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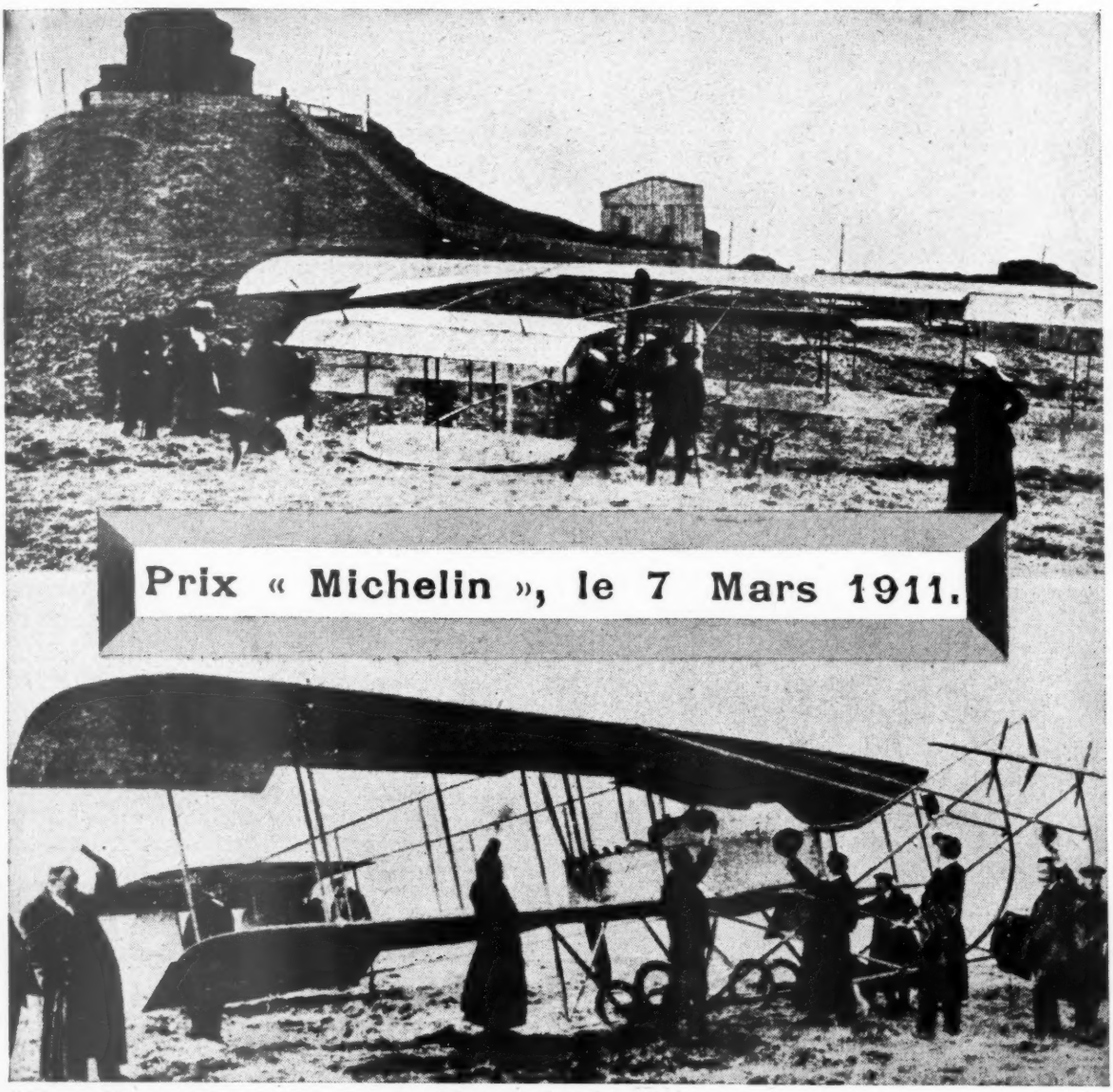

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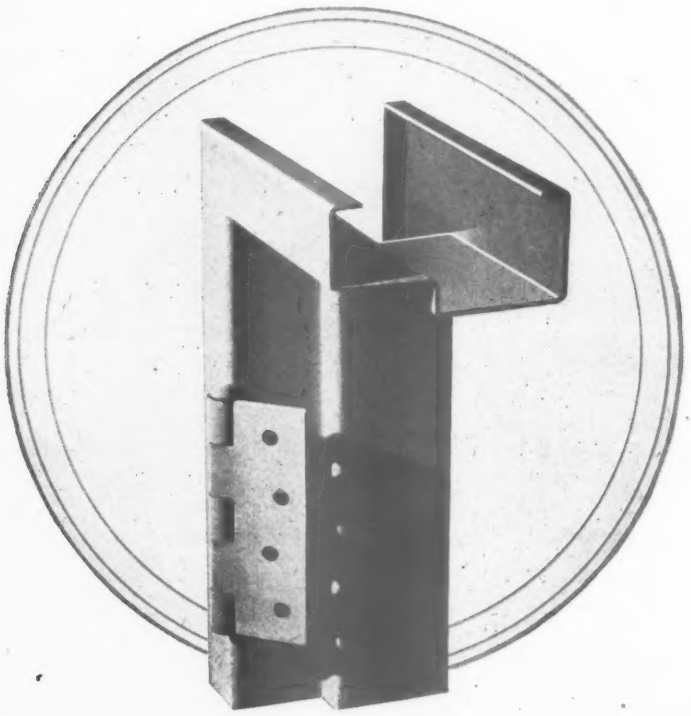

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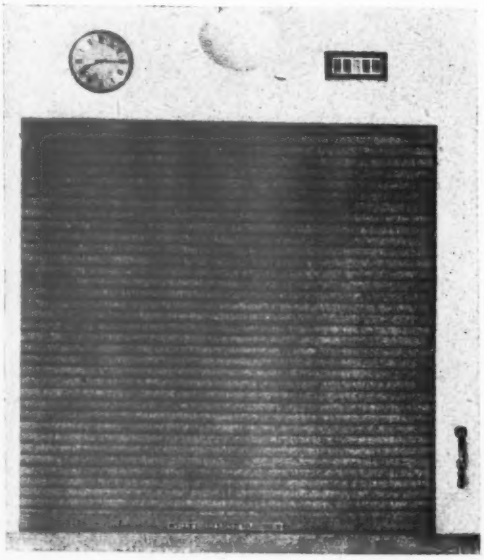

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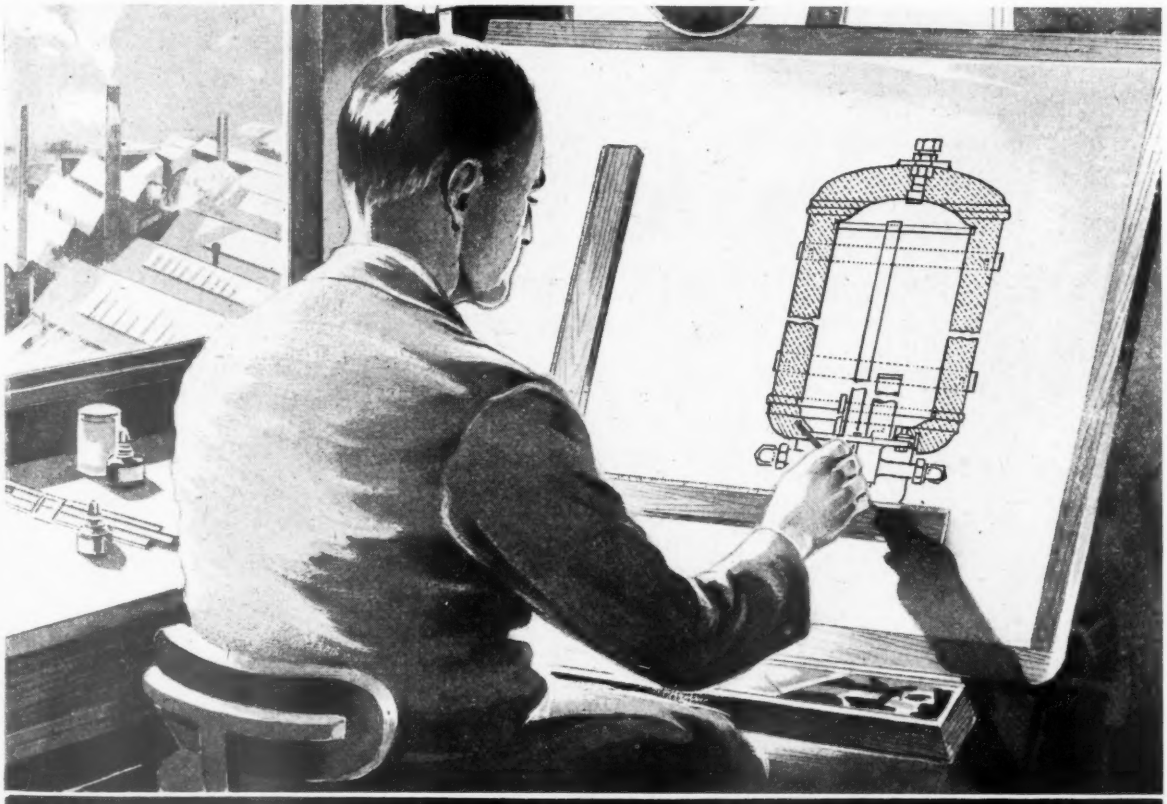

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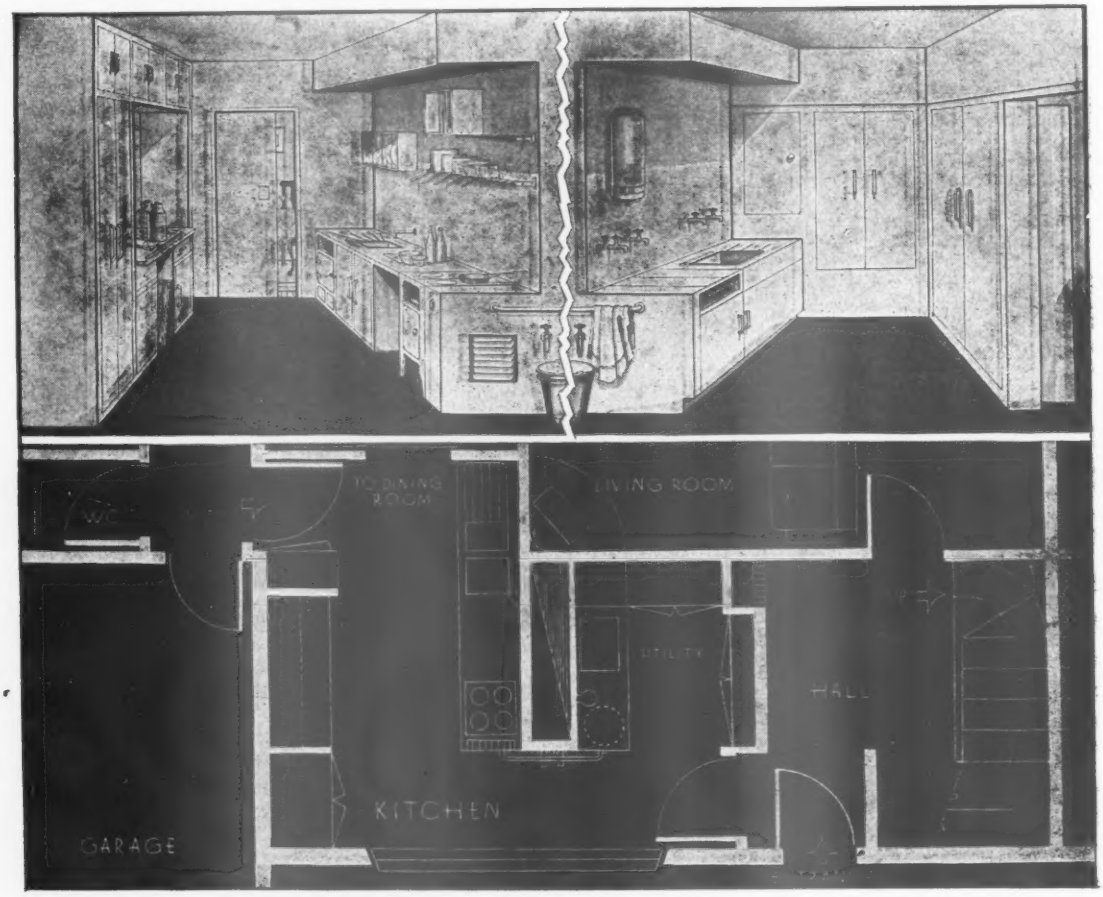

