of our rating system, namely, that each house should make a contribution to local expenditure based on its letting value, could really be an improvement.

*

But this is drifting away from the question—has the present rating system any serious effect on domestic or commercial architecture? My feeling is that it has not. The size and shape of a structure, in so far as they are determined by financial considerations, are fixed by the amount of capital money that is available to build them and by the annual return that the owner hopes to derive from them; that rates no more influence a house, I believe, than does the current level of income tax. But this does not mean that any professional man can afford to neglect the problems raised by these publications, which provide information and data which are not collected elsewhere between only two covers.

*

The great value of works of this kind is that they show what parts of the existing machine are most inefficient, so that we may proceed with improvement piecemeal and yet know that we are tackling first those weaknesses that do demand priority of attention.

THERE'LL ALWAYS BE AN AD. MAN

Second in the series The Architect in Advertising is reproduced below. It was sent in by a correspondent who, remembering perhaps that architects often earn as much as mace-bearers, underlines the first sentence.

*

Apart from the Copy, which perpetrates the legend that an architect makes money but is so artistic he forgets everything including the staircase, the advertisement is reasonably accurate—assuming of course that the type in the striped shirt really *is* left-handed.

The Architect in Advertising. See Astragal's comment above.

ELIZABETHAN STORY

Stumbling round the PLA building on Tower Hill the other day in desperate search for the main staircase, I reflected how rare an experience it was to walk about a really well-planned public building, to feel one's feet guided, as though along circulation lines, from room to room in direct inevitable passage.

*

It was all the more pleasant a contrast therefore to attend last Saturday a matinée at the Memorial Theatre, Stratford-on-Avon, where from car-park to foyer, from cloaks to auditorium, and thence to the restaurant, the flow of traffic was easy, quick and pleasant. You may disagree with some of the internal detail of this building—and the lack of maintenance during the war has certainly made some of it look a bit shabby—but the planning, inside and out (the gardens have now matured) is quite excellently direct and imaginative.

Architects often pride themselves upon being able to find the lavatory by instinct in any strange building without trouble or delay. Such skill—which anyway savours of professional arrogance—is quite unnecessary at Stratford, where not even those in the greatest hurry need ever pause to ask the way.

TEAPOT HALL R.I.P.

Postcript to my notes of March 15 and June 14 on Teapot Hall, the thatched cottage in Lincolnshire which was then described as being in a lamentable state of disrepair: a Lincolnshire reader now writes what looks like the epitaph on the little building. "What was once Teapot Hall is now an utter ruin. Walls gone, the thatched roof gone, and what is left has apparently been on fire as there are only scorched rafters left . . . . a pitiable sight."

ASTRAGAL

Teapot Hall is no more. See Astragal's note this week.

LETTERS

Leonard W. Ashurst, A.M.I.Struct.E.
Assistant Engineer, County Architect's Department, Middlesex.

R. M. Bradbury

Standardisation of Reinforced Concrete Structural Members

SIR,—Will you kindly give space in your journal to this open letter addressed to the Reinforced Concrete Association? This body invites observations on its recently published memorandum and the subject is of universal interest.

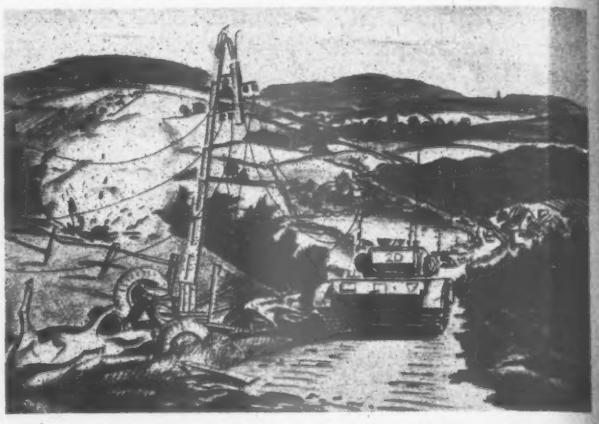
1.—The keynote of the memorandum is "formwork" expressed in terms of (*a*) reduced cost, (*b*) increased speed of erection, and (*c*) improved appearance of the finished structure; providing, it is claimed, an important incentive to the increased use of reinforced concrete.

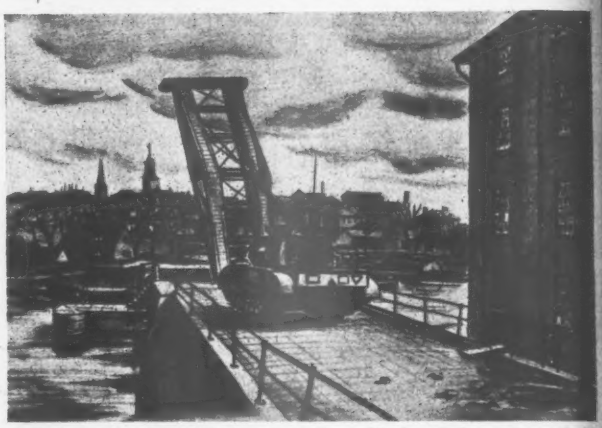
2.—It will be appreciated, however, that items (*a*), (*b*) and (*c*) are applicable also to formwork for steel-framed buildings, *viz.*, the soffits of floors, roofs, etc., and the encasement where specified of stanchions and joists.

3.—A more suitable title for the memorandum would be *The Standardisation of Formwork for Structural Members.* It is moreover stated that the recommended dimensions are the *overall* dimensions of concrete members. An examination of the sketches at the head of Table 1 (Columns) and Table 5 (Beams) shows that overall the members cannot be always standard, but will vary with the thickness of the monolithic slab. In actual fact, therefore, the formwork only is standard.

4.—Items (*a*), (*b*) and in some cases (*c*), may be of 100 per cent. importance to

FROM AN ARCHITECT'S WAR-TIME CHRONICLE





The 82 Assault Squadron of the Royal Engineers has had the excellent idea of producing a chronicle of events of its campaigns in North West Europe between 1944-45, *in the form of an illustrated booklet dedicated to the members of the Squadron who gave their lives. Printed in Hamburg, it is mainly composed of black and white sketches by Lt. Birkin Haward, A.R.I.B.A., of the* 82nd, *at one time National Organizer of the Association of Building Technicians. Four of these are reproduced above. Top left,* Night Attack to Clear Fontenoy Village, 25 : 6 : '44. *Top right,* Moving South from Caumont, 31 : 7*: '44. *Below left,* Bremen, 26 : 4 : '45. *Below right,* Last Action Assault Bridge at Bremervorde, 2 : 5 : '45.

members of the Reinforced Concrete Association, *i.e.*, Designers and Contractors, but their value to other users or potential users of reinforced concrete will vary in proportion to each person's knowledge or lack of knowledge of this composite material and it follows that, provided cost and architectural considerations compare favourably with other forms of construction, the Architect will normally use the material for which he has the most simplified but comprehensive data.

5.—It is agreed, and indeed emphasised, that the amount and distribution of reinforcement in structural members is a matter for the designer, but the size of a member in the majority of cases will be selected by the Architect, probably long before he feels justified in calling in the services of the specialist designer.

6.—If, by reference to tables or other data, the Architect can decide, with accuracy, upon the size of his structural members, then a mountainous stumbling block to the popularity of reinforced concrete is removed. On the other hand, if the studied policy of the RCA is to omit every reference to the load bearing limitations and capabilities of the tabulated members, then that policy is fundamentally opposed to increased popularity and the case for standardisation falls through. (See para. 2.)

7.—Furthermore, the RCA tables, as presented, are liable to misuse by the inexperienced, who may commit serious blunders by attempting (*i*) to fix the size of columns without regard to bending, and (*ii*) to settle beam sizes irrespective of the limitations imposed by shear, deflection and the minimum width necessary to the proper placing of the reinforcement.

8.—A part of the equipment of all who practise the varied forms of the building profession is the familiar structural steelwork handbook based on British Steelwork Association Tables. Reinforced concrete design in detail and for special structures, is most certainly the province of engineers specialising in the subject. That, however, is no reason why a concise handbook should not be produced in a simple, generalised form, giving the size of reinforced concrete structural members in buildings for specified loads and conditions, without reference to reinforcement, and conforming to the proposed standards for formwork.

9.—When such a handbook becomes familiar, then the primary objective of the Reinforced Concrete Association, *viz.*, the increased popularity of reinforced concrete, will have been achieved.

LEONARD W. ASHHURST,
Assistant Engineer,
County Architect's Department,
Middlesex.

Plans for an Arts Centre

Sir,—Your interesting notice of the Arts Council's booklet *Plans for an Arts Centre* reveals what appears to be a serious defect in the project, namely, the absence of a raked floor for the multi-purpose hall. It is extremely unlikely that a flat floor would provide a satisfactory auditorium for dramatic performances or would be preferable to a raked floor for any other purpose than dancing or general conviviality. These latter pursuits could surely be suitably conducted in one or more of the adjoining enclosures, such as the restaurant and exhibition room, particularly if these are separated by sliding partitions only.

This defect was strongly criticised at a recent Town and Country Planning Association discussion on the need for theatres, cogent arguments being advanced on the basis of actual experience of theatrical companies in local town halls and the like, the rear half of which offered neither an unobstructed view nor adequate hearing.

It is something of a puzzle why the palatial premises of some councils—I have Clacton-on-Sea in mind—provide a public hall flat, long and relatively narrow, which is so completely unsuitable for dramatic representation. It is certainly a crippling disadvantage for the theatre in such towns.

Ruislip R. M. BRADBURY

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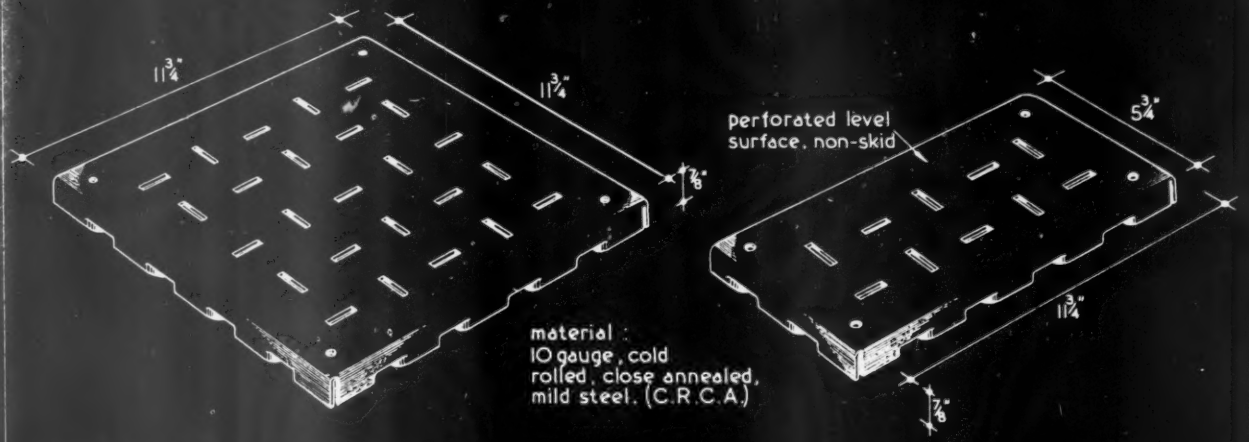
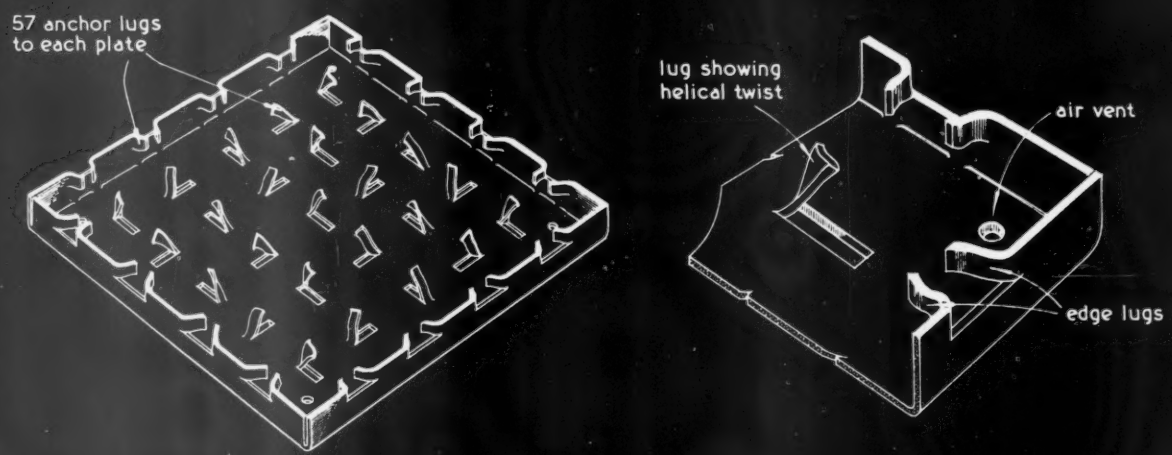
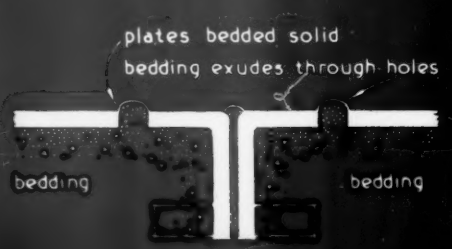
· CONSOL · STEEL ANCHOR FLOOR PLATES



NOMINAL SIZES : STANDARD 12"x12" AND 12"x6" PLATES.
(no other sizes are manufactured)



GENERAL AND DETAIL SKETCHES SHOWING UNDERSIDE OF PLATE.



