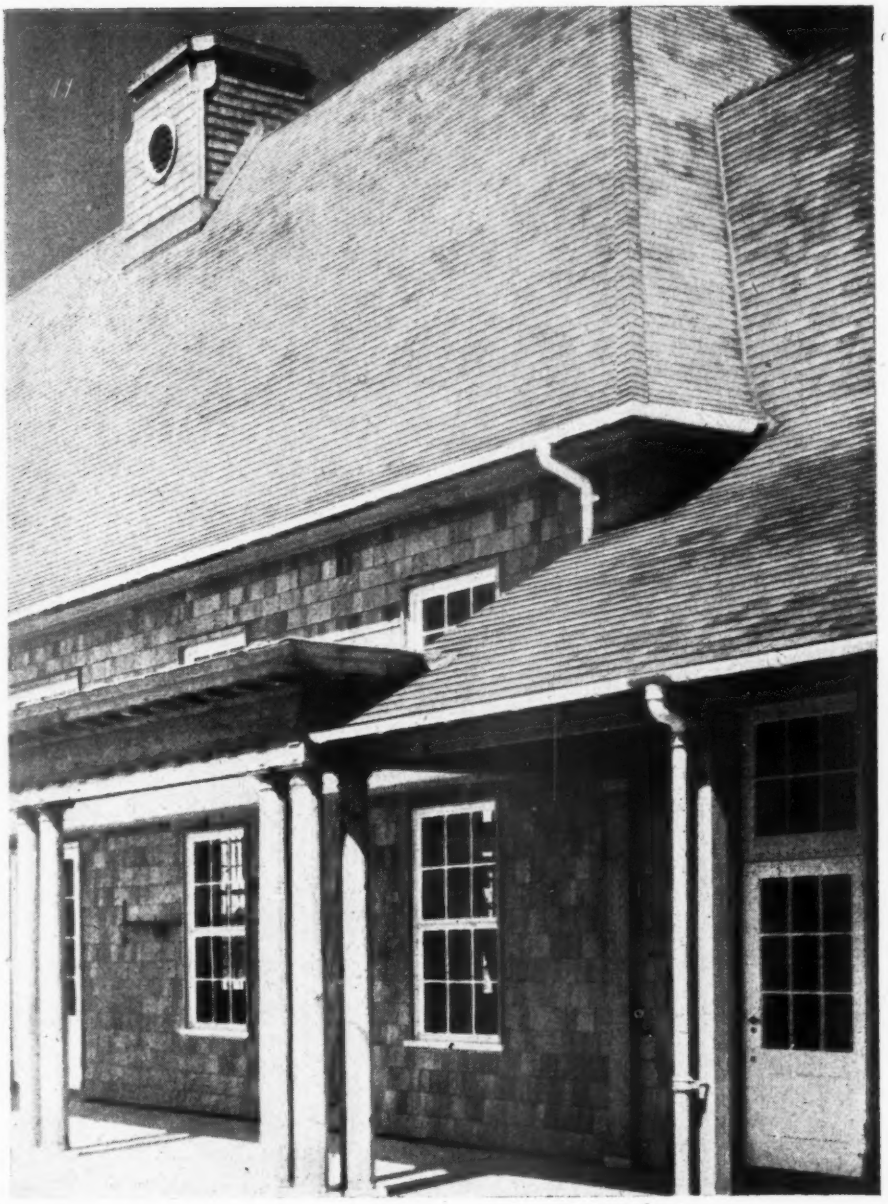

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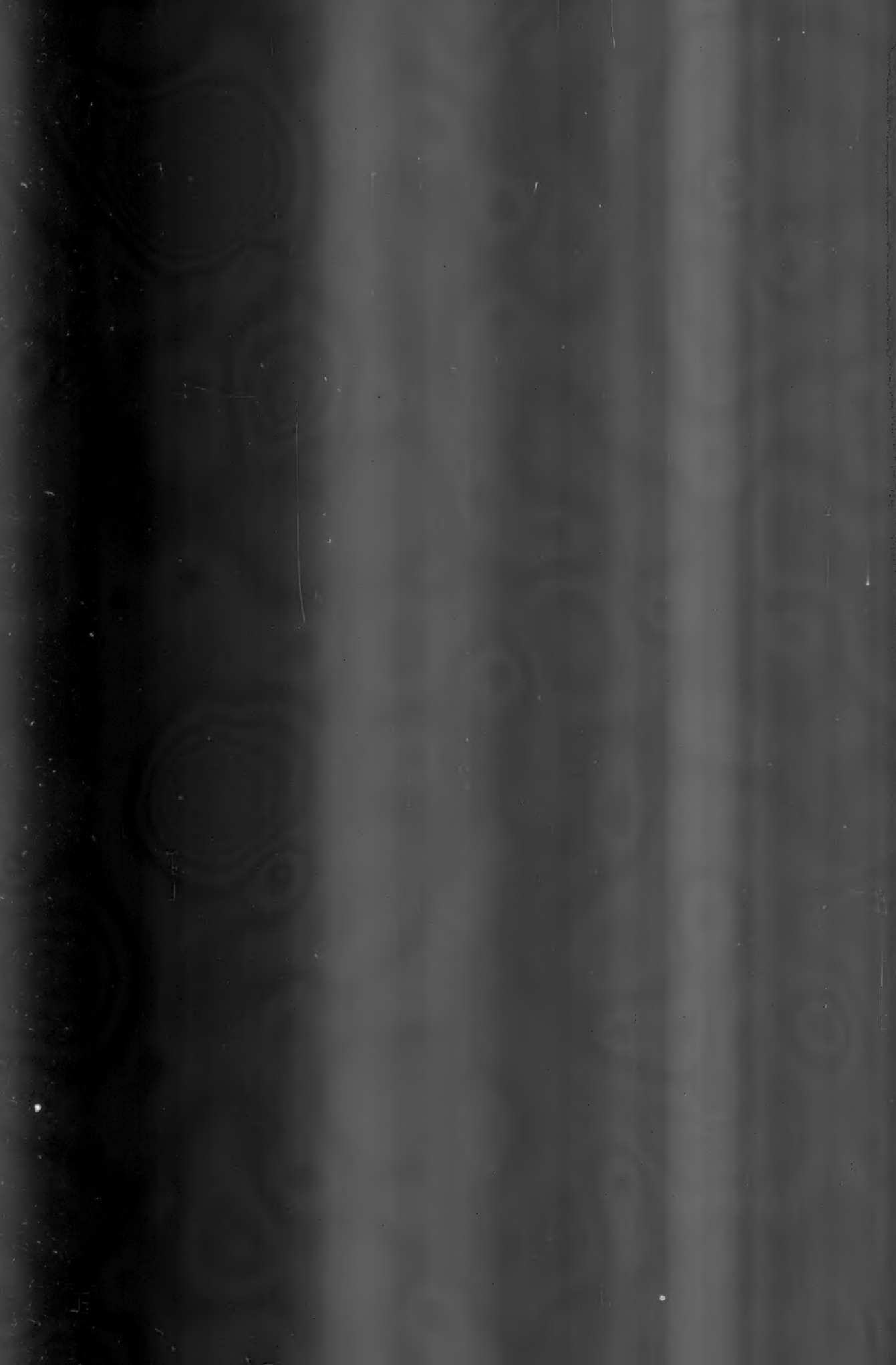
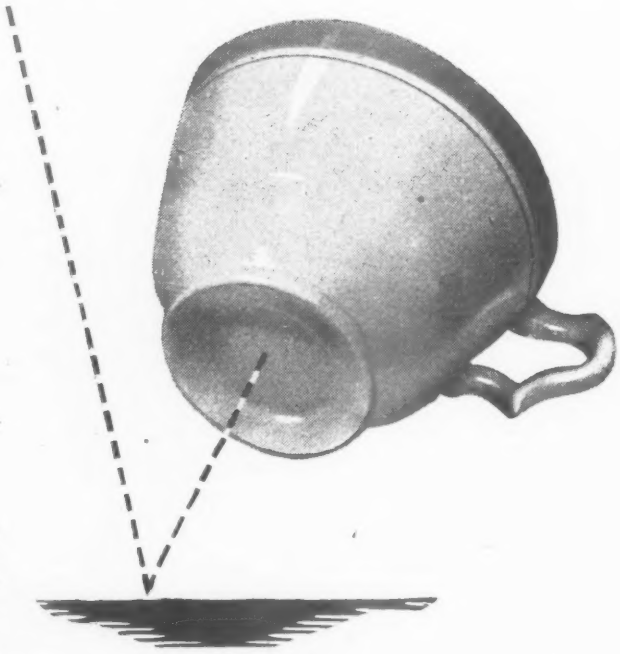


Would you expect a cup to bounce?



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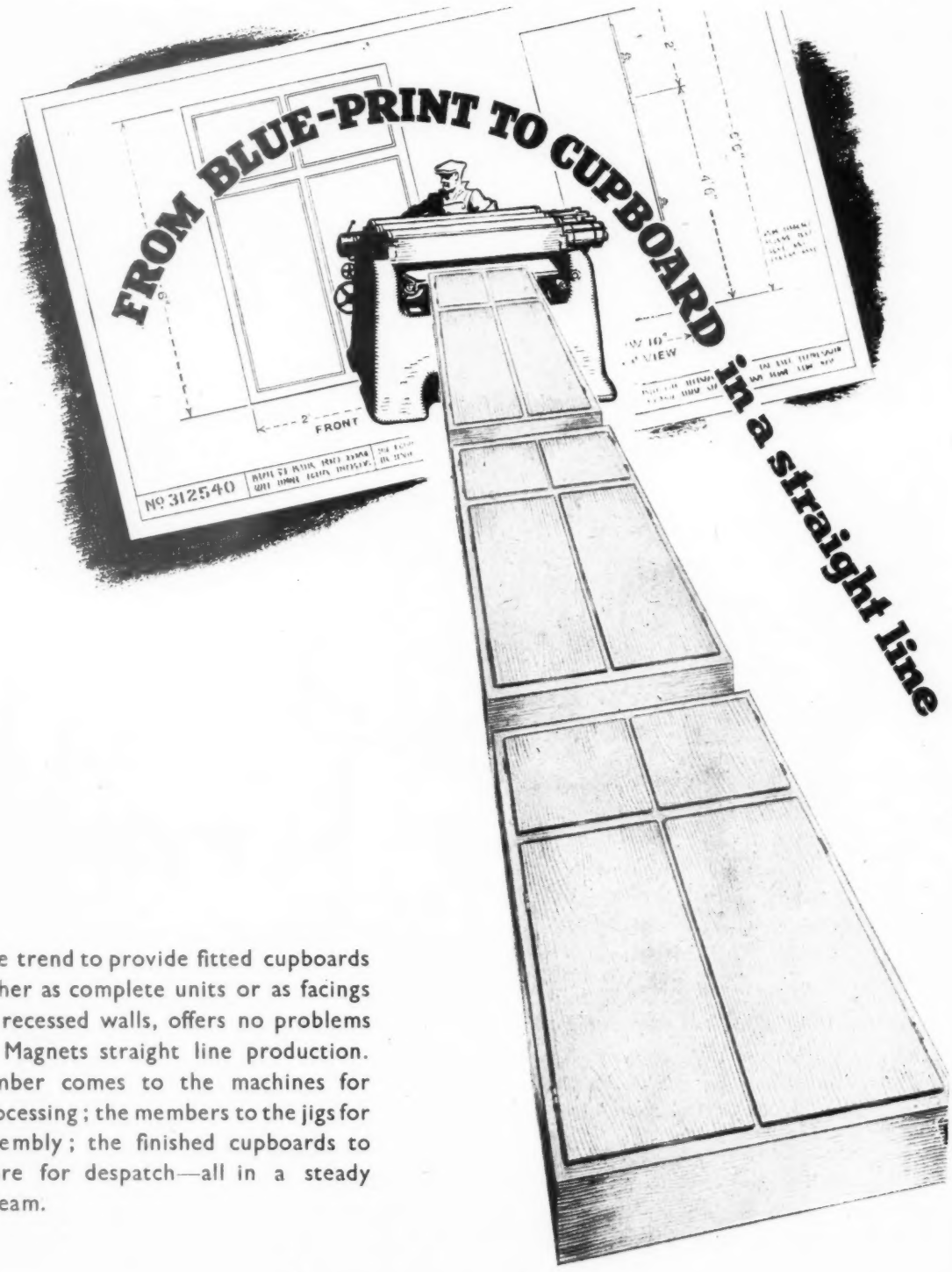

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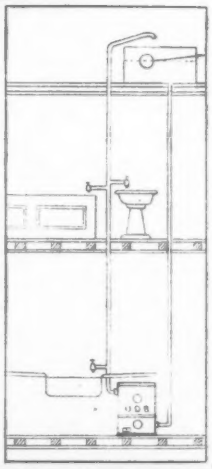

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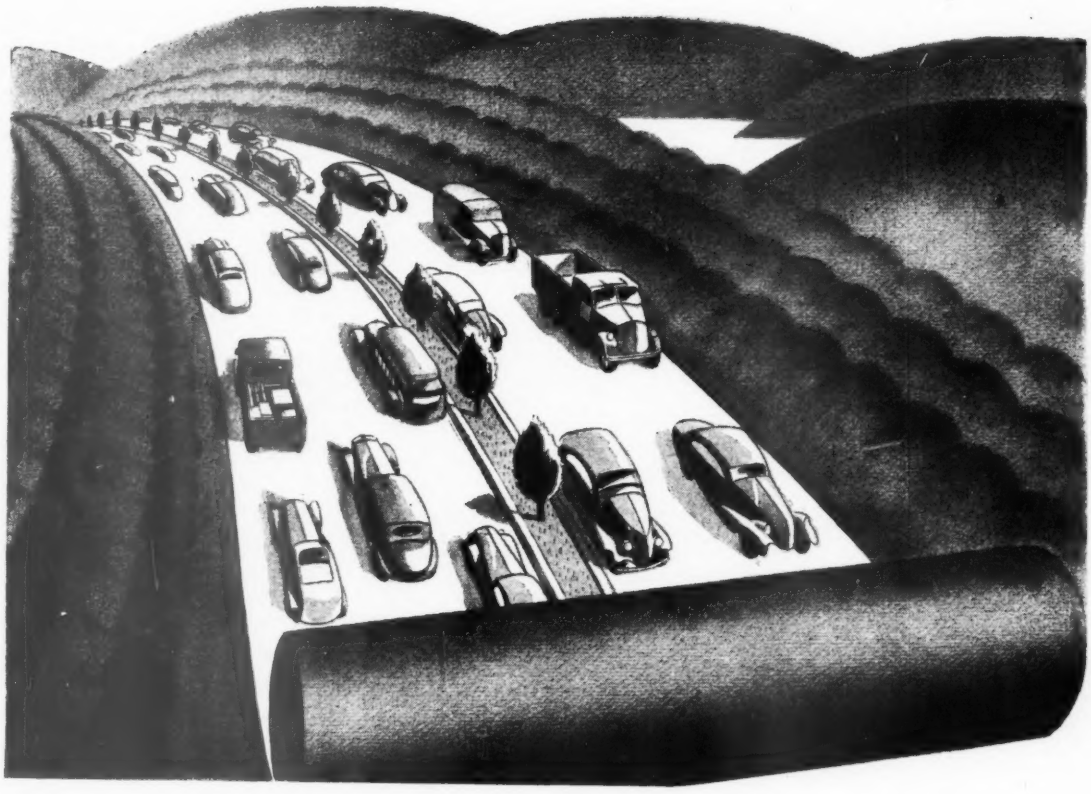

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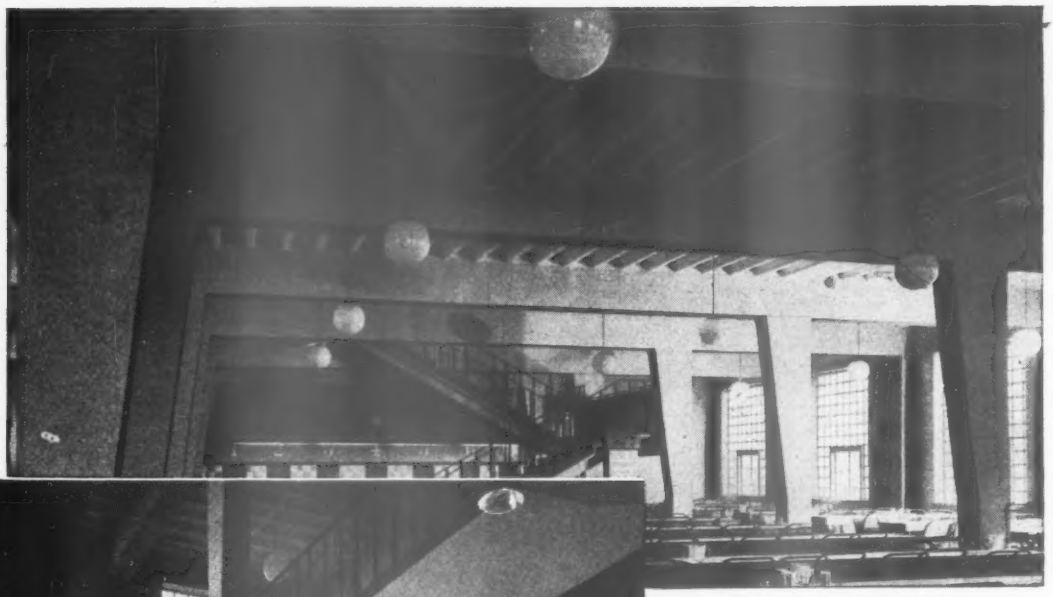

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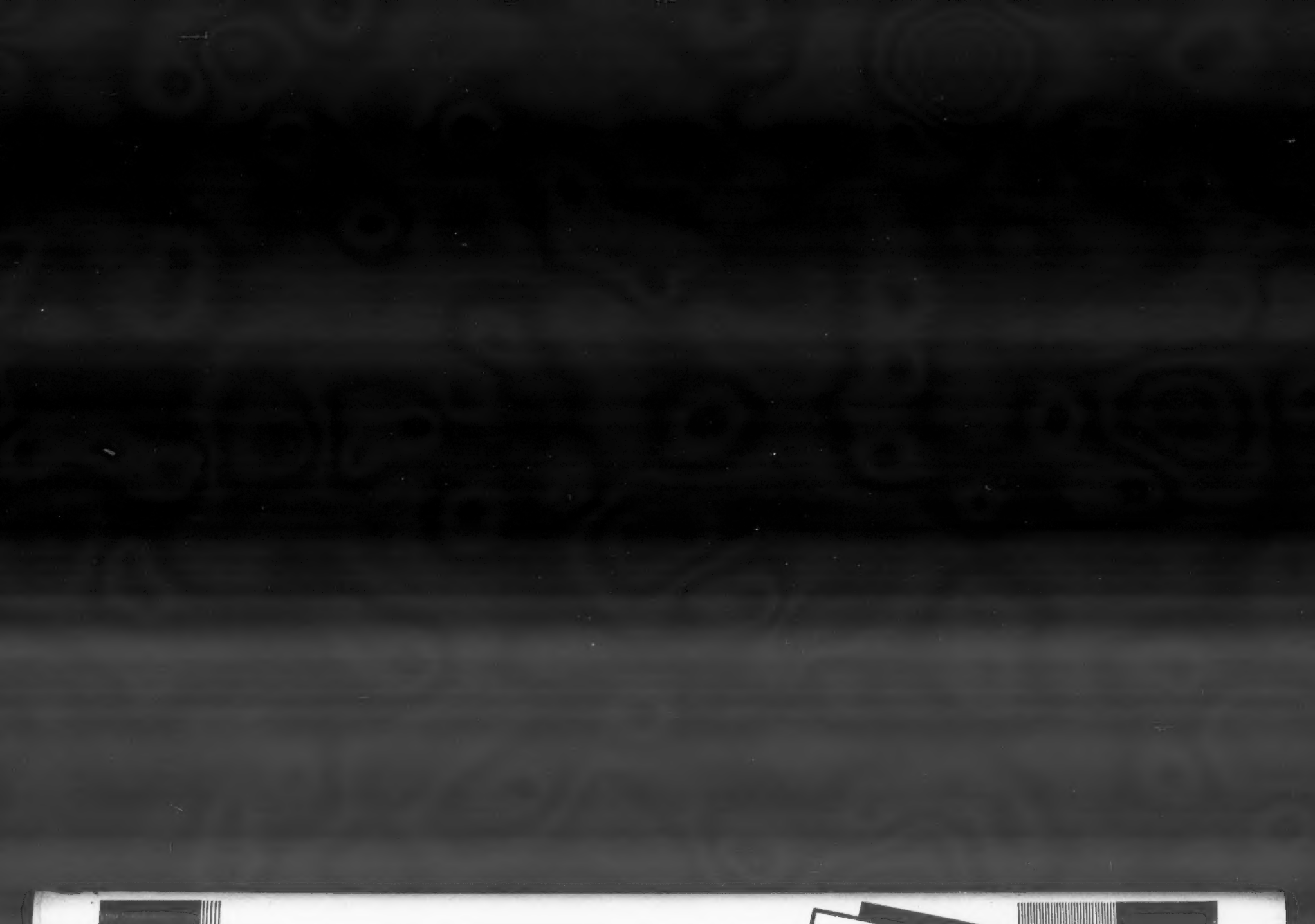