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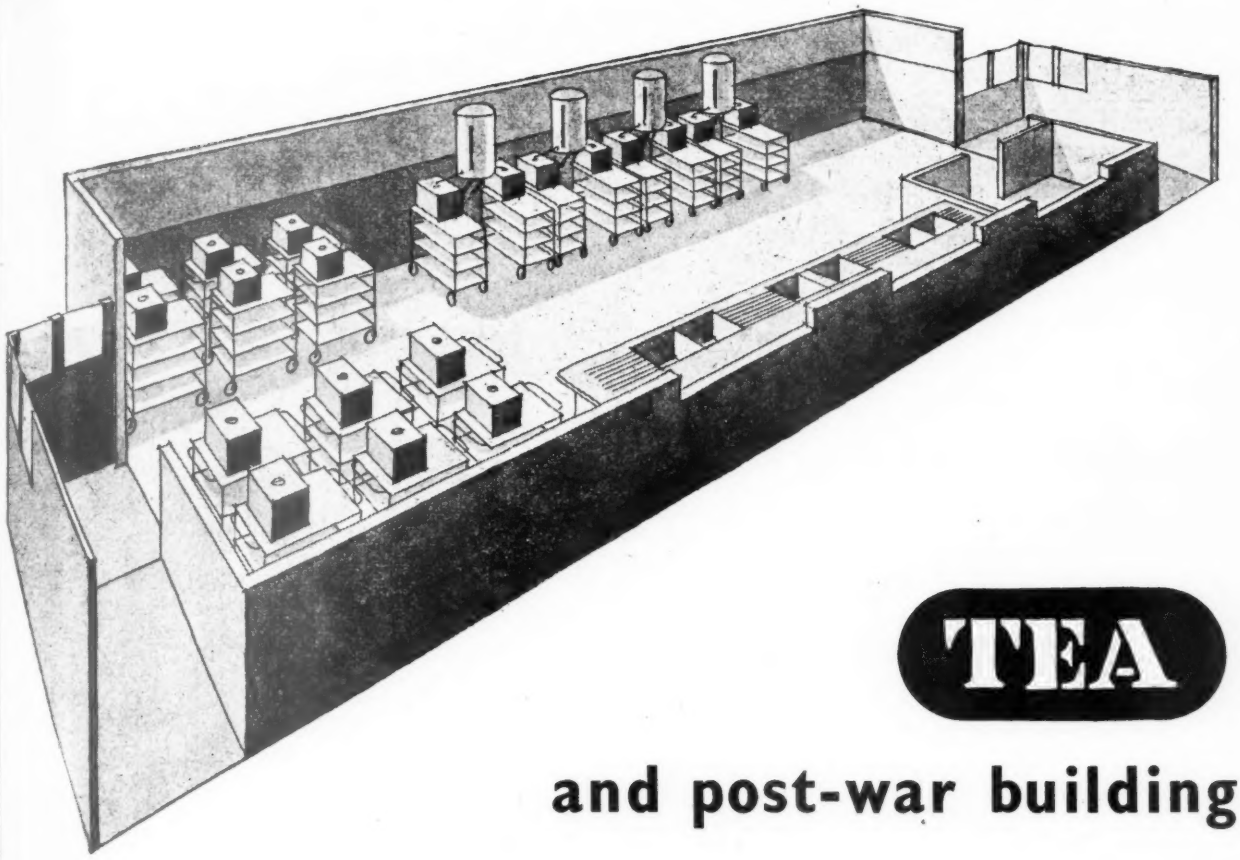

TEA

and post-war building

DURING the war, over 3,000 industrial firms have approached the Empire Tea Bureau about their tea catering services.

Many of them asked advice on the re-organizing of tea-stations, or the planning of entirely new tea-service departments.

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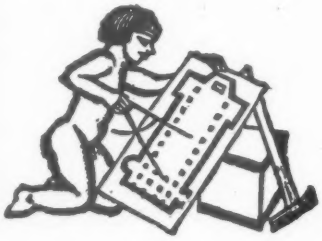

DIARY FOR MARCH APRIL AND MAY

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.

BRIDGWATER. Sir William Savage and A. J. Allen. *Water Supply Problems in Rural Districts.* At Westover Senior School, Wembdon Road, Bridgwater. (Sponsor, Royal Sanitary Institute.) 10.30 a.m. MAR. 10

CHESHUNT. *When We Build Again.* Exhibition. (Sponsor, TCPA). MAR. 1-10

HASLINGDEN. *The English Town: Its Continuity and Development.* Exhibition. (Sponsor, TCPA). Town and Country Planning Association Conference, Mar. 24. Speakers, R. L. Reiss and W. Dobson Chapman, Vice-President TCPA. MAR. 22-APR. 7

LEICESTER. Sir Charles Reilly. *Principles of Neighbourhood Planning.* At the Leicester School of Architecture. (Sponsor, Leicester and Leicestershire Society of Architects in association with the Leicester School of Architecture.) 6.30 p.m. MAR. 6

Gordon Stephenson. *Community Centre Buildings.* At the Leicester School of Architecture. (Sponsor, Leicester and Leicestershire Society of Architects in association with the Leicester School of Architecture.) 6.30 p.m. MAR. 20

LONDON. *Devastation and Reconstruction.* Exhibition of French prefabricated houses. At the RIBA, 66, Portland Place, W.1. The exhibition has been brought over from France under the auspices of the French Ministry of Information and is the first exhibition to be produced since the liberation of Paris. It was prepared in France during the German occupation under enormous difficulties and in spite of political direction on the policy of reconstruction which tended to ignore all but effete and obsolete methods of construction. Open daily (Sundays excepted) from 10 a.m.-6 p.m. MAR. 1-15

R. F. Wilson, Art Director and Secretary of the British Colour Council. *Colour as a Factor in Industrial Design.* At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA). 1.45 p.m. MAR. 7

Miss Margaret Whinney. *St. Paul's Cathedral.* At the Courtauld Institute of Art, 20, Portman Square, W.1. 1.15 p.m. MAR. 1

John Summerson. *The Architecture of William Butterfield,* 1814-1900. At the Courtauld Institute of Art, 20, Portman Square, W.1. 1.15 p.m. MAR. 8

L. S. Atkinson. *Modern Electric Lift Practice.* At the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. (Sponsor, IEE.) 5.30. MAR. 8

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

National Housing and Town Planning Conference. At the Central Hall, Westminster, London, S.W.1. The Conference will consider some of the more important problems confronting local authorities in post-war reconstruction in England and Wales, and will be similar in character to the conference held in Westminster in October, 1943. Ladies are specially invited. The Minister of Health (Mr. H. U. Willink) will address the Conference on March 2, and it is hoped that the Minister of Town and Country Planning (Mr. W. S. Morrison) will find it possible to address the conference on March 1. Following is the preliminary programme:—March 1: Chairman, Alderman P. J. M. Turner, J.P. (Sheffield), Chairman of the National Housing and Town Planning Council. General Subject: *Planning for Post-War Reconstruction.* March 2: Chairman, M. Lindsay Taylor, Town Clerk of Southall, Middlesex, and Vice-Chairman of the National Housing and Town Planning Council. General Subject: *Housing the Nation.* MAR. 1-2

Democracy and Planning. Statements by speakers who have taken part in local surveys. At 28, King Street, Covent Garden, W.C.2. Chairman, G. Goddard Watts. The speakers include: Anthony Minoprio, Planner to the Chelmsford Planning Group; Ivan R. Taylor, who will describe the plans and proposals of the Green Street Green Model Village Association; Keith Jeremiah, who is conducting a survey for the Sudbury and District Planning Association. (Sponsor, TCPA.) 1.15 p.m. MAR. 8

Lord Westwood. *Industrial Relations.* (Amulree Memorial Lecture). At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA). 1.45 p.m. MAR. 14

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

STAFFORD. *When We Build Again.* Exhibition. (Sponsor, TCPA.) MAR. 1-3

NEWS

THURSDAY, MARCH 1, 1945
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Though no feature in the JOURNAL *is without value for someone, there are often good reasons why certain news calls for special emphasis. The* JOURNAL'S *starring system is designed to give this emphasis, but without prejudice to the unstarred items which are often no less important.*

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

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

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

★

The Association of Building Technicians won its Arbitration Case for CLERKS OF WORKS.

The National Arbitration Tribunal has given a decision in favour of the ABT in its dispute with the Lambeth Borough Council, which has been in progress since October, 1943. The ABT claimed improvements in the salary and overtime pay of Clerks of Works employed on bomb damage repairs at Lambeth, on the grounds that their conditions were worse than the average of other borough councils. The Tribunal of the London District Whitley Council, to whom the case was first referred by the Ministry of Labour, made a recommendation which the Lambeth Borough Council refused to accept. The ABT therefore appealed to the National Arbitration Tribunal for confirmation of the Whitley Council recommendation. The recommendation, which has now been enforced, is as follows: "That Clerks of Works employed by the Lambeth Borough Council be designated '*Officers*'; that they be graded within the London District Council's Scales of Salaries; that the appropriate grade be Grade 'B' of the London District Council's Scales, *i.e.*, £225 per annum, rising by annual increments of £15 to £390 per annum; that the commencing point in Grade B should be £330 per annum; that the cost-of-living bonus as recommended by the London District Council from time to time be paid in addition to the salary in Grade B; that the normal working week be 44 hours; that overtime worked over and above the normal 44-hour week be paid for in addition to salary and bonus at the following rates: Over 44 hours and up to 52 hours, plain time rates; over 52 hours and up to 58 hours, time-and-a-quarter rates; over 58 hours, time-and-a-half rates." It is expected that the case will have repercussions in other borough councils where unfavourable conditions exist.

From AN ARCHITECT'S *Commonplace Book*

CALVINISM IN FLEMISH BRICKWORK. [*From* The Quest of the Absolute, *by Honoré de Balzac.*] The spirit of old Flanders seemed to fill the old house in the Rue de Paris, in which lovers of municipal antiquity would find a perfect example of the unpretending houses which the wealthy burghers of the Middle Ages built for themselves to dwell in . . . Ever since the house had been built the front has been carefully scoured twice a year ; not a particle of mortar came loose or fell out but was immediately replaced. The costliest marbles in Paris are not kept so clean and so free from dust as the window bars, sills, and outside stonework of this Flemish dwelling. The whole house front was in perfect preservation. The colour of the surface of the brick might be somewhat darkened by time, but it was as carefully kept as an old picture or some book-lover's cherished folio—treasures that would never grow old were it not for the noxious gases distilled by our atmosphere, which no less threaten the lives of their owners. The clouded skies of Flanders, the dampness of the climate, the absence of light or air caused by the somewhat narrow street, soon dimmed the glories of this periodically renewed cleanliness and, moreover, gave the house a dreary and depressing look. A poet would have welcomed a few blades of grass in the openwork of the little shrine, and some mosses on the surface of the sandstone ; he might have wished for a cleft or crack here and there in those too orderly rows of bricks, so that a swallow might find a place in which to build her nest beneath the red triple arches of the windows. There was an excessive neatness and smoothness about the house front, worn with repeated scourings ; an air of sedate propriety and of grim respectability which would have driven a Romantic writer out of the opposite house if he had been so ill advised as to take up his abode there.