SECTION THROUGH ADJACENT PLATES AFTER BEDDING

SKETCH SHOWING USE OF 12 x 6 PLATES TO FINISH OFF RUNS

Issued by Constructors Ltd.

INFORMATION SHEET : STEEL SURFACING FOR HEAVY DUTY FLOORS

Sir John Burnet Tait and Lorne Architects One Montague Place Bedford Square London WC1

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 956 •

FLOOR FINISHES

Product :

Consol Steel Anchor Floor Plates.

General :

Consol steel anchor floor plates are designed to provide a heavy duty, wear-resisting floor finish for industrial and similar buildings.

Description :

(See illustrations on the face of this Sheet.)

Material : 10 gauge mild steel, cold rolled, close annealed (C.R.C.A.).

Sizes : Available in two sizes only, 12 in. by 12 in. by $\frac{7}{8}$ in. and 12 in. by 6 in. by $\frac{7}{8}$ in.

Surface Finish : Perforated level non-skid surface.

Each full plate is provided with 57 steel lugs, projecting sideways and downwards to provide a sound key to the bedding material. The lugs during the process of manufacture are given a helical twist to provide a rag bolt grip effect.

Applications :

Wherever a surface is required to withstand heavy impact or abrasion, e.g.,

Extra heavy industrial floors.
Factories, Bakeries, Dairies, Mills, etc.
Loading decks of all types.
Docks and loading quays.

External roads and gangways subjected to exceptionally heavy traffic, with iron-wheel trucks carrying heaviest type of dead load.

Laying—New Work :

General : It is essential that the sub-floor upon which the surfacing is to be bedded should be adequately strong.

Allowance for finish : 1½ in. should be allowed between structural floor and finish levels.

Bedding material : 1 part (vol.) Portland Cement; 2 parts (vol.) clean sharp sand; 1½ parts (vol.) fine gravel to pass $\frac{3}{8}$ in. mesh. The mix should be stiff, but sufficiently plastic to ensure solid bedding beneath the plate.

Laying : The plate should be coated on the underside with a thin cement grout and then tapped into position on the bedding material with a mallet. Alternative rows should be commenced with half plates so that the joints are broken. Each plate should be solidly bedded; and it is important to ensure that the bedding material should exude through all the holes on the surface of the plates. The plates should be laid closely together but not butted metal to metal, each plate being finished true and flush with those immediately next to it. After a few rows of plates have been laid and the surface levelled a further tapping down is recommended to eliminate any likely air pockets.

The bedding material exuding through the perforations in the plate should be spread over the surface by means of a squeegee, care being taken to see that all holes and joints are filled with bedding material. *If it is found that the bedding material does not exude through all the holes, the plate should be taken up and further material added.* The efficiency of the whole system is dependent on the plates being solidly bedded.

Laying on Existing Floors :

When old concrete floors are to be resurfaced, any defective portion of the sub-floor should be cut out and made good. After the debris has been removed the surface of the sub-floor should be brushed clean and thoroughly soaked until absorption ceases.

In the case of floors close to furnaces, ovens, etc., or rooms where the floor temperature is high, special care is necessary to ensure that the soaking is thoroughly carried out and the floor should be allowed to cool before laying the plates. This is very important in order to obtain a satisfactory key and to avoid hollowness after laying.

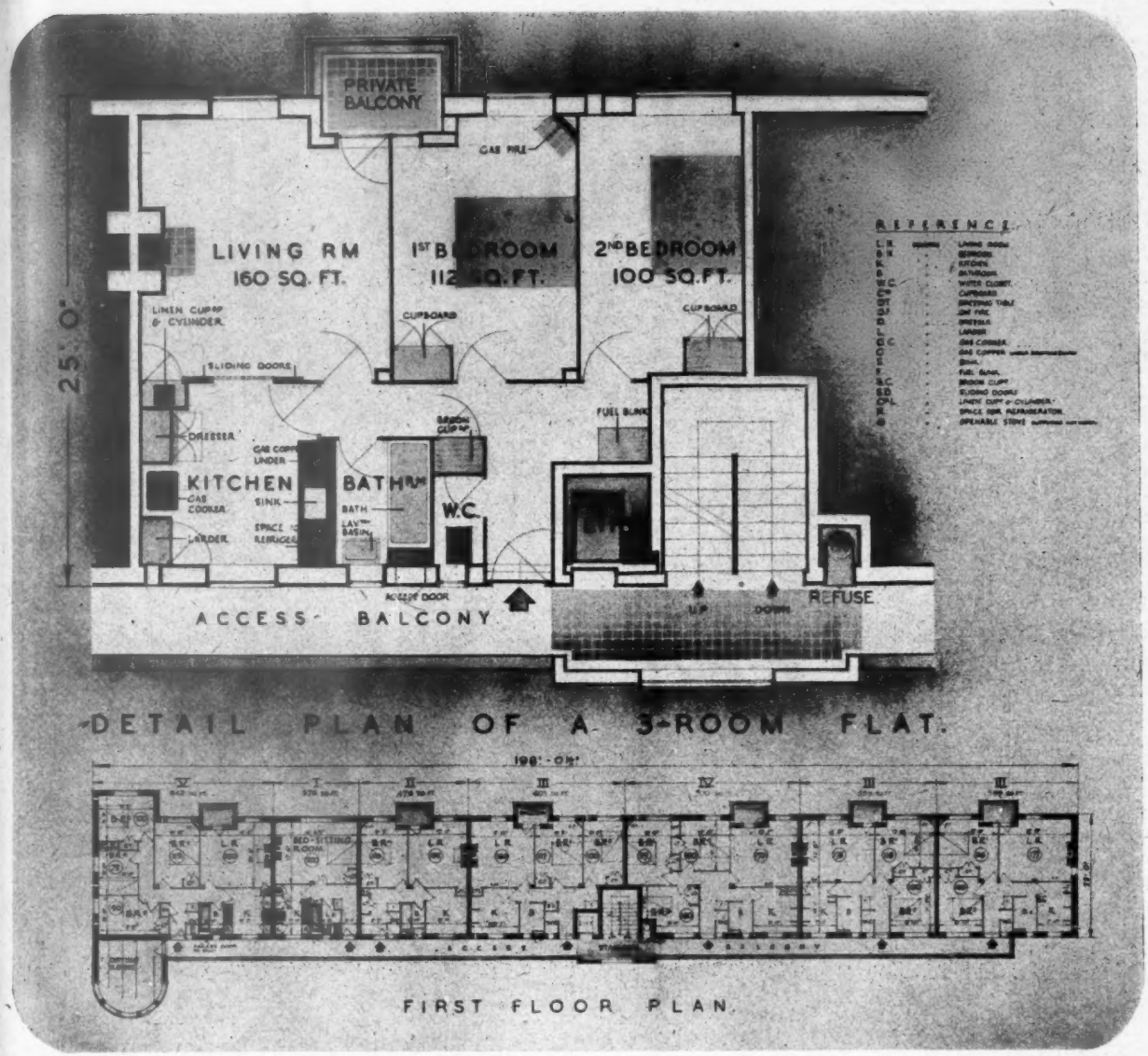
After preparing the old concrete surface as above, a thin cement grout consisting of 5 lb. Portland Cement and 2 gallons water should be applied and well rubbed in with a stiff brush. There should be no pools of water left on base concrete before application of grout. The procedure for the laying of the plates as described for new floors should then be followed.

Setting Out :

After the plates have been laid for about six hours they should be covered with wet sand which should be kept wet for about three days.

After five days the floor can be used for light traffic and for heavy traffic in ten days after laying, when using Portland Cement. If it is desired to put the floor into use in the minimum space of time, then it is advisable to use a Rapid Hardening Cement of approved manufacture in place of the ordinary Portland Cement.

Manufactured by :	Constructors Ltd.
Licensees :	Prodorite Ltd.
Address :	Wednesbury, Staffs
Telephone :	Wednesbury 0284



P.B., balcony access type of block dwelling, showing detail plan of a 3-room flat and typical (first-floor) general plan. A drying room is provided on each floor at the end of the corridor. (Scale $\frac{1}{8}$ in. to 1 ft.)

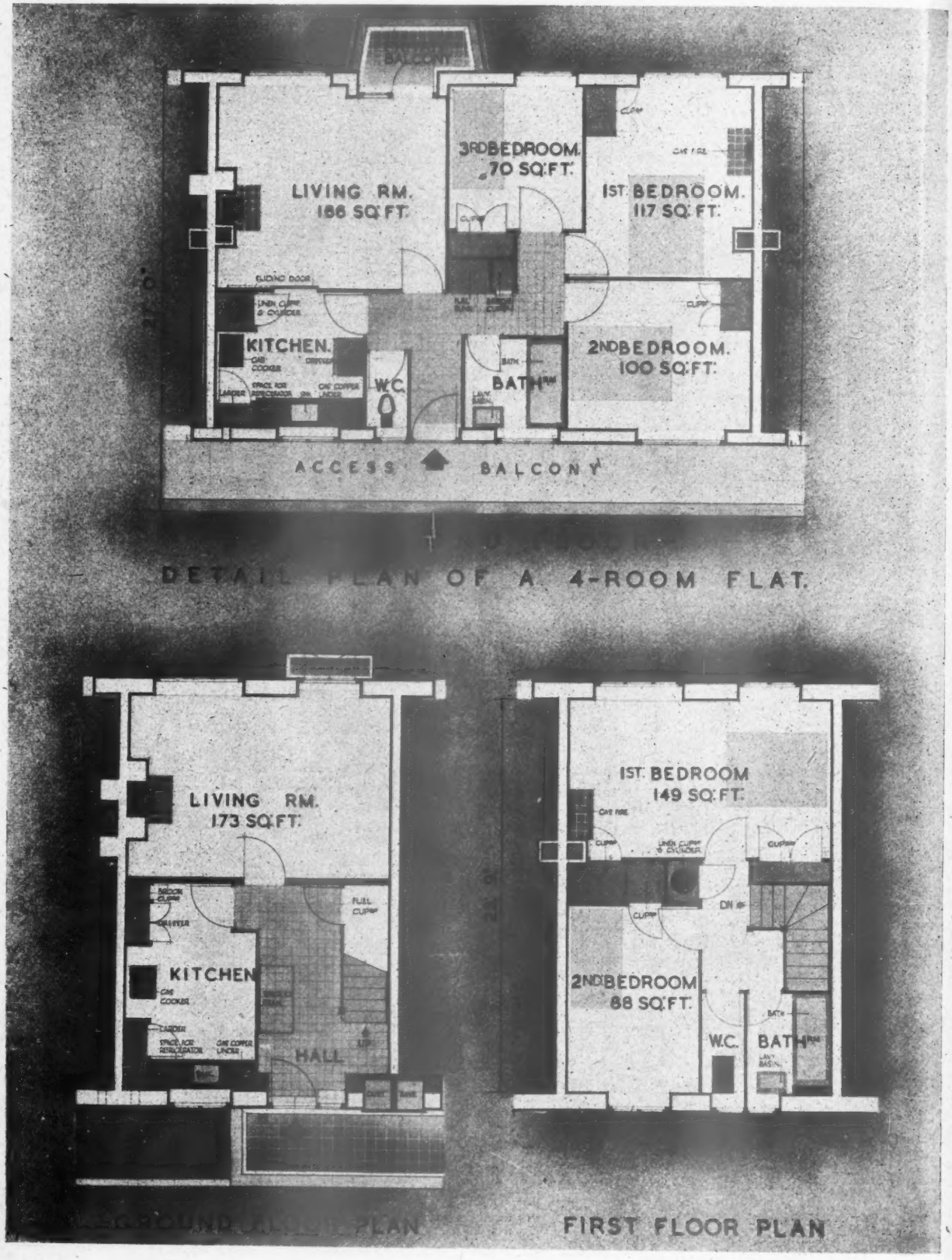
LCC HOUSING

GENERAL—The Housing and Public Health Committee of the London County Council has reviewed the types of houses and flats which the LCC erected before the war and has prepared new type plans which will be adopted as standard types for future developments. In considering the new types, the Committee has borne in mind the recommendations of the official *Housing Manual.*