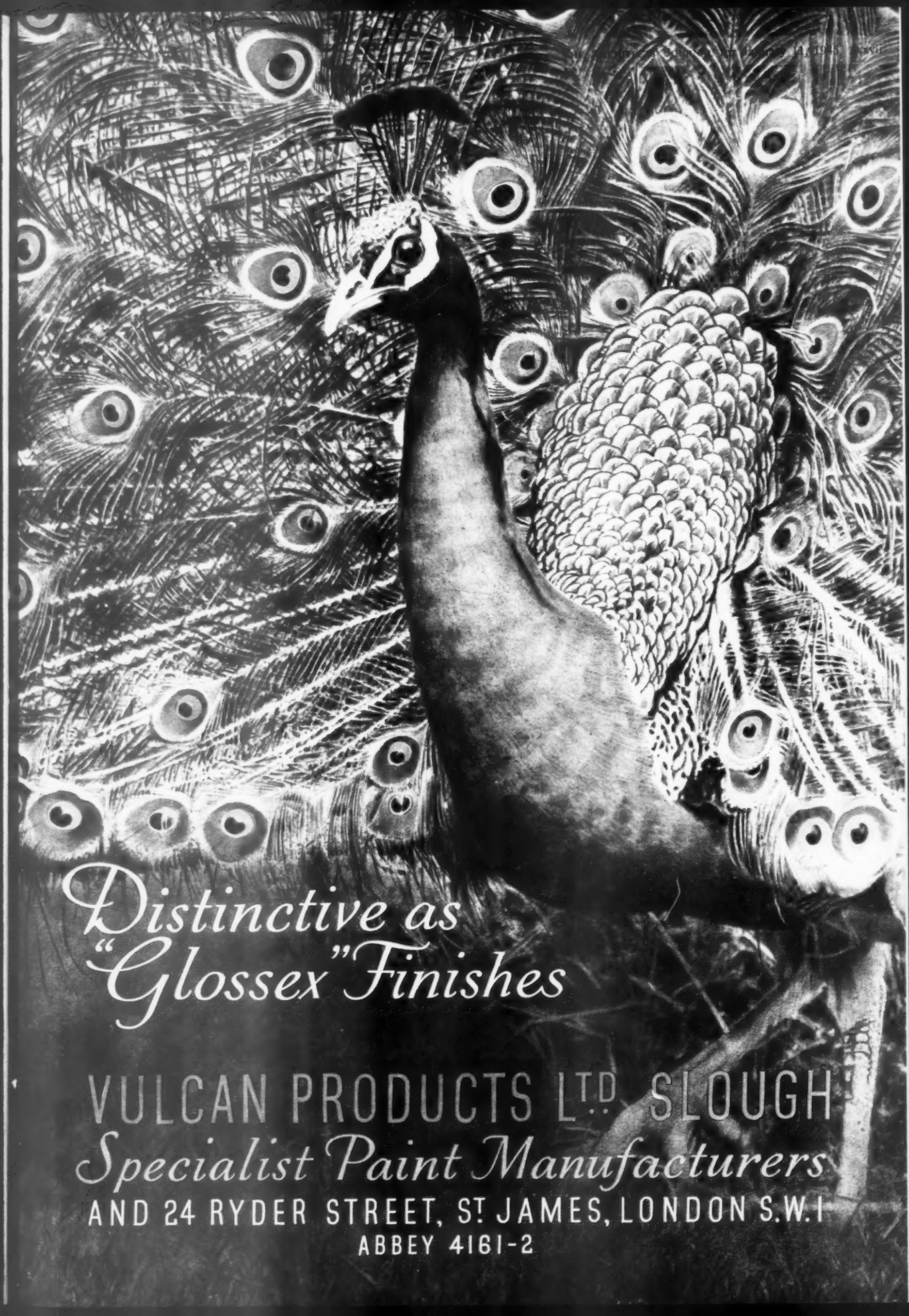
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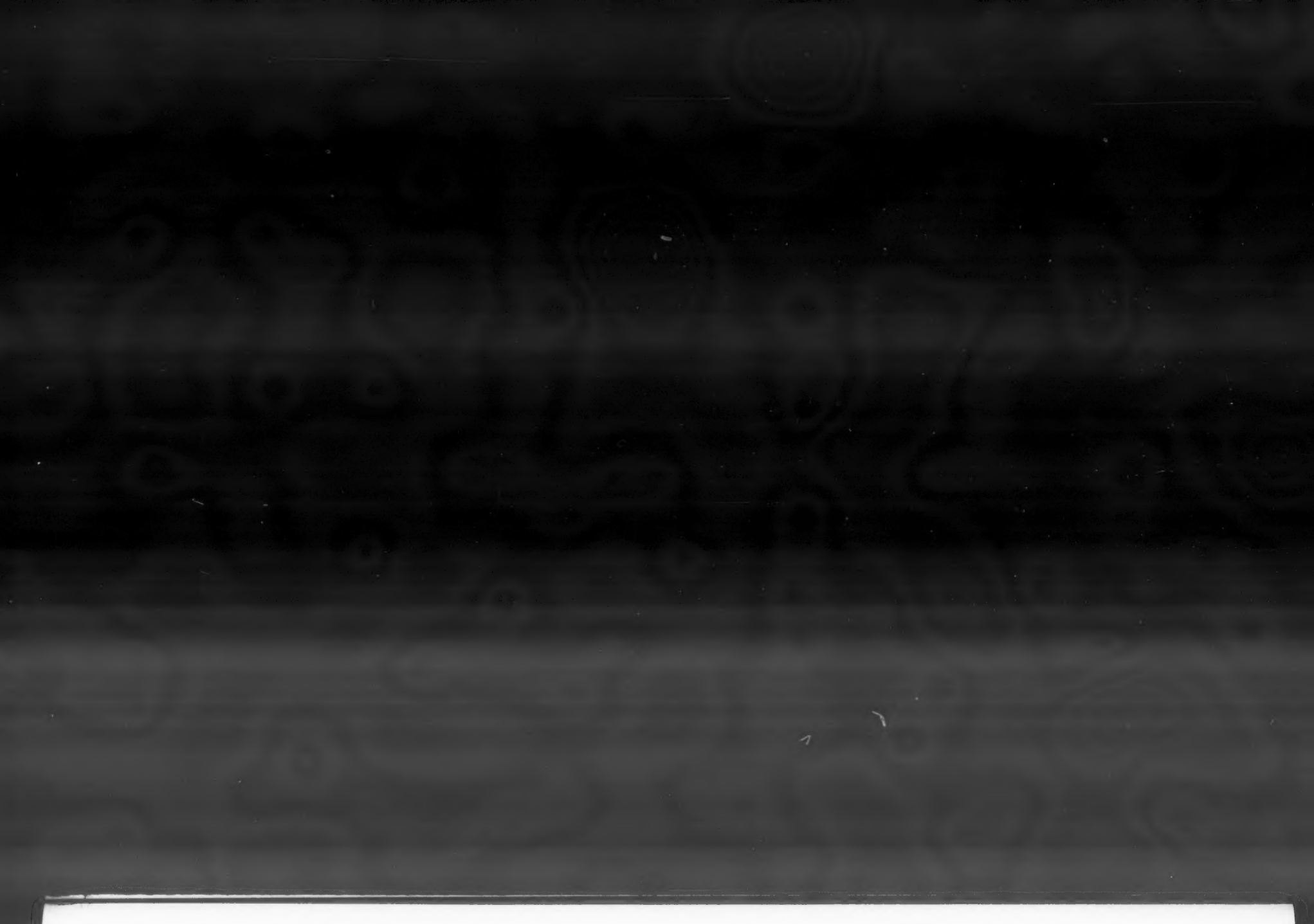

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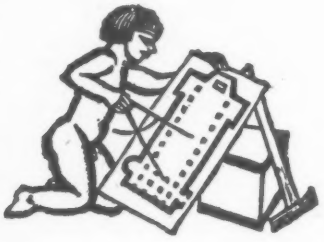


DIARY FOR JANUARY FEBRUARY AND MARCH

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

BIRMINGHAM. *When We Build Again.* Exhibition. At George Dixon Grammar School, Edgbaston, Birmingham. (Sponsor, TCPA). JAN. 15-21

CHESHUNT. *When We Build Again.* Exhibition. (Sponsor, TCPA). FEB. 28-MAR. 10

CROSBY, LIVERPOOL. *The English Town: Its Continuity and Development.* (Sponsor, TCPA). JAN. 17-31

LICHFIELD. *The English Town: Its Continuity and Development.* Exhibition. (Sponsor, TCPA). The Town and Country Planning Association is holding a Conference on the last day of the Exhibition. Speaker, F. J. Osborn. FEB. 12-17

LONDON. L. H. Keay. *Post-War Housing.* At 66, Portland Place, W.1. (Sponsor, RIBA). This meeting, which was to be held on January 16, has been cancelled. Mr. Keay will read his Paper during the Session 1945-46.

D. E. E. Gibson, City Architect, Coventry. *Some Aspects of Prefabricated Housing.* Illustrated by lantern slides and epidiascope. At Westminster Medical School Lecture Hall, opposite Post Office, Horseferry Road. (Sponsor, Association of Building Technicians, Westminster Branch). Admission: Non-members 1s., members 6d. Tickets from Westminster Branch Secretary, A.B.T., 5, Ashley Place, S.W.1. 6.30 p.m. JAN. 16

W. P. K. Findlay ,of the Forest Products Research Laboratory. *Dry Rot in Buildings, Its Prevention and Cure.* At the Royal Sanitary Institute, 90, Buckingham Palace Road, S.W.1. (Sponsor, RSI). 2.30 p.m. JAN. 17

Applications of Electricity to Water Supply. Discussion. At the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. (Sponsor, IEE). 5.30 p.m. JAN. 22

S. R. Raffety. *Rural Water Supplies.* At the Institution of Civil Engineers, Great George Street, Westminster, S.W.1. (Sponsor, Institution of Civil Engineers). 5.30 p.m. JAN. 23

TVA Documentary Film. At a joint meeting of the Town Planning Institute and the Institution of Civil Engineers. At the Institution of Civil Engineers, Great George Street, S.W.1. 6 p.m. JAN. 25

National Federation of Building Trades Employers Luncheon. At the Connaught Rooms. Chairman, J. G. Gray, the President. Guest of honour, Ernest Bevin, M.P., Minister of Labour and National Service. JAN. 25

G. Pierce Clingan, City Building Surveyor, Liverpool. *National Building Regulations.* At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, Royal Society of Arts). 1.45 p.m. JAN. 31

H. M. Webb. *Reconstruction under the Town and Country Planning Act, 1944.* At Caxton Hall, Caxton Street, S.W.1. (Sponsor, TPI). 6 p.m. FEB. 1

Percy Smith, Master of the Faculty of Royal Designers for Industry. *Beauty in Sign Painting and Civic Lettering.* At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA). 1.45 p.m. FEB. 7

H. S. Goodhart-Rendel. *The Work of the late Sir Edwin Lutyens.* At 66, Portland Place, W.1. (Sponsor, RIBA.) 6 p.m. FEB. 13

Wing-Commander T. R. Cave-Browne-Cave. *Camouflage for the Concealment of Civil Factories.* (Francis Cobb Lecture). At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA). 5.30 p.m. FEB. 14

F. N. Sparkes and A. F. Smith. *The Concrete Road; a Review of Present-day Knowledge and Practice.* At the Institution of Civil Engineers, Great George Street, Westminster, S.W.1. (Sponsor, Institution of Civil Engineers). 5.30 p.m. FEB. 27

Professor E. P. Stebbing. *Erosion and Water Supplies.* At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA). 1.45 p.m. FEB. 28

F. Longstreth Thompson. *An Outline Plan for a Region.* At Caxton Hall, Caxton Street, S.W.1. (Sponsor, TPI). 6 p.m. MAR. 1

MALVERN. *When We Build Again.* Exhibition and Film. (Sponsor, TCPA, in collaboration with Messrs. Cadbury Bros.). *The English Town: Its Continuity and Development.* Exhibition. (Sponsor, TCPA). Town and Country Planning Association Conference, Mar. 17. MAR. 10-19

MIRFIELD, YORKS. *The English Town: Its Continuity and Development.* Exhibition. (Sponsor, TCPA). FEB. 25-MAR. 9

SHEFFIELD. J. Noel Wood, General Manager and Engineer, Sheffield Corporation Waterworks. *Some Aspects of Water Supply.* At the Council Chamber, Town Hall, Sheffield. (Sponsor, RSI). 10.30 a.m. JAN. 27

STOCKTON. *When We Build Again.* Exhibition. At the Gas Showrooms, Stockton. (Sponsor, TCPA). FEB. 1-14

NEWS

THURSDAY, JANUARY 11, 1945
No. 2607. VOL. 101

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.

A plan has been submitted to the Royal Fine Art Commission for RE-DESIGNING THE PRECINCTS OF THE TOWER OF LONDON.

The scheme, presented by the Tower Hill Improvement Trust, involves important alterations to the City of London plan as at present proposed and the thoroughfares around the Town that now exist. Instead of the two roads now cutting through Tower Gardens, the Improvement Trust, according to *The Star*, proposes one main traffic highway, 100 ft. wide, including a 20-ft. pavement, along Tower Street, past the Port of London Authority building and Trinity House on the north side of Trinity Square, and cutting across the Minories into Royal Mint Street. This would be part of the City's proposed new road from Victoria Embankment to the East End. It would allow the Tower—declared by the Trust to be the finest historic monument in Europe—to be bounded on its north side by seven acres of gardens. The space would include the Church of All Hallows, the Scaffold Site, the Mercantile Marine Memorial, and remains of London Wall. Part of the gardens would be reserved for children. Outside the entrance to the Tower there would be a car park to take thirty motor coaches, as it is believed that there will continue to be, after the war, large numbers of visitors to the Tower. The technical committee sponsoring the tentative plan include Sir Charles Bressey, Mr. B. W. Stuttle, borough engineer of Stepney, and Mr. B. H. Harbour, of the LPTB. The plan will be submitted to the City and the LCC.

Aluminium and Unit Construction

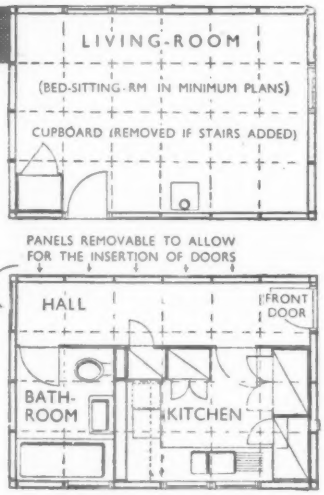
SUGGESTION FOR AN EXPANDING HOUSE

(1) The house is so designed that it can be made up from a number of basic cells each forming one or two complete rooms. The minimum house contains two such cells, one forming a bed-sitting-room, the other a kitchen, bathroom, and hall.

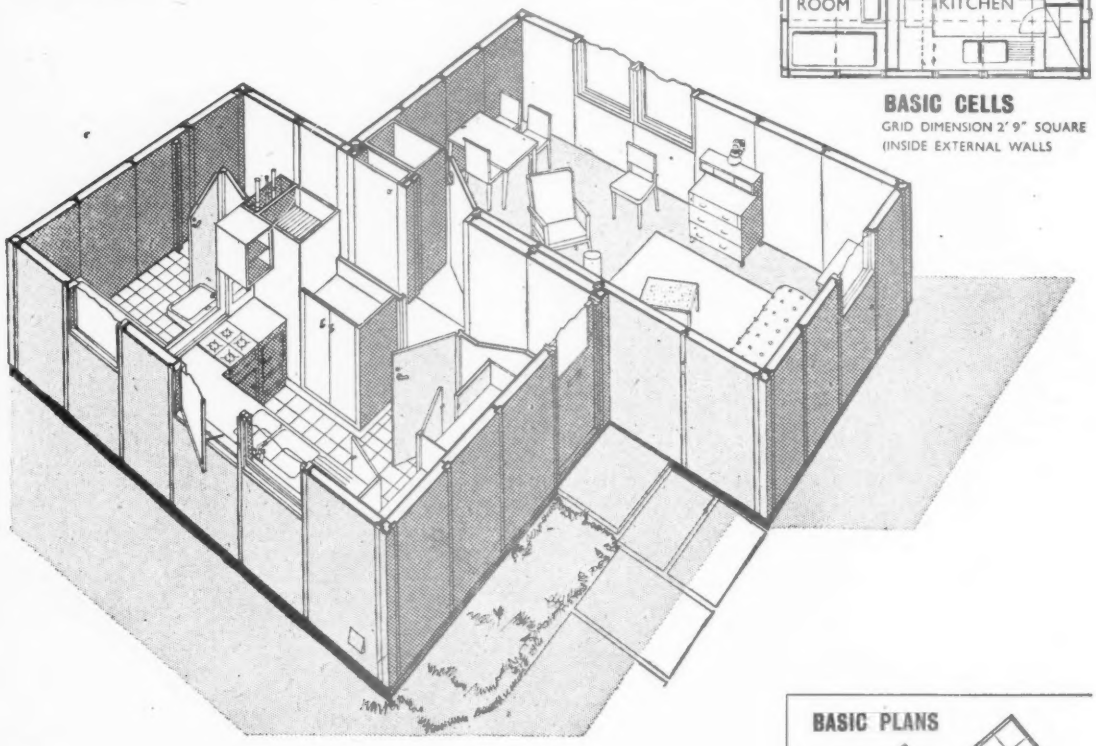
(2) These cells are designed in unit dimensions so that they may be erected in the factory from a number of standard panels. The complete cell can be sent to the site, thus avoiding site work. It is only necessary to construct foundations and to lay drains.

(3) The size of the cell enables it to provide all the rooms normally needed in a small house and by adding to the basic unit of two cells (the living-room with kitchen and bathroom) considerable variation in accommodation is possible.

By varying the arrangement of the panels, when building up the cells, the following rooms can be formed:—
(*a*) living-room (*b*) kitchen and bathroom
(*c*) large bedroom
(*d*) two small bedrooms
(*e*) medium bedroom with dressing-room



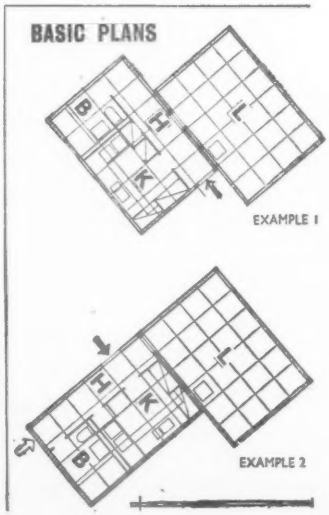
BASIC CELLS
GRID DIMENSION 2' 9" SQUARE (INSIDE EXTERNAL WALLS



(4) The panels are constructed from an extruded light alloy frame with a covering of light alloy sheeting. Panels of the standard size with door and window openings are used for the walls and also for the roof and floor decks. As the complete cell is assembled in the factory, site jointing is avoided and complete control over the construction is attained.