St. Alban's, Brooke Street, Holborn, is TO BE REBUILT BY SIR GILES GILBERT SCOTT and his brother, Mr. Adrian Scott, after the war.

In the *Evening Standard*, The Londoner writes: Mr. Scott tells me that the cost cannot yet be assessed; he thinks that it may be about £55,000, including the cost of extra land for a Lady chapel and other buildings. I believe the purchase price of the land will be about £17,000. St. Alban's was built about 70 years ago. Mr. Scott tells me that the new building will have something of the old shape inside. The only part of the old building which can be kept is the tower, a distinctive part of the Holborn skyscape.

Mr. G. W. Buchanan has been elected PRESIDENT OF THE NATIONAL FEDERATION OF BUILDING TRADES EMPLOYERS.

Other office bearers for the year are:—Senior Vice-President, Mr. W. H. Forsdike, Joint Managing Director of W. & A. Forsdike, Ltd., Sheffield, and Chairman of the National Joint Council for the Building Industry; Junior Vice-President, Mr. E. J. Smith, of E. J. Smith & Co., Cardiff. Mr. G. W. Buchanan, the new President, is best known for his work with the National Joint Council for the Building Industry, of which he has been a member for the past nine years. He succeeded the late George Parker as Chairman of the National Joint Disputes Commission, and followed him also as chairman of the National Conciliation Panel. Just before the war Mr. Buchanan became chairman of the Grading Commission, and played the chief part in simplifying the mass of intricate "exceptional margins" which became necessary to meet the needs of big Government works in rural areas. A member of the Wet Time Committee, which did the spade work in connection with the provision against time lost through inclement weather, he has been a member of the Uniformity Joint Board and of its General Purposes Committee, and of the Building and Civil Engineering Advisory Panel of the Ministry of Labour. He has also represented the National Federation on a host of other Committees, and since its inception has been chairman of the Federation's Policy Board. He was President of the London Master Builders' Association in 1931. A director of W. H. Lorden & Son, Ltd., of Wandsworth, he was educated at Mercers' School, and received his early training in his father's business. During the last war he served as a gunner after having put in eight years with the London Scottish.

Five members have been appointed to the FIRST NORTHERN IRELAND HOUSING TRUST.

The Northern Ireland Minister of Health and Local Government (Mr. W. Grant) has appointed the following to be members for five years of the first Northern Ireland Housing Trust: F. Lucius O'Brien, Belfast (Chairman); G. Herbert Bryson, Dunmurry (Vice-Chairman); Mrs. Eleanor Craig, Belfast; John Graham Larmour, Annaborough, Co. Down; James P. Duff, Coagh, Co. Tyrone. The members bring to their work extensive business experience and a practical knowledge of social questions.

Mr. G. W. Buchanan, the new President of the National Federation of Building Trades Employers. *See item on this page.*

★

Sir Robert Pattinson's alternative to the LINCOLN COOLING TOWERS is to be considered by the Corporation Electricity Committee

Since the report of the Electricity Commissioners into Lincoln Corporation's application for consent to the extension of St. Swithin's generating station by the installation of additional plant was received, after the public inquiry held in October, considerable attention—according to *The Times*—has been given by the city council and other interested bodies to the suggestion put forward by Sir Robert Pattinson, of Lincoln, chairman of the Witham and Steeping Rivers Catchment Board, that the necessary water for cooling purposes might be obtained from the River Trent instead of erecting cooling towers in Lincoln. There has been a conference in Lincoln Guildhall of the interested parties. Afterwards it was stated:—"The corporation has retained the services of Mr. C. E. Farran, of Doncaster, consulting engineer, and he was also present at the conference. Sir Robert Pattinson explained his proposal in detail and the various engineering and other questions involved received very careful consideration." It was eventually agreed that Mr. Farran should prepare and submit a full report on the scheme and any other relevant matters for consideration by the electricity committee of the corporation.

★

A British Mission is to visit Finland TO BUY TIMBER FOR THE UNITED KINGDOM.

Representatives of the Timber and Paper Controls of the Ministry of Supply will leave shortly for Finland to arrange for the purchase of supplies of timber and wood pulp for the United Kingdom. There is little possibility of supplies being shipped to this country before the end of hostilities in Europe. But the delegation will make purchases for shipment at the earliest opportunity. The delegation will consist of: G. R. Lenanton, Director of Home Timber Production in the Ministry, L. C. Paton, Pearson Bell, Maj. W. Newland Hillas and G. S. Spry, all of the Timber Control, and R. C. Purkiss for the Paper Control.

Informal Grandeur

What is it that made Nash's drive from Carlton House to Regent's Park, that still makes the Circus and Royal Crescent at Bath, and particularly Lansdown Crescent (above top), so different from eighteenth century urban landscape on the Continent? It is the expression of the first steps towards modern functionalism. There is no subordination to a single theme, a Royal Palace or a Triumphal Arch, but a superb appreciation of the living requirements of the fashionable eighteenth century holiday-maker. The monumental is transformed through a new design process, which takes account of prospect, aspect, contour and the living requirements of the group. The result is one of informal grandeur, or as *The Architectural Review* has called it, the asymmetrical monumental. As in the park landscape of the same period, it is a new expression and not just a variation on a Continental theme. England produced so little in this manner, and has destroyed so much, that Bath has therefore particular significance, and its plan (reviewed on page 169) should arouse national interest. The lower illustration above shows some of the planning proposals for the central area.

★

Designer of Stockholm Town Hall and Royal Gold Medallist in 1926, *Professor* RAGNAR ÖSTBERG *HAS DIED at the age of* 79.

Mr. F. R. Yerbury writes: Ragnar Ostberg is probably the best known of all Swedish architects. Naturally, to the layman, his name is specially associated with Stockholm Town Hall, perhaps one of the few buildings of the present age which enjoys world-wide fame. It is a remarkable achievement for any architect to produce a building which in his own life time becomes almost a symbol of the city in which it is built. St. Paul's Cathedral is symbolical of London, and in the same way, rightly or wrongly, Ostberg's Town Hall symbolizes, to most Englishmen, Stockholm. This represents the popular appreciation of Ostberg's work. He was perhaps one of the last, and certainly one of the most competent, exponents of the romantic in architecture, and his Town Hall represents a kind of climax. It would seem that his greatest contribution to architecture, and particularly in Sweden, was in the revival of appreciation of craftsmanship in building and the decorative arts, in which he was so profoundly interested. It always seemed to me that many of the most modern Swedish buildings owe a good deal to the fostering by Ostberg of a School of Craftsmen. I was privileged to rank amongst's Ostberg's personal friends. I knew him as a modest, highly cultured and most knowledgeable man; kindly and simple in his personal tastes, friendly and kind, but nevertheless when the occasion required it, making the most devastating and witty criticisms—sometimes deservedly acid. I mourn his loss as the loss of a friend, but I share with architects scattered all over the world the sense of loss of one of the greatest architects of our times. Ostberg had a great admiration for England. He spent some time in England as a student, travelling through the country sketching and visiting cathedrals, parish churches, villages and manor houses, and his sketch books, which incidentally revealed him as a really fine draughtsman, were full of charming drawings of the things which he so obviously loved and appreciated. When he came to England to receive the Royal Gold Medal for Architecture, it was after an interval of many years, but he was no stranger here and was able to pick up again on the work of his student days.

★

A special additional procedure has been agreed upon for the settlement of WAR DAMAGE DISPUTES.

The National Federation of Building Trades Employers has agreed with the War Damage Commission a special additional procedure for the settlement of disputes regarding proper cost in which members of the Federation are concerned. Broadly, the scheme provides that in cases of dispute, members of the Federation may refer the matter to an assessor appointed by the Federation who, if satisfied, will take up the case for them with the Commission and, if necessary, the amount in dispute being £25 or more, recommend its reference to the Deputy Commissioner. The Federation wishes to announce that, wherever practicable, it will be open to the Federation's assessors to place their services at the disposal of non-Federated builders—without any charge or fee.

HOUSING IS NOT ENOUGH

IN *Rebuilding Britain* (Gollanz, 6s.), Sir Ernest Simon has come out with a constructive and forthright book. No one can accuse Sir Ernest of being a feckless visionary, a long-haired planner, a youthful enthusiast. Chairman of the Manchester Housing Committee, Lord Mayor of Manchester, Parliamentary Secretary of the Ministry of Health, Chairman of sundry committees in the Ministry of Works, he knows well all the intricacies of English housing, and official visits to Russia, the United States and Europe have enabled him to see them in a rare perspective.

Britain can be rehoused, he has little doubt of that: our achievement of four million houses between the wars was something no other great country has approached, and Sir Ernest estimates that, if the matter is vigorously tackled, we can turn out 50,000 houses the first year after the war, 100,000 the second, 250,000 the third, and a steady 400,000 after that, making four million houses in twelve years. The basis of this reasoning is fully explained, and no difficulties are shirked. He reminds us that it was fifteen years after the Armistice before 300,000 houses were built in one year, the great majority of these being built by private enterprise for sale. This must not happen again and the suggestion in the Pole Report that a certain proportion of the inadequate supplies of labour and material that will be available should be devoted to "very large houses of a luxury type" comes in for some heavy gunfire. "On the broad and long-term questions of national policy it is to be hoped the Pole Report will be ignored."

But what about planning? Sir Ernest has less hope here. Five conditions are essential for successful planning:—1, suitable planning authorities, national regional and local; 2, control of land in the national interest; 3, adequate finance; 4, proper national and local plans; 5, the necessary driving force to see that the job is done.

Responsibility is now divided between seven Ministries plus a Minister of Reconstruction. National planning has not been discussed: control of the land shelved (Sir Ernest adds that experience has forced him to the conclusion that nationalization is necessary): finance is ludicrously parsimonious, being based on unreal premises: local planning is piecemeal, though often enthusiastic: initiative and independent action are carefully discouraged.

Sir Ernest gives a vivid picture of the replanning of Moscow, where the question of compensation simply did not exist. The sole question was: "what is the best use of the land in the national interest?" The Mossoviet, which combines the duties of a regional and a local authority, showed great courage in pressing on with the fundamentals of planning: the making of roads, the planning of the boulevards, etc., while, comparatively speaking, neglecting the terrible overcrowding in the houses. They took the view that the people would be prepared for ten years to suffer this inconvenience in order ultimately to get a superbly planned city, which would not be

possible if the houses were built before the layout of the city was developed.

The JOURNAL is prepared to state categorically that no Government department in this country is likely to take this point of view. Nor is it one which any British planner would dare to voice except from some safe place. At the same time the fact has got to be faced that *unless* housing is undertaken as a part of planning it will become the great obstacle to planning. The interests who dislike planning are even now busily working housing up into a rival political slogan. If they succeed, housing and planning will be presented to the nation as an unjustified *either/or*. Put to the public like this the answer will not be in doubt.

The Architects' Journal
War Address: 45, The Avenue, Cheam, Surrey
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NOTES & TOPICS

BUILDING SOCIETY IN COURT

From small suburban institutions, often under the part-time management of the local estate agent, and operating on a scale very similar to a present-day Christmas club, Building Societies have grown into national corporations with sumptuous offices, as many branches as a bank, and directed by titled figures who claim an important part in the direction of our social affairs. It is, therefore, interesting to see that the effect of the Building Societies' Act, 1939, has recently been considered by the Courts, in the case of *Reliance Permanent Building Society v. Hardwood-Stamper.*

*

The Act of 1939 was passed partly as a result of a popular agitation over the part some Building Societies were playing in the better and faster provision of shoddy houses for the more prosperous of the working classes and partly as a counterpart to the Hire Purchase Act of 1938 which regulated the sale of goods on the instalment plan.