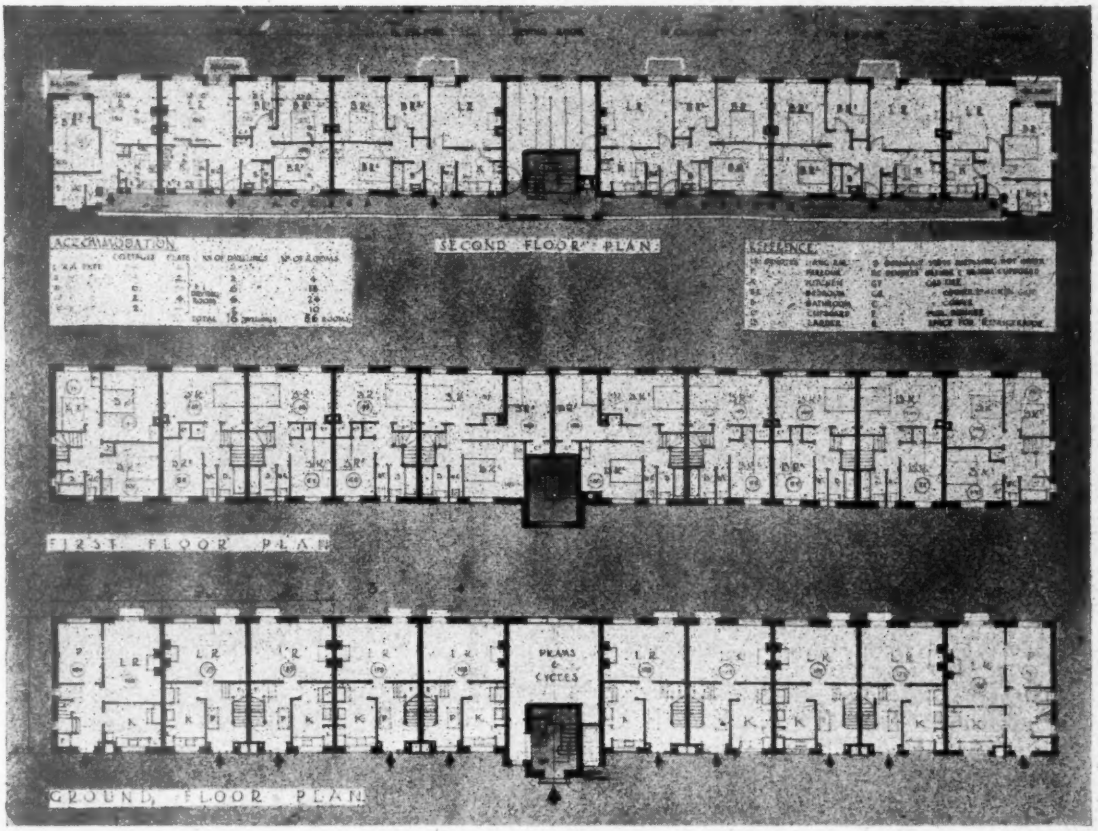
To meet the increased cost of flats of the new types, and in recognition of the improvements proposed, it is estimated that, on 1938-1939 prices, the net rents of block dwellings of the new types will exceed those of the present types by from 1s. 3d. to 4s. a week. Assuming that post-war costs will be 80 per cent. above those of 1938-39, further increases of about 2s. a week for the average three-room flat will be necessary unless additional subsidies are forthcoming. The additional cost is less in the case of houses, and the estimated increases in the net rents vary from 1s. 6d. to 2s. a week, with an additional 1s. 6d. a week for the 80 per cent increase in cost.

Block dwellings and cottages included in the Council's housing programme for the first post-war year will, generally speaking, be of the types already approved, but they will include some of the new improvements.

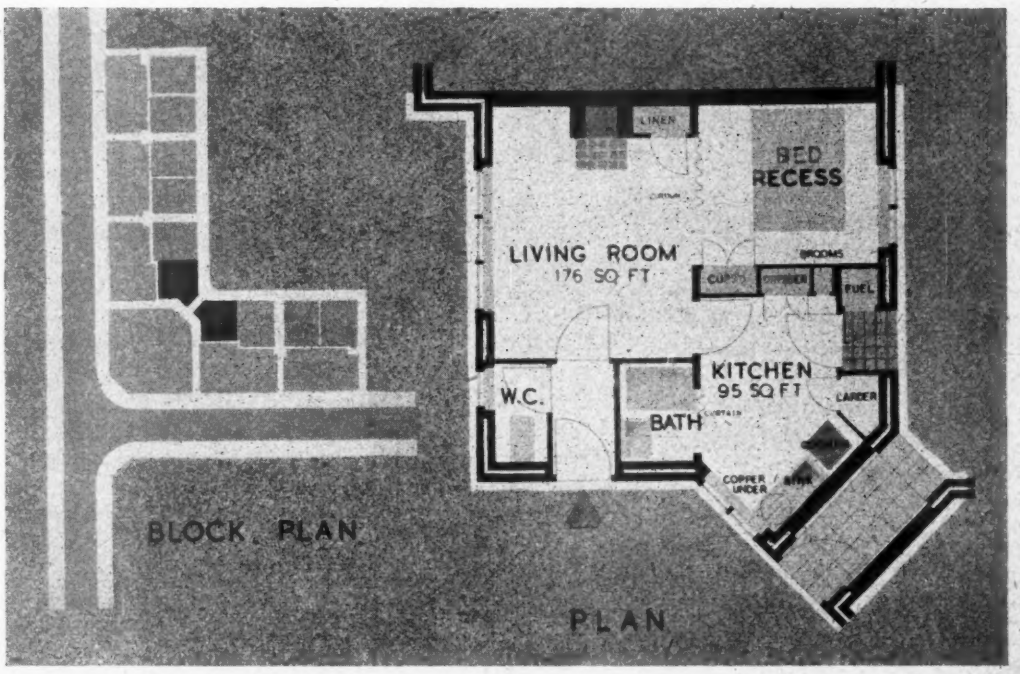
BLOCKS—The new type blocks of flats will comprise four types: P.B., balcony access type; P.S., staircase access type; P.M., four-storey superimposed maisonettes;

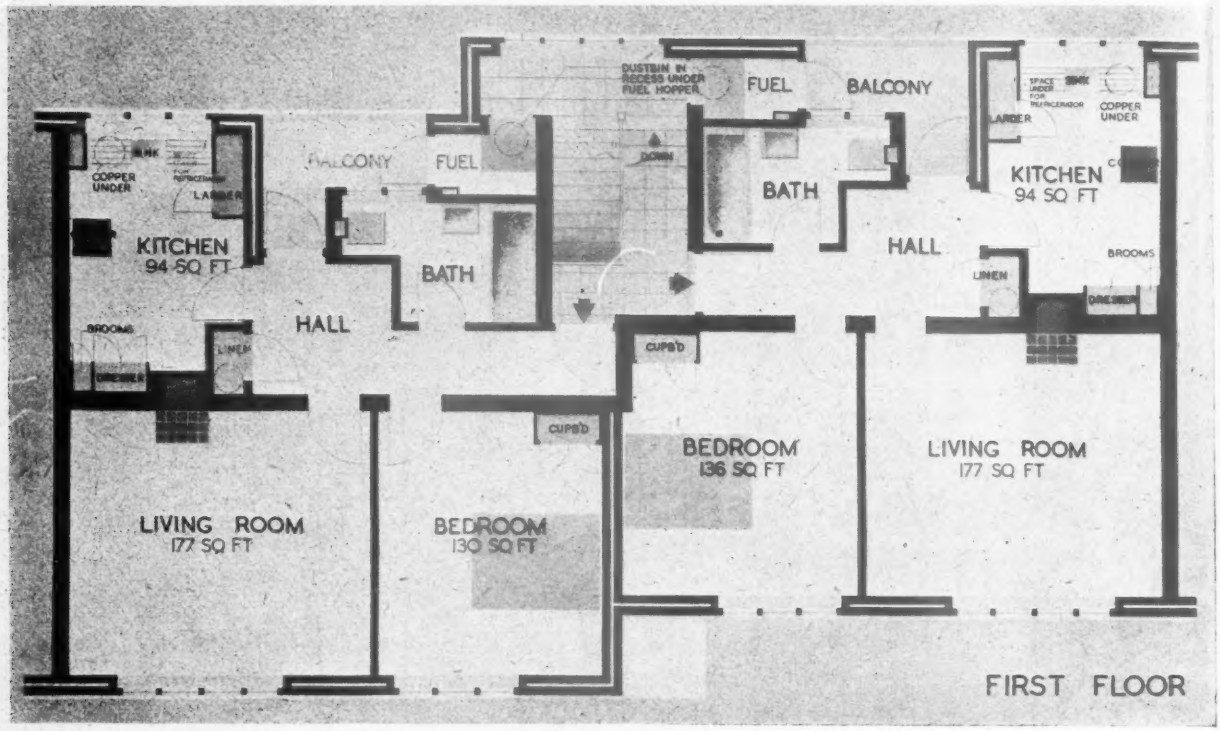

BALCONY
LIVING RM.
186 SQ.FT.
3RD BEDROOM.
70 SQ.FT.
1ST BEDROOM.
117 SQ.FT.
SLIDING DOOR
KITCHEN.
W.C.
BATH
2ND BEDROOM.
100 SQ.FT.
ACCESS
BALCONY
DETAIL PLAN OF A 4-ROOM FLAT.
LIVING RM.
173 SQ.FT.
KITCHEN
HALL
1ST. BEDROOM
149 SQ.FT.
2ND BEDROOM
88 SQ.FT.
W.C.
BATH
FIRST FLOOR PLAN

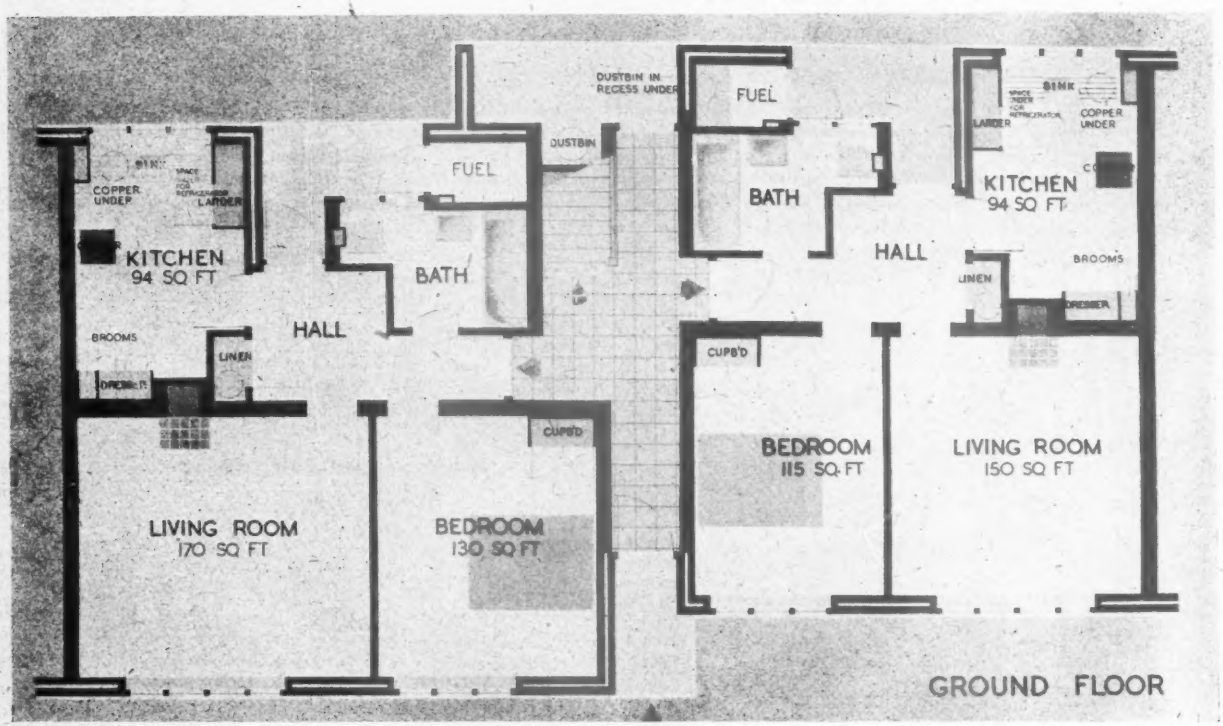
L.C.C. HOUSING



On facing page, detail plans of P.C. type of block dwelling having three storeys, the two lower being maisonettes and the top floor being flats. Above, typical plans of the P.C. type ; there is storage for prams and cycles in the centre on the ground floor, and communal drying room on the top floor. This type will permit of the erection of a number of houses with gardens in the denser urban developments. Below, House type P.1, having a total floor area of 330 sq. ft. ; it is a bungalow suitable for old people, containing a special sitting bath in an alcove off the kitchen to enable advantage to be taken of the warmth of this room.