(5) Flexibility to suit the requirements of orientation and access is obtained by varying the placing of the cells. Some are shown here, but further variations are possible. We illustrate two possible arrangements of the basic cells, to form minimum houses. These houses could be enlarged in a number of different ways to form bungalows or two-storey houses with two or three bedrooms.

BASIC PLANS



From AN ARCHITECT'S *Commonplace Book*

NATURE UNDER CONTROL. [*From* TVA : Democracy on the March *by David E. Lilienthal, Chairman of the Tennessee Valley Authority (Penguin Books).*] In the winter of 1942 torrents came raging down this valley's two chief tributaries, in Tennessee and Virginia. Before the river was controlled this would have meant a severe flood. . . But in 1942 it was different. Orders went out from the TVA office of central control to every tributary dam. The message came flashing to the operator in the control room at Hiwassee Dam, deep in the mountains of North Carolina : " Hold back all the water of the Hiwassee River. Keep it out of the Tennessee." The operator pressed a button. Steel gates closed. The water of that tributary was held. To Cherokee Dam on the Holston went the message : " Keep back the flow of the Holston." To Chickamouga Dam just above the industrial danger spot at Chatanooga : " Release water to make room for the waters from above." Day by day till the crisis was over the men at their control instruments at each dam in the system received their orders. The rate of water release from every tributary river was precisely controlled. The Tennessee was kept in hand.

In the House of Commons, Sir Ralph Glyn asked the Chancellor of the Exchequer if he would consult with those responsible in order to CEASE COVERING HISTORICAL MONUMENTS such as Nelson's Column and the Marble Arch with poster hoardings so as to permit visitors to London to see these monuments.

Sir John Anderson: While sympathizing with his purpose, which I trust may be obtainable before very long, I cannot accept his assumption. It is still of national importance that the need for war savings should receive the most effective possible publicity, and I hope the National Savings Committee will continue to make full use of the facilities that have been given for the purpose. Major Petherick: Would he cover the Albert Hall entirely with posters so that no visitor can see it? (Laughter.)

The National Federation of Building Trades Operatives will INSIST THAT SKILLED WORKERS DO THE TEMPORARY HOUSING.

Mr. R. Coppock, general secretary of the National Federation of Building Trades Operatives, speaking at Plymouth, said he could not see at the moment, in consequence of the failure of the Government to plan the nation's housing programme, how it is possible within the next 12 or 18 months to direct their energies to the production of normal housing. Thousands of temporary houses must therefore be produced. Their erection is a skilled operation, and the operatives' federation will insist that skilled workers shall do the work, so that the best possible is done with substitute materials. The federation will do its utmost to provide all the temporary accommodation possible.

The Building Apprenticeship and Training Council is starting an immediate DRIVE FOR APPRENTICES.

The scheme, announced by the Ministry of Labour, and sponsored by the Building Apprenticeship and Training Council, is for five years' training under skilled craftsmen from the age of 15, though boys of 14 can enter as probationers. The wages are already fixed by the various district agreements, and are a percentage, increasing yearly, of the craftsmen's rates. The Government is backing the plan, and has promised all the necessary building materials. Apprenticeship committees have been set up all over the country, and they will make arrangements with local building firms to organize the training work. The attention of all boys about to leave school and those who are attending, or are about to attend technical schools, is to be drawn to this opportunity. It is estimated that an annual entry of 25,000 lads, mostly in the 13-16 age group, will be required for the various crafts.

★

American methods of producing houses here with British plans is MORE PROMISING THAN THE PROSPECT OF SHIPPING HOUSES, says Mr. Jacob Crane.

Mr. Jacob Crane, deputy director of the United States National Housing Agency, has spent eight weeks studying British problems at the invitation of the Ministries of Health and Town Planning, and has had discussions with 17 local authorities. Speaking in London he said: The experience we have had in making pre-fabricated houses would be useful to this country. And American methods for producing houses here with British plans is more promising than the prospect of shipping houses (see page 36).

The cost of houses built immediately after the war is likely to be HIGHER THAN THEIR VALUE a few years later—Mr. Willink.

Mr. Willink, Minister of Health, told the Auctioneers' and Estate Agents' Institute in London that the Government is relying for the most part on the houses built by local authorities in its plans for postwar housing. The great opportunity for private enterprise will come when the cost of building, now at peak level, has been brought down in the course of the next few years. Unless our efforts are to end in disaster, building prices must decline rapidly during the next few years until they are again in line with the cost of living. But the cost of houses built immediately after the war is likely to be higher than their value a few years later.

The Government, it is understood, has decided to accept the offer of APSLEY HOUSE, Hyde Park Corner, from the Duke of Wellington.

It is probable that the house will be used as a museum, and that the Duke will retain the top floor. Long known as *Number one, London*, the house has been the London home of the family since the first Duke of Wellington bought it in 1820 out of £750,000 presented to him after the defeat of Napoleon. It remains much as it was when built by Lord Apsley in 1784. There are between forty and fifty rooms, and candles are still used. Many relics of the Iron Duke are preserved. Among them are three Valesquez pictures he brought to England after the Battle of Vittoria, and it is reputed more than one ton of gold ornaments given him by admirers. The shutters to the house are of bullet proof iron erected by the first Duke when he lost his popularity after a mob enraged by his opposition to the Reform Bill smashed the windows in 1831.

Mr. T. Alwyn Lloyd, F.R.I.B.A., P.P.T.P.I., of Cardiff, has been APPOINTED A MEMBER OF THE CENTRAL ADVISORY COUNCIL for Wales set up under the new Education Act.

He is believed to be the only architect on the Advisory Councils, appointed by the Minister of Education, for England and Wales respectively. Mr. Lloyd is chairman of the Welsh School of Architecture Advisory Committee and a member of the Technical College Committee of the City of Cardiff, being also one of the magistrates for that city.

The chairman of the Bournemouth Beach Committee says that the PIERS CANNOT BE REBUILT FOR TEN YEARS.

Bournemouth Borough Council has consented to the erection of a jetty between the two piers which, like most of the piers on the South and East coasts, have been made unusable by partial demolition. Ald. A. H. Little, chairman of the Beach Committee, said that the piers cannot be rebuilt for 10 years because the materials will be wanted for other purposes. Other reports

Bombed Buildings Abroad—II

The second photograph in this series shows another view of bombed Capua Cathedral, taken by a staff photographer of the USA magazine *Time*. The body of the cathedral is Renaissance work, though founded in 856 A.D. Italian workmen are clearing the débris, from which a number of valuable relics have been salvaged.

about South Coast piers, according to the *Daily Telegraph*, are:—*Brighton.*—When a section in the middle of the Palace and West piers was dynamited in 1941, leaving a 100-yd. wide gap, care was taken to avoid damaging the metal understructure. They could both be repaired within a few weeks. *Sandown and Ventnor.*—Provided it were possible to get highly specialized labour for pile-driving, repairs would not take many months. *Shanklin.* — Dilapidations far greater than at Sandown and Ventnor. *Yarmouth, Ryde and Cowes.*—Piers in operation throughout war. *Portsmouth.*—Piers could be rebuilt in six to 10 months. Scheme in hand. *Torquay.*—Restoration to full use possible in a few weeks.

★

Architectural assistants who desire to relinquish office appointments to take full time training in a school of architecture may compete for THE ARCHITECTS REGISTRATION COUNCIL'S SCHOLARSHIPS.

Special attention is called to the fact that the Maintenance Scholarships in Architecture offered annually for award by the Architects' Registration Council of the United Kingdom are available for architectural assistants working in offices who are desirous of relinquishing their office appointments in order to secure the benefit of a full-time training in one of the Schools of Architecture whose examinations are recognized as a qualification for registration under the Architects' Registration Act, 1931. The Maintenance Scholarships are awarded by the Council annually in June. They consist of a grant for the payment in whole or in part of the school fees and necessary subscriptions, instruments, books, etc., and, where necessary, a maintenance allowance not to exceed as a rule £100 a year. The scholarships are renewable from year to year until the student has finished his or her school training. They are available for students of British nationality who could

not otherwise afford such training, to enable them to attend architectural schools approved by the council. Scholarships will not be granted to students who will be less than 17 years of age on October 1 of the year in which the student makes application. Particulars and forms of application may be obtained from the Secretary to the Board of Architectural Education, Architects' Registration Council of the United Kingdom, 68, Portland Place, London, W.1. Copies of previous examination papers may be obtained on the payment of 6d. The closing date for the receipt of applications for the next awards is February 1, 1945.

★

The Westminster Council welcome heartily the generous intention of the Duke, but this is A PIECE OF SUCH BAD PLANNING that they do not wish to take any responsibility for it—Sir Parker Morris, Town Clerk of Westminster.

Sir Parker Morris was speaking at the Westminster City Hall at the Ministry of Town and Country Planning inquiry into the refusal of the LCC to sanction a £90,000 scheme for building houses to be let to working class people which the Duke of Westminster is prepared to carry out at his own capital expense. Mr. G. D. Squibb, representng the Duke of Westminster, said that the Duke, who owns a considerable amount of property in the city from which he took his title, felt that he, as a good landlord, ought to make some provision for housing members of the working classes who could not afford to buy their own houses. Flats are all very well, but it is not everybody who likes them. The Duke feels that he is performing a public duty by taking upon himself the burden of doing something to alleviate the shortage of small houses in the centre of London. If this form of development is carried out the Duke will be making a present to the community of money which would otherwise be paid by subsidy out of taxes or rates. The site fronted Ebury Street, Pimlico, the only suitable available site on the Grosvenor estate. It was proposed to build 32 houses on an area of 1¾ acre, and they would be equipped on the best modern lines. They would be three-bedroom houses, with hot and cold water in the bedrooms, airing cupboards, and a shed for bicycles, in which activities such as joinery could be carried on. There would be a bathroom. The Duke felt the need of houses to let to the working classes so much that if any part of the site was required for a new road in the next 25 years he would be prepared to give it up with the houses on it and ask in compensation no more than its site value for housing purposes. Mr. George Leslie Head, architect and surveyor, said that the houses gave the best accommodation he had seen. Mr. Kingsley P. Cannon, assistant solicitor, LCC, said that Westminster City Council's objection to the proposal was that it was inappropriate in view of the immediate developments. Sir Parker Morris, Town Clerk of Westminster, said that the Westminster Council welcomed, heartily the generous intention of the Duke, but this was a piece of such bad planning that they did not wish to take any responsibility for it. If the Duke cannot find on his estate a more suitable site for cottages it should still be possible, if he would collaborate with the City Council or the County Council, to obtain another site in Westminster. The City Council will gladly be associated in any good scheme. This site could be used temporarily for Portal houses or prefabricated houses.

HEALTH IN THE HOME

THE Association for Planning and Regional Reconstruction is perhaps unique among planners' organizations. Instead of devising smooth, round schemes into which variable personal coefficients are invited to squeeze their irregular shapes, the APRR begins with two unorthodox assumptions—that individuals exist, and that local requirements differ.

Their report on hygiene in relation to housing, published in this issue, does *not* invite the comment that the camel-driver has a plan and the camel also has a plan. No effort is made to sponsor some proprietary brand of human happiness ; but the report ably sums up common experience in a practical and objective way and indicates available resources and methods in the war against dirt.

Dirt and how to deal with it were among the earliest preoccupations of civilization and religion. In its architectural aspects hygiene may appear, at first sight, less interesting than the spectacular historical tableaux presented by the pyramids, the Gothic cathedrals, the Taj Mahal. But the history of the bath, the privy, the dust-bin and the sewer is the intimate history of civilized man—and no dull story, as Mr. Reynolds showed in his book, *Cleanliness and Godliness*.

The needs discussed in this APRR report are those which occupied the minds of Chalcolithic builders in Mohenjo-Daro (nearly 5,000 years ago) and of the magician who devised the flushed water-closet in the Palace of Minos. Neglect of these needs did more than all the internal wars of the Greeks to undermine their civilization. Rome built her greatness on health and cleanliness ; and the neglect of archaic experience in the Middle Ages left Europe a prey to plague and pestilence. The problems of today are vastly magnified by industrial development, but our assets have grown with our liabilities. The key, however, lies with specialized knowledge and the use that it makes of our greater experience and improved technical equipment. Where knowledge becomes specialized, planning becomes, sooner or later, inevitable ; and emphasis then shifts to the questions of means, direction, control and object.

The APRR is concerned with certain detailed considerations of principles which no one would dispute in theory, though practice has neglected them in millions of homes. A critical study of this report might therefore be a useful beginning ; and on one point, especially, practical steps should be taken. It is maintained in this report that there is still *insufficient co-ordination between the architect and the housewife*. If so, it is an example of the specialist failing to relate the experience of his ultimate client to the technical equipment at his disposal, and the assets of modern civilization are being dissipated by specialization instead of being better exploited.

Tudor England was not notably hygienic. But one has the feeling that the Tudor craftsmen worked under the eye of his wife, who knew the needs of a house, according to her own standards. Be that as it may, a realistic approach demands

that " the hand that rocks the cradle has a finger in the pie "—a recipe for hygiene which must, of course, be considered in a strictly metaphorical sense.

The Architects' Journal
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NOTES & TOPICS

LIBERAL OUTLOOK

In the arguments which followed the recently published Fleming Report on the Public Schools, many people seemed to think that these institutions were still run on strictly Arnold lines. But those who have during the last few years visited any of these schools will have noticed how sharply they have been affected by the outlook of advanced educationalists. What with puppets and hydroponics, visits to Sadlers Wells and pictures from CEMA, life in the Shell to-day is very different from the time when the exit of a form-master was the signal for a shower of stones.

*

It is only a few years since an old Etonian recalled how three friends of his called to see their tutor, and found the study deserted, but a glass of milk and a biscuit on a plate awaited the absent pedagogue's return. Action was immediate, almost automatic. One boy drank the milk, another ate the biscuit, the third broke the plate. How different from, and out of key with, the contemporary relationships of master and boy, in which the pupil treats his instructor as an equal, and to the features of even the sternest master is fixed what Harold Nicholson has called " the ingratiating smile of Montessori Motherhood."

*

Whether all this is a good thing has not yet been fully argued. There are many experts who hold that to make a subject too fascinating is not the part of a teacher. The interesting, they say, is always uninstructive—or, as Alain put it, " Il faut apprendre s'ennuyer d'abord."

*

This advener is certainly not the motto of the University of Wisconsin (Milwaukee Division), judging by its recent bulletin. The programme it offers is full of interest and variety. Here you can learn Polish or Plastics, Aviation or Arithnopology, Real Estate or Bunnies' English, Speech or Sociology, Industrial Psychology or Sand Control. There is a special course, too, called Liberal Education, which includes the Essentials of Home Building (" to minimize possible misunderstandings due to the misinterpretation between owner and contractors of the plans, specifications, and contracts "), Colonial and Early American Architecture, Mental Hygiene (" the nature of personality deviations "), the New Testament and the Synoptic Gospels, Philosophy and the Social Order, and the Religious Poetry of Israel, Commercial Art, Appreciation of Music and Tone-Colour, and Sketching. (" Because of the nature of this last course, no visitors will be admitted except by permission of the instructor.")

*

Evidently Mr. Appey Merrill, the instructor (part-time) in Liberal Education, must be a very busy man, and so, too, must be his students. Picture, if you can, Mr. Milton P. Brooks, a middle-aged graduate of the course, spending a literal evening in his Colonial style residence outside Milwaukee. Owing to a misinterpretation of the plans—Milton missed the first two lectures—the room is a little uncomfortable, but he realizes that this was due to a personality deviation on the part of the builder, who had not, unfortunately, attended the lectures on Mental Hygiene.

*

The walls of the room, in which Milton sits listlessly turning over the pages of the Synoptic Gospels, are hung with sketches which indicate only too clearly why no visitors were permitted during their execution, and a practical demonstration of Tone-Colour comes thudding and squeaking over the radio. Opposite him sits Mrs. Brooks, a woman who loves nice things and frequently admits to it as though to some strange foible. She is ploughing through the Book of the Month and brooding over the social order in Milwaukee. The Lansoms next door, she thinks, as her eyes travel unseeing over Walter Lippman's prophecies, are making quite a place out of that little shack. But that, of course, is no reason why Mrs. Lansom should think she belonged to the same cultural group. Why, she'd probably never heard of Mr. Merrill. Absently she turns the page.

*

Upstairs Junior has fallen asleep over his *Talmud for the Tots*, and in a brilliantly lit hall, not a thousand miles away, Mrs. Lansom is sharpening her pencil as Mr. Merrill mounts the platform. It's the start of the second semester and Liberalism is on the march in Milwaukee.

A MOOT POINT

My legal friends tell me that they have found what at the moment appears to them to be an insoluble problem. It is, very shortly, what happens where two individuals hold a joint tenancy in land and both are killed simultaneously? Apparently, if land is held by two people on a joint tenancy, the survivor takes the whole interest in the land on the death of one. But what if there is no survivor, using that term in its exact sense?

*

The point seems to have arisen because the Court of Appeal has recently decided that people can be killed simultaneously, a fact that the lawyers, with their happy traditional belief that time was infinitely divisible, had never previously thought to be a likely event. But the Court of Appeal said that where evidence showed that members of a family had all been in a

basement when a bomb burst in that same basement, the Court would not assume that any one survived the other.

*

There is the problem. If both joint tenants die simultaneously there is no survivor to take the lot. What happens to the estate? Does it go back to the Crown, as happens when a man dies without a will and without heirs? If not, who does get it? Can the next-of-kin of the two joint tenants put their heads together and split it up?

*

I am not claiming that the point is of fundamental interest, but to me it has all the fascination of a question of mediæval sophistry, such as how many angels can be accommodated on the point of a pin. Except that when a V-bomb goes off, one feels that the simultaneous death of two joint tenants is rather more likely than a meeting of seraphim.

PICTURE POSTCARDS BY NBR?

Here is a suggestion about that hardy institution, the picture postcard. These oblong pieces of thin cardboard, of which one side bears a photographic view, coloured soot or cocoa, are a genuine part of the convention of holiday-making. But the idea needs spruce ing up.

*

Many a time before the war, one twirled the wobbley rack on the counter of some small town or village store, in the vain hope that somewhere was just one card that did justice to the place. The local views were there of course, the nearby falls; river and mountain portrayed with a certain amount of retouching, a happy, golden valley or two, a church so taken that it looked just a church, and some *olde* houses part of which went long ago when the district brand of chain chemists opened a branch. The real body of the place, all that gives personality to it, the architectural dialect which sometimes speaks with such refreshing brilliance, was either not there, or so lost by uninspired photography that you began to doubt your own judgment until faith was restored by seeing the original once more.

This little problem has a definite answer, and it lies in the National Buildings Record. Anyone who saw its exhibition at the National Gallery in June-July of last year or the reproductions in the Journal, cannot fail to have been impressed by what intelligent photography can do to reveal the character of a building, street or place.

*

Could not these photographs, after careful selection, be reproduced in postcard form by the NBR with a Government grant for printing costs? The distribution and sale could be made by the GPO at their post offices throughout the country, the local offices showing the local cards. Alternatively, private publishing firms and retailers could print and distribute them. The NBR would hold the copyright for which no charge would be made, on the understanding that private enterprise guaranteed a minimum circulation, and the cards were sold at a standard price fixed by the Government. Sizes should be laid down, and also the finish and titling. And why not a better proportioned card (say about 4 in. x 6 in.), while we are about it, ready franked for posting?

BEACHCOMBER'S CORNER

The disappearance of the Suet house is due to an unfortunate misunderstanding. The Postfabrication Department of the Ministry of Ways and Means, acting in concert with the Regional Commission and the Development Board, omitted to get a receipt in quadruplicate for the blue prints of a standard sink attachment from the Sink Committee of the Ministry of Fittings, who had applied, through the Roofing Committee, to the Sub-Regional Officer, to have the receipts forwarded by the Planning Officer of the Ministry of Technical Potentialities, to the Area Supervisor of the Board of Inspection, acting with the Correlation of Facilities Board. The whole matter is to be reviewed by the Domiciliary Department of the Ministry of Integration and Practical Application, after discussions with the Board of Tendencies, who have their regional representatives on the Committee of Action.—(Beachcomber in the *Daily Express*.)