*

The particular provision that was discussed in Mr. Harwood-Stamper's case was the direction in the Act that a Building Society, when selling a house under its power of sale, must take reasonable care to ensure that the price at which it is sold is the best price which can reasonably be obtained. Not, one would think, a very onerous duty to lay on such an organization, particularly on one which claims that it is not solely activated by the crude desire to make a profit for its shareholders.

*

What is of general interest is not the facts of this particular case. The house concerned does not seem to have been an easy one to sell. It was in bad repair and likely to cost a great deal to put in complete repair. The total amount due under the mortgage was just over £1,200, and the house was sold for £700. The interesting point was the contention put forward by counsel for the Society as to the meaning of the section of the Act. He argued (I quote from the judgment of Mr. Justice Vaisey) that "the section has no particular meaning and no particular effect . . . the section is a mere reminder to building societies of their pre-existing responsibilities and a mere reassuring resumé for the comfort of mortgagors of what their rights in this matter are."

*

If counsel considered that his argument would have any quality of reassurance to the average mortgagor, his views on mortgagors are fundamentally at variance with my own. The Court did not take this view. It considered that the section did affect some alteration in the existing law. The society was bound to have some consideration for the interests of the mortgagor as well as for its own desire simply to get back the amount of its loan when accepting an offer for the property. However, lest the hopes of mortgagors should rise too high, they must also bear in mind that the decision contains a legal definition of the word "ensure." It means "to make sure, to assure oneself," not "to guarantee."

KIMBER AND THE MG

What could be more ironic than the recent death of Cecil Kimber, the man behind the MG car, in a train smash? His death is a loss not only to the British motor industry, but to all who appreciate this country's tradition in motor-car design. Way back in the early 1920's, the first MG appeared as a sporting and better-looking version of the Morris-Oxford of those days, with a hotted-up engine and a burred aluminium bonnet behind the famous bull-nose radiator; but in recent years the MG became a *marque* by itself, owing little to the contemporary Morris in construction and nothing in appearance.

*

Any MG, whether a large car or a Midget, a racing car or a town coupé, was unmistakably an MG. The credit for this individuality goes mainly to Cecil Kimber, who preferred to lead in design rather than follow. Unlike some of the bigger manufacturers, he would not be panicked into imitating the best-sellers of last year's New York motor show, but designed cars that were distinctively British, and distinctly good to look at. That he had his own very definite ideas on design was evident from a talk he gave to the DIA some years ago—one of the rare occasions when he talked publicly about his work.

OILS BY OLIVER HILL

Seldom can those cursed turnstiles at the Leicester Galleries have clicked round so many architectural midriffs as during recent weeks. The transformation scenes by that romantic dramatist Mr. John Piper have now been packed off to Renishaw, but they are succeeded—as in a variety show a Grand Guignol sketch was succeeded by a tap-dance—by a one-man show, or rather a one-architect show from Mr. Oliver Hill.

There are some who know Mr. Hill only as a social and rather baroque figure who owns an ape and a dining-room with stone chairs. But those who are familiar with his work as an architect know him to be an imaginative composer of forms who has always had a sympathy for his site and who, unlike most of his profession, has never been afraid of colour.

*

These qualities emerge clearly in the little landscapes which he has recently shown. Vigorously painted in small strokes from a thickly loaded brush, they make a spirited and brightly-coloured display which is not less charming because it is unambitious. The pictures do not pretend to be great art. They are simply records of country scenes painted with gaiety and a confidence which is astonishing for an artist who has only just, at the age of 57, begun to try his hand. (All the fifty landscapes he exhibited were painted within the last eighteen months.)

*

Mr. Hill is a painter who sets himself certain limitations and obviously enjoys himself hugely within them. It is pleasant, in these days when any charlatan or pastiche purveyor seems to be able to sell anything he shows, to look at work which is as direct in approach as it is uninhibited in execution.

ASTRAGAL

On this page, three of the oil paintings by Mr. Oliver Hill, recently exhibited at the Leicester Galleries. Top, Stormy Day, Arundel ; *and* Steyning. *Above,* Chiswick Mall. *See Astragal's note.*

LETTERS

Derek M. Edge

K. Hajnal-Konyi

Protective Architecture

SIR,—As an ex-Serviceman I would like to express my whole-hearted approval of the words of Edward D. Mills when he hopes that other readers will take the opportunity of airing their views on this matter of vital importance in your correspondence columns. With this object in mind, I am writing to express what must be some of the thoughts of the majority of our fighting men.

On returning to civilian life, I am amazed at the number of people who scorn any suggestion that our towns of the future should be planned with a view to Military Defence. Planning for the possibility of a future war is apparently the biggest sin on earth. These very same people in the next breath usually declare that we must never disarm again, but in our own interests must maintain a substantial Navy, Army and Air Force. It would seem that, providing no one threatens to shatter their visions of a dream world containing everything our future cities ought to contain, these misguided individuals will blindly cast aside everything the complicated history of the world has to teach them.

I agree with Mr. Mills when he states that the only hope for the future of mankind is a whole-hearted attempt to run a world on the basis of mutual understanding and trust, "Rather than suspicion, intrigue, and secrecy." It is as well to bear in mind, however, that the world is still very young and our civilization—such as it is—was only founded some two thousand years ago. Two thousand years in the history of a universe that has been in existence longer than we can conceive, is nothing. There is no reason to suppose, therefore, that however much we try, the evolution of the human being will reach such a stage as will enable our world of "Mutual understanding and trust" to be achieved in the next fifty, hundred, or even five hundred years. Whilst I agree completely with the ideals put forward by Mr. Mills, I am convinced that the future of this country lies not only in its peaceful efforts and intentions, but in its strength

and readiness to fight any threat to its future integrity during the interim period.

In the hysteria of relief following wars we British have in the past only too readily thrown away our history lessons.

This is the fifth war in one hundred and fifty years—an average of one in thirty. The first of the period was won at the battle of Trafalgar by a fleet that could never have put to sea had it not been for the *foresight* of John Evelyn and his book *Sylvia* a century before. John Evelyn and his acorns produced enough English oak—the only wood available at the time—to build the fleet that saved the British Empire. Evelyn provides one of the greatest lessons in foresight and national pride that our history has to offer us. Three wars in this half-century are enough for any Serviceman to demand that we remain a military nation in the future—however odious it may seem.

It would be foolish to stake everything on the slender chance that a future war can be avoided. By using enough foresight and preparing for possible future war, we will not be wasting our time.

With the great advances in the machines of war and those likely to be made in the future, we can ill afford to neglect a Protective Architecture, but let us be quite sure what we mean by these two rather vague words. We do *not* mean the frenzied erection of pill-boxes, gun positions, and barbed wire—or thick-walled houses of concrete and steel—or to go to the other equally pointless and impossible extreme of housing the population underground. The only feasible solution seems to be a sound strategical and economical planning of town and countryside.

No matter what instruments of war are created in the future, there is one thing that will remain the same for ever. Aeroplanes, ships, rockets, flying bombs are only a means to an end. They do not themselves secure territorial gains or break the morale of a confident nation. There is little doubt that, in the future, invasions will be common occurrences. We must be prepared to welcome the future invader with nothing but total annihilation. Without troops on the ground, an invader will gain little or nothing. He can employ all the means of the age to bring them to our shores, but, having reached our shores, they will be forced to fight—on the ground. We can plan for their reception right down to the last killing-ground, and to the last bayonet charge. We can plan town and countryside in such a way that an invader can only attack from the directions we wish him to attack, and we can plan to attack the invader.

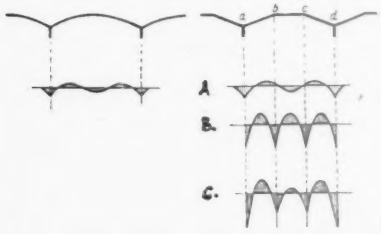
The art of killing enemies with short-range weapons right down to the bare hands is as old as man himself and will continue to be so throughout the ages. We can therefore plan the positions of our buildings, our ornamental lakes and parks, to the last bush and hedgerow, to suit the warfare of our infantrymen and guerrillas. Such conditions cannot—as opposed to fortifications of concrete and steel which may be utilized when the time comes and adapted to suit the machines of the age—be instantly created when war is on the doorstep, be it fifty or five hundred years hence.

In constructing and siting our future buildings after taking only civil considerations into account would be to employ the hitherto too common characteristic of this country in doing things by halves. If the soldier, sailor, or airman advises the position of an ornamental lake to be moved or that the railway sidings be spread for tactical reasons over larger or smaller areas, then these things should be done. We do not want a military dictatorship. We do not want a dictatorship of any description. We *do* want *all* the brains of the country to be utilized and not just half of them.

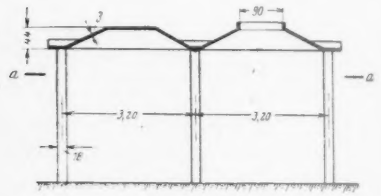
It is therefore desirable in future for architects, builders, town planners and other civilian authorities to work as a team with military, naval, and air advisers. Towns could be created no less beautifully with military advice than without. They would be functionalistic towns and readily adaptable from peace to war. They could be subject to periodical surveys to bring them into line with new conditions. England would surely signify certain annihilation to any potential invader. The Englishman's home would surely be his castle. Such a united nation would undoubtedly provide a secure base from which to begin the road to "Mutual understanding and trust." Let us tackle the first things first.

It has been stated that architecture expresses the social state of a nation. In our future towns we have a great deal to work for. Protective Architecture applied to our town and country planning will show a strong, confident, and united England.

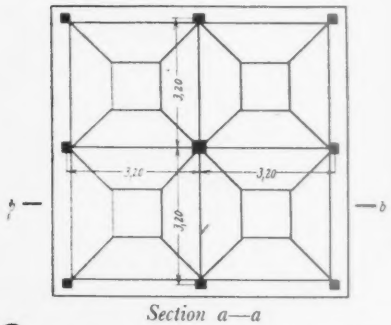
Cambridge DEREK M. EDGE



1 *Bending moments in shell and Faltwerk.*

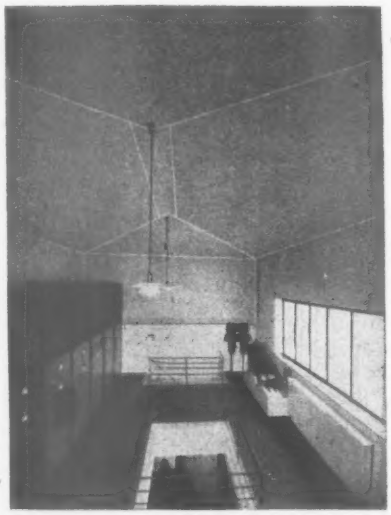


Section b—b



Section a—a

2 *Experimental Faltwerk built in USSR.*



3 *Faltwerk roof over a pumping station of the Emschergenossenschaft (Ruhr district) Germany. (See letter from K. Hajnal-Konyi).*

Shell Concrete Construction

SIR,—Mr. Samuely's letter in your issue of January 4 contains several interesting references. Could he give more information about the buildings in shell construction designed by him "as long ago as 1919," *e.g.*, a few sketches showing their general arrangements and main dimensions, and also state where they were erected?

I was astonished to learn that the old Egyptians were aware of the principles of shell construction. There must be many other readers who would be interested to see at least one example which illustrates Mr. Samuely's surprising statement.

In the last paragraph of his letter he refers to a type of construction known in Germany as Faltwerk. An adequate English term does not yet exist. Some of your readers might have suggestions.