LCC HOUSING

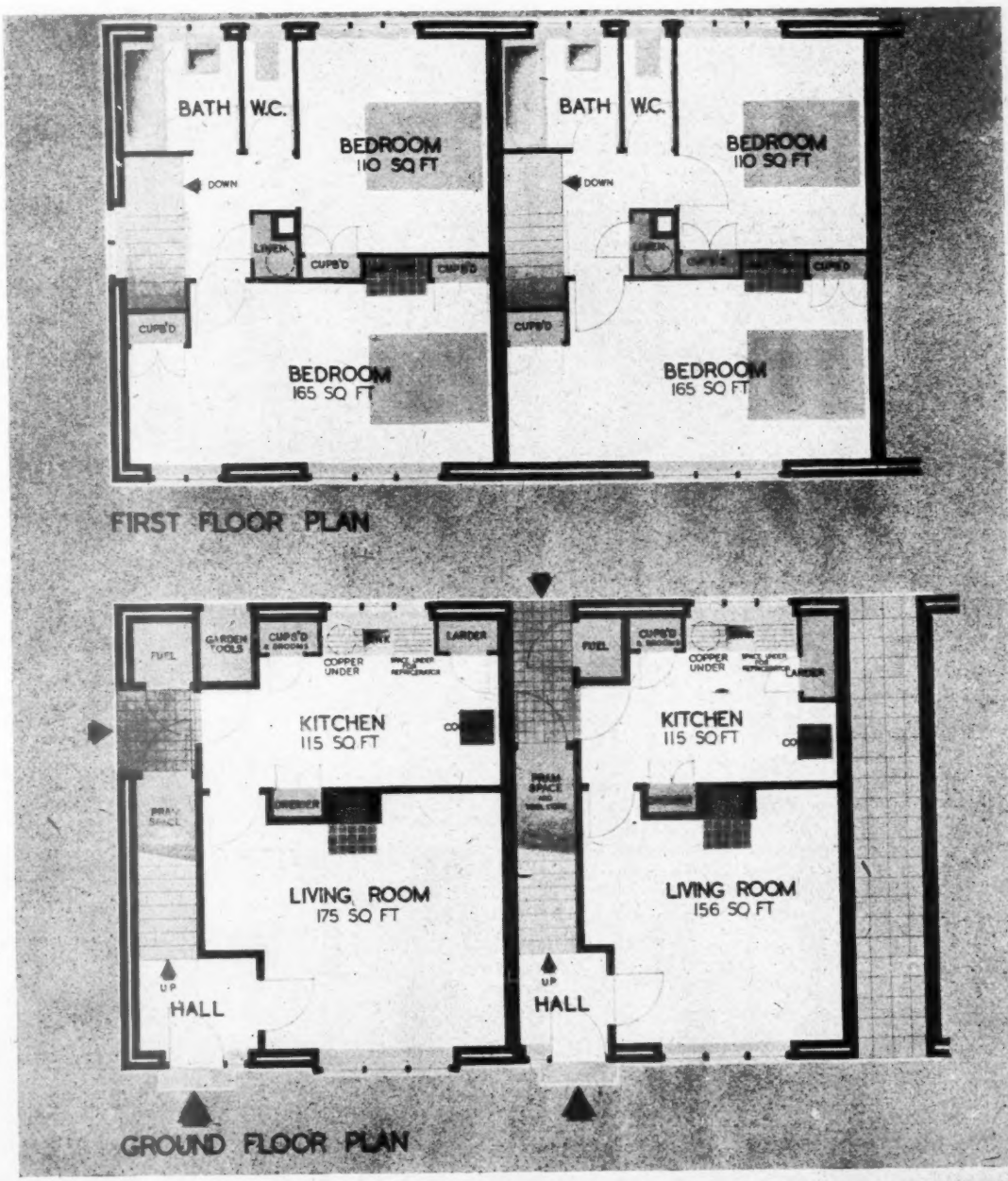
Above, the P.2 type of two-storey flats planned in units of four, the two upper flats being served by a central staircase. The kitchen and living rooms are more conveniently arranged than hitherto with all rooms opening off a central hall, lighted and ventilated directly to the outer air. Each flat will have garden space. The total floor areas are: ground floor left, 549; ground floor right, 514; first floor, each 564 sq. ft. On facing page, type P.3, two-storey house containing living room and two bedrooms. The general planning is improved as compared with existing types and the areas slightly increased, being 792 at ends and 746 sq. ft. at inters.

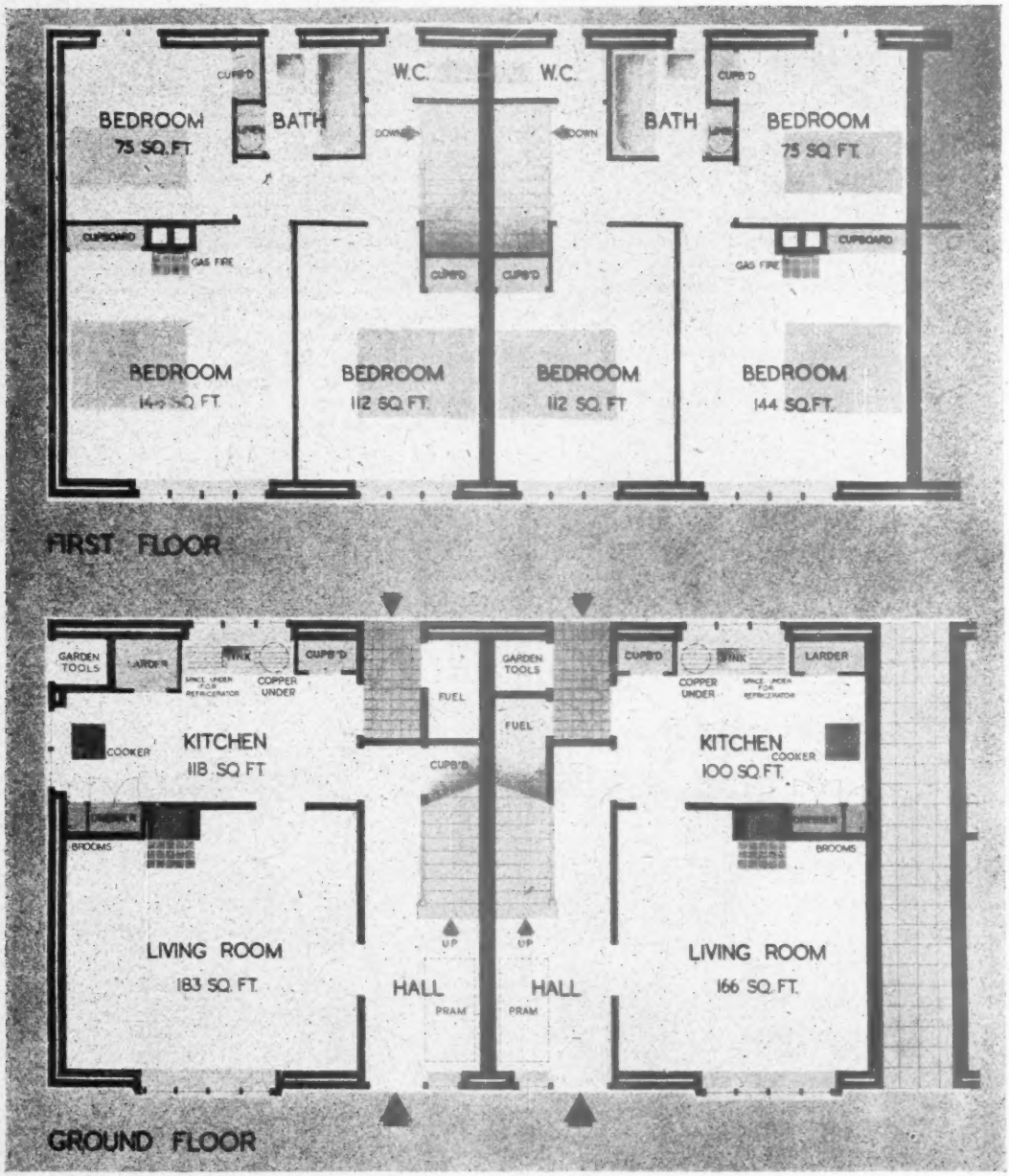
P.C., three-storey blocks comprising maisonettes on the two lower floors with flats above. All will have constant hot water from slow combustion stoves (and electric immersion heaters for hot water in summer), rearranged and improved kitchen fittings with space for refrigerator, gas or electric copper in place of solid fuel copper, additional cupboards, BSI standard dressers and kitchen cupboards, gas or electric fires in place of open fires in first bedroom, additional electric plug points, and a point for a gas poker. Additional pram sheds will be provided. Pipe runs in roof spaces, rising mains in staircases and pipe runs to water waste preventors will be lagged.

In the P.B. and P.S. types the sizes of the living rooms will be varied according to the size of the dwelling, so as to give more living room accommodation for the larger families. Drying rooms will be provided off the balconies at each level in the P.B. type and on alternate floors in the P.S. type. Sanitary and plumbing services will be in enclosed ducts, and lifts will be provided in five-storey blocks.

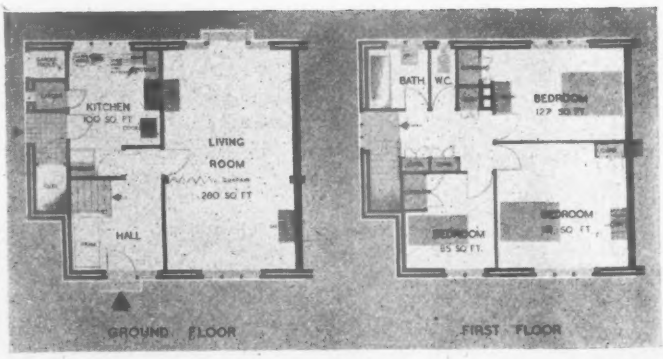
The chief advantage of the P.M. type is that it will enable tenants to enjoy accommodation and privacy of occupation similar to that afforded by two-storey houses. Where the site is suitable gardens can be provided for this type. The P.C. type will permit of the erection of a number of houses with gardens in urban developments where this might not otherwise be possible because of comparatively high densities.