ASTRAGAL

LETTERS

London's Housing Needs

SIR,—Your issue containing F. J. Osborn's attack on my recent article on London's Housing Needs has only just reached me.

I also am a humble admirer of the Abercrombie-Forshaw Plan. My criticism is confined to its housing aspect, namely to its failure to estimate the composition of London's future population.

Planners ought to know the number and kind of people expected to live in the dwellings they plan to build. This is so obvious as to sound almost "Pickwickian," if it were not for the fact that we know so singularly little about it. The late J. A. Spender hit the nail on the head in saying: "planning is limited by ignorance." To reduce ignorance in this field is the task of demography, the science of population. Maybe the task is "painstaking," but indispensable it certainly is. To estimate the needs of the immediate future those who prepare housing plans must foresee the number and composition of households to come, and such forecasts must be based not on "all-too-familiar" generalizations, but on precise and detailed study of local conditions on the lines described, for instance, in Mrs. Marianne Walter's letter.

The claim of the TCPA that "at least 80 per cent." of London's "families" should be provided with houses and gardens, has no justification in population facts. I said this in my article assuming that this type of accommodation is primarily required for families with children. But this assumption is only commonsense; it has nothing to do with demography. Suppose we accept Mr. Osborn's criterion: the "general will" voiced through a sample enquiry. Even if hundred per cent. of the "voting" families preferred houses with gardens, we still would have to find out before we start building, what these families are, in order to suit the houses to the particular families. It is here that demography comes in. Demography does not choose the types of buildings, but supplies the necessary data to enable planners to design dwellings, in houses or in flats, to suit the needs of the people.

Whether I succeeded in presenting the case is, of course, for others to judge, but whatever the value of my contribution may be, we should expect the Chairman of the Executive of the TCPA not to ridicule the demographic method, but to grasp and appreciate its value as the only scientific method of estimating housing needs. The TCPA has done much to ascertain what people like or dislike. This may be all to the good, but it is time to start with the more responsible task of finding out what the people really need. As a national forum of expert planning opinion the true function of the TCPA should be, I submit, enlightenment and guidance rather than registry of wishes and votes.

Welwyn Garden City ALEXANDER BLOCK

The TPI Examination

SIR,—The opportunity given by the ARCHITECTS' JOURNAL for the expression of frank opinion in the matter of the 1944 TPI examination is most creditable, and is much appreciated by both successful and unsuccessful candidates.

As an unsuccessful candidate considering the question of sitting again, I would welcome a statement by the Board on the following points.

(1) Would the 1945 TPI examination be held in London if those bombing conditions prevailed?

(2) Will the Institute consider the publication of the relative percentage of passes for 1943 and 1944?

(3) Did the Board lower the standard of marking for the examination in view of conditions?

(4) If the standard was maintained, did the Board consider a more general method of relegation than usually applied?

For an Institute which preaches the doctrine of humanized planning, it is the general opinion that in the matter it has failed to humanize its own conduct of affairs.

UNSUCCESSFUL

SIR,—Astragal's note is a simple and moving story of one of the candidates, who failed to reach the required standard, and I am sure that there are many who will sympathize with the writer. To quote a very well-known radio feature—"I too have a memory" . . . of a week of warning bells, sirens and doodle-bugs; of that examination hall with its vast expanse of glass; of the popping up and down between writing desks when the danger seemed near; of the secret admiration for Mr. Potter sitting at the table at the head of the room, and like most of us preparing to get down and get under, when he might have been far more comfortable at the back of the hall; of the near misses we "enjoyed" on the way to and from the Examination buildings, and best of all, that visit on Wednesday when some of us thought that Jerry had a grudge against all budding town planners. Happy days! My writing was never very good, but I am quite sure that the examiners could see at a glance when the danger was imminent. I know it took a few minutes and perhaps a few lines to get back to legibility. I felt genuinely sorry for those who were experiencing this sort of thing for the first time because very few of us can behave as normal human beings under such conditions. To those who were successful I offer my congratulations. May I add my plea to that of the correspondent for the Board to put us out of our misery and tell us where we failed? It may not be the practice of the Joint Board to disclose this information, but on this occasion there would be some justification.

SUSSEX

Double Glazing

SIR,—Astragal's note on double-glazing expresses a common misconception which seems to need correction. He thinks it strange that in none of the experimental houses yet built has "a window with air-tight, vacuum-filled space between double glazing been tried out." In point of fact, it would be strange if such a window had been tried out for the following reasons:—

(*a*) A vacuum between the glasses is not needed for good insulating effect; in fact, whether there is some degree of vacuum or not makes little or no practical difference. What provides the insulation is the bringing to rest of the air in the space, and this does not even require that the space shall be hermetically air-tight.

(*b*) The object of sealing the space hermetically is the permanent exclusion of moisture by the prevention of interchange of air with the external atmosphere during variations of atmospheric conditions. Many and great efforts to produce a durable hermetically sealed double-glazed unit have been made in recent years, especially in America; but as yet none has been produced at a cost low enough for ordinary domestic glazing.

(*c*) A pane of 26 oz. window glass of fair size (say 20 in. by 40 in.), which is strong enough to withstand the buffeting of a 100 miles-an-hour gale, cannot safely support a permanent pressure-difference of more than about one-fifth of one pound per square inch. This is only about one seventy-fifth of a complete vacuum. So Astragal's "vacuum-filled space," quite apart from its paradoxical terminology, is a sheer physical impossibility. So great is the effect of even very small pressures on areas as large in relation to thickness as window-panes, that it is often necessary before attempting to apply a sealed double-glazed unit to calculate carefully the pressure-differences against the pressure relieving effect of the elasticity of the glass to ensure that the glass will not be broken as a result of ordinary atmospheric variations of pressure and temperature.

The sealed air-tight double-glazing unit is not yet a practical possibility for ordinary windows; nevertheless, as Astragal rightly emphasizes, the advantages of double-glazing entitle it to serious consideration in post-war housing. Fuel-saving comfort, clear vision at all times, and better daylighting by the use of larger window areas without disadvantage are its great virtues. The problem is one for the window manufacturers—the problem of carrying two glasses instead of one in each window frame whether fixed or opening. This must be done so that for all the ordinary purposes of opening and closing, cleaning and so forth, the window is equivalent to a single one; yet it must be possible easily to clean between the glasses when this is necessary, which should be quite infrequently if the window is rightly designed and constructed. In mass-produced articles such as standard windows this is a manufacturing problem of the first magnitude not solved in a day, not put into effect, perhaps in a year. All the more reason then for its earnest consideration now. And let due attention be given to Astragal's note about proper joints and draught checks. The value of double-glazing will be lost unless windows really do exclude draughts.

C. D. LAMB

St. Helens (PILKINGTON BROS., LTD.)

Building Jigsaw

SIR,—Major G. B. J. Athoe, Secretary, Incorporated Association of Architects and Surveyors, has, by his letter, rendered a service to the building professions and industries which is particularly welcome at the present time. His views leave but little doubt that they coincide with those very many who belong to the great and honourable business which comes under the heading of building, which will without any doubt step up from its pre-war third industrial position to the premier for a decade or so after the war.

The views of practically every building man—whether he be craftsman or professional—are that those not fully trained in building should not meddle-in or have any voice in subjects they know nothing about; they are bound to be tripped up and cause muddle.

The only possible exception to this rule is that the highest officers of State, and M.P.s, who act as the guardians and spokesmen for so many people and interests, may perform services of value. But it is certainly not in the national interests for any person connected with a local authority, who is not a building man, to endeavour to control the destinies of thousands of house and property owners when there are competent men who belong to, and could be nominated by, the following Institutes, etc.: the Royal Institute of British Architects, the Incorporated Association of Architects and Surveyors, the Chartered Surveyors' Institution, the Institution of Structural Engineers, the Institute of Builders, the Town and Country Planning Association, the National Federation of Building Trades Employers, the Association of Building Technicians, and, what are equally important, as they represent the vast operative interests, the National Federation of Building Trades Operatives, and the various unions.

These plain facts regarding the powerful interests of building should impress those who endeavour to control it without knowledge of its vast subjects that they are really a menace to the community.

London R. V. BOUGHTON

Garages

SIR,—In the published plans of suggested layouts for the temporary factory-made house provision does not appear to have been made for garage accommodation.

As—during the ten years' life of the house—many of the occupiers are likely to acquire cars, it is surely advisable to reserve a conveniently situated site in every scheme for this purpose.

Chorley Wood CHARLES READ

On August 27, 1942 the Journal published a report called "The Hub of the House" produced by the ASSOCIATION FOR PLANNING AND REGIONAL RECONSTRUCTION and submitted as evidence to the Ministry of Health Central Housing Committee's Sub-Committee on the Design of Dwellings under the chairmanship of Lord Dudley. That report dealt with the planning and equipment of the kitchen. The APRR has now produced a second report under the same general title dealing with the planning and equipment for hygiene in the house. The report is here reproduced in full and falls into three sections—1. Personal Hygiene covering bathrooms and waterclosets; 2. Household Cleaning covering general design for cleanliness, cleaning cupboards and equipment, refuse storage and removal; 3. Laundry work covering methods of home washing and its requirements.

THE HUB OF THE HOUSE

PREFACE

Housewife and Architect

The following points have been noted:— (*a*) There is still insufficient co-ordination between the architect and the housewife. (*b*) Requirements vary from one housewife to another. (*c*) Changes in methods of living (*e.g.*, British Restaurants, communal laundries, etc.) directly influence domestic habits and requirements. (*d*) Family incomes are often insufficient to meet the capital and running costs of the equipment required by the housewife. (*e*) The social and domestic or working aspects must be balanced in order that one may not overload the other. (*f*) Present by-laws are unnecessarily restrictive (*e.g.*, the two-pipe system for drainage; cold water cistern in roof, etc.).

It is hoped, however, that:—(*a*) The Association's work on the Hub of the House is a contribution to better understanding between housewife and architect. (*b*) The housewife's real needs can be ascertained by surveys of domestic habits. (*c*) The mass production of well-designed equipment will go far to bridge the gap between family need and family income. (*d*) The work of the Study Committees of the Directorate of Post-War Building of the Ministry of Works, will result in by-law revision.

Family Requirements

The real requirements of any family as regards size, location and equipment of service rooms in a house depend upon:—(i) The size, ages and occupation of the family. (ii) The family income. (iii) The standard set by the housewife.

General Assumptions

These are:—(i) *Personal Hygiene.*—A bath, lavatory basin and a W.C. represent minimum requirements. (ii) *Household Cleaning.*—Sufficient space and equipment to maintain a fair standard of cleanliness. (iii) *Laundry Work.*—Income and custom influence so directly both what is washed and how to wash that individual study is necessary before determining the location and type of equipment required for the laundry work of any family.

PERSONAL HYGIENE

Location and Space Requirements

Bathroom.—*Location:* The most convenient place is adjoining the bedrooms and in a storeyed house this would mean upstairs. Downstairs may be more convenient where there are farmworkers, or old people, or invalids who sleep on the ground floor. In low cost housing the total area of bedrooms on the first floor may exceed that of the living room, kitchen and entrance hall on the ground floor, and the addition of a bathroom upstairs may lead to an increase of 10 per cent. in the building costs. The economy of a downstairs bathroom may outbalance the convenience of one near to the bedrooms. *Size:* There should be sufficient space for such fittings as are required and adequate space to move in and to keep the place clean.

W.C. and Wash-hand Basin.—*Location:* If the family is small, a W.C. in the bathroom may be adequate, but for all families of four or more a separate one is essential. If the family is of a size composition which demands a first and ground floor W.C., then the ground floor one is best placed near an entrance door. *Size:* There should always be sufficient space for a wash-hand basin together with the W.C.

Fittings

Bath.—*Design:* The full length (5 ft. 6 in. overall) tub is the most usual pattern in this country. Two other types, the shower and the chair bath have advantages in certain circumstances. Both take up less space and require less water (important features in the small house, or where hot water is limited); both have less surface to clean. The shower is not suitable for young children, but undoubtedly has a place in hostels for young people, or in small one-room flats. For a family of mixed ages, the full length bath is best. The chair bath is liked by elderly persons, who may have difficulty in using the full length tub. It is preferable to an abbreviated full length which, for economy in space and cost, is too short and too narrow to use in comfort. Whatever type of bath be used, the base of the bath should be at floor level or slightly higher. A bath sunk to floor level is dangerous to young children and old people often have difficulty in getting out of it. *Position:* For cleaning, the bath is best placed with both sides free. This arrangement, however, requires additional space in the bathroom and the enclosure of three sides of the bath. Dust traps around or under the bath must be avoided, the bath either being sufficiently high from the ground or completely enclosed. The bath should not be placed directly below the window.

Wash-hand Basin.—*Design:* The wash-hand basin in the bathroom should be large enough to be used for some laundry purposes (24 in. by 18 in.), but that in the separate W.C. should be

smaller. Wash-hand basins should be fixed on brackets incorporating towel rails, since the pedestal type involves extra cleaning for the housewife.

Water Closet.—*Design:* The low seated water closet is recommended for its convenience of inspection and maintenance, although it occupies more space. The corbel type, in which the pan is clear of the floor, is a satisfactory pattern, but the wall supporting it must be structurally strong enough to carry its weight. The overall height of the pan from the floor should not exceed 14 in. The medical profession recommends that the seat should slope 1 in. from front to back and also states that the height most commonly in use is unsuitable for physiological reasons; the lower pattern is also better for children. If the W.C. is in the bathroom it should have a lid. *Position:* The W.C. should not be directly under the window.

Additional Bathroom Equipment.—*Taps:* To be placed sufficiently far forward to prevent the enamel surface of the bath from becoming damaged. It should be possible to fill a vessel by standing it directly on the floor of the bath, and not holding it against the side. Any drips from the taps should fall direct on to a plate of suitable material, possibly combined with the water outlet. The swivel-mixer tap is the most useful and convenient type for both basin and bath. *Towel Rails:* To be sufficient to hold the towels for all the household: at least one rail should be heated. *Soap Dish:* To be built in and contain sufficient space for sponges. *Soiled Linen:* A ventilated cupboard for soiled linen should be included if not already provided elsewhere in the house. *Toilet Accessories:* A cupboard should be provided for toilet accessories, including hot water bottles. This could be included with a Medicine Cabinet. *Mirror:* To be placed in a good light. *Shelf:* For tooth brushes and tumblers. *Pegs:* For hanging clothes. *Laundry Accessories:* If laundry is done in the bathroom, cupboard space is necessary for laundry accessories: possibly combined with Cupboard for toilet accessories. *Chair or Stool.*

Notes.—(*a*) Owing to the damp atmosphere of a bathroom the heated linen cupboard should be placed elsewhere. A convenient position is on the first-floor landing. (*b*) Where the water-heater is not of a type suitable for building into the wall, it is essential that there should be easy access to wall and/or floor surfaces behind and beneath it for cleaning away grease and dirt. (*c*) If laundry work is to be done in the bathroom the drain pipes must be suitable to carry away fluff, grease, etc., from laundered garments.

Space Requirements

In addition to a reproduction of Time Saver Standards from the *American Architect*, the drawings show the space requirements of various types of lavatory basin, bath or shower, and W.C., together with the minimum clearances from walls and from adjacent fittings. The length, breadth and height of each fitting has been arbitrarily chosen as representing suitable averages. Combinations are also shown of fittings arranged into rooms of various sizes and shapes. Alternative positions for the door are indicated, and the window can be on any side of the room. All the variations shown in this drawing are not necessarily practicable from the housewife's point of view but a number of possible placings are given from which the most suitable can be selected for the building under consideration.

HOUSEHOLD CLEANING

General

The house must be kept clean in order to prevent deterioration of its substance and fittings, and to maintain the health of its inhabitants. Materials used in the construction and furnishings will spoil if they are allowed to remain without attention. Dirt attracts animals and insects, which are offensive in themselves and are often carriers of disease, while, in a dirt-laden atmosphere, food decays more quickly owing to bacterial and mould infection.

The house and everything in it, whether inhabited or not, is at all times exposed to dust, particles of soot from nearby chimneys, and chemicals discharged into the air which are injurious to many metals and fabrics. In certain neighbourhoods such airborne material may be a serious nuisance. When the house is inhabited, dirt is brought in by every footstep and deposited on the floors and floor coverings. Cooking, washing and laundry work all produce waste material — solid, liquid and vapour—in the form of ashes from coal and wood fires, garbage, dirty water and cooking fumes. Currents of warm air arising from fires, radiators and water heaters attract particles in suspension and deposit them on walls and ceiling in the vicinity. All this waste material can be described as dirt, namely, matter in a place from which it should be removed. The problem of its control and removal is approached through the following means: (i) Planning and design; (ii) Materials; (iii) Ventilation; (iv) The temporary storage of refuse; (v) Cleaning equipment.

Planning and Design

To simplify cleaning, the house and its fittings should be designed so that the minimum of dirt is collected or produced.

Construction.—Adjacent walls and ceiling and floor junctions to be rounded to facilitate cleaning. Windows to be designed so that they can be cleaned from the inside. Adequate recessed door-mats and scrapers to be provided. All doors and cupboards to have flush surfaces. The top of built-in cupboards to be carried to ceiling height. The bottom of all cupboards, especially those which need to be frequently scrubbed, to be 4 in. above floor level and laid with a slight fall towards the front. Any frame to the cupboard doors projecting above the floor of the cupboard to be avoided so that the interior of the cupboard can be easily cleaned. The bottom or floor of all low-level kitchen cupboards and cleaning cupboards, to be of non-porous material, such as tiling. All shelving in kitchen cupboards to be removable for ease of scrubbing. Fireplaces, mantlepieces, bannisters and all other features to be simple in design. Over-elaborate decoration means a multiplication of surfaces from which it is difficult to remove dust.

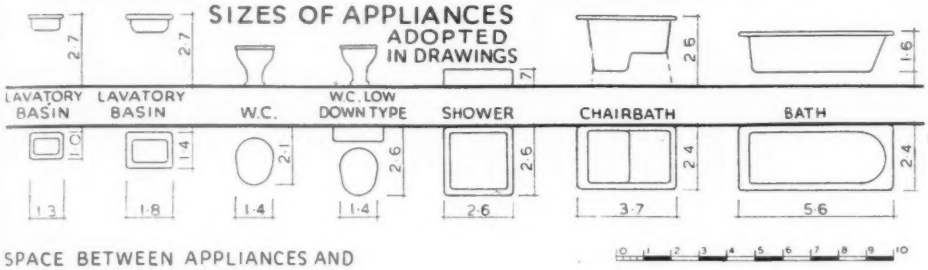
Position of Fittings.—Sinks, baths and basins to be so placed that no part of the wall or floor surrounding or beneath them (except behind fixed panels) is inaccessible for sweeping and cleaning. Where possible, built-in fittings, such as wash-hand basins, W.C.s, and table tops (if no cupboard is built beneath) to be cantilevered from the wall. This greatly facilitates sweeping and scrubbing the floor. Sinks and draining boards should ideally be made in one piece to avoid the unsatisfactory junction between the two, an invariable dirt-trap. When, for economic reasons, two different materials are unavoidable, the draining boards to overhang the sink by 1½ in. with a throating on the underside.

The problem of the junction between sink and wall-face can be approached in various ways. Where space and the shape of the room allows, the sink and drainers can be placed at right-angles to the wall, at a short distance from the wall face. The standard practice in hospitals of fittings having a space between the back of the fittings and the face of the wall has many advantages, but in the minimum size kitchen this space (a minimum of 2 in.) cannot easily be spared. Where the sink itself must be placed against the wall and there is no room for the intervening space, pressed metal sinks should have a pressed metal upstand at the back, carried up the wall face in place of tiling.

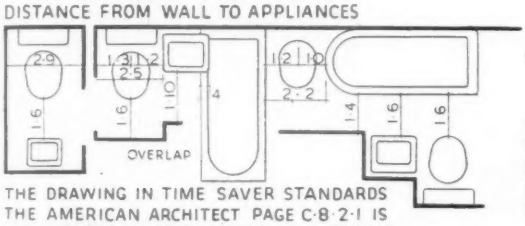
Pipes to be either enclosed in ducts or laid at a height of not less than 4 in. from the floor, and 1½ in. from the wall.