As Mr. Samuely pointed out, Faltwerk construction makes a number of additional forms possible, but it requires more concrete and steel than a curved shell. This may be the reason why its application, so far, to my knowledge, has been restricted to comparatively small spans where the weight of the structure is of no great importance. Could Mr. Samuely give examples of roofs of substantial spans? In his Fig. 3 one important feature of shell construction is missing, the stiffening member across the span of the barrel, which may be omitted in a Faltwerk in certain cases. I wonder whether a roof has ever been carried out in accordance with Mr. Samuely's Fig. 3.

The main difference between curved shell and Faltwerk is the magnitude of the bending moments across the vault. Fig. 1 shows the bending moments both in a shell and in a Faltwerk designed for the same conditions. The shell is only 2 in. thick; for the Faltwerk a thickness of $3\frac{1}{2}$ in. is required. In the latter case, the bending moments in a continuous system *a-b-c-d* (B) are superimposed on the bending moments of the shell (A), resulting in (C).

Fig. 2 shows a roof carried out in the USSR for experimental purposes. The spacing of the column is 10 ft. 6 in. and the roof is only $1\frac{3}{16}$ in. thick. This system has a certain similarity to flat slab construction, but its load bearing capacity, with equal weight, is many times greater. It is often possible to support the roof not only at the corners, but along the full length of the surrounding walls, *e.g.*, in pumping stations, transformer rooms, etc. Fig. 3 is the inside view of such a roof over a pumping station of 21-ft. 6-in. width and 33-ft. 6-in. length.

Systems of this type bear the same relation to systems supported on the corners only, as a two-way reinforced slab, supported on all four sides, to a flat slab, supported on columns only.

The most important field of application of Faltwerk are bunkers, but this type of construction is of comparatively little interest to architects.

London K. HAJNAL-KONYI

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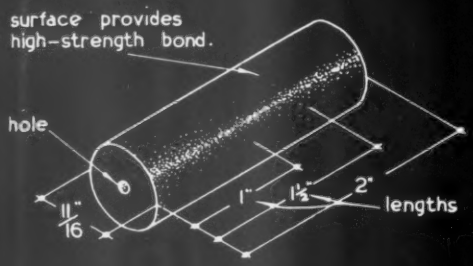
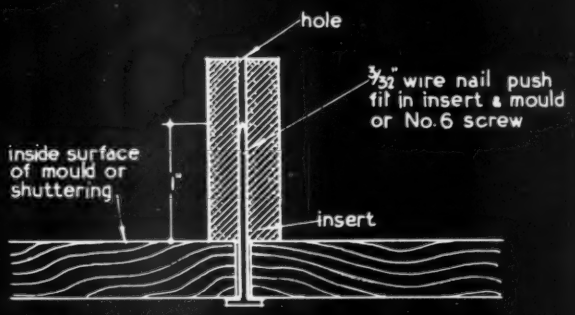
PHILPLUG INSERT No. 102 —— for 'cast-in' applications



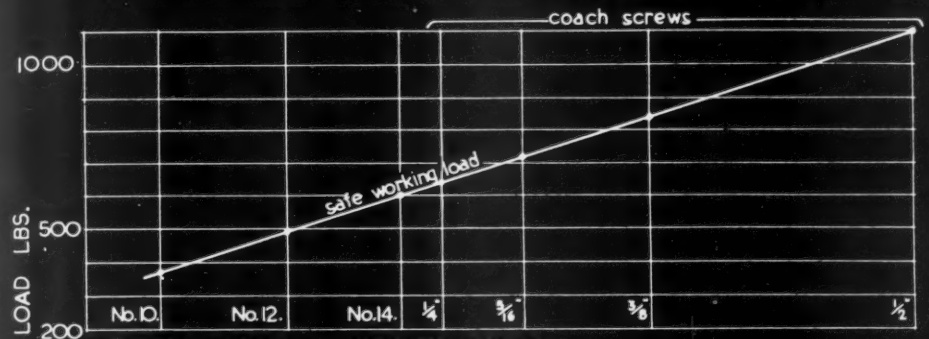
ISOMETRIC SKETCH SHOWING STANDARD DIMENSIONS.



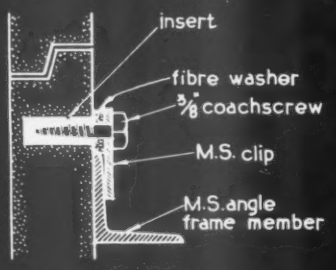
SECTION THROUGH INSERT SHOWING METHOD OF LOCATION IN MOULD.—or to shuttering—.

LOAD CAPACITY USING SCREWS:

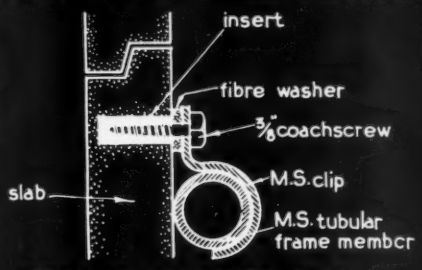
the values given here are those for continuous loading. for shock loads decrease value by 50%



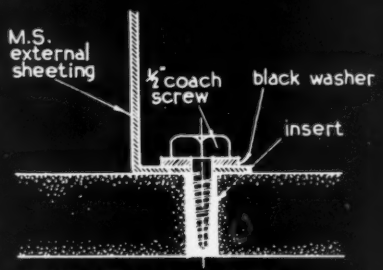
SIZE OF SCREW —PENETRATION 2"



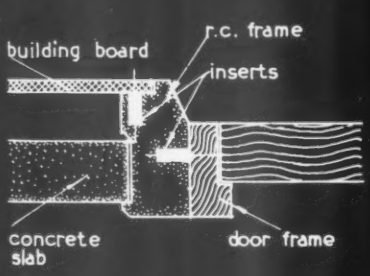
PRECAST CONCRETE SLAB ATTACHED TO STEEL FRAME. (fixing to steel angle member)



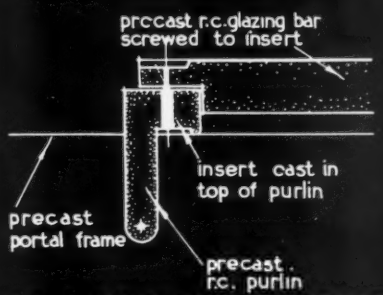
PRECAST CONCRETE SLAB ATTACHED TO STEEL FRAME. (fixing to tubular member)



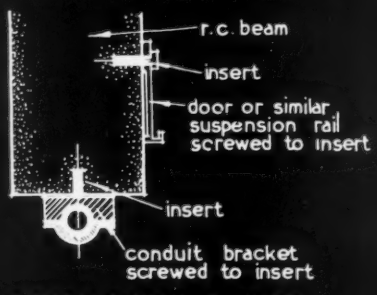
SHEET STEEL EXTERNAL WALL FINISH ATTACHED TO IN SITU FOUNDATION CONCRETE.



TIMBER DOOR FRAME & BUILDING BOARD LINING ATTACHED TO R.C. FRAME



R.C. GLAZING BAR ATTACHED TO PRECAST R.C. PURLIN ON R.C. PORTAL FRAME.



TYPICAL 'DETAIL' FIXINGS: CONDUIT & RAIL FITTINGS ATTACHED TO R.C. LINTOL.

TYPICAL STRUCTURAL AND SEMI-STRUCTURAL APPLICATIONS.

Issued by Philplug Products Ltd.

INFORMATION SHEET: FIXING BLOCK FOR USE WITH CONCRETE CONSTRUCTION.
Sir John Burnet Tait and Lorne Architects One Montague Place Bedford Square London WC1.

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INFORMATION SHEET

• 953 •

FIXING BLOCKS

Subject :

Philplug Insert No. 102. Fixing block for use with concrete construction.

General :

This Sheet describes Philplug Insert No. 102 and gives general data and examples of reinforced concrete construction using cast-in Inserts as fixing blocks. The Insert can also be employed for In-situ work by casting $\frac{11}{16}$ in. diameter hole in the concrete. When employed in this way the Insert should be expanded into the hole by driving it with a $\frac{5}{8}$ in. diameter rod.

Physical Properties and General Characteristics of the Material :

The Inserts are made of an asbestos and special cement material which is waterproof and rotproof and will not corrode ferrous metals. The asbestos content renders it fireproof, an advantage over wooden Inserts. The material forms a high-strength bond with Portland Cement concrete, and its co-efficient of expansion is almost identical with that of normal concrete mixes.

Standard Sizes :

The standard Insert is $\frac{11}{16}$ in. diameter and is available in three stock lengths 1 in., $1\frac{1}{2}$ in. and 2 in., greater lengths (non-standard) may be obtained in the $\frac{11}{16}$ in. sizes, and Inserts of greater diameter are manufactured to order.

Fixing :

Screws, nails or drive screws may be used for fixing. Where heavy loads have to be carried a 2 in. long Insert should be employed, if practicable, so that the load is taken as far below the surface of the concrete as possible. Screws from No. 10 to $\frac{1}{2}$ in. coach screws can be accommodated in the same Insert and it is not necessary in the case of the smaller screws to place these in the centre of the Insert. When the larger screws, namely $\frac{3}{8}$ in. and $\frac{1}{2}$ in. coach screws are being employed it is best to pierce a hole in the Insert by means of a pointed spike. This ensures easy entry for the screw. So far as nails are concerned, cut nails give the best results and the largest nail it is practical to use should be employed.

Load Capacity :

The graph on the face of this sheet gives the average safe working load for screws and coach screws. These values are for continuous load conditions. Where shock loads are anticipated, the loads given should be decreased by one half. The loads that can be carried by nails vary considerably with the size of the nail employed and can be taken as approximately one-third that of screws of similar diameter.

Applications :

The Inserts are suitable for all usual fixing applications—such as brackets, gutters, etc. and in addition are particularly suitable for purely structural applications. The sketches illustrate typical structural and semi-structural uses including concrete to steel, steel to concrete, timber to concrete, concrete to concrete and fibreboard to concrete.

Finishes :

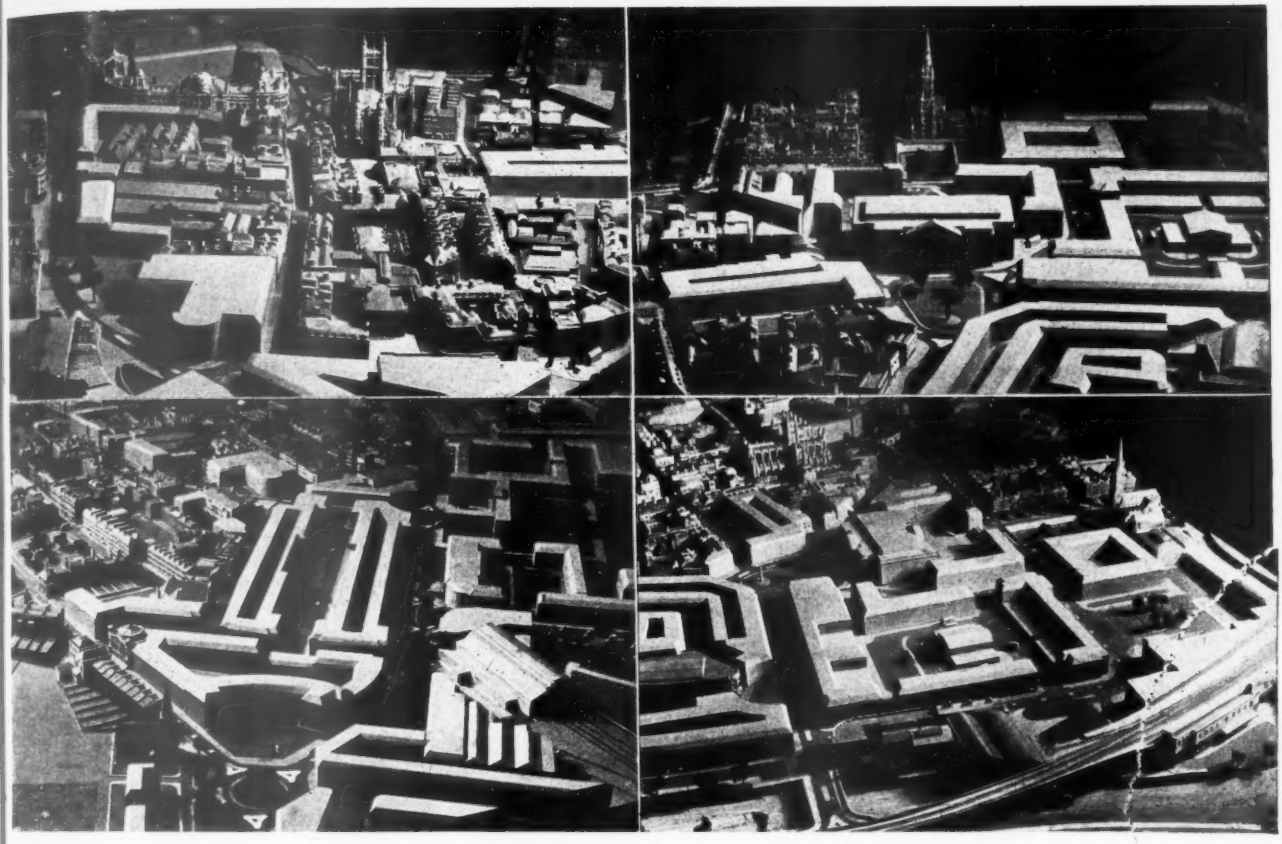
The Insert may be finished by similar treatments to those normally used with Portland cement concrete. Oilbound paints should not be used without first priming the surface.