HOUSES—On cottage estates, there will be seven standard types of dwellings: P.1, a bungalow suitable for old people; P.2, two-storey flats planned in units of four; P.3 and P.4, two-storey houses containing living room and two bedrooms, and living room and three bedrooms respectively; P.5,



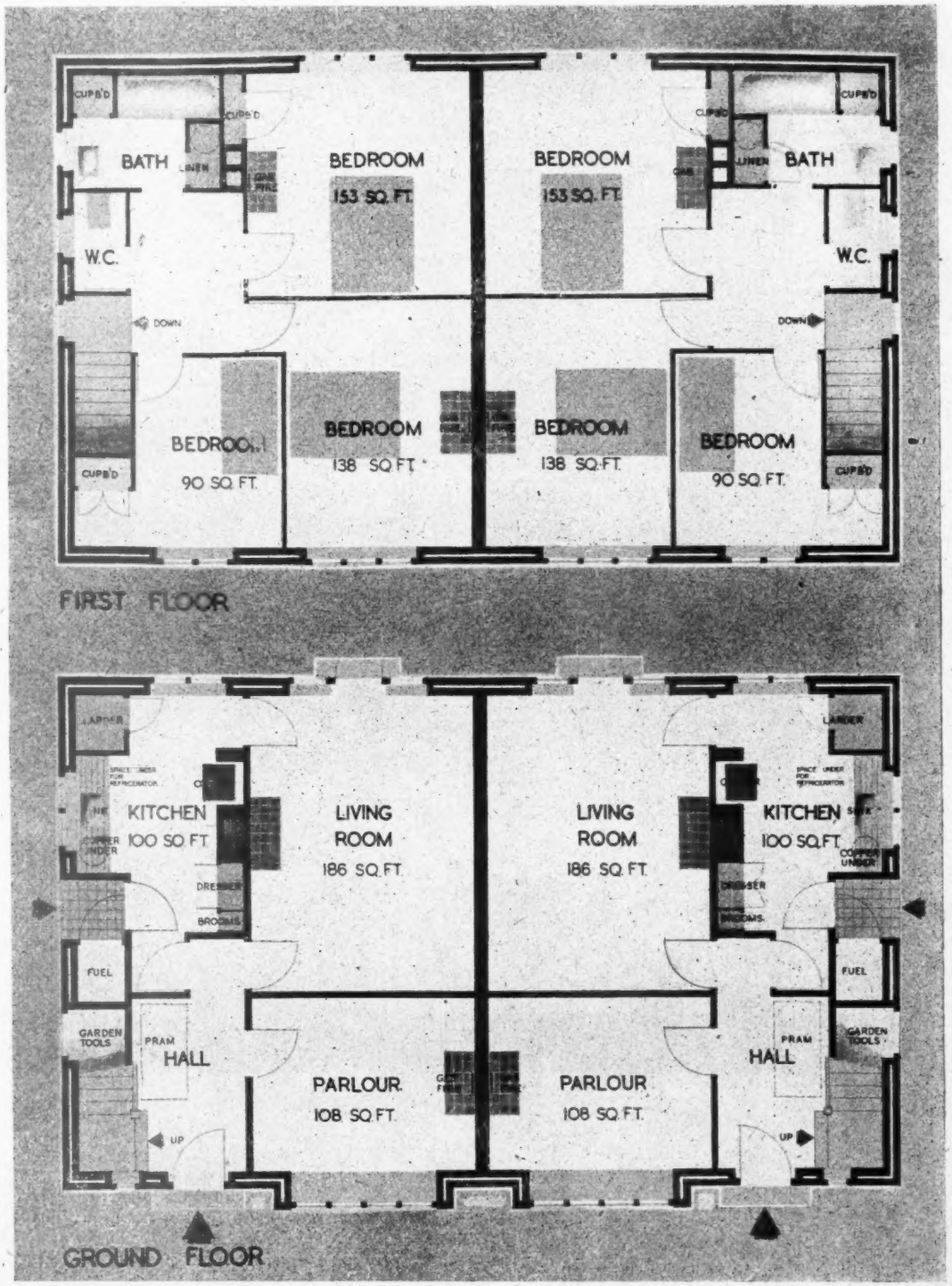


Above, the P.4 type, two-storey houses containing living room and three bedrooms, general planning being an improvement on existing types and area increased to 892 sq. ft. at ends and 842 at inters (scale : $\frac{1}{8}$ in. = 1 ft.). Right, the L.P.4 type having living room and three bedrooms. There is a through living room or alternatively a living room and parlour. Total floor area, 1,078 sq. ft. (Scale : $\frac{1}{8}$ in. = 1 ft.) On facing page, the P.5 type having three bedrooms and a parlour intended for large families. Total floor area, 1,050 sq. ft. (Scale : $\frac{1}{8}$ in. = 1 ft.)



LCC HOUSING

containing three bedrooms and a parlour, larger than P.3, 4 and for larger families; L.P.4 and L.P.5, containing living room and three bedrooms, and living room, three bedrooms and parlour, respectively, larger than P.3, 4, 5, and providing for either a large through living room or a smaller living room with separate parlour. Improvements similar to those proposed for the new type flats will be incorporated in the houses, together with outside store where needed and fuel and tool stores within the structure.



Lay-out for one of the LCC estates—the Headstone Lane Estate—for prefabricated houses. The estate contains types P.3, 4, 5; L.P.4, 5; two-room non-parlour flats and a few one-room flats, giving a total number of lettings of 1292. Two large school sites can be seen. The site also contains shops, workshops and garages. Another site has been laid out for Grange Hill Estate.

LCC HOUSING

INFORMATION CENTRE

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

STRUCTURE

2282 *Aesthetics*

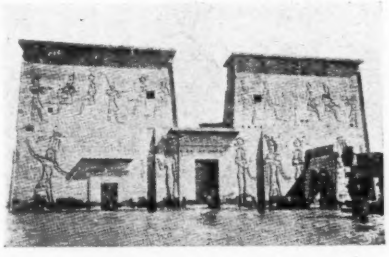
THE ÆSTHETIC ASPECT OF CIVIL ENGINEERING DESIGN. (*A Record of Six Lectures delivered at the Institution of Civil Engineers,* 1945. *Price* 6*s.* 0*d.*) Lectures by Oscar Faber, Charles Holden, Prof. C. E. Inglis, Prof. P. Abercrombie, C. A. Jellicoe, Edward Wadsworth.

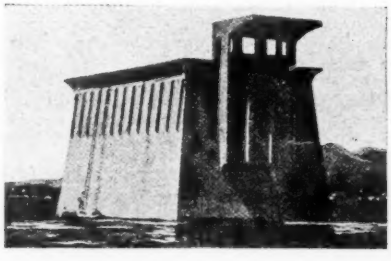
When arranging the lectures the Institute was led by the feeling that "there was a need to stimulate within civil engineers and civil engineering students an appreciation of æsthetic considerations in relation to their work . . . in order that the work might be of the highest quality, form and proportion." Dr. Faber, who delivered the first lecture, began by explaining why the knowledge of æsthetic considerations and competence in dealing with them were essential for the successful work of an engineer concerned with large structures. The beauty of a structure cannot be superimposed, but must lie in the original conception of the design. Engineering colleges still strangely neglect the æsthetic aspect, and in designing a structure students are not taught to consider, for instance, what kind of structure the site demands so as to harmonize with its surroundings. The beauty of a structure cannot be derived by any single short-cut—such as honesty of construction—but depends on a large number of qualities, of which the following are a few:—Harmony; composition; character; interest; the expression of function; the expression of construction; rhythm; colour and texture of materials. Dr. Faber then proceeded to show what exactly is meant by these qualities and how all had to combine in a happy design. The illustrations Dr. Faber chose to accompany his explanations were impressive, especially the different silos and flour mills, and the warehouse of the S.R.

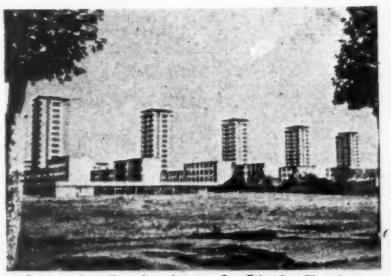
In the second lecture, Dr. Holden showed how he approached designs himself. In his early days he soon found that ready-made formulæ did not give satisfaction after having been applied a few times. The designer must use his creative faculty, which means "departure from tradition or formula in order to improve on past efforts." Order ("the condition in which every part or unit is in its right place") is one of the principal components of beauty, fitness for purpose is another (the most efficient functional plan is invariably the most promising architecturally). But to make a structure beautiful, something more is needed which is the outcome of "æsthetic choice." Æsthetic choice (*re* forms, quality of material, texture, scale, etc.) is the "choice of that among a number of alternatives which gives the highest visual pleasure to the designer." Dr. Holden gave some extremely interesting examples of the way the "æsthetic choice" was made by him in several of his designs; for instance, in the case of a number of underground stations (among them St. James's Park Station and Head Office of the LPTB). The variety of the designs was suggested by the actual site conditions.

The third of the lectures, by Professor Inglis, was entirely devoted to bridges. The creation of a bridge is the most spectacular of all civil engineering achievements, and many engineers will still to-day endorse the opinion of Rennie, designer of the late Waterloo Bridge, when he wrote: "The works of the engineer, associated as they are with the great operations of nature, should be designed and constructed so as to harmonize with them. They must strike by their general mass and proportion rather than by trifling details and minutiæ of ornament, which as a matter of taste would be misplaced and unnecessary and wasteful as regards expenditure. Consistent, therefore, with their first grand object of fitness for their purpose, they should be simple and in the few cases where ornament may be necessary, it should harmonize with the structure and be sparingly used." Professor Inglis gave a survey of bridge construction throughout the ages, starting with the famous Pont du Gard in the South of France, constructed about 2,000 years ago. The stone age in bridge construction lasted up to the end of the eighteenth century, when cast iron began to make its appearance as a bridging material and cast-iron bridges often achieved a very high standard of design. However, wrought iron soon ousted cast iron, and when Telford built the Menai Suspension bridge (in 1826) a new era in bridge construction was started. Throughout the nineteenth century many new and beautiful types of steel and concrete bridges and viaducts, spanning over greater and greater distances, were erected in all countries. As the bridges increase in length, æsthetic treatment has to be more and more subordinated to practical considerations, particularly those relating to problems of erection. The economic limit of span for a reinforced concrete arch is about 500 ft., the limit being imposed by the prohibitive cost of the moulds and falsework. A simply supported girder bridge also has a length limitation of about 800 ft. The first great cantilever bridge was Sir Benjamin Baker's Forth Bridge, which, with its two main openings of 1710, held the record for length of span for many years. When really long openings of 2,000 ft. or more have to be spanned, the only form of bridge possible is the long cable suspension bridge. The longest bridges are naturally found in America, culminating in the Golden Gate Bridge, San Francisco, which has a span of 4,200 ft. (a little more than three-quarters of a mile). The 65 photos of bridges given by Prof. Inglis, together with his thought-provoking descriptions of the different types, will be a delight to engineers. (Fig. 24, showing the Etive Bridge in Scotland, has mistakenly been placed under Vierendeel trusses.)

In his talk on *Some Æsthetic Aspects of Civil Engineering,* Professor Abercrombie reminded his audience how much the appreciation of beauty changes with human progress. Some fifty years ago, for instance, Stephenson's tubular railway bridge was considered ugly, whilst it is greatly admired at present. Similarly, modern architects praise the Crystal Palace, which a few decades ago was considered the last word in ugliness. Whether man's works should be in conformity with the landscape or dominate it is a controversial question; yet in both ways beauty can be achieved. No dogmatic statements are possible, nor practical advice can be given; new forms, new ideas always modify the canon of beauty which is as old as humanity.







Illustrations from the record of six lectures delivered at the Institution of Civil Engineers on The Æsthetic Aspect of Civil Engineering Design. *Top, the Temple of Isis at Philae compared with the torpedo testing works at Hyeres. Below, San Giminiano, Florence, compared with working class flats at Drancy, Paris. See No.* 2282.

D

In the fifth lecture, Mr. Jellicoe tried to work out how beauty in an engineering structure was achieved by the juxtaposition of two things: intellect and emotion. On a number of interesting examples Mr. Jellicoe showed how, to create something beautiful, the scientific thought of the engineer must be balanced by architectural emotions. Some very fine examples of great art are the English Park designs of the 18th century. The industrial age brought new problems and shortly before the war it was realized that in certain buildings there was an opportunity for a great new art—the art of modern industry in landscape. The examples of such plants, given by Mr. Jellicoe, are very promising. The next illustrations are faked views, prepared for the British Road Federation, giving suggestions how roads passing through different scenery should be treated. A few further illustrations show how modern standardized houses arouse different emotions when placed in different settings on different sites. Mr. Jellicoe ended his lecture by showing some highly attractive pictures of modern street scenes in Stockholm. Flowers are brought into the streets grown in borders, placed in large bowls on public ways —as if man tried to restore the balance of nature which had been deranged by the industrial revolution.

The last lecture was given by Mr. Wadsworth, who, as a painter, was more concerned with the appearance of things than with their functional efficiency. He started by giving his own definition of beauty as "a refinement on function which induces visual comfort or stimulates visual delight or visual excitement." It is only by the subconscious and constant interplay between feeling and calculation that good designs can evolve. A good design is characterized by an interesting visual relationship of the parts to the whole, contrasts of scale of the parts, and a proper respect for the treatment of materials and surfaces, whether they be stone, brick, steel, concrete, or any mixture of these. Mr. Wadsworth then proceeded to explain by examples what he considered to be good and not so good engineering jobs. His illustrations and explanations are fascinating. Sidney Harbour bridge (which according to him is very heavy-handed), Eiffel Tower, a number of lighthouses, old towns, modern oil refineries and petrol plants, the Kremlin, Glasgow Exhibition, hydro-electric stations, a temple of Isis, torpedo testing works, etc., all examples of structures giving either visual comfort or discomfort, buildings that are visually stimulating and even exciting, or visually dull and monotonous. The Lecturer ended in expressing his hope that civil engineers will continue to design beautiful structures with new materials, that will require new treatment, so that the observer in some distant future age, on looking at some civil engineering achievement—a building or a bridge—will say: "This is so excellent that it must have been designed and built round the nineteen-fifties."