SPACE REQUIREMENTS BATHROOM & W.C.

SIZES OF APPLIANCES ADOPTED IN DRAWINGS



SPACE BETWEEN APPLIANCES AND DISTANCE FROM WALL TO APPLIANCES



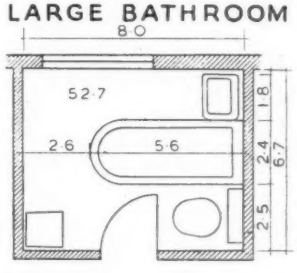
THE DRAWING IN TIME SAVER STANDARDS THE AMERICAN ARCHITECT PAGE C·8·2·1 IS HERE REPRODUCED WITH SMALL ADJUSTMENTS

A GREATER DEGREE OF STANDARDIZATION WOULD REDUCE COST· SIZES SHOWN DO NOT INCLUDE ALL DESIRABLE TYPES · THE OVERALL DIMENSIONS OF FIXTURES DETERMINE THE MINIMUM SIZE OF THE ROOM · ALL WC'S SHOWN HAVE A LOW LEVEL CISTERN · WC'S WITH HIGH LEVEL CISTERNS REQUIRE LESS SPACE

SMALL BATHROOM

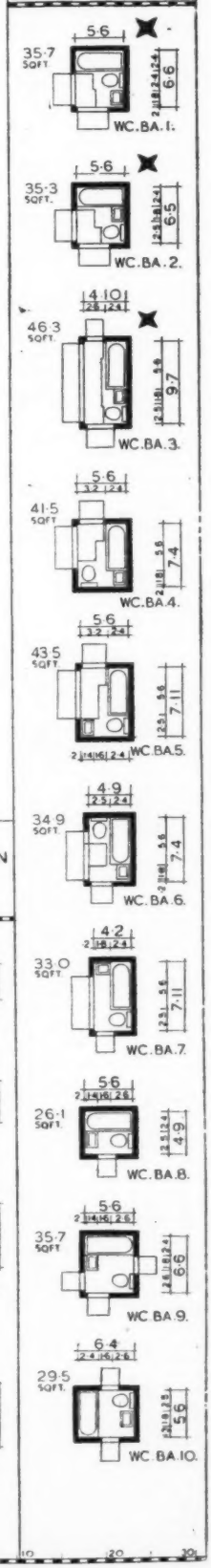
NORMAL BATHROOM

LARGE BATHROOM



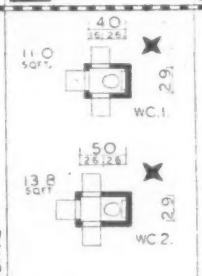
"NORMAL BATHROOMS" ARE USUALLY SHOWN ON THE SMALL SCALE DRAWINGS

WC BATH & LAV. BAS.

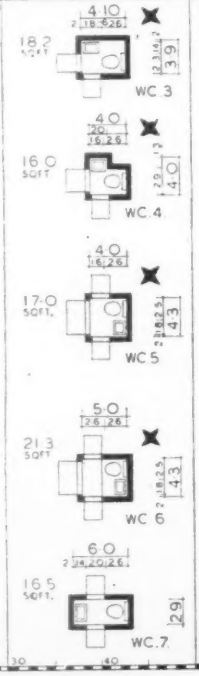


LAVATORY BASIN

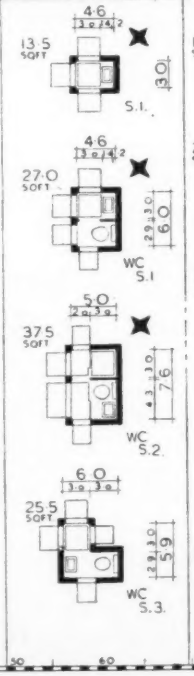
WC



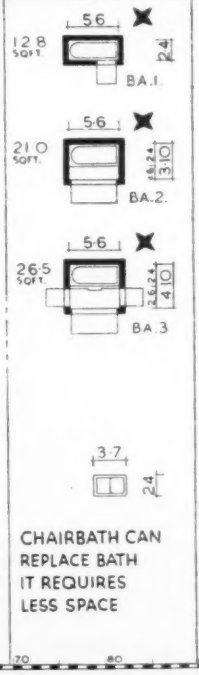
WC LAVATORY BASIN



SHOWER WC LAV BASIN

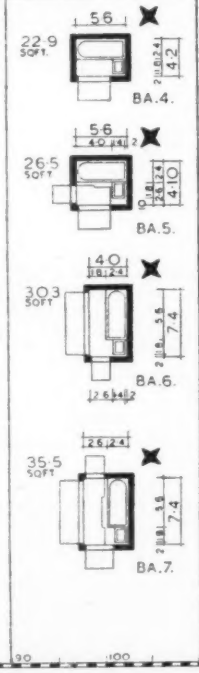


BATH



CHAIRBATH CAN REPLACE BATH IT REQUIRES LESS SPACE

BATH LAVATORY BASIN



BASINS IN BEDROOMS ARE CONVENIENT IN USE BUT MAY ADD DISPROPORTIONATELY TO THE COST OF PLUMBING

SUITABLE FOR INSIDE PLUMBING UNITS BASED ON ONE STACK SYSTEM

SCALE IN FEET

AMERICAN ARCHITECT
Time-Saver Standards

C8.2.2
A.I.A. FILE 29-i

SEPTEMBER 1935 Serial No. 10

BATHROOM PLANNING—ACCESSORIES

PLANNING

Minimum sized bathrooms and toilets require special planning care to assure adequate wall space for essential accessories. In the accompanying drawings the recommended location of each major item of built-in equipment is shown in relation to the principal fixture it serves. The notes serve as a check list of items to be considered.

Towel bars should be ample in number and length to serve the needs of each member of the family regularly using the bathroom, or the number of guests likely to use its facilities before supplies can be replenished. For each person regularly using the bathroom there should be separate bar space for bath towel, face towel, and face cloth; plus an additional rack for guest towels.

Where a dental lavatory is included in the plan, transfer the tooth brush holder shown at the main lavatory and add a shelf and a small cabinet for dentifrices.

The medicine cabinet should be related in size to the type of bathroom or toilet. For guest baths or toilets space is needed only for dentifrices, shaving accessories, toilet preparations and a few simple remedies. A bath serving several bedrooms may require a complete supply of medicines in addition to the above. Every bathroom should have a storage closet for cleaning utensils and supplies and for reserve stocks of toilet paper, towels and sundries.

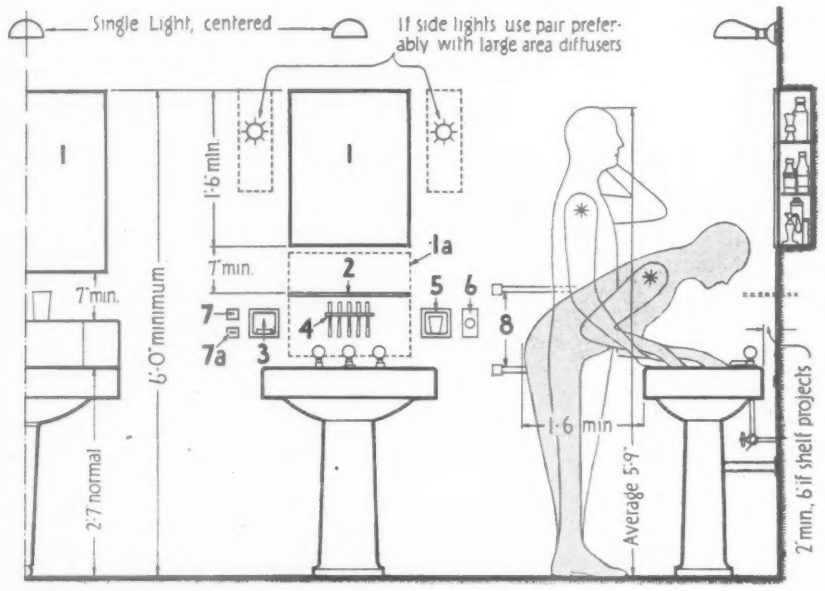
Floor space should be left in the plan of utility bathrooms for portable accessories desired by the owner or needed on occasion for the care of infants or invalids. Consider such items as: scales, stool or seat, infant's bath and dressing table (portable type requires about 3' x 4' of floor space in use) soiled linen hamper, exercise devices, dressing table or vanity with bench, ultra-violet radiation equipment, etc.

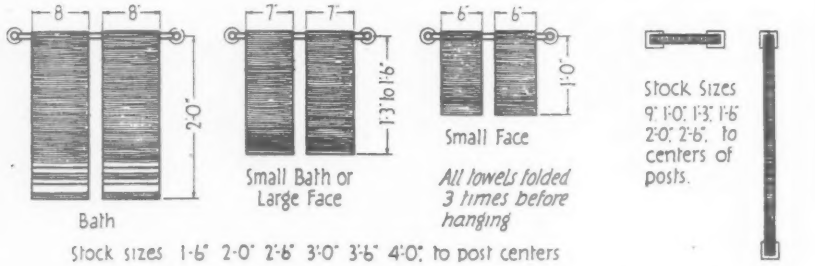
MATERIALS

Accessories designed for use in tiled walls are made in tile sizes (basic units 3" x 3", 3" x 6" and 4¼" x 4¼") and in colors to match wall tiles. Include such units in the tile contract. Similar ceramic or metal units are available for surface attachment.

Towel and grab bars are available in: glass, clear, black, opal, crystal; wood, enameled or covered with pygalin or its equivalent in colors; metal, finished in nickel plate, chromium plate or enamel, or rubber covered.

Shelves are available in clear, opaque, opal or crystal glass; also in metal, usually enameled in colors or black.



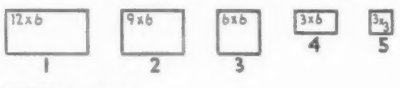


Stock sizes 1'-6" 2'-0" 2'-6" 3'-0" 3'-6" 4'-0" to post centers

TOWEL BARS

GRAB BARS

SIZES OF ACCESSORIES FOR TILING



	1	2	3	4	5	6	7
Toilet paper holders			✓	✓		✓	
Combination holders, soap, brush, tumbler etc.	✓	✓	✓	✓		✓	✓
Units: soaps, tumblers, brush holders, etc.		✓	✓	✓	✓	✓	✓
Bases for towel bars shelf brackets, door stops, hooks, etc.				✓	✓		✓
Grab bars and soap or sponge holders.	✓	✓					

Specials Some toilet paper holders 6"x10"
Radiant heaters 15"x15" and larger.

AT LAVATORY

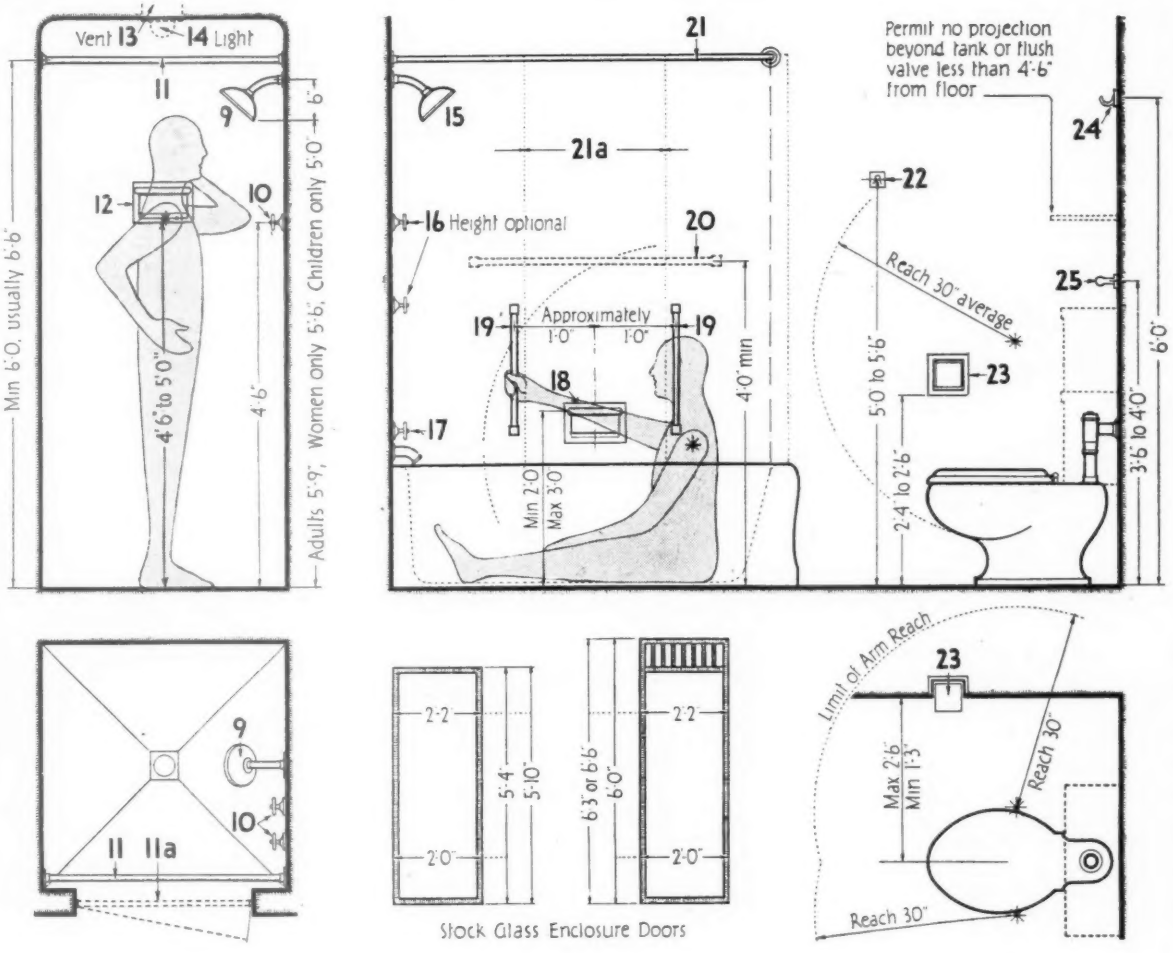
1. **Mirror and medicine cabinet.** Size governed by use of shelf or shelf-topped lavatory; mirror should swing 7" over any shelf. (1a) Fixed mirror desirable immediately above lavatory for children 7 to 14 years
2. **Shelf.** Preferably recessed flush with wall. May be part of medicine cabinet or part of lavatory
3. 4 and 5. **Soap, tooth brush and tumbler holders.** May be separate units or combined: flush or projecting type
6. **Receptacle** for connecting curling iron, automatic stropper, etc. Should be above and to right of lavatory, dead front type
7. **Strop hook.** (7a) Optional; razor blade disposal slot
8. **Towel bars.** May be at level of shelf or lavatory top. In congested space provide upper bar for face cloths, lower bar for towels

C8.2.2
A.I.A. FILE 29-i

AMERICAN ARCHITECT
Time-Saver Standards

BATHROOM PLANNING—ACCESSORIES

Serial No. 10 **SEPTEMBER 1935**



AT SHOWER

9. **Shower head.** Height governed by client preferences: may be overhead for men only

10 **Shower valves** or **mixing valves.** Always place near entrance to shower See plan

11. **Shower curtain rod.** (11a) Optional: **glass shower enclosure door;** place hinges on edge opposite shower control valves

12. **Combination soap and sponge holder and grab bar.** Use draining lip type. May be on rear wall, or side wall opposite shower head

13. **Shower ventilator.** Optional: but desirable to remove steam. May function as vent for bathroom

14. **Shower stall light.** Optional: must be vaporproof fixture

AT BATHTUB

15, 16 and 17. **Shower head, shower controls, bath valves and spout.** Location optional with client See shower stall for recommended heights. Always locate for accessibility from outside of tub

18. **Combination soap** and **sponge holder** and **grab bar.** Draining lip type preferred

19. **Vertical grab bars.** Optional: but recommended

20. **Towel bar.** Do not use over tub equipped with shower

21. **Curtain rod.** Keep within inside face of tub. **(21a)** Alternate, **glass shower enclosure** in place of curtain. Various types, with and without doors, are available

22. **Robe** or **Douche hook.** Height only indicated above; locate outside tub line, near supply end if possible, or near closet

AT WATER CLOSET

23. **Toilet paper holder.** Preferred position indicated in diagram. Optional positions indicated by limit of easy reach of average adult

24. **Bag hook.** Height indicated is for enema bag: hook for douche bag only may be 5' to 5'6" above floor

25. **Towel bar.** Desirable behind toilet only when flush valve equipment or one piece closet is used

NOT ILLUSTRATED

Full-length mirror. Usually on door

Bathroom scale. May be built-in or portable type

Linen hamper. Optional: may be part of cabinet type lavatory, built-in type, or portable

Auxiliary heater. Built-in radiant type desirable. Should project toward open floor space

This refers particularly to the feed-pipe to water or steam-heated radiators. This pipe, being hot for long periods, attracts loose dust which gathers all round it and is most difficult to remove.

Other Features.—Adequate power points to be provided in all rooms and on passages and stairways, for suction cleaner and blower. A too sparse distribution of points increases the danger of wrenching the plug from the socket, while an unduly long flex is inclined to twist and catch if carried through doorways. A suction cleaner is not put to its fullest use if it cannot reach all parts of the house.

Points for a gas or electric poker to be provided for all coal fires in open hearths and enclosed boilers. By using a gas or electric poker the necessity for grate cleaning and fire laying is reduced to a minimum; cinders can be left in the fire-box and cinder sifting, an operation which diffuses fine ash and dust over everything nearby, becomes unnecessary; paper and sticks are not needed for lighting as the strong heat from the poker will ignite coal or coke.

The use of smokeless fuel—anthracite, coalite, and coke—reduces the amount of soot deposit in rooms where there are old-fashioned open fires, but coalite disseminates a fine white ash.

The use of dark coloured paint for decoration, with its resultant loss of light, does not reduce the amount of dirt that collects; it merely makes it less obvious.

Materials

For easy cleaning, materials should possess the following properties:—(*a*) They should, where possible, be homogeneous (*i.e.*, the same right through), so that appearance is not spoiled by wearing due to repeated cleaning. (*b*) They must be easily cleaned, *i.e.*, present a reasonably flat surface that will not hold dust, which is difficult to dislodge from ridges and grooves. (*c*) They should be able to withstand constant friction from brushing or rubbing, the surface remaining unaffected. (*d*) They should be resistant to chipping, cracking and reasonably rough usage. (*e*) In the case of metals, only those should be used which are unaffected by the atmosphere.

In rooms where the air is constantly charged with moisture, the surface of the walls and ceiling should be washable. This applies particularly to wall areas behind and above the bath and sinks, and the cooker. The small backplate usually fitted to gas and electric cookers is insufficient to catch all the condensed water from boiling pans and direct splashes of grease from frying, which are distributed over a large area.

The possibility of washable dadoes, especially in children's rooms, should not be overlooked. All floors and floor coverings (linoleum, etc.) should be treated so that the surface is impermeable to dirt.

Ventilation

Controlled ventilation should be employed in rooms where the air is constantly charged with moisture or with cooking fumes.

Temporary Storage of Refuse

It is hoped to discuss the removal and disposal of refuse more fully in The Hub of the House, Part III—Services. The present section is only concerned with its temporary storage, in or near the house, from which it is eventually removed by the local authorities.

Constituents.—The principal constituents of domestic refuse are:—

Nature	*Possible Utilization*
Non-edible	
1. Dust and ash	Ground fillings
2. Cinders	Heat production
3. Clean or printed paper	Repulping or heat production
4. Glass	Re-use or smelting
5. Iron (tins, etc.)	Remelting
6. Bones	Bone meal or pig food
Edible	
7. Organic garbage	Pig-food

Method of Removal.—Household refuse can be removed by the following methods:—(i) Incineration: destruction by fire in an incinerator or household boiler of all burnable material. (ii) Collection: from bins to dust-cart by the local authority. (iii) Water-borne: refuse is placed in a container which is fixed beneath the sink; from the container it is flushed into a tank beneath and withdrawn by water suction to a central collecting station. (iv) Water-borne: organic garbage is put through an electrically-operated grinder, which is fixed beneath the sink, and pulverised so that it can pass into the sewer and be flushed away. (v) Air-borne: refuse is withdrawn by air extraction through pipes to a central collecting station.