Issued by : Philplug Products Limited

Address : Lancelot Road, Wembley, Middlesex

Telephone : Wembley 0140/1

PHYSICAL PLANNING SUPPLEMENT



Above are four views of the model showing the proposals for the central area of Bath. Top left, looking east towards the Abbey and Guildhall, the new building in the left foreground is a theatre and cinema (*I* in the map on the next page). Top right shows, centre, the new concert hall and, right, the new central bus station (*B* and *E* in the map). Lower left is a view down the new shopping and business precinct (*D* in the map). Lower right, the new station place (*H* in the map), with a hotel block on the side of the square facing the station. In the distance can be seen the new swimming pool and cafe on the bank of the river below Pulteney Bridge, (*F* and *G* in the map). The new plan for the city has been prepared by Sir Patrick Abercrombie, Mr. John Owen and Mr. H. A. Mealand. It is presented in an exhibition now on view at Bath and in an eighty thousand word report, which are reviewed below.

A PLAN FOR BATH

reviewed by

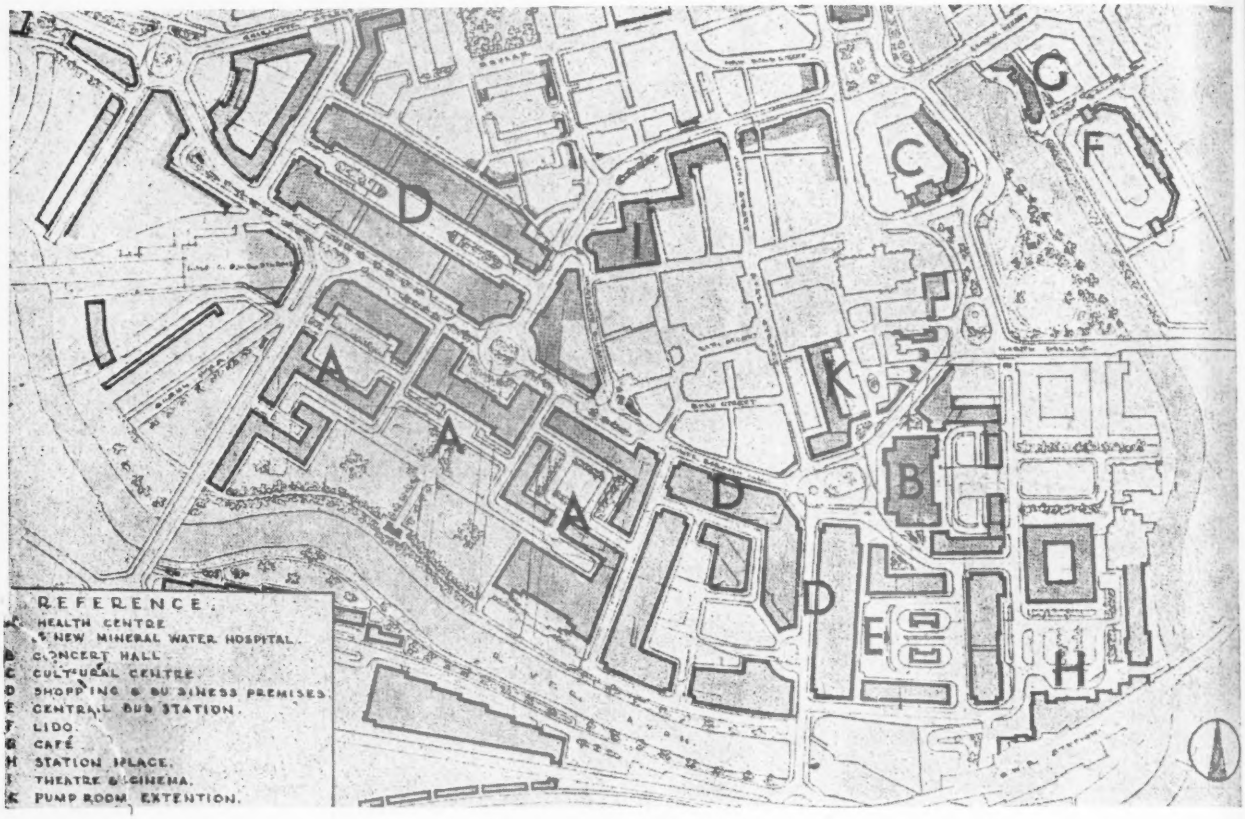
ALFRED C. BOSSOM, F.R.I.B.A., M.P.

Recognition of realism is always refreshing. Strange as it may seem, great undertakings are often contemplated on limited information, without full knowledge or understanding of the things that may happen over-night, of limitations that are unavoidable and of possibilities that may be unattainable.

Before the war, the City Fathers of Bath recognized that they had a great responsibility in handling the future of their City, standing as it does pre-eminently as one of the very few magnificent examples of the planner's art which has come down to us from the eighteenth century without very bad deformities being inflicted upon it. There is no history of that spectacular century that does not refer to Bath, to the life lived there and to its importance as a health resort. Therefore, when on June 21, 1943, a resolution was passed by the Bath and District Joint Planning Committee and later confirmed by the three constituent authorities, the Bath City Council, Somerset County Council and the Bathavon Rural District Council appointing a Technical Committee to prepare and submit a comprehensive report on the entire situation, a great service was rendered not only to that historic centre, but also to similar towns and cities throughout the country.

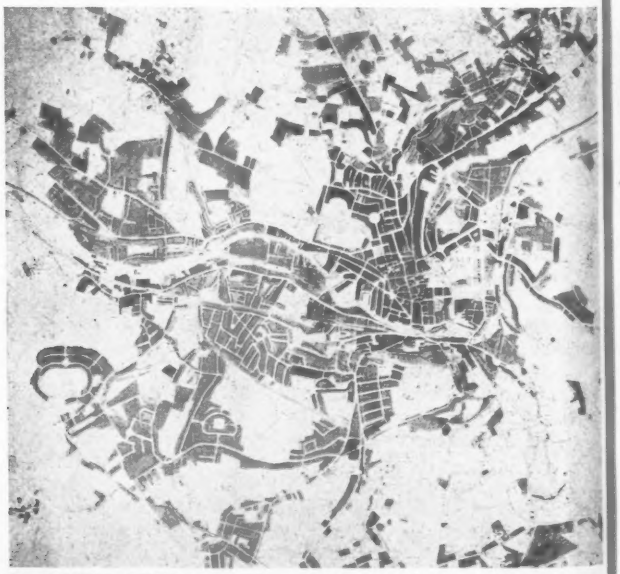
Sir Patrick Abercrombie, M.A., Mr. John Owen, City Engineer, and Mr. H. A. Mealand, the Town Planning Officer, were asked to examine the position as the planning scheme for the area had already reached the draft stage when the war started. The war has, as everyone knows, produced a much wider aspect as regards planning, and, as town and city have succeeded each other in outlining their postwar expectations, so has it been found that each successive plan was more comprehensive than its predecessor.

All now recognize that no plan can be confined strictly within a city boundary but that it must dovetail into adjacent areas and parishes. In the case of Bath, the plan includes no less than 14 neighbourhoods and 13 parishes or parts of parishes such as Bathampton, Batheaston, Bathford,



PROPOSALS FOR THE CENTRAL AREA

Above is a map of the central area of Bath, showing the new proposals in dark tone. On the previous page are four views of the model of the central area. As Mr. Bossom points out in his review "the suggestions in the Report are put forward so clearly in the model that even the non-technically minded can understand them."



GROWTH OF BATH : Above is a map, showing, in dark tone, building development up to 1876, and, in light tone, land developed between that date and 1939.

Charlcombe, Claverton, Combe Hay (part of), Englishcombe (part of), Langridge, Monkton Combe, Newton St. Loe, St. Catherine's, South Stoke, Swainswick, Weston and Woolley, all covering an area of about 220,990 acres with a combined population of some 78,500 people. The authors of the plan, recognizing the likelihood of further growth, have allowed for a future population in the neighbourhood of 81,000.

Fifty years may pass before the whole scheme the planners envisage is brought to fruition, but, again, suggestions for further demolitions to be brought about as soon as possible, have been wisely thought out so that, when the contemplated new city does arise like a phœnix from the dust of its ancient past, it will stand out, possibly, as an even greater attraction than it has been.

The Report opens with a review of Bath's historical background, and its social and functional activities—of the days when Bath was pre-eminent for its gaiety, carriages and Bath chairs. Delightful and picturesque days they may have been, but they little dreamed that in a comparatively short time, along these same thoroughfares would rush the high-speed car and heavy motor lorry.

The Report then touches on the Basis and Extent of the Plan, its provisions for road, rail and air transport; the Central Area and Riverside Strip; the Central Features, Georgian Bath and Architectural Treatment; the Housing and Density of its Population; the communal, social and educational activity of the town; its industry; its open spaces, agricultural prospects and so forth, with the succeeding chapters dealing in great and methodical detail with each aspect of the above problems.

The actual City area is slightly under 150 acres and in the plan it is divided into ten precincts with the idea of making each self-contained whilst at the same time being readily accessible to all the adjacent neighbourhoods. Much damage has, unfortunately, been done to Bath during the German Baedeker raids of April, 1942. These probably stimulated the desire for a really comprehensive plan which was to be a careful conservation of desirable areas and historic buildings, coupled with complete re-planning of other sections. Something like 8,000 new houses will be required, and the plan endeavours to guard against clothing the green slopes of the hills around Bath, with building developments that will disfigure the skyline.