LIGHTING

2283 **Poise in Lighting**

ACHIEVEMENT OF POISE IN A LIGHTING SYSTEM. *A. H. Brainerd.* (*Illuminating Engineering, July,* 1945, *p.* 455.) "Reverberent" illumination. Use of high reflection factors and colour.

A short but valuable paper, in so far as it contains three or four substantial ideas. These can be isolated somewhat as follows. First there is the recommendation to develop "reverberent" lighting conditions, i.e., every surface of walls, floor, ceiling and furniture should be developed to reflect light. The author associates this with indirect lighting sources so that ultimately a high diffusion results. He expects this way to avoid much brightness-contrast and thereby to secure comfort for the eyes. The risk that indirect lighting and so much reflection will make objects seem shapeless is countered by reliance on the use of colour.

Another major line of thought has its origin in the idea that indoor lighting conditions can be made equivalent to those outdoors without needing high intensities if much higher reflection factors are employed. Thus, as he says, outdoor surfaces are dark, but illumination is powerful; indoors the sensible thing is to accept lower illumination but use high-reflection values.

In the discussion, Mr. Ward Harrison challenges some of these points in some degree. He draws attention to the fact that with indirect lighting the ceiling is the brightest surface in view, and this is not an acceptable condition for vision. Direct lighting, in his opinion, has fundamental usefulness. Finally, he points out that dirt does more harm than lighting engineers do good, and emphasizes the need to find a better solution to the maintenance problem.

2284 **Indirect Lighting**

INDIRECT LIGHTING AS APPLIED TO EXTERIOR AND INTERIOR ILLUMINATION. *A. Knudstrup.* (*Illuminating Engineering, July,* 1945, *p.* 465.) Examples of indirect lighting. Special indirect unit for downward and upward light.

2285 **Fluorescent Light**

FLUORESCENT LIGHT AND EYE TROUBLE. (*Pencil Points, September,* 1945, *p.* 98.) Ill-effects of UV, infra-red, and visible radiant energy.

Recent notes in this column have discussed the argument now under weigh in America about fluorescent light and its alleged harmfulness to the eyes. This article is a summary of the discussion so far. The general conclusion is that all common sources of light—including daylight and sunlight—have harmful constituents, but that fluorescent light has no more—perhaps rather less—than others. Data of UV, infra-red and visible radiant energy from natural and artificial light sources is quoted.

PLUMBING and Sanitation

2286 **Concrete Pipes and Fittings**

CONCRETE CYLINDRICAL PIPES AND FITTINGS, INCLUDING MANHOLES, INSPECTION CHAMBERS AND STREET GULLIES. *British Standard* 556 : 1945. (*British Standards Institution,* 2*s.* 0*d.*) Quality of materials and manufacture. Manufacturing date to be marked on. Dimensions and tolerances. Hydraulic, absorption and crushing tests. Maturing time. Information to be given by purchaser. Diagrams.

2287 **Cast Iron and Copper Pipe Fittings**

MALLEABLE CAST IRON AND CAST COPPER ALLOY PIPE FITTINGS FOR STEAM, WATER AND GAS. *B.S.* 1256 : 1945. (*British Standards Institution,* 3*s.* 6*d.*) Provides for fittings screwed BS pipe thread but having taper male threads and parallel female threads. Sizes up to 6 in. short turn, long sweep and extra long sweep types. Section included on testing of fittings for porosity and malleability. Dimensions only, not composition of material.

2288 **Asbestos Cement Pipes and Fittings**

ASBESTOS CEMENT SPIGOT AND SOCKET RAINWATER PIPES, GUTTERS AND FITTINGS. *British Standard* 569 : 1945. (*British Standards Institution,* 2*s.* 0*d.*) Dimensions and tolerances. Workmanship. Tests for straightness and dimensions. Hydraulic tests and test for resistance to acidic water. Diagrams of standard units.

EQUIPMENT

289 **Drawing Boards and T-squares**

DRAWING BOARDS AND TEE SQUARES. *B.S.* 1265-68 : 1945. (*British Standards Institution,* 2*s.* 0*d.*) Covers size, materials and constructional requirements. Two changes in size of boards to be noted. Imperial to be 32 in. × 23 in. and large double elephant 42 in. × 32 in.

This is the first of a series of standards which will relate to drawing office equipment and materials. While its main content on quality and workmanship will be of real value the points of most immediate interest are the recommendations on size. In the past Imperial Boards have been in two sizes. Now 32 in. × 23 in. is recommended. This is a revision on size given in BS 1192 : 1944, *Architectural and Building Drawing Office Practice.* More important is the recommendation that in future the Large Double Elephant of 42 in. × 32 in. should be used in preference to the normal DE of 42 in. × 29 in. This change permits the use of 30-in. paper without cutting. It is to be hoped that Architectural Schools will recommend the new size to students.

2290 **Household Appliances**

REPORT ON THE MARKET FOR HOUSEHOLD APPLIANCES. (*Published by PEP. Distributed by Oxford University Press.* 18*s.* 0*d.*). Title gives little idea of wide scope and value of book. Thorough investigation of post-war market. Descriptions of large range of appliances. Useful comment added. Of real value to industry, architects and builders.

It is impossible to summarize adequately the 400 pages of this book as it is packed with useful information, comments and conclusions. The fact that in this country there was no information comparable to the kind easily available in USA is noted, and this book goes a considerable way to meeting the situation. The Report commences with a fairly lengthy summary of the succeeding chapters. These deal first with general factors affecting demand and next with household activities. Then follow chapters on Cooking and Food Preparation, Space Heating, Water Heating, Home Laundry, Cleaning Equipment, Storage and Refrigerators, Lighting Fittings, Children's Equipment and Miscellaneous Equipment. They include descriptions of apparatus and information on cost, running cost, design, appliances preferred, estimated demand for new appliances and for renewals.

Appendix I lists appliances available pre-war with sizes, materials and prices and a key to manufacturers who are listed in Appendix II. Other Appendices deal with number of families, income levels, war

savings and tax credits, with the post-war housing programme, with a comparison of refrigeration ownership in UK and USA and with Domestic Science in Education.

It is difficult to see how any manufacturer of appliances could afford to be without this book, and it is very much to be hoped that any architect with housing responsibilities will obtain a copy and study it in some detail.

Some of the material contained in this book was published in PEP Broadsheet No. 231 (see No. 1923 : 10.5.45).

2291 *Metal Sinks*

METAL SINKS. *B.S.* 1244 : 1945. (*British Standards Institution*, 2*s.* 0*d.*) Covers single sinks, sink plus draining board and sink plus draining board and work-table, all with or without back ledge. Materials porcelain, enamelled iron or steel, stainless steel and Monel metal. Qualities of material specified, including the enamelling. Dimensions and diagrams. Aluminium sinks not included.

2292 *Fire Clay Tubs and Sinks*

FIRECLAY WASH TUBS AND SINK SETS. *B.S.* 1229 : 1945. (*British Standards Institution*, 2*s.* 0*d.*) Covers single wash tubs, separate wash tubs and sinks and combined wash tubs and sinks. Each of these with or without a back shelf. Specification mainly concerned with dimensions. No recommendation on fixing height. Diagrams of each type.

QUESTIONS and Answers

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

2293 Builder's Registration

Q *I have a client, a building trade craftsman, who sustained a fractured spine in an accident and now has his waist encased in plaster. He is unable to take a full time position with a building firm owing to occasional recurrences of pain. He feels he would like to be in a position to do jobbing work at the times he is physically able to do so. Is it necessary for this man to obtain a certificate of Registration before he undertakes work on his own account, and if so, to whom should application be made ?*

A The strict interpretation of the law would require your client to obtain a certificate of registration. Officially "any building undertaking" must obtain a licence, but we are informed unofficially that this is not always done. A large number of building trade operatives who are doing factory work during the day occupy their spare time with small building jobs, and it is impossible for any check to be kept on this, nor is any attempt being made to make men of this type register themselves. While your client is not exactly of this type, we would suggest that, provided he does not wish to employ any men, there is no need for him to obtain registration.

Your client will not be allowed by the local Labour Exchange to employ any men unless he is registered. If he wishes to do this he will have to apply to the Registrar, Building & Civil Engineering Contractors, Ministry of Works, Sanctuary Buildings, Great Smith Street, London, S.W.1.

SOCIETIES AND INSTITUTIONS

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

RIBA

C. G. Stillman

Dec. 11. At 66, Portland Place, W.1. Paper read to the RIBA on THE PLANNING AND CONSTRUCTION OF SCHOOLS by C. G. Stillman, F.R.I.B.A.

C. G. Stillman : In commencing this talk I do not wish to make apologies, but I feel I must explain that my recent move from West Sussex to Middlesex has left me little time for making the necessary preparations to do full justice to a subject of this importance.

I need hardly point out the magnitude of the problem in all its various aspects. It is enough to say that we have before us a school building programme of unprecedented proportions, urgency and perplexity. The scale of the programme is so immense, so fraught with problems and difficulties, that quite a number of years must elapse before it can be put into anything like full operation, and no one can say how long it will take to complete—if ever it reaches completion.

Furthermore, it will take quite a number of years before we shall know with any degree of accuracy and full understanding, the real nature of the building requirements, and how to carry them out—but this is not to say it is a matter that can stand delay. In its technical aspects and from points of view of design, the housing problem in comparison is a relatively simple matter.

Many people think that the Butler Act is incapable of practical application, and I think that anyone who has studied the Act will agree that, in all its implications, a considerable period of trial and error must be allowed before its manifold secrets and hidden snags can be brought to light. Consider the implications contained in this quotation from the Act :

"The Schools shall not be deemed to be sufficient unless they are sufficient in number, character and equipment to afford for all pupils opportunities for education offering such variety of instruction and training as may be desirable in view of their different ages, abilities, and aptitudes, and of the different periods for which they may be expected to remain at school, including practical instruction and training appropriate to their respective needs."

In the short time at our disposal this evening it will be impossible to do more than to touch upon the main points of immediate interest, and I should like to introduce some of these matters by referring to the recent Report of the Royal Institute of British Architects Committee on School Design and Construction. This Report gives a very good outline of the technical problems involved, and in this respect might be taken as the basis for this talk.

To begin with, it gives the main reasons for the present acute shortage of accommodation and other factors which have created this unprecedented demand for school building. It refers to *speed* as a vital necessity and expresses doubts with regard to pre-war methods of construction being sufficiently expeditious for fulfilling all the needs. The question of availability of materials and labour is dealt with, and this leads up to the main point for consideration—the type of building which will accomplish all that is required in the quickest possible time.

Apart from the leeway to be made up, and owing to actual losses due to the war, educational needs have so completely outgrown existing accommodation that it now requires almost entirely re-equipping with a new set of buildings. Not only does further progress depend upon it, but education as it is being practised to-day with the deterioration due to the war, will deteriorate still further until the essential improvements in building accommodation can be provided. All this will be only too clearly revealed when Education Authorities have had time to formulate their development plans and apply the new yardstick of the Building Regulations to their schools. I can give one example from a survey made of 100 rural schools :

The number of schools unsuitable for re-modelling, taking into account the cost and time and materials to be expended, site restrictions, and the difficulty in closing the schools during building operations, approximates to 84 per cent.

The number of schools suitable for re-modelling, but showing no saving in cost over the cost of a new school, and requiring to be closed down during building operations approximates to three per cent.

The number of schools twenty per cent. modelling, but showing twenty per cent. saving over the cost of a new school, and not requiring to be closed approximates to thirteen per cent.

So many of our schools belong to that period in history—the first half of the nineteenth century—which produced both the worst type of building, and this great muddle of unplanned development: gas works, warehouses, factories and goods yards, etc., intermingled with schools and hospitals and ugly mean streets, all tightly jammed together, leaving no room for expansion or improvement of any kind.

So seriously and so urgently is the accommodation question regarded by the Government, that in order to implement the raising of the school-leaving age, already many times deferred, education

authorities have been told that for the next three years the additional classrooms required must be provided by way of temporary war-time huts. These will be erected by the Ministry of Works in playgrounds and playing fields or on sites to be acquired, with little or no regard to permanent development. Whilst this is an emergency scheme intended to bridge the gap until permanent building can get going, it is quite obviously an extremely costly and uneconomic expedient. Once up, it will be many years before we shall be in a position to scrap these huts and expend the double labour and materials in replacing them. We had the same experience after the last war and the huts then built still remain to-day.