It is assumed that the edible garbage will be kept separately at the point of production and collected for pig-food, so that one container will be required for this purpose and a second one for all other refuse whichever method of removal is adopted.

Location.—Refuse containers should be near the house but not in it. Ideally they should be in a small specially constructed extension to the main building, accessible from the house (kitchen, scullery or internal porch) and also from outside, so that collection can take place without entry into the house.

A good arrangement of this sort is as follows:—Access to the containers from the house to be through circular holes cut in a horizontal surface, the holes to be closed by a hinged lid, with a washable underside, and fitted tightly to prevent the escape of odours. All refuse can thus be emptied into the bins without going out of doors. The compartment containing the bins to be no larger than will conveniently hold the required number, and fitted with a wide external door, so that the bins can be easily withdrawn for emptying. All surfaces of the compartment to be capable of being washed with hot water and disinfectant. Where possible, a floor drain to be provided so that it can be sluiced down. The compartment to be ventilated to the outside air, but proof against entry by rats and flies, and situated so that it does not receive direct sun.

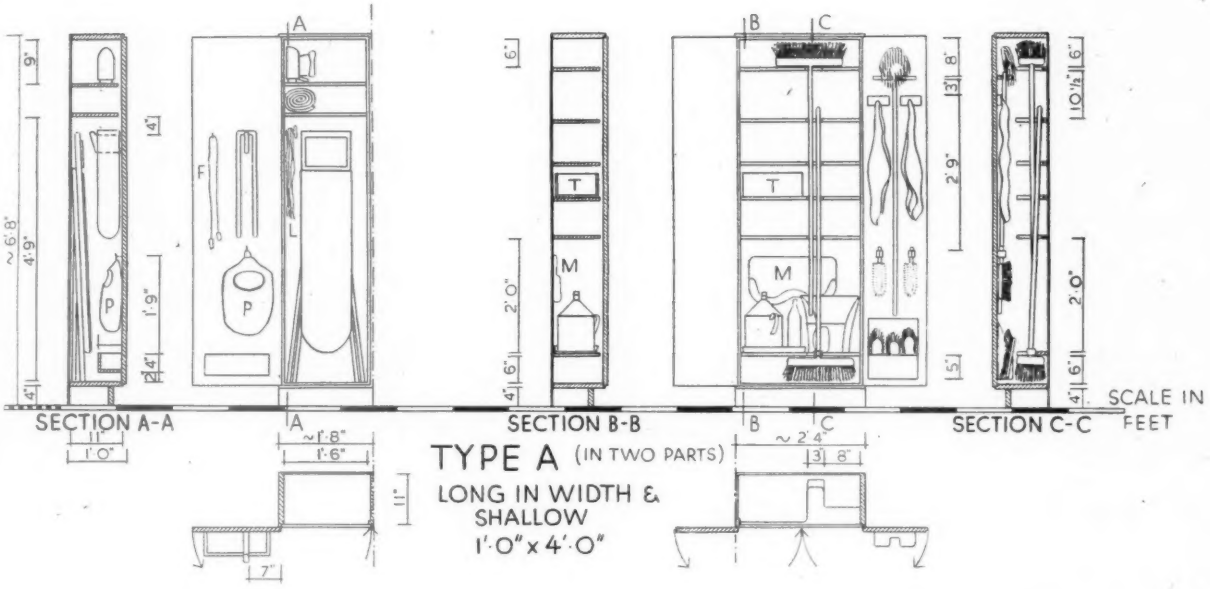
In addition to these containers, one smaller one is needed in the kitchen, for easy access when working.

In a household of only one or two people, or where there is a daily collection, the larger outside containers can probably be dispensed with, and two small ones can be kept in the kitchen, if of suitable design.

Design.—Vessels containing garbage should be seamless, and made of a non-porous and stainless material. A convenient arrangement is to have a cylinder, about 9 in. in diameter and 18 in. in depth, fitted with a detachable strainer reaching to about 6 in. from a rounded base. This may be hooked on to a vertical support built for the purpose beneath the working table top, if adjacent to the sink, or beneath the draining board. The open top should fit closely beneath the board so that no lid is necessary, the board itself acting as a cover. When required, the vessel to be swivelled round from under the board. To empty, it should be lifted from the supports fixed to the upright and the liquid drained off through the detachable strainer before tipping the solid contents outside. Some such receptacle has several advantages:—it will not crack, chip or rust; it is all in one piece; there is no hinged lid or foot pedal, both of which may get out of order; it is off the floor, of great convenience when sweeping; it is at a useful height (just under the table top); it is easily brought into position or pushed out of the way.

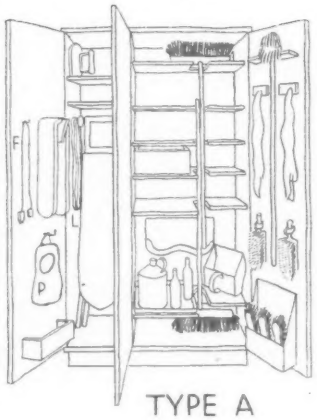
Garbage chutes are not recommended. A chute, leading from the kitchen to outside, or from an upper floor to a lower, is undesirable as it can never be kept properly clean, and foul gases are drawn back into the house.

CLEANING CUPBOARD



TYPE A (IN TWO PARTS)

LONG IN WIDTH & SHALLOW
1'·0" x 4'·0"



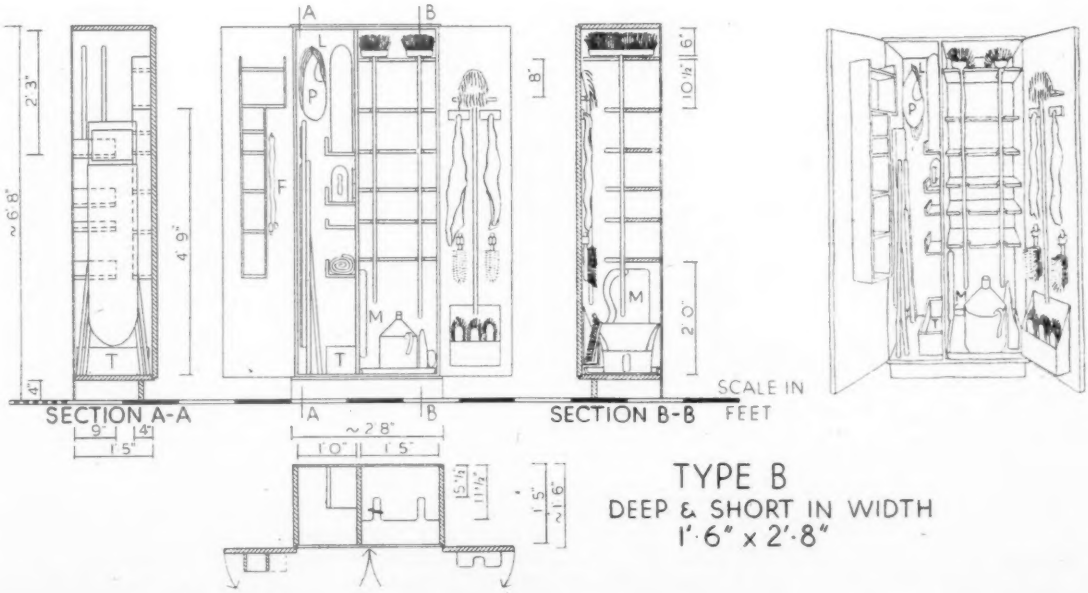
TYPE A

LIST OF CONTENTS

CLEANING SECTION		LAUNDRY SECTION	
2 LONG HANDLED BROOMS (HARD & SOFT)		CLOTHES LINE	L
LONG HANDLED MOP		CLOTHES PEGS	P
2 SWEEPING BRUSHES (HARD & SOFT)		IRONING BOARD	
DUST PAN		IRONING BLANKET	
SCRUBBING BRUSHES		SLEEVE BOARD	
KNEELING MAT	M	IRON	
CLEANING CLOTHS		(ELECTRIC FLEX)	F
WASH LEATHER		STAND FOR IRON	
DUSTERS			
PARAFFIN			
TURPENTINE			
TOOL BOX	T		

ARTICLES WHICH WILL BE ACCOMMODATED ON SHELVING

DETERGENTS & POLISHES (SOAPS, FURNITURE CREAM)	STARCH & BLUE
LINSEED OIL	PRESS CLOTH
CANDLES & MATCHES	CLEAN DUSTERS



TYPE B

DEEP & SHORT IN WIDTH
1'·6" x 2'·8"

Cleaning Equipment

Cleaning equipment consists of appropriate tools and reagents, which should have proper provision for their storage.

Dry, loose dust and small light pieces of refuse can be removed by suction cleaners driven by electric power or propelled by hand. Many electrically driven machines are fitted with attachments which suck in or blow away dust from corners which cannot be reached by a broom. Dust can also be drawn into air-ducts which are built into the wall and conveyed to a central point of collection in the house or group of houses. This is a simple form of district cleaning, since one motor can serve a number of adjacent buildings.

Dirt which has become attached to hard surfaces must be removed by the aid of mild abrasives and grease solvents, applied by hand. Cleaning materials consist of all tools employed in the removal of dirt, and include brushes, cloths, soaps and all other detergents, and also all materials used for preservation, *i.e.*, polishes for wood and metals, including tools for their application (*see illustration*).

Space Requirements of Equipment.—Suction cleaners and mechanically driven floor polishers, owing to their size and weight, should be kept in a special cupboard or recess, possibly beneath the stairs. This recess may be enclosed or not. The reason for separating them from the other cleaning materials is that the cleaning cupboard is best designed as part of a unit range of equipment and, therefore, provided with a plinth raising the floor of the cupboard from the ground. The awkwardness of lifting mechanical equipment, even a few inches, is a sufficient argument for suggesting an alternative place where there is no change of floor level, so that the equipment can be easily wheeled out. If this recess is in the kitchen or utility room it may also provide storage space for a step-ladder.

All other cleaning materials should be kept together in a cupboard specially designed for them. It may be convenient to include here a special branch of cleaning accessories, namely, the shoe-cleaning outfit, if this has not been provided for elsewhere. The contents of the cleaning cupboard are, for the most part, small though numerous and two suggested shapes are shown in the drawings.

Since many reagents are poisonous, and broomheads and brushes are germ-laden, no cleaning materials should be associated with food. The kitchen is not recommended as the most suitable place on this account. If the cleaning cupboard must be placed in the kitchen it should be near the door. A better position is in the hall or passage, where it is easily accessible to all parts of the house.

LAUNDRY WORK

General

Washing is done at home for preference or because there are no alternative means such as a communal laundry service or a convenient municipal or privately-owned laundry.

The communal laundry is at present confined to urban areas. Its possibilities have not yet been fully developed, but undoubtedly it is an advantage to housewives who cannot afford to send laundry out, and who are unable to do the work at home through lack of sufficient space and equipment. The housewife takes the clothes to the laundry where she washes them herself with the mechanised equipment provided. Much time, fuel and labour is thereby saved, and the equipment, shared by a group of people, is used to full advantage. It has certain disadvantages: the clothes have to be carried there, and it is not always convenient to leave the house, the kitchen or nursery for several hours at a time.

Washing that can be sent out to a municipal or privately owned laundry, relieves the housewife of part or all of the work connected with it. The main objection to sending clothes to the outside laundry is that it is comparatively expensive; hard on the clothes, which cannot receive individual care; clothes are liable to be lost and they are away for a number of days.

The housewife may still prefer to wash at home, even when both the services described above are available to her and this report deals only with home laundering and the facilities which can be provided.

These are discussed under the following heads:—(*a*) What to wash; (*b*) How to wash; (*c*) Space Requirements; (*d*) Where to wash.

What to Wash

Materials to be washed may be classified in three groups:—

A. Delicate woollen and silk clothes and stockings, which need no boiling or starching.

B. Personal clothing of all kinds (including babies' napkins), kitchen towels and tea-cloths which need frequent washing.

C. Clothes requiring cold water starching and household linen, sheets, towels, tablecloths, loose covers, curtains, etc.

Whether or not any special provision is made for laundry work, articles in Group A will probably be washed at home in every house, as they are fragile and need special care. For the small urban house, provision should be made for Groups A and B but not necessarily for Group C, as outside laundry facilities are usually available and household linen is inconvenient to wash and dry in a small space. For the country cottage provision should be made for all three.

How to Wash

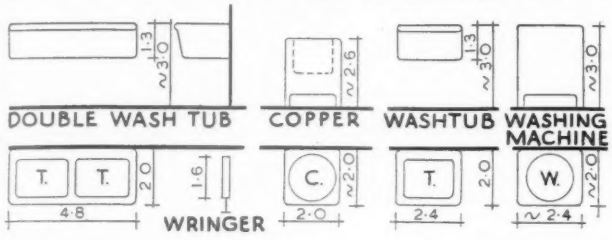
Laundry work consists of two main operations—washing and drying. The term washing may include the processes of soaking; washing (in its proper sense); rinsing; starching; blueing; wringing. Drying may consist of drying; damping; ironing; folding; airing. Whereas methods of drying vary little from one housewife to another, the method of washing varies widely in different districts, and even in different income groups in the same district. This is mainly determined by the equipment available.

Charts 1–7 show seven different methods of washing, together with a brief indication of the sequence of the washing operation for the various categories of laundry work. It is noteworthy that, whatever the method of washing, the space requirements of the washing process remain the same, *i.e.*, some 9 ft. by 2 ft. on plan. A greater area is required only where both the Scottish double sink and a boiler are included. The plan area then becomes 11 ft. by 2 ft. (Chart 2).

Notes.—The following notes are of general interest in any study of washing at home:—(i) The sink or container in which woollens, silks and rayons are washed should not be fitted with a plug attached to a chain since there is a danger of the chain becoming entangled with the fabric and thus causing damage. The pillar type of combined plug and overflow is to be preferred. (ii) A washing machine thoroughly cleans all fabrics and its mechanical action is less detrimental to clothes than is hand rubbing. But the washing machine cannot distinguish between lightly soiled and very dirty parts. Very dirty parts should, therefore, be hand rubbed either before or after machine treatment. (iii) In hand washing woollens and silks are squeezed gently in water at a temperature of about 100 degrees. Cottons are, however, rubbed vigorously in water at a higher temperature. (iv) The raising of the temperature of the water in which clothes are being washed is necessary to increase the efficiency of the detergent and to sterilize (or, more correctly, pasteurize) the clothes, and so destroy bacteria and body parasites. It is doubtful whether a prolonged period of boiling contributes anything to the cleansing of the clothes since the soaps generally available in England attain their highest efficiencies at temperatures in the neighbourhood of 180 degrees, that is about when the water starts to bubble. (v) The size of sink or container for the hand washing of clothes should be 20 in. by 14 in. by 8 in. internally, and the capacity of the washing machine or copper should be not less than 8 gallons.

SPACE REQUIREMENTS: LAUNDRY

SIZES OF APPLIANCES ADOPTED IN DRAWINGS & KEY.



IN ADDITION ENOUGH STACKING SPACE IS REQUIRED (FOR AT LEAST THREE BOWLS) SUCH AS A TRAY OVER BASIN OR BATH, FLAT TOP OF SOILED LINEN CUPBOARD OR LOW DRYING CUPBOARD, FLAT LID OF WASHING MACHINE

THE POSITION OF WASHTUB AND COPPER OR WASHING MACHINE ARE INTERCHANGEABLE

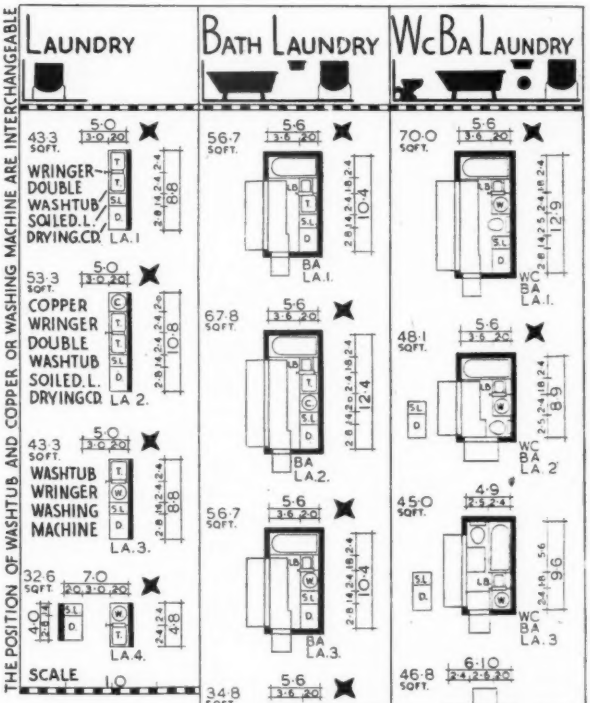
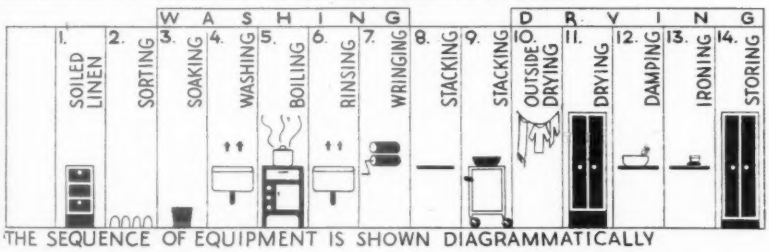
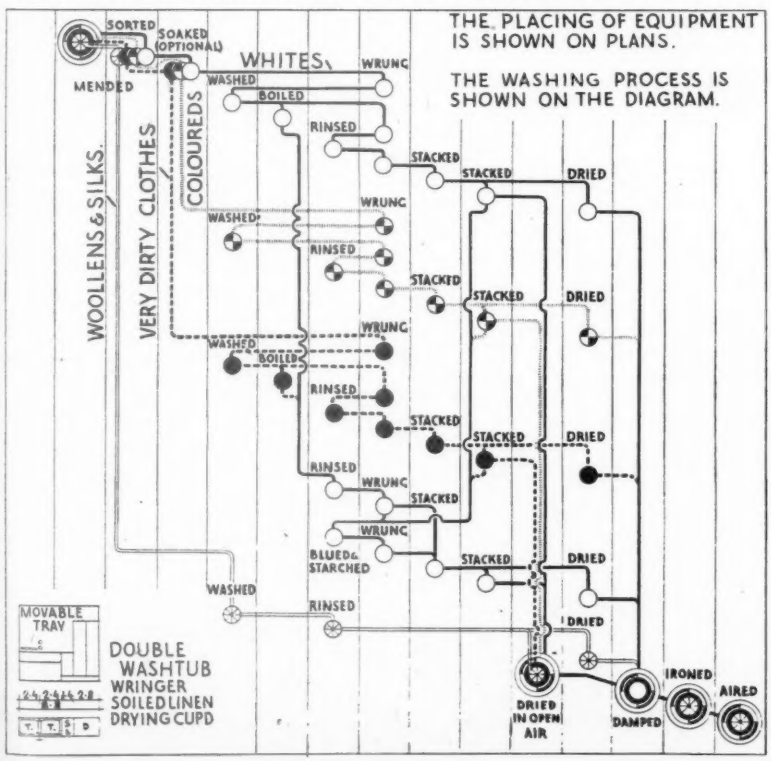


CHART I.

WASHING (4) BOILING (5) RINSING (6) WRINGING (7) CAN BE DONE EITHER SEPARATELY OR TOGETHER BY SPECIALIZED WASHING MACHINES



THE SEQUENCE OF EQUIPMENT IS SHOWN DIAGRAMMATICALLY



KEY

DOORS MAY BE PLACED ANYWHERE ALONG THE PORTIONS OF WALL LEFT WHITE.