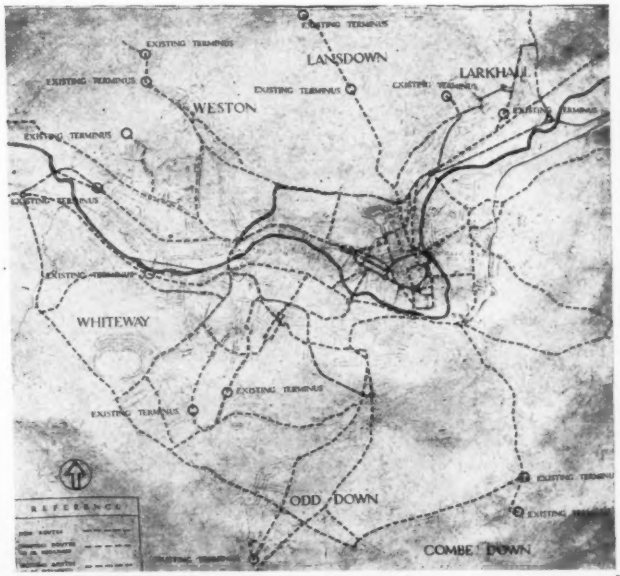
Even though Bath is a City of open spaces, looking forward to the future, the planners do not consider that these are adequate, nor sufficiently evenly distributed, so that more are envisaged in the town to be. For instance, each school will have not only its own playground, but its own playing field as well. The river, which in the past has been largely ignored, is to have the shabby buildings cleared from its banks, leaving a delightful riverside walk from east to west of the City and opening up some lovely landscape views of the country beyond.

The general transport situation has been treated most interestingly. It was felt that the outer ring idea was not necessarily the best for Bath, so that it has been arranged that the east-west through traffic (London-Bristol) is to pass north of the City by a double carriage way; whilst the Bristol-Salisbury-Southampton flow of vehicles is by-passed to the south-west. Another interesting aspect of the traffic problem is the "inner" circle for major local needs on to which radial approach roads converge. This "ring" practically encircles the ancient City centre containing the Abbey, Pump Room and Guildhall, and encloses it as a precinct free from main traffic streams.

In the reconstruction work an endeavour is to be made to restore a number of the damaged architectural buildings; other Georgian houses will be remodelled to form a certain number of flats so that, whilst maintaining their outward attractiveness they can be apartments of present-day practical utility inside! It is thought that this treatment will obviate the necessity of building flats, unless certain age-groups of the population prefer them. A City centre such as this should naturally have a fine concert hall, so here again the realistic has been adopted and a fine site selected facing Manvers Street. There is to be a new G.W.R. station place, with a new block of hotels to balance those in South Parade.

It is also suggested that the existing congested civic offices should be moved from the Guildhall to the Royal Crescent—the former becoming the cultural centre with new front to the river and Orange Grove. The plan shows that this development, although useful, would not necessarily destroy other proposed developments if it eventually should not be realized. As the years go by, due to our better plans for national transport, many more visitors will undoubtedly flock to this cultural playground, and, contemplating this, the planners have provided for great car parks for over 2,000 cars within the central area.

NEIGHBOURHOODS: Above is a map showing the 14 proposed neighbourhoods. C indicates community centre; a cross, churches; light tone circles, schools and shopping centres.



BUS ROUTES: Above is a map showing new routes, and existing routes to be retained or extended.

One of the great scourges of the age is rheumatism, and the waters of Bath have been renowned through the centuries for their curative qualities for this ailment and a wider use of these waters is contemplated than before. It is hoped to enhance the town's reputation as a floral city by making it a permanent centre for national agricultural and horticultural shows. Such attractions might well make this town, with its 1,700 Georgian houses out of a total of 20,000, a permanent centre for the arts.

A town with a population in the neighbourhood of 80,000 people, however, must have a certain amount of industry. Bath is essentially a Spa town, and it is hoped to encourage light industries such as printing, book-binding, plastics, furniture and cabinet making, foodstuffs, textiles, clothing and so forth. Not wishing to debar heavy industries, though, the planners have suggested the transfer of these to the Locksbrook area on the banks of the River Avon and the Weston Cut, which gives good access to east-west arterial roads as well as rail and river, hence layouts for this area have already been prepared. For some of the smaller workshops, it is proposed that they be housed in the modern multi-storeyed flatted factories, thus allowing for expansion.

It is proposed a new east-west arterial road should be sunk under Lansdown Road. Although the treatment for this section has only been submitted in sketch form, one would like to see rather more character introduced. There is refinement about the architecture of Bath, but these long side walls will not receive a patina of charm due to age, but rather one of dreariness incongruous with the general environment—whereas there is no reason why they should not benefit by the artist's touch.

Bath's development has been steady; it has not been a spasmodic growth "over-spilling" haphazardly and uncontrolled. Looking back, it is found that in 1931 it had a population of 35,000; in 1861, about 51,000; in 1871, about 52,000; 1881 found it back a few hundreds; 1891 it stayed about the same; 1901, in the neighbourhood of 50,000. The next few years saw an extension of the boundaries which lifted the population to about 70,000, and it has remained round about this figure ever since.

The suggestions in the Report are put forward so clearly in the model that even the non-technically minded can understand them. They are in block-model form, so to speak, showing more clearly than any plan where the open spaces are to be; where fine buildings are possible; why roads are to be changed and where railways will run. It is worked out on a Master Plan whose architectural forms tell their own story, showing that modern developments can be carried out without destroying the charm that previous designers have given to this historic centre.

Bath means much to Britain. The history of the day of the dandy had probably more to do with this town than any other. The country owes much to Sir Patrick Abercrombie for setting a standard of common-sense advancement. It is to such cities as Bath that other towns and cities will look to see how they might approach their own problems in the years ahead when labour problems may not be so great.

Whether this plan is carried forward in its entirety or not, Bath is entitled to the thanks of city fathers throughout the country. It is a town of about the size of a great many others which have to face similar problems regarding traffic arteries, green belts, housing etc.—and here's a type of investigation and procedure to follow.

I am sure I am voicing the expressions that will come from many cities in years to come, when I say that Bath has done a fine piece of work for itself, and a still finer piece of work for the country as a whole, in not only setting up its own plan, but also for the thorough methods adopted as justification for the basis of its findings.

PLANNER'S SCRAPBOOK

PLANNER'S QUIZ

4. On the left is part of a map from a guide to a rapid method of District Survey. All the information shown can be deduced from published sources, but these sources will not be given until the next Quiz, when the key to the symbols used on the map will also be given.

There are, therefore, two questions ; what do the symbols denote in the map on the left ? and from what published sources was the information taken ?

Answer in the next Planner's Scrapbook.

THE ANSWER TO THE LAST PROBLEM

3. The symbols in this WATER map (streams, springs, wells, reservoirs, and land liable to flood) are shown below. The information was taken from Ordnance Survey 6 inches to 1 mile maps.

3 — PERMEABLE WATER-BEARING FORMATIONS. DRAINAGE GOOD; SUPERFICIAL SHEETS OF GRAVEL OVER CLAY. DRAINAGE GOOD, EXCEPT NEAR EDGES; IMPERMEABLE FORMATIONS DRAINAGE POOR; LAND LIABLE TO FLOODS; APPROXIMATE POSITION OF IMPORTANT SPRING ZONES; WELL; SPRING

Left, combined kitchen units which can be mass-produced in a variety of materials suitable for existing houses. New units can be added from time to time as needed. The units here are timber, except for the vegetable drawers of enamelled steel. Below, a mural by F.H.K. Henrion.

KITCHEN

PLANNING EXHIBITION

CONSULTING ARCHITECT: JANE DREW

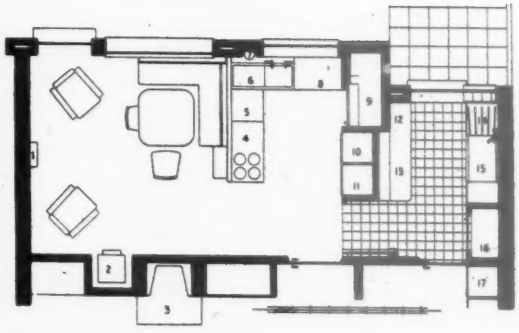
In 1943 the British Commercial Gas Association set up a Domestic Heat Services Committee, representing the technical and commercial aspects of the industry and dealing with all matters connected with the fuel services of the home. The committee appointed Miss Jane B. Drew, F.R.I.B.A., as its consultant, and in co-operation with her undertook a survey of the design and equipment of kitchens. The Kitchen Planning Exhibition, now open at Dorland Hall, London, which has the support of the Ministries of Works, and of Fuel and Power, is the outcome of this research.

The main conclusion from the research is that, while there is no one ideal kitchen to suit all needs, most needs fall into a few given categories and that for each of these there is a solution within the range of present-day technical design and national resources, and the family's financial means.

In the design of the ten package and full-scale kitchens exhibited, uniform levels of working surfaces, and layout of equipment to follow the correct sequence of operations have been considered. Prevention of accidents has been given special attention, as, for instance, in the avoidance of dead storage space between cupboard tops and ceilings which is said to be a frequent cause of accidents. It has been borne in mind that, in addition to the building of new houses and flats, a large number of existing dwellings will call for reconditioning or conversion into flats, and that here greater scope must be provided than before the war for standardization and prefabrication.

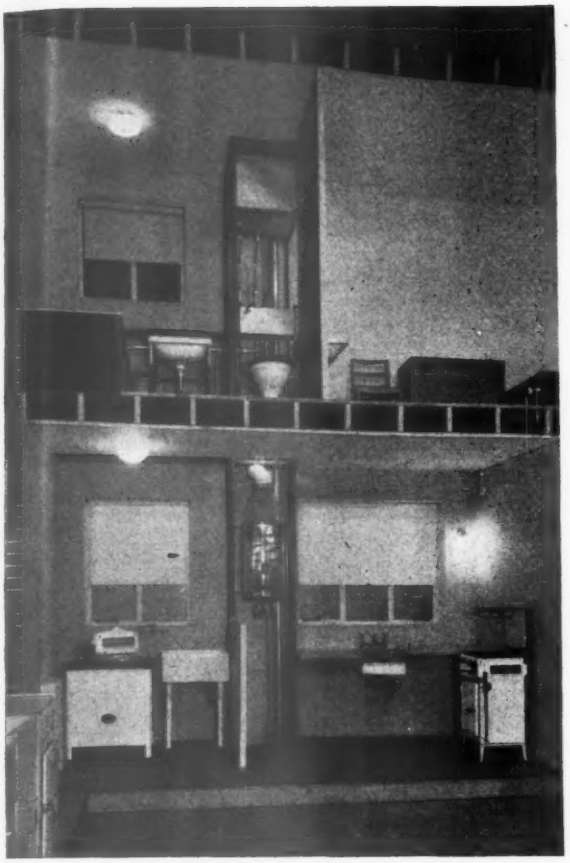
An item in the Exhibition not illustrated here, which is of interest, is a prefabricated hot-water supply unit for a small house designed by Walter Segal, for the London Counties Coke Association. It consists of two components, the lower of which contains the coke boiler and a hot cylinder of 30—35 gallons capacity; in the upper component is a linen cupboard and cold-water storage tank.

Over 100 firms have co-operated in supplying post-war sample products. The exhibition closes on Saturday.