I have spent some time on this introduction because I regard it of enormous importance to establish the background upon which we have to work. Despite all the difficulties, we must remember that we are starting afresh and the work we do now may have to serve the needs of education for the next 100 years. We should be preparing the way for a new epoch in education.

When we see how hopelessly obsolete our present buildings have become and how rapidly obsolescence can take place in the normal life of a well-built school, we find this a further point for consideration in deciding the type of school we shall build.

So far, therefore, the first three factors are:

(1) Speed.
(2) New methods of construction.
(3) Rapid obsolescence.

I ran now add a fourth which will influence design very considerably, and that is the improvement and control of daylighting in all teaching rooms. This is a new factor upon which a great deal can be said. Planning against noise disturbance is a fifth point of importance. There are many other new aspects of school planning which must be taken into account, such as developments in physical education (affecting the lay-out of the physical training ground, gymnasium and playing field), adult education, *i.e.*, the greater use of the school premises by adults: youth movements and the use of the school as a Community Centre.

The step up in total floor area (the need for more space) and the increase in essential equipment will call for every possible economy in the fabric design, and this leads us again to the conclusion that we are entering a decade of strictly utilitarian building. On this point the RIBA Committee have said:

"The success of utility building, from the Architect's viewpoint, lies in the assemblage of the component elements of the plan into a well-organised composition, in the full and correct use of colour and texture and in a pleasant treatment of the site lay-out. Much can be done to enhance the appearance of a simple building by imaginative planting of trees, shrubs and flower beds and the arrangement of approach ways to the school."

May I say here, that I was recently taken to task when I said "with all modern buildings we should be able to take for granted such things as good sanitation, efficient heating and ventilation and structural stability." I repeat that these are largely matters or ordinary good practice, the standard for which is fully covered by the Building Regulations and can be arrived at by the application of known formulæ and by calculation. The more difficult problem for the architect, particularly with the present restrictions, is to capture and provide the right aesthetic note, the right spirit and environment to suit the particular occasion or to fit the particular purpose—for which there is no scientific formula. I still stand by this, and I believe that the architect's task has become far greater, from the design point of view, to extract the best out of these utility buildings. It will require the exercise of a higher level of architectural skill than has been the case in the past.

Now the Report goes on:

"The school is the physical background to the early and impressionable years of a child's life and the environment of the building and its site-setting created by good design will exert a beneficial influence in character-forming at the most receptive age. The child's mind is receptive to the appeal of simplicity in line and form and re-acts with enthusiasm to the influence of colour and texture.

"Upon the Architect's degree of insight into the mind of the child, will depend the success of his work. A school should not become so detached, architecturally speaking, from its primary purpose as to bear oppressively on the minds of the young."

To quote Sir Robert Wood:

"I suppose that the two ultimate elemental factors in education are: first, environment, and secondly, personal influences; these two factors are represented by the school premises and the school teachers."

Before I end these general remarks, I should like to spend a few moments by way of prefacing the slides I am about to show.

First—I must stress my belief in the absolute need for an entirely new approach to school planning and construction. According to Sir Frederick Mander, school building has hitherto been a relatively leisurely occupation; the erection of a single school was often an isolated incident in the history of a Local Education Authority (not Middlesex) and the building of a number—at one time—was a very considerable enterprise. I think there is a lot of truth in this. Also, we have been accustomed to think of each school as an isolated problem, designed to express individuality and to provide a permanent and complete architectural composition. Where an architect could devote the time and thought to the design of one, two or three schools at a time, he may now have to deal with ten or perhaps twenty, and he must think in terms of schools that run in certain uniform types and sizes, but are not necessarily in their complete and final form. We must find new ways and means of providing good and satisfactory building accommodation in such a manner as not to stabilise conditions.

This has led to the idea that we should build in a less durable manner and for a shorter life. But what is the shortest life we can build for economically? We still talk rather unintelligently of "temporary" and "permanent" construction, and I often wonder what is really meant by these terms.

I notice that in the recent report on *School Building for Scotland* there are recommendations for building temporary schools to be followed later with permanent schools on the same site.

We are apt to forget that, in schools particularly, a great part of the cost is spent on essential services, installations, site works, playgrounds, etc., where the initial cost and the upkeep cost cannot be varied to any degree, since for this class of work there is but one standard. Except in cases where floor areas are reduced below accepted standards, the difference in capital outlay is extremely small, as it can only be applied to the "shell," and since it is rarely possible to build schools with expensive "shells," it is extremely difficult to effect much in the way of saving. It, therefore, resolves itself into the difference between an economic or uneconomic building, one good, one bad, but both capable with maintenance, of lasting much the same length of time.

I think it is time we dropped such terms as "temporary," "semi-permanent" and "short term" construction. Buildings do, however, fall into a number of classifications. We can make a proper distinction between "wet" and "dry" construction—or "masonry" building with load bearing walls and "frame" building with point loading. These two types of classifications may also be termed "heavy" and "lightweight" buildings, but I would prefer to make the distinction more definite, and suggest for this purpose using the terms—"Code Standard" and "Sub-Standard."

When we refer to "Code Standard" planning and construction, this will mean the full schedule of accommodation to be complied with under the new Building Regulations of the Ministry of Education, British Standard Specification and recognised Codes of Practice.

"Sub-Standard" planning and construction will mean reducing the floor areas in teaching space and ancillary accommodation; reducing the numbers of wash basins, W.C.s, sinks and fitments, etc.; cheaper installations for lighting and heating and using less expensive finishings, such as roof coverings, infilling walls and partitions, and omitting plaster work, wall tiling, painting, etc.

Where it is impossible, owing to building restrictions, to plan and build right up to "Code Standards," we may decide to use some form of "Sub-Standard" accommodation. This, however, is unsatisfactory, costly to maintain, and will ultimately require replacement. The alternative I wish to suggest for your consideration is—a Code Standard plan with the erection of a Code Standard constructional frame, for such parts of the plan essential for immediate needs, *i.e.*, the ultimate scheme is planned to allow for the full provision required under the Code. The structural frame is also designed to accommodate the full ultimate requirements. Only the minimum of these requirements is proceeded with in the first place, omitting such parts of the scheme as necessary for later addition.

This will provide for a permanent and progressive development, the Code Standard frame being encased with possibly a Sub-Standard shell, the degree of which can vary according to availability of materials and labour, together with Sub-Standard finishings, installations and equipment. The complete design, allowing for later improvements, would then permit of the whole of the work being brought up to Code Standard when this becomes possible.

Both Code and Sub-Standard construction can embrace standardised prefabricated units to a greater or lesser degree, according to the system employed, or on the other hand, the principles I have outlined can be carried out according to traditional methods. No form of standardised construction should be used which is not fully flexible of application. In order to avoid monopolies and bottlenecks in production, alternative methods of constructing standardised designs are desirable so far as possible.

I would now like to put before you by way of illustration, one or two exploratory suggestions for the type of building (and the planning arrangements) which would appear to arise from these remarks.

Note.—Slides were shown illustrating different standards of design and construction—plan types—cross sections of classrooms demonstrating daylighting problems, etc., and the re-modelling of existing premises, etc.

ANNOUNCEMENT

Major Robert Hening has been released from military service, and returned to work at 20, Gower Street, W.C.1, in partnership with Mr. Anthony M. Chitty, F.R.I.B.A., A.M.T.P.I. Trade catalogues to the firm will be welcomed.

PRICES

BY DAVIS, BELFIELD AND EVEREST, CHARTERED QUANTITY SURVEYORS

BASIC MATERIALS	Increase over pre-war prices at end of										
	Jan., 1945	Feb., 1945	Mar., 1945	Apr., 1945	May, 1945	June, 1945	July, 1945	Aug., 1945	Sept., 1945	Oct., 1945	Nov., 1945
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Portland cement	41·46	41·46	56·10	56·10	56·10	56·10	56·10	56·10	56·10	56·10	56·10
2-in. Unscreened ballast	108·70	108·70	108·70	108·70	108·70	108·7	108·7	114·49	114·49	114·49	114·49
Fletton bricks (at station)	34·59	34·59	34·59	34·59	34·59	34·59	34·59	34·59	36·22	36·22	36·22
Stoneware drainpipes (British standard 2 tons and over)	43·75	43·75	43·75	43·75	43·75	43·75	43·75	43·75	43·75	43·75	43·75
Roofing tiles	65	65	75·31	75·31	75·31	75·31	75·31	75·31	75·31	75·31	75·31
Steel joists (basic sections ex mills)	47·5	47·5	47·5	47·5	47·5	47·5	47·5	47·5	47·5	47·5	47·5
Lime greystone	43·53	43·53	43·53	43·53	43·53	57·65	57·65	57·65	57·65	57·65	57·65
Sheet lead	73·91	65·22	65·22	65·22	65·22	84·79	84·79	84·79	84·79	84·79	84·79
Iron rainwater goods and soil pipes	40·5	40·5	45·5	45·5	45·5	45·5	45·5	45·5	45·5	45·5	45·5
White lead paint	38·38	38·38	38·38	38·38	38·38	42·93	42·93	42·93	46·21	46·21	46·21
RATES OF WAGES (Central London Area)											
Labourers	31·75	34·92	34·92	34·92	34·92	34·92	39·68	39·68	39·68	39·68	39·68
Craftsmen	26·19	26·19	26·19	26·19	26·19	26·19	30·95	30·95	30·95	30·95	30·95

LABOUR—Rates of Wages since July 1, 1945

LONDON DISTRICT	Craftsmen	Labourers
Within 12 miles radius	2s. 3½d.	1s. 10d.
From 12-15 „ „	2s. 3d.	1s. 9½d.

N.B.—Prices of materials include for delivery to site in the Central London Area unless otherwise stated.

GRADE CLASSIFICATIONS

	A	A¹	A²	A³	B	B¹	B³
Craftsmen	2/2	2/1½	2/1	2/0½	2/0	1/11½	1/11
Labourers	1/9	1/8½	1/8	1/7½	1/7½	1/7	1/6½

F.S.I., F.I.Arb.

CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

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

THE INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. ADDRESS: 75, EATON PLACE, LONDON, S.W.1. TEL.: SLOANE 5615. 991

CITY OF LEEDS.

CITY ENGINEER'S DEPARTMENT.

Applications are invited for the appointment of a PLANNING ASSISTANT, at a commencing salary of £400 per annum, plus cost-of-living bonus (at present £59 16s. per annum). The maximum salary for the post is £450 per annum, and the first increment of £25 will have effect on the 1st of April following the completion of 12 months' satisfactory service.

Applicants should be Corporate Members of the Town Planning Institute, and have had considerable experience in the preparation and administration of Planning Schemes.

Preference will be given to candidates who also possess an engineering, architectural and/or surveying qualification.

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

Applications on the forms provided, which are obtainable from the undersigned, to be delivered not later than the 15th of January, 1946, accompanied by copies of not more than three testimonials.

Canvassing in any form, either directly or indirectly, will be a disqualification.

W. S. CAMERON, M.Inst.C.E., P.P.T.P.I.,
City Engineer.

Civic Hall, Leeds, 1. 985

BOROUGH OF GRANTHAM.

APPOINTMENT OF JUNIOR TECHNICAL ASSISTANT.

Applications are invited for the above appointment in the Department of the Housing Architect. The appointment, which is a permanent one, will be in Grade C, at a commencing salary of £175 per annum, rising by annual increments of £12 10s. to £240 per annum, plus cost-of-living bonus. Applicants should be neat and accurate draughtsmen, capable of preparing working drawings and details from draft sketches, and should be used to making surveys and taking levels. Experience in a municipal or architect's office on housing work will be an advantage.

Applications, giving particulars of age, training and experience, together with copies of two recent testimonials, should be sent to the undersigned in a plain envelope, endorsed "Junior Technical Assistant," not later than Tuesday, 8th January, 1946.

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

JOHN F. GUILE,
Town Clerk.

Guildhall, Grantham.
15th December, 1945. 520

CITY AND COUNTY OF THE CITY OF EXETER.

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

(*a*) TEMPORARY ASSISTANT BUILDING and QUANTITY SURVEYOR, at a salary between £350 and £450 per annum, plus cost-of-living bonus, at present £59 19s. 3d.

(*b*) TEMPORARY SENIOR ASSISTANT ARCHITECT, at a salary between £350 and £450 per annum plus cost-of-living bonus as above.

(*c*) TEMPORARY JUNIOR ASSISTANT ARCHITECT, at a salary between £250 and £350 per annum, plus cost of living bonus as above.

The appointments will be subject to one calendar month's notice on either side, and in each case the salary will be fixed in accordance with qualifications and experience.