SPACE NEEDED FOR THE MOVEMENT OF ALL DOORS

A. DOORS CAN OPEN OUTWARDS ONLY

B. DOORS CAN OPEN EITHER WAY.

NB. NO POSITION OF WINDOWS IS SHOWN AS THEY COULD BE ALMOST ANYWHERE ALONG THE WALLS.

NOTES ON ITEMS (7)(8)(9) ON LAUNDRY CHART ABOVE.

7 THE WRINGER IS USUALLY PLACED BETWEEN THE WASHING AND RINSING APPLIANCES.

8. WITH THE WRINGER IN THIS POSITION THE CLOTHES AFTER THE FINAL WRINGING ARE DISCHARGED FROM THE ROLLERS ONTO A TRAY PLACED OVER THE WASHTUB OR ONTO THE FLAT LID OF THE WASHING MACHINE

9 IF DRYING FACILITIES ARE NOT CLOSE AT HAND A BASIN OR BASKET IS REQUIRED TO HOLD THE WRUNG WASHING.

Space Requirements

Soiled Linen Container. — For ease of access the soiled linen container should be located in one of the communal spaces of the house, *i.e.*, bathroom, landing, alcove or laundry. It should be large enough to hold all linen, including that which is sent out. It may be portable or may take the form of a built-in cupboard. If the soiled linen container is to be built-in, it is important that it be constructed of a non-absorbent material which can be washed with boiling water and should only be placed in the lower part of the linen cupboard if it can be adequately insulated from the heated upper portion. In many of the drawings showing space requirements for laundry work, a soiled linen container is included, the top of which would form an additional worktop.

Sorting.—The clothes, on removal from the soiled linen cupboard, are usually sorted into various heaps on the floor according to the washing process through which they will pass.

Stains which need to be removed before washing should be attended to immediately after sorting. The most convenient place is a table near the sink, on which can be placed reagent bottles and the articles needing attention.

Soaking.— The over-night soaking in water of certain articles: (*a*) loosens dirt, (*b*) dilutes stains, (*c*) partially or completely cleanses, provided suitable reagents are added to the water. Soaking can be done in any sink or basin, or in any portable vessel that is free from rust.

Washing.—In addition to equipment, such as sinks, washing machines, etc., many small accessories are required in connection with the laundry process. Broadly speaking, these fall into two categories, those connected with:—

(*a*) The washing process, *e.g.*, all reagents, which include stain removers, detergents, etc.

(*b*) The drying and finishing processes, *e.g.*, sprinkler, clothes line and pegs, ironing and sleeve board, irons, press cloths, etc.

Should washing be done in the bathroom, the washing accessories required should be housed in a cupboard in the bathroom, the drying accessories being located at ground floor level in a special laundry cupboard or in part of the cleaning cupboard.

Rinsing, Wringing and Stacking.—To remove the soapy water, clothes should be put through at least two rinsing waters. The sink or a basin may be used for rinsing and it should be placed next to the washing machine or wash-tub. The clothes are wrung between each rinse.

Wringing is done in the hands or by hand-operated or electrically-driven wringers. These save much labour but are unsuitable for fabrics and garments with fastenings which cannot be put through rollers. The wringer should be fixed to the edge of the wash-tub or washing machine so that the clothes are discharged on to the adjacent rinsing sink, the soapy water being returned to the wash-tub.

A third method of wringing, that is suitable for all fabrics, is the spinning centrifugal dryer, and it should be noted that a machine designed for the removal of moisture by centrifugal force can also be adapted for the purposes of washing and rinsing, thus allowing all the operations to be carried out in the one apparatus (Chart 7).

After the final rinse the clothes are discharged into an empty sink or on to a flat surface, *e.g.*, a table top placed temporarily over the rinsing sink or over the washing machine. Clothes are stacked on this surface prior to hanging out to dry.

Blueing.—White clothes are put through a suspension of laundry blue in cold water. This can be done in the rinsing sink or in a hand-basin prior to the final rinse.

Starching.—Cottons and linens, which need stiffening, are put through a solution of boiled starch. This is done after blueing and is the last process before hanging out to dry.

Drying.—Drying can take place:—

(*a*) *In the open air.*—Under proper conditions this is the best method of clothes drying since the actions of both sun and frost help to disinfect and whiten the clothes, dispensing with the need for strong bleaching powders and chemicals which rot and destroy fabrics if used continuously. The clothes line should be situated preferably over grass so that, should clothes become detached from the line, they do not fall on a dirty surface. The umbrella type of clothes dryer provides for a large amount of washing in a restricted ground space. Under certain circumstances, *e.g.*, flats, roof drying may be convenient. Suitable drying days are, however, infrequent in towns on account of the smoke-laden atmosphere which often prevails.

(*b*) *In a heated drying cabinet.*—The drying cabinet should be situated in or near the room in which washing takes place in order to avoid undue handling of wet clothes.

The design of a drying cabinet, its size and the method of clothes hanging adopted is influenced by whether the cabinet is required for fast drying or slow drying ($\frac{3}{4}$ hour—6 to 8 hours).

Obviously the fast drying cabinet requires a larger heating element; also for economy in operation, it is necessary to recirculate a proportion of the warm air and, for efficiency in use, it is necessary to extract vapour. A fan is thus an essential adjunct to a quick drying cabinet.

In the normal small house the clothes washing process can be organized so that the washing takes place on one day and the finishing processes on the next day. Clothes drying can, therefore, take place overnight. In view of the fact that the drying process in domestic laundry work does not have to keep pace with the washing process, it would appear that for housing work the slow drying cabinet is to be preferred because of its lower running costs. A slow drying cabinet requires no fan and a source of heat equal to only 1 kilowatt.

As regards methods of heating, the fast drying cabinet it best heated by electricity or gas but for the slow drying cabinet a heated coil is equally suitable. Where gas or electricity are used the heating element must be screened so that if clothes fall off the drying rails neither burning nor scorching occurs.

In the small house a heated pipe coil, run off a boiler is probably the most economical arrangement. A gas or electric heating element is, however, convenient for summer use.

Damping.—Clothes that need to be ironed while damp should be allowed to dry thoroughly, then damped all over, rolled up and allowed to rest for several hours before ironing. The alternative is to iron them when they have reached the exact required stage of dryness, but this is not always convenient, especially if clothes are dried out of doors, when drying is liable to be uneven. For damping they require space on which they can be laid out flat so they may be sprinkled evenly with water. The table top which has been used for stacking is suitable for this.

Ironing.—Ironing may be done on any firm unpolished surface, *e.g.*, the kitchen table, or a specially constructed ironing board. Irons include the ordinary flat iron, heated on a coal range, coke boiler, oil stove or gas ring; and irons heated by gas or electricity, the most efficient being the thermostatically controlled electric iron. Flat irons should be kept oiled and in a dry atmosphere. The space requirements of all ironing equipment has been considered in the cupboard for laundry accessories. If household linen is being laundered at home, electric rotary irons and presses may be considered.

Airing.—This may be carried out in the drying cabinet or in a heated linen cupboard or in a folding electric airer. The heated linen cupboard should not be placed so that the contents are exposed to a damp

The Basic Requirements of DOMESTIC HOT-WATER SUPPLY

REQUIREMENT	CENTRAL SYSTEM		LOCAL SYSTEM	
	BACK BOILER	DOMESTIC BOILER	ELECTRIC STORAGE	GAS GEYSER
BATH — Large supply at infrequent intervals day or night, with possibility of following baths.				Excellent
WASH BASIN — Small supplies at irregular intervals day or night.				Excellent
SHAVING — Very small supply of very hot water at infrequent intervals.				Excellent
KITCHEN SINK — Moderate supplies at frequent intervals. Day only.				Excellent
COOKING — Small supplies of very hot water. Day only.				Excellent
CLOTHES WASHING — Large supplies of hot water on certain days only.				Excellent
SUNDRIES — Illness, hot water bottles, cleaning etc. Very hot water day or night.				Excellent

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THE USE OF WASHING MACHINES
CHARTS SHOWING THE WASHING PROCESS

2. WASHING PROGRESSES AS ON CHART I. BUT A COPPER IS USED FOR BOILING

COPPER
DOUBLE
WASHTUB
WRINGER
SOILED LINEN
DRYING CUPD

3. WASHING PROGRESSES AS ON CHART I. BUT A WASHING MACHINE IS USED WHICH CAN WASH ONLY

WASHING
MACHINE
WRINGER
WASHTUB
SOILED LINEN
DRYING CUPD.

NOTE ON CHART 4 TO 7
FOR DRYING IN DRYING CUPBOARD, DAMPING, IRONING AND STORING SEE CHART I.

NOTE ON 3 & CHART 5 RINSING IS IMPRACTICABLE IN ANY WASHING MACHINE WHICH IS NOT CONNECTED DIRECTLY TO DRAINAGE

CHART 4 WASHING MACHINE WHICH CAN WASH & BOIL

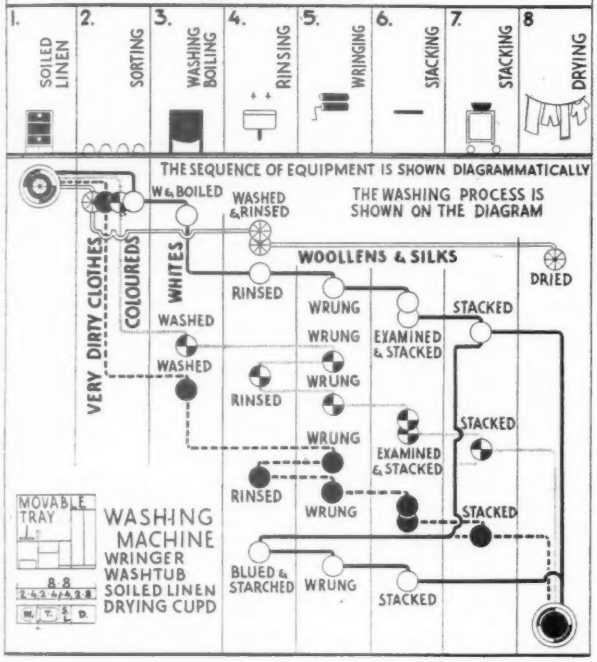


CHART 5 WASHING MACHINE WHICH CAN WASH & RINSE

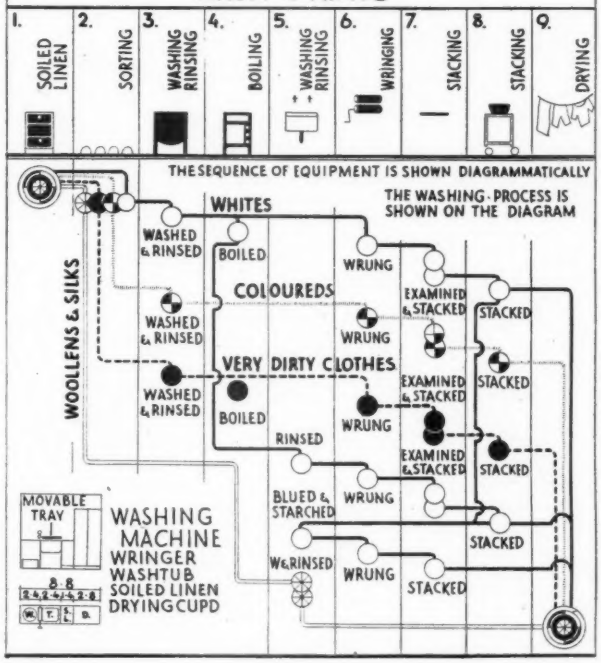


CHART 6 WASHING MACHINE WHICH CAN WASH, BOIL & RINSE

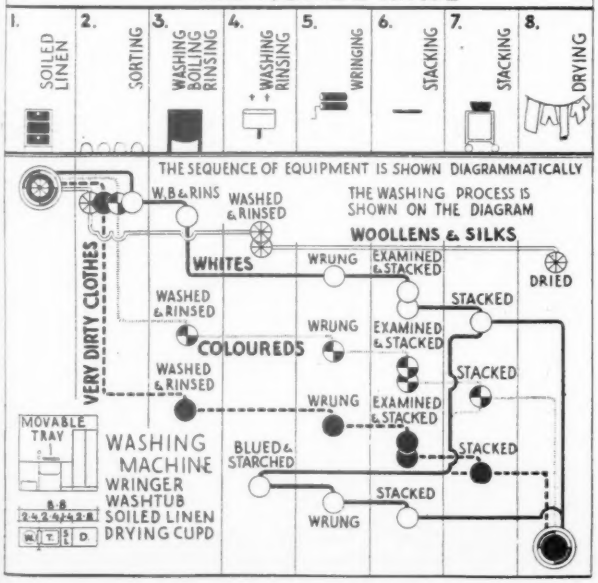
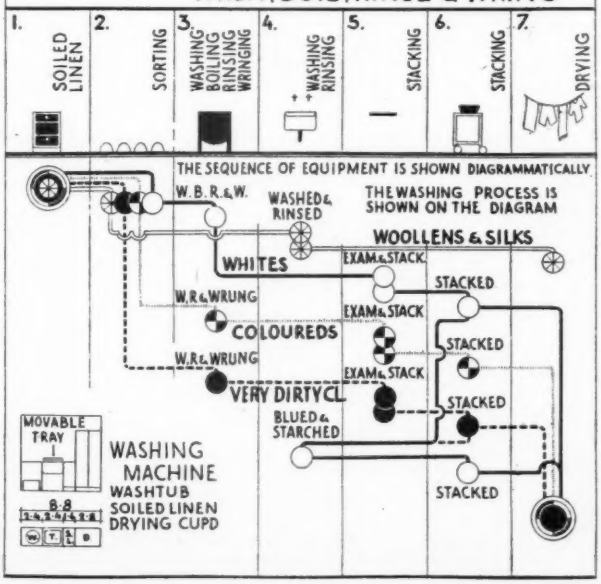


CHART 7 WASHING MACHINE WHICH CAN WASH, BOIL, RINSE & WRING



atmosphere. It may be on a landing or as part of a room. Its design should provide for long, shallow, slatted shelves enclosed by sliding doors. The shelving should be arranged so that circulation of air can take place throughout the cupboard, and spaced so that large articles—blankets, etc.—can be easily accessible.

Where to Wash

Four positions in the house may be considered as suitable for laundry work. The selection depends on:—(*a*) The location of the room in the house. (*b*) The nature of the equipment.

These four positions are:—(i) Special laundry or utility room. (ii) Bathroom. (iii) Back kitchen or scullery. (iv) Kitchen.

Special Laundry or Utility Room.—This room is common in many American small houses and is becoming popular in this country, especially where all work is done at home. It may take the form of a part of the main kitchen, divided by a low partition or working surface of some kind. This partition enables the housewife to keep an eye on the kitchen or the children.

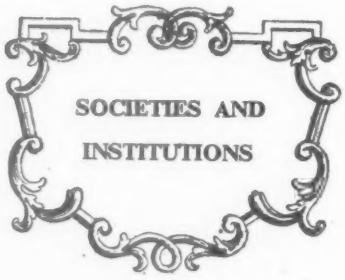
The advantages are:—(i) All laundry apparatus can be housed and arranged in the most suitable way for labour saving. (ii) Sink and plumbing arrangements can be installed jointly with the kitchen sink. (iii) Ventilation can be installed to extract all steam away from the kitchen and the rest of the house. (iv) The washing apparatus is away from store cupboards and food.

Bathroom.—The bathroom should only be used for laundry work in flats or one-storey houses, unless an adequate drying cupboard is provided. The advantages of washing in the bathroom are:—(i) The soiled linen can be already collected there, or nearby, in the cupboard provided. (ii) The existing wash-hand basin can be used for washing. (iii) All laundry reagents, many of them poisons, are out of possible contact with food.

Back Kitchen or Scullery.—Advantages are that the housewife is within easy reach of the kitchen and the apparatus is in most houses away from the store-cupboards and food and yet the cooker is nearby if required for boiling. In an old house this back kitchen may be suitable for conversion to a utility room.

Kitchen.—Arguments in favour of laundry work in the kitchen are:—(i) The housewife can attend to other duties simultaneously, such as answering the door, cooking a meal, looking after children. (ii) In the absence of a washing machine, and special clothes boiler, the existing sink and the cooker can be used for washing and boiling.

Arguments against laundry work in the kitchen are:—(i) It is undesirable to sort and wash soiled linen and clothing in close contact with food. (ii) The warm air becomes charged with moisture from the boiling clothes and permeates the store cupboards, larder and vegetable racks.



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

Jacob Crane

January 2, at 66, Portland Place, W.1. Talk to the RIBA on AN AMERICAN LOOKS AT BRITISH HOUSING, by Jacob Crane, Urban Development Director, US National Housing Agency.

J. Crane: For our cities, and for cities in other countries, I wish we had some reasoned method for determining the type of physical structure which would be the best all around in any given situation. I wish we had some method of computing and balancing the social-economic factors to guide policies—for example, on centralization versus dispersion. You are certainly feeling your way toward such methods. Perhaps they have not yet crystallized either here or in the USA. It may be that the Soviet Union is ahead of us here. This seems to me one of the many points where world-wide exchange of experience will help us all to resolve some of the most basic and obscure problems. I have the feeling that we are trying to cure where, in fact, we have largely to create anew. The social economics of housing—home and communities—constitute a central consideration and major force.

I have been impressed by the importance of the rôle assigned by government, central and local, and by the major responsibility which government assumes in Britain. To a greater degree than at home, government seems to be considered the agent of the people, the agent to which both private enterprise and public enterprise look for the sponsorship and assistance needed to do what the community wants done. On this matter there seems to be relative harmony and a mood of tolerance and co-operation. Conversely, I may say that, to a stranger, the multiplicity and complexity of statutes and relationships are quite perplexing.

It appears that the first few hundred thousand of new houses have to be secured by whatever are the quickest methods in the light of the shortage of manpower and of certain materials. Of course, that is the justification of temporary houses. Otherwise, temporaries mean trouble and waste, and the local authorities seem convinced of that. I have been told that the last of the temporary houses built to meet the emergency after the fire of 1666 were demolished only two years ago.

Now, there can be no doubt that US is in the mood to help in every possible way with the solution of the present problems in Britain. But there are several factors which are undoubtedly being weighed by those primarily responsible. We have a great shortage of homes in America. Materials and manpower and transport cannot be taken away from essential war production. Shipping space is needed, first of all, for war material and for relief supplies. Many other countries need houses or material for shelters. It takes time to assemble and ship houses over long distances. All told, I think we have to face the situation realistically, and I do not consider the prospects too good for this winter and spring. By early summer, we may well have our own production in better shape, and I have no doubt we shall then be able to help you.

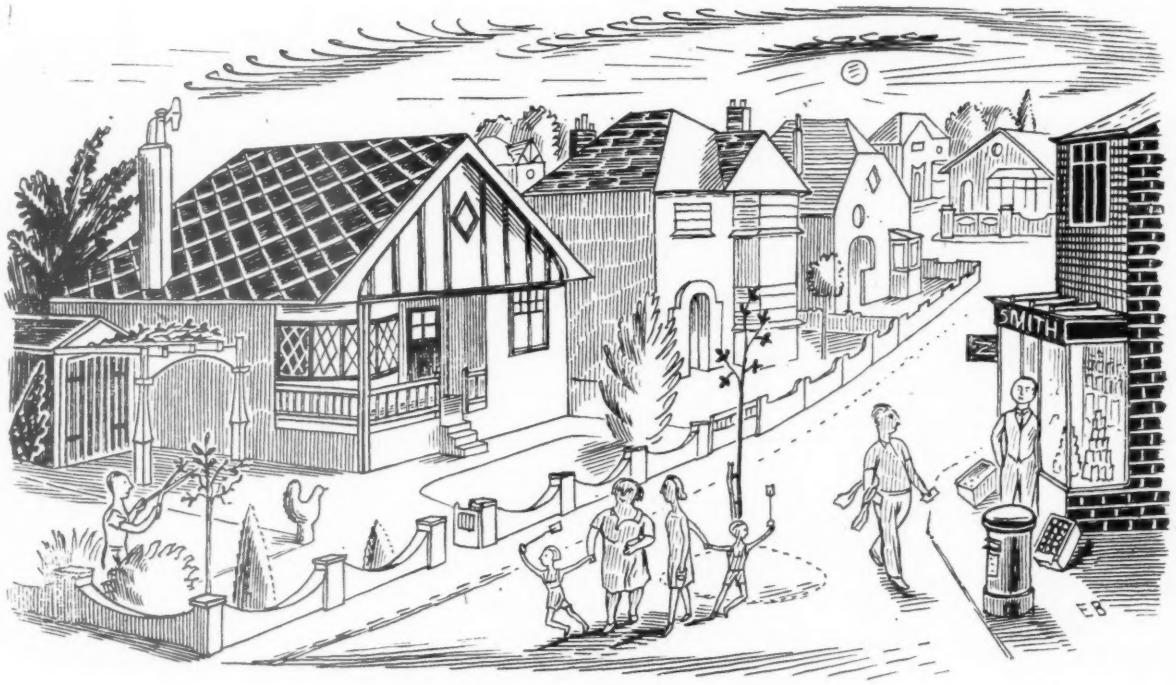
Meanwhile, there may be opportunity to bring over the methods, and the men who know the methods, and even panels and parts of houses, or whole houses, as demonstrations—all for purposes of drawing on our experience for whatever it is worth in adaptation to British requirements. It is my impression that the shipping space devoted to bringing over a few men and a few demonstration pieces can be far better justified at this critical moment than trying to allocate shipping space for any large number of houses at, say, seven tons and 1,200 cubic feet each.

Our transition and post-war housing emergency is similar to yours. Administrator Blandford has carefully canvassed the needs and has announced a goal of 12,000,000 new urban houses during the first ten years. This includes the replacement of about 6,000,000 substandard dwellings, with additional millions to be replaced during the second ten-year period. All told, this is a huge and very urgent task. The 12,000,000 is proportionate to the 4,000,000 quoted for Britain during the same period. I am sure we shall avoid temporaries. For reasons which are valid in our situation, we will depend heavily upon private enterprise right from the beginning. Prefabrication will be used more extensively than before the war for permanent houses. The main responsibility will return to the communities, with a carefully-designed set of Federal aids to help private and public enterprise to meet all segments of the housing need.

The high level of standards promulgated and generally accepted here for permanent post-war housing seems to me very good. The general desire and the general policy favouring cottages with gardens, even though in terraces, seems to me to reflect a world-wide tradition which is good and which is now reviving. The local authorities' programmes for community facilities

We need

NEW HOUSES



Will the familiar 'Kozy Kot' and 'Mon Repos' be superseded by communal flats with a communal garden? Or will the suburban housewife insist on splendid isolation? Time will soon show. Either way, post-war housing is bound to be a very big job for architects and builders. And zinc will have its important place. Its lightness, long life and low cost ensure that. It has the further advantage of equal adaptability to modern building or traditional, site-built or prefabricated. Now, we suggest, is the time to study zinc—and especially its newer uses.

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Zn

are excellent. Our war-time testing of many theories of community centres may have developed experience useful to you here.

As for types of houses and the use of materials and methods of construction in Britain, I am puzzled. Apparently these matters are more deeply imbedded in tradition than is true with us. To me, they are too greatly hampered by tradition here. I have a strong prejudice in favour of more open and flexible and ingenious designs. It seems to me that the fine Georgian tradition can be adapted to modern modes in the use of its open planning, its big windows, its flat roofs.

To illustrate my feeling about the use of materials, I could not regret that the stone quarries in the Glasgow district are reported to be nearly worked out. Stone seems to me not a good material for small houses—expensive, cold, damp. We must keep closely in touch with each other on all the new materials which are being developed on both sides.

I was, most of all, impressed with the quality of planning and administration in local governments. The past hundred years of experience, plus leadership by the central government and by various individuals and associations, have produced a really excellent framework for planning and housing by the communities. The manner in which the responsibility is placed in the local councils and their committees and officers seems to me better than our prevailing system of *ad hoc* planning and housing agencies. In general the skill in housing seems to be ahead of the effectiveness of general-development planning, and this was considered to be a serious matter by local authorities which are not trying to rationalize their urban areas.

But the local planning is also coming along very well. Earlier work is not lost. In Bristol, for example, the present excellent planning derives in no small part from the start made twenty-five years ago. In the very first towns I visited outside London, Portsmouth and Plymouth, I got a sense of achievement which has steadily been maintained from town to town. And, of course, the plans for the City and County and Region of London, whatever adjustments have still to be made, are, in fact, world classics—a turning-point in the story of the big western cities.

For the re-development of central areas, the bomb damage offers an opportunity, and the new Town and Country Planning Act offers an instrument (perhaps not yet perfected) which puts you ahead of us. We are not so far along as you are in the redesign of shopping districts. And, for redevelopment programmes, you have a big advantage in that no compensation is ordinarily paid for substandard dwellings in clearance areas. We have some new methods for analysing blighted districts; and we are working on measures to conserve neighbourhoods which cannot be cleared for a number of years.

I believe we have learned something about site planning for convenience and privacy and economy. We do better than you do with street trees and roadway planting.

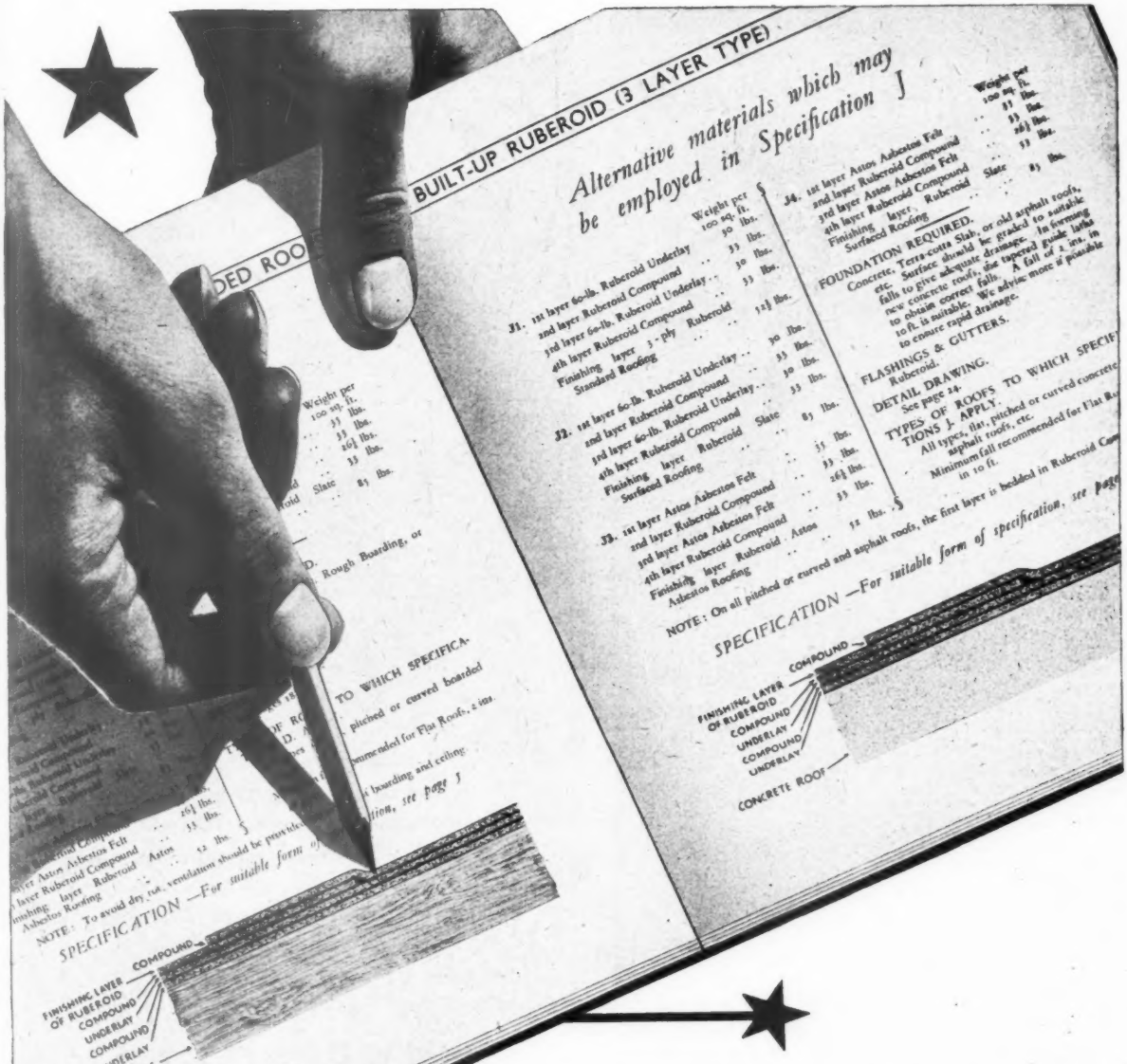
In the management of local authority housing we have adopted generally the principle of adjusting rent to income, and I think it might be more widely considered here.

We have begun to use some new methods of analysing the need for housing, by numbers of houses, by geographic areas, and by income groups. The latter reveals the need for special measures to provide for certain middle-income families—your group at, say, £400 to £800 per year, key people in many industries. In Manchester, where I found much that interested me, an apparently very useful method has been devised to forecast the probable proportion of family compositions, and hence to design neighbourhoods for approximate numbers of single persons, families of various sizes, old people, etc.

We always proceed to estimate dollar costs and to proceed to the plan for financing. I felt that many of the planning and housing programmes here would benefit by similar estimating in all its aspects.

In talking with each local authority, I asked them what they find to be the principal obstacles, and also what they think the chances are of carrying out their plans and programmes. This is rather deep water for a "sixty-day wonder," but I would summarize the obstacles to be: apathy where keen interest is needed; the almost inevitable conflict between the public interest and the interest of private property; the formulation of financial aids from the central government; and the clarification or reorganization of local governmental areas of jurisdiction. All of these, including the last-named, seem to call for national policy and national action. Then, I estimate that at this time of historic opportunity, the outcome hangs in the balance. I might bet even money, but I would not give any odds that the local communities will be able to do substantially what they find essential for their development and re-development, and to do it in time.

The national housing policy of Great Britain can be seen emerging in Parliamentary debates and acts, in various public statements, in the work of the advisory committees and royal commissions and research groups, and in the several very excellent reports which have appeared during the last couple of years. It seems to me to represent a great advance over pre-war. And it seems to me more progressive and more realistic than the policies which have thus far actually been formulated on a national scale in the USA.



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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: 7F EATON PLACE, LONDON, S.W.1. TEL.: SLOANE 5615. 991

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Applications are invited for the post of INSTRUCTOR IN TOWN PLANNING. Salary £400 to £500 per annum, according to qualifications and experience. The appointment, which involves 20 hours' teaching per week during College terms, will be for one year in the first instance. The holder of the post is allowed to undertake private professional practice.

Applications (3 copies) must be lodged not later than 20th January, 1945, with the Registrar, College of Art, Edinburgh, 3. Testimonials are not required, but the names and addresses of two persons to whom reference may be made should be given. 943

COUNTY BOROUGH OF CROYDON.

ARCHITECTS' DEPT.—THE BOROUGH ENGINEER'S ORGANIZATION.

Applications are invited from qualified persons for the following vacancies on the established staff. The persons appointed will carry out their duties under the direction of the Assistant Architect.

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Two SENIOR ARCHITECTURAL ASSISTANTS, with wide Housing experience ...	£465—£525 (Grade D)
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Plus war bonus in each case (at present £49 8s. per annum).

Form of application may be obtained from the Borough Engineer, Town Hall, Croydon, and should be returned to me not later than 17th January, 1945.

E. TABERNER,
Town Clerk.
944

CITY OF COVENTRY.

CITY ARCHITECTURAL DEPARTMENT.

Applications are invited from qualified persons for the posts of ASSISTANT ARCHITECTS, at a salary of £6 per week, plus cost of living bonus.

The appointments are temporary, and are subject to the City Council's rules and regulations.

All applications not later than the 22nd January, 1945, should be addressed to the undersigned, and should give full particulars of experience, age, and qualifications.

D. E. E. GIBSON, M.A., A.R.I.B.A., A.M.T.P.I.,
City Architect.

1a, Warwick Row, Coventry.
January 11. 956

SPALDING URBAN DISTRICT COUNCIL.

ARCHITECTURAL ASSISTANT.

Applications are invited for the post of Architectural Assistant, in the Surveyor's Department, at a salary of £350 per annum, plus cost-of-living bonus, at present £49 8s. p.a.

Applicants must be A.R.I.B.A., or hold an equivalent qualification, and have had practical experience in housing and other architectural work normally carried out by a Local Authority. The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination. Applications to be accompanied by copies of three recent testimonials must reach me not later than 22nd January, 1945.

RAYMOND W. HASTINGS,
Clerk of the Council.
11, Market Place, Spalding. 954

CITY AND COUNTY OF THE CITY OF EXETER.

APPOINTMENT OF CHIEF ASSISTANT ARCHITECT.

Applications are invited for the above appointment in the City Architect's Department at a salary of £500 per annum, rising, subject to satisfactory service, by annual increments of £25 to £600 per annum, plus cost of living bonus at present £49 10s. 9d.

Candidates should be members of the Royal Institute of British Architects, and should have wide experience in the design and carrying out of important architectural works, preferably including housing schemes, schools, and other municipal buildings. Experience in precinct design will also be an advantage.

The appointment will be subject to one calendar month's notice on either side, and to the provision of the Local Government Superannuation Act, 1937. The person appointed will be required to pass a medical examination.

Applications, stating age, qualifications, previous and present appointments, present salary, 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., A.M.T.P.I., City Architect, 2, Southernhay West, Exeter, not later than 27th January, 1945.

Applications from Architects serving with H.M. Forces will receive consideration.

C. J. NEWMAN,
Town Clerk.

Exeter.
21st December, 1944. 949

EAST GLAMORGAN JOINT PLANNING COMMITTEE.

Applications are invited for the following appointments:—

(*a*) PLANNING OFFICER.—Salary £750, rising by annual increments of £25, to a maximum of £800 per annum, plus War Bonus and travelling expenses on the approved scale.

(*b*) GRADE I PLANNING ASSISTANT.—Salary £305, rising by annual increments of £20, to a maximum of £400 per annum, plus War Bonus.

(*c*) TWO GRADE II PLANNING ASSISTANTS.—Salary £255, rising by annual increments of £15, to a maximum of £300 per annum, plus War Bonus.

The qualifications required for the appointments are as follows:—

(*a*) PLANNING OFFICER.—Must be a corporate member of the Institution of Civil Engineers and/or hold the Testamur of the Institution of Municipal and County Engineers, and must have passed the final Town Planning Joint Examination or its equivalent.

(*b*) GRADE I PLANNING ASSISTANT.—Must hold any *one* of the preceding qualifications, or be a corporate member of the R.I.B.A.

(*c*) GRADE II PLANNING ASSISTANT.—Must be a competent Surveyor and Draughtsman, with experience in a Planning Office, and have passed the Intermediate Examination of the Town Planning Institute or hold equivalent qualification.

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

Applications, stating age, qualifications, experience and present position, and liability for military service, accompanied by copies of three recent testimonials, should be sent to the undersigned in sealed envelopes, endorsed "Planning Officer" or "Planning Assistant," as the case may be, and should be received by him not later than the first post on the 31st day of January, 1945.

BERNARD M. MURPHY,
Clerk of the Committee.
Council Offices, Hengoed, Glam.
2nd January, 1945. 955

ARCHITECTURAL ASSISTANTS (6), permanent, required by the Housing Department of the Corporation of Glasgow.

Candidates must have been born before 1923, and have the necessary qualifications or experience.

SENIOR ASSISTANTS (2), A.R.I.B.A. or equivalent qualifications, and should have had experience in the design of housing developments. Town planning experience in relation to housing would be an advantage.

Salary within the scale £315 p.a. by £15 to £450 p.a., according to qualifications and experience, plus war bonus £49 10s. 9d. p.a. Ref.: E.A. 1147XA.

1ST CLASS ASSISTANTS (4), should have had considerable experience in design and construction, preferably in connection with housing.

Salary within the scale £315 p.a. by £20 to £395 p.a., according to qualifications and experience, plus war bonus £49 10s. 9d. p.a. Ref.: E.A.1148XA.

The appointments are subject to the Corporation's General Conditions of service, and to the provisions of the Superannuation Scheme.

Applicants should write, quoting the appropriate reference, to the Ministry of Labour and National Service, Central Register, Room 5/17, Sardinia Street, Kingsway, London, W.C.2, for the necessary forms, which should be returned completed on or before 24th January, 1945. 959

ARCHITECTURAL ASSISTANT, temporary, required by the Urban District Council of Farnborough, Hants.

Candidates must have been born before 1923, preference being given to the holders of recognised Architectural qualifications, who have had previous experience in the design of working class houses.

Salary £400 p.a., plus cost of living bonus.

Applicants should write, quoting EA.1152XA, to the Ministry of Labour and National Service, Central Register, Room 5/17, Sardinia Street, Kingsway, London, W.C.2, for the necessary forms, which should be returned completed on or before 22nd January, 1945. 958

ARCHITECTURAL ASSISTANT, permanent, required by the Urban District Council of Walton and Weybridge.

Candidates must have been born before 1923, and should preferably be A.R.I.B.A. or hold an equivalent qualification. Experience of housing schemes would be an advantage.

Salary £400 p.a., plus bonus of 19s. p.w.

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

Applicants should write, quoting EA.1136XA, to the Ministry of Labour and National Service, Central Register, Room 5/17, Sardinia Street, Kingsway, London, W.C.2, for the necessary forms, which should be returned completed on or before 22nd January, 1945. 958

Architectural Appointments Vacant

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

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

QUALIFIED ARCHITECT and Quantity Surveyor required; car driver; salary, £500 per annum, and opportunity for partnership. Details to Box 936.

ARCHITECTURAL ASSISTANT, with good general experience, urgently required in office, Slough district; essential work; state age, salary required, and brief details. Box 951.

ARCHITECT'S or Surveyor's Assistant, on a temporary basis, for a Midland Brewery Company; all round experience, including licensed work. Write, giving full particulars of age, experience, salary required, and when available, to Box 952.

REQUIRED, immediately, experienced Architectural Assistants; must be first-class draughtsmen and well trained, for important large scale work. Apply, stating age, salary, and experience, Herbert J. Rowse, F.R.I.B.A., Martins Bank Building, Liverpool, 2. 945

Architectural Appointments Wanted

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

CONTINENTAL ARCHITECT, qualified, with many years' experience, seeks employment. Box 421.

A. R.I.B.A. requires part-time work in London area; surveys, schemes and perspectives. Box 422.

ARCHITECT, Town Planner and Structural Engineer (ex-Officer), requires situation or partnership in E. Kent or London. Box 423.

QUALIFIED ARCHITECT requires post as Assistant; surveys, working drawings, details; accurate drafting; maintenance and war damage; a designer of taste. Box 420.

STRUCTURAL ENGINEER is prepared to undertake Design Work, etc., in spare time; steelwork or reinforced concrete; Wessex area preferred. Box 418.

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A. R.I.B.A., aged 30, Lancashire and London experience, requires senior position of responsibility in Lancashire with commercial or private concern; free-lance work considered; best references supplied; industrial, hospitals and housing; not liable Service call-up. Box 424.

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Competitions

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

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The Cement and Concrete Association offers premiums for designs for Open Type Concrete Fences.

The Royal Society of Arts, desiring to promote good design in industry, have undertaken to conduct the competition.

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Mr. A. G. Bray, F.R.I.B.A., Cement and Concrete Association.

Designs are invited for two types of fences.

Premiums to the value of £170 are offered, viz.:

First ... £50
Second ... £25
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} For designs of each type.

Last date for submitting designs, 30th April, 1945.

Conditions of the competition may be obtained from the Acting Secretary, Royal Society of Arts, 6-8, John Adam Street, Adelphi, London, W.C.2.

An exhibition will be held of the winning and commended designs. 960

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

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

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

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