Applications, endorsed Appointment (*a*), (*b*) or (*c*), and stating age, qualifications, previous and present appointments, with salaries and exact designations, full details of experience and date when available, together with copies of three recent testimonials, should be sent to F. R. Steele, F.R.I.B.A., F.S.I., M.T.P.I., City Architect, 2, Southernhay West, Exeter, not later than 2nd January, 1946,

C. J. NEWMAN,
Town Clerk.

18th December, 1945. 509

COUNTY BOROUGH OF EAST HAM.

APPOINTMENT OF TEMPORARY TOWN PLANNING ASSISTANT.

Applications are invited from qualified persons for the temporary appointment of Town Planning Assistant in the Borough Engineer and Surveyor's Department, subject to one month's notice on either side.

Candidates must be Associate Members of the Town Planning Institute, or hold an equivalent qualification, and be competent to undertake town planning work in all aspects of post-war redevelopment.

The salary will be at the rate of £485 per annum, rising by annual increments of £20 to a maximum of £525 per annum, plus war bonus in accordance with the Council's scale for official staff in force from time to time, at present £59 16s. per annum, but the commencing salary may be at any incremental stage up to the maximum, according to the qualifications and experience of the person appointed.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, after two years' service with any or all local authorities, to the Council's conditions of service for temporary official staff in force from time to time, and the successful candidate will be required to pass a medical examination.

Applications, on the form provided, must be delivered to the undersigned, together with copies of three recent testimonials, and endorsed "Town Planning Assistant," not later than Friday, 11th January, 1946.

Canvassing in any form, direct or indirect, will be regarded as a disqualification.

C. V. THORNLEY,
Town Clerk.

Town Hall, East Ham, E.6.
10th December, 1945. 997

EAST SUFFOLK COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

GENERAL ARCHITECTURAL ASSISTANT (CLASS B).

Applications are invited for this post, at a salary of £300, rising to £400, plus war bonus (now £59 16s.) per annum.

Applicants must be capable of making surveys of existing buildings and preparing working drawings and details with minimum supervision.

Preference will be given to Members of the R.I.B.A. who have had experience in an office of a Local Authority.

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

Applications, stating age, qualifications, previous experience, etc., together with copies of two recent testimonials, must be delivered to E. J. Symcox, F.R.I.B.A., County Architect, County Hall, Ipswich, not later than 7th January, 1946.

Particulars regarding Military or other forms of National Service should be furnished.

The appointment is subject to the approval of the Ministry of Labour.

CECIL OAKES,
Clerk of the Council.

County Hall, Ipswich.
12th December, 1945. 508

CITY OF MANCHESTER.

HOUSING COMMITTEE.

Applications are invited for the appointment under the Housing Committee of the following posts for Technical Assistants:—

One STRUCTURAL ENGINEERING ARCHITECT.—£450 to £480 per annum. The successful applicant must have had experience in the detailed constructional work involved in systems of reinforced concrete and steel-frame construction.

One TEMPORARY ASSISTANT ARCHITECT.—£400 to £425 per annum.

Three ASSISTANT ARCHITECTS.—£380 per annum, one at £364 per annum, and one at £340 per annum.

Two ASSISTANT QUANTITY SURVEYORS.—£400 to £425 per annum, and one at £340 per annum.

The above amounts are supplemented by a temporary cost-of-living bonus, which at present amounts to £60 per annum.

In the case of the Assistant Architects, applicants must be registered Architects, and generally preference will be given to applicants who are members of the Royal Institute of British Architects, or in the case of Quantity Surveyors, the Surveyors' Institution.

After six months' service, the successful candidates will be required to contribute to the Corporation Superannuation Fund.

Applications, stating age and experience, together with copies of two testimonials, must be submitted to Mr. John Hughes, B.Arch., F.R.I.B.A., Director of Housing, Town Hall, Manchester, 2, not later than Friday, the 4th January, 1946.

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 Committee or the Council).

PHILIP B. DINGLE,
Town Clerk.

Town Hall, Manchester.
December, 1945. 511

CITY OF NOTTINGHAM EDUCATION COMMITTEE.

COLLEGE OF ART AND CRAFTS.
Principal: ALFRED H. RODWAY, A.R.C.A.

Applications are invited from persons holding recognised qualifications in Architecture, preferably the degree or diploma of a recognised school, for the full-time post of STUDIO INSTRUCTOR, to teach Architectural Design and Construction in the School of Architecture of the College. The School is recognised for purposes of exemption from the R.I.B.A. Intermediate and Final Examinations, and in the Department of Town and Country Planning from the Final Examination of the Town Planning Institute. Possession of A.M.T.P.I may be regarded as an added recommendation. Salary in accordance with the Burnham Scales, 1945, *viz.*: £300×£15—£525, to the minimum and in certain cases to the maximum of which may be added, where appropriate, additional allowances for (*a*) training; (*b*) graduate status; (*c*) full-time professional experience after age 21; and (*d*) increments in respect of previous recognised full-time teaching service. Subject to the conditions governing full-time teaching service, the successful candidate will be given such opportunities as may be practicable to maintain his/her professional practice. The person appointed will be required to commence duty as early as possible in 1946. Apply by letter to the Principal, College of Art and Crafts, Waverley Street, Nottingham, stating, in the following order, details (with dates) as to (1) Professional Training; (2) Diplomas, Degrees and/or professional distinctions; (3) recognised full-time teaching experience; and (4) full-time professional experience after age 21. Applicants serving in H.M. Forces should state group release number and approximate date of demobilisation. Last date for receipt of applications, Friday, 4th January, 1946.

F. STEPHENSON,
Director of Education.

Education Office, South Parade, Nottingham. 512

CAMBRIDGESHIRE COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

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

Two ASSISTANT ARCHITECTS. Salary £450—£25—£550 per annum, plus cost-of-living bonus, at present £59 16s. per annum, subject to three months' notice on either side.

Candidates should be qualified and experienced Architects, and have had good experience in general architectural work, including School, Hospital, and Housing planning and design, and in the preparation of working drawings and specifications. Experience in Local Government Service would be an advantage.

Applications, stating age, qualifications, training and experience, giving particulars of present and past appointments, and accompanied by three recent testimonials, must be sent to the undersigned not later than Saturday, 5th January, 1946.

CHARLES PHYTHIAN,
Clerk of the Council.

Shire Hall, Cambridge
17th December, 1945. 522

NORTH RIDING EDUCATION COMMITTEE.

Applications are invited for the post of ARCHITECTURAL ASSISTANT. The post is exempt from the age restrictions of the Control of Engagement Order. The salary is at the rate of £425 a year, rising by annual increments of £25 to a maximum of £500 a year, plus war bonus, at present £60 a year. Under existing conditions working hours are increased by one-seventh, and the payment for this is at the rate of one-seventh of the basic salary.

Candidates must be Associates of the R.I.B.A., and must posses a sound knowledge of the design, erection, and maintenance of Educational Buildings.

Further particulars and a form of application may be obtained by sending a stamped addressed foolscap envelope. Completed applications, with copies of two recent testimonials, should be submitted not later than the 12th January, 1946.

F. BARRACLOUGH,
Secretary.

Education Offices, County Hall, Northallerton. 987

WEST CORNWALL JOINT PLANNING COMMITTEE.

APPOINTMENT OF PLANNING ASSISTANT.

Amended Advertisement.

Applications are invited for the appointment of a Planning Assistant, whose basic training has been in Architecture.

The Joint Planning Area comprises six Municipal Boroughs, three Urban Districts, and three Rural Districts in south-west Cornwall; a total area of approximately 500 square miles.

The salary will commence at £400 per annum, rising by four annual increments of £25 to a maximum of £500 per annum, plus cost-of-living bonus, at present 23s. per week; the first increment to take effect on 1st April, 1947.

The appointment will be full time, and the Officer appointed will be required to provide a motor car, for which a mileage allowance will be paid.

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

Applications, stating age, qualifications, and experience, accompanied by copies of not more than three recent testimonials, should be sent to the undersigned not later than 5th January, 1946.

D. J. BEATTIE,
Secretary.

Alphington House, Alverton, Penzance, Cornwall. 510

BOROUGH OF BARKING.

DEPARTMENT OF THE BOROUGH ARCHITECT.

Applications are invited from qualified persons for the post of ASSISTANT ARCHITECT, on the Establishment Staff.

Salary will be a figure between £360 and £405 per annum, according to qualifications, age, and experience, plus appropriate war bonus, at present £59 19s. 4d. per annum.

It is desirable that candidates should be Associates of the Royal Institute of British Architects.

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

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

Applications are to be forwarded to the Borough Architect, C. C. Shaw, Town Hall, Barking, Essex, not later than Monday, 7th January, 1946.

E. R. FARR,
Town Clerk.
523

METROPOLITAN BOROUGH OF FULHAM.

TEMPORARY ARCHITECTURAL ASSISTANTS.

Applications are invited from Registered Architects, with housing experience, for positions as temporary Architectural Assistants in the War Damage and Borough Surveyors' Departments of the Council. Candidates should be Associates of the Royal Institute of British Architects or hold equivalent qualifications.

The salary scale is £360×£15—£450 per annum, plus cost-of-living bonus, which at present is 23s. per week. The commencing salary will be fixed within the scale, according to the qualifications and experience of the persons appointed.

Further particulars and a form of application can be obtained from me. Applications must reach me not later than 21st January, 1946.

CYRIL F. THATCHER,
Town Clerk.

Town Hall, Fulham, S.W.6.
7th December, 1945. 988

NORTHAMPTON COUNTY BOROUGH EDUCATION COMMITTEE.

ASSISTANT ARCHITECT.

Applications are invited for the above-mentioned appointment in the Education Architect's Department. The commencing salary will be at the rate of £500 per annum, plus bonus, at present £60 per annum, and the appointment, which is a permanent one, is subject to the provisions of the Local Government Superannuation Acts.

Applicants should be Registered Architects, members of the R.I.B.A., and have had experience in the design of education buildings.

Forms of application may be obtained from the undersigned, and must be returned duly completed not later than the 5th January, 1946.

H. C. PERRIN,
Chief Education Officer.

"Springfield," Cliftonville, Northampton. 999

WEST SUSSEX COUNTY COUNCIL.

COUNTY PLANNING DEPARTMENT.

Applications are invited for the following appointments in the County Planning Department:—

(*a*) TECHNICAL PLANNING ASSISTANT. Salary £350, rising by annual increments of £15 to £445.

(*b*) PLANNING ASSISTANT. Salary £180, rising by annual increments of £15 to £280.

In addition to the salaries stated, overtime and war bonus of £60 per annum is at present being paid by the County Council. The commencing salary will be fixed according to experience.

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

Applicants for appointment (*a*) should have had a practical experience in planning schemes for urban and rural areas, and should be Members or Associate Members by examination of the Town Planning Institute and also Members or Associate Members of the Institute of Municipal and County Engineers, the Royal Institute of British Architects, or the Chartered Surveyors' Institution.

Applicants for appointment (*b*) should be neat and efficient draughtsmen, and have knowledge of ordnance survey revision, and preferably should have had experience in a Planning Department. Any technical qualifications will be an additional recommendation.

Applications, stating age, qualifications, experience, and any other relevant particulars, together with the names of two persons to whom reference could be made, must reach me at the County Hall not later than first post on Saturday, 5th January, 1946.

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

County Hall, Chichester.
Sussex. 507

CITY OF STOKE-ON-TRENT.

CITY ARCHITECTURAL DEPARTMENT.

APPOINTMENT OF DEPUTY CHIEF ARCHITECT.

Applications are invited for the above appointment, at a salary commencing at £650 per annum, rising by annual increments at £50 to £750 per annum, plus cost of living bonus of £59 16s.

The appointment, which will be held during the pleasure of the Council, will be subject to three calendar months' notice on either side, and to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

Applications, stating age, qualifications, and experience, and particulars of present and previous appointments, together with two recent testimonials and names and addresses of two responsible persons of standing to whom reference may be made, must be delivered to the undersigned, endorsed "Deputy Chief Architect," on or before Monday, 14th January, 1946.

HARRY TAYLOR,
Town Clerk.

Town Hall, Stoke-on-Trent. 505

Architectural Appointments Vacant

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

ARCHITECTURAL DRAUGHTSMAN urgently required for progressive industrial factory; situated in Stoke-on-Trent; chiefly factory work; work to drawing and detailed work essential; knowledge of modern buildings, also setting out and standard bye-laws; salary in accordance with experience and ability. Write, giving all details, to Box 955.

ARCHITECTURAL and Surveying Assistant required in West End office of Quantity Surveyors, in connection with preparation of working drawings and details on adaptation of new schemes and war damage schemes. Write, stating age, experience, and salary required, Box 983.

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