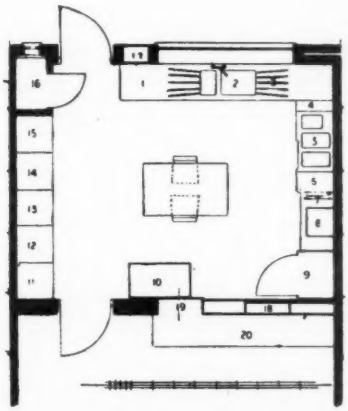


On this page, a living-room kitchen with utility room for washing and odd jobs. A 4-ft. 6-in. high partition separates the living-room portion from the kitchen and allows the single-handed mother to watch her children while she cooks. Top, a general view. Below centre, the cooker with its raised oven, a feature of most of the kitchens ; an extractor fan is installed. Below left, the gas-operated refrigerator built in at a convenient level. Below right, the gas washing-boiler in the utility room under a removable draining board ; on the left is a working bench with a tool rack below. Left, plan of lay-out ; 1, *gas fire ;* 2, *coke boiler with gas poker ;* 3, *open coke fire with gas poker (in main living room) ;* 4, *gas cooker ;* 5, *work top, cupboard under ;* 6, *enamelled steel sink, garbage bin and tray rack under ;* 7, *gas sink water heater ;* 8, *work table, drawers and towel rail under ;* 9, *larder ;* 10, *high-level gas refrigerator, drawers under ;* 11, *cupboard ;* 12, *work bench ;* 13, *soiled-linen bin, cupboard under ;* 14, *gas wash boiler under draining board ;* 15, *sink ;* 16, *gas-heated airing cabinet ;* 17, *cupboard for ironing board, brooms, etc.*

KITCHEN PLANNING EXHIBITION



Left, the Denham prefabricated plumbing unit with One-Pipe system (see A.J., Jan. 20, 1944, pp. 63—64). Below, working kitchen for a semi-detached house, for a family of four to five people of middle-class income, 11 ft. 10 in. by 15 ft. 0 in.; general view and plan. The coke boiler, which is gas ignited, works in conjunction with a gas circulator for provision of hot water when boiler is not wanted. 1, work table with drawers under; 2, stainless steel sinks, garbage bin and basket cupboard under; 3, wash boiler and wringer under; 4, tray rack under; 5, horizontal gas cooker; 6, coke hod cupboard; 7, towel rails; 8, coke boiler with gas poker (gas circulator over); 9, drying cabinet; 10, trolley table; 11, cupboard for utensils and ironing board; 12, drawers; 13, vegetable rack; 14, cupboard; 15, gas refrigerator (wall cupboards with glass sliding doors over, 12—15); 16, larder; 17, delivery hatch; 18, wall cupboards with glass sliding doors; 19, hatch to dining-room; 20, sideboard.



CONSULTING ARCHITECT: JANE DREW

KITCHEN PLANNING EXHIBITION

Above, the smaller of the two package kitchens exhibited, measuring 5 ft. 6 in. long, 6 ft. 9 in. high, and 1 ft. 9 in. deep. It includes gas cooker, sink, water heater and refrigerator, and standard unit furniture for storage. Sink and draining board are of enamelled steel. The package kitchen is designed as a complete unit delivered in one or two parts, intended primarily for houses converted into small flats. Below, the Back-to-Back kitchen-bath-room unit, kitchen side. Intended for a flat housing three or four people of middle-income group (£4—£10 per week). The wall between kitchen and bath-room houses all pipes and services. The unit is faced with anodized aluminium sheets backed with cork insulation and fixed to a frame of aluminium alloy. Hot-water comes from a Multipoint gas water heater in the duct. Right, the bathroom side of the unit.

INFORMATION CENTRE

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

STRUCTURE

1817 **Shell Concrete**

NEW WORKS CANTEEN IN ESSEX. *Designed by Edward D. Mills* (*The Architect and Building News, December* 8, 1944, *pp.* 147-155). Wartime application of Zeiss Dywidag Shell construction in this country. (*See No.* 1717, *December* 21, 1944.)

The main hall (120 ft. long by 48 ft. wide) consists of five reinforced concrete shell membrane barrel vaults supported on reinforced concrete columns. The thickness of the shell is 2½ in. at the top. This type of roofing was selected after considerable investigation for the following reasons: (*a*) Economy in steel; (*b*) ability to span a large area without internal supports; (*c*) economy in cost; (*d*) attractive appearance.

1818 **USA Wartime Buildings**

THESE WAR BUILDINGS WERE SIGNIFICANT. (*Engineering News-Record, October* 19, 1944, *pp.* 487-496.) Examples of important wartime structures in USA in steel, reinforced concrete, and timber. Air-conditioning, heating, lighting.

Shortages of many materials and the need for bigger and better industrial structures necessitated changes of design that may have a significant bearing on the future of building design. Demands of the aircraft industry characterize the requirements, such as complete air-conditioning, better lighting, larger areas of unobstructed floor space than in the past and, in general, more flexible layouts.

As an aid to air-conditioning, many new factories have been made windowless, and the walls and roof have been designed to provide better insulation than in the past. Measures have also been taken to overcome condensation on the walls. Roofs of larger spans have provided more flexible lay-outs. When structural steel became scarce, large blimp hangars were erected in timber; factories were roofed with plywood girders and laminated timber beams and ribs of long span were introduced.

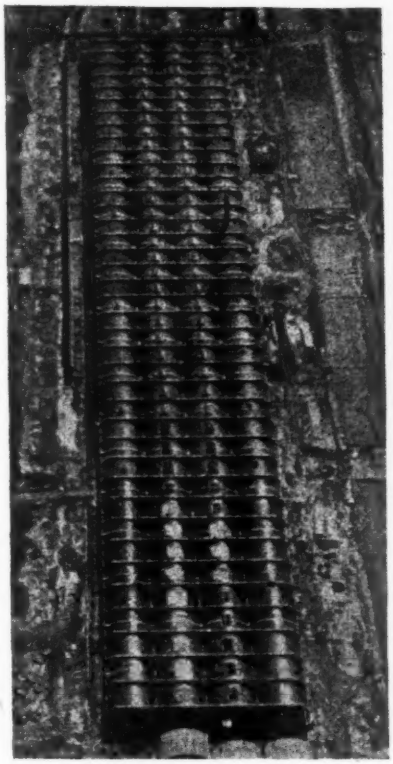
The article describes outstanding examples of large span buildings in steel, reinforced concrete and timber, many of which were mentioned in the Information Centre, Nos. 1140, 1141, 1146, 1232, 1244, 1340, 1381, 1393, 1402, 1437, 1704. See also A.J., of March 8, 1944, p. 182). A Navy Hangar at San Diego in Zeiss Dywidag shell construction (see A.J., December 7, 1944, p. 421) is significant for its span of 294 ft. and rise of 81 ft. At the Army's Columbus depot a warehouse in the same type of construction, covering an area of 182 ft. by 1,562 ft., was completed in 36 days. A third interesting example of shell construction is the factory of the Budd Manufacturing Co. at Philadelphia, 1,860 ft. long, and made up of eight barrel-arch bays. The plant has artificial lighting; the white ceiling serves as a reflector to provide, without glare or shadows, a uniform intensity of 55 ft. candles at working level. The building is also notable for the unusual amount of equipment that is suspended from the shell roof, including tracks for piping, conduits, catwalks, service platforms, heaters and lighting equipment.

1819 **Composite Steel and Concrete Action**

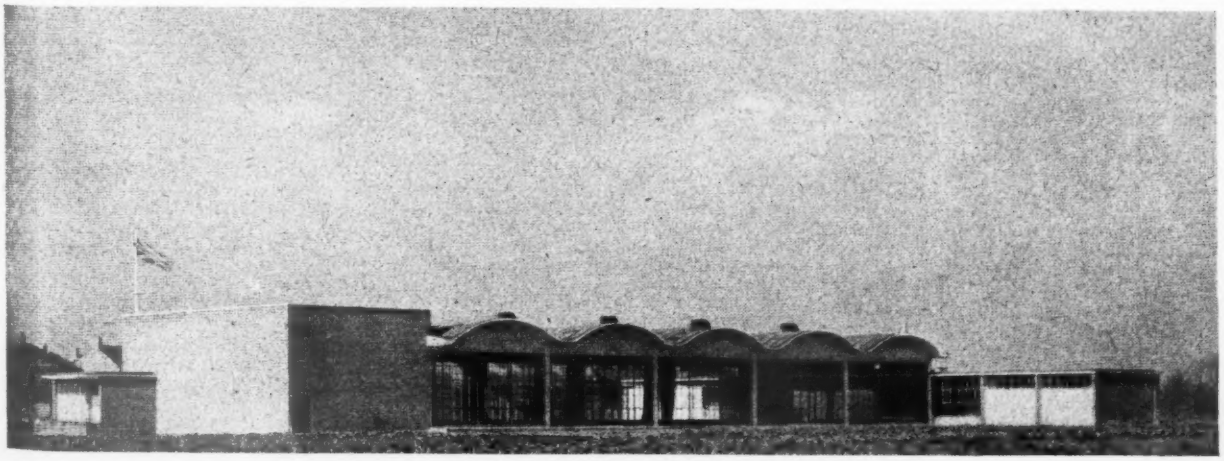
COMPOSITE ACTION BETWEEN STEEL BEAMS AND CONCRETE DECKS. *W. A. Ozanne.* (*Engineering News-Record, October* 5, 1944, *pp.* 400-401.) Test on bridge of composite type in Australia has verified combined action between steel girders and concrete deck. Economizes steel.

Composite structures consisting of steel joists or plate girders and reinforced concrete slabs fastened together are not usual in this country. Bond between steel girders and concrete slab is secured by steel bars welded to the top flange of the girders and embedded in the concrete. This type of structure allows substantial economy in steel.

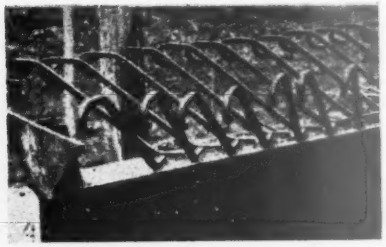
Tests on a bridge over the Maribyrnong River at Melbourne, of 70-ft. span and 52-ft. width, have resulted in very close agreement between measured and calculated deflection and stress. The bridge consists of six girders at 8-ft. spacings. The test load



At the US Army's Columbus depot ; a warehouse covering 182 ft. by 1,562 ft. in plan built in 36 days of a series of 45 ft. R.C. barrel arches. See No. 1818.



New works canteen in Essex of shell concrete construction. See No. 1817.



On the Maribyrnong River Bridge at Melbourne, hooked steel bars were welded to the top flange of the girder and embedded in the concrete deck. See No. 1819.

of 10,000 lb. passed down the bridge immediately over the two central girders. It is interesting to note that only 60 per cent. of this load was carried by these girders, 30 per cent. being transferred to the adjacent girders and 10 per cent. to the two outer lines through cross-frames provided at the centre of the span and by the very stiff concrete deck.

As an indication of the economy of this type of structure it is pointed out that the moment of inertia of the composite section is nearly four times that of the steel section alone. This result is obtained very cheaply by the provision of a few welded shear bars and by a small amount of extra concrete.

1820 **Building Mathematics**

THE ELEMENTS OF BUILDING MATHEMATICS. *T. H. Fallows.* (*J. M. Dent*, 1944, 3*s.* 3*d.*) Over 200 diagrams, 165 pages. Covers needs of Junior Technical Schools of Building. Elements of arithmetic and algebra. Calculation of areas and volumes, including brickwork and timber. Practical examples and exercises with answers given. Useful guide for self-instruction.

1821 **Building Science**

BUILDING SCIENCE FOR STUDENTS OF ARCHITECTURE AND BUILDING. VOL. I. *Alfred G. Geeson* (*The English Universities Press, London*, 1944, 21*s.*). Elementary treatment of physics and chemistry in their relation to building. Three sections: Materials, Structures, Equipment.

As the Author points out in the preface, the importance of science in architectural education is slowly receiving full recognition. There is a big gap between scientific research and its application to building. The busy architect or builder can hardly be expected to spend a lot of time and energy on becoming familiar with the results of research.

The purpose of the book is to give the student an experimental approach to Building Science. It adopts the principles of a recent Report of an Architectural Education Committee, and assumes that the student has access to a suitably equipped laboratory. The syllabus is divided into three main sections:—

I. Materials. (The science underlying the use of constructional materials and their exposure in the fabric of buildings.)
II. Structures. (The science underlying the structure of buildings and the strength of structural materials.)
III. Equipment. (The science underlying the equipment and occupancy of buildings, such as heat and electricity.)

The book covers the scope of the vast majority of courses leading to the National Diplomas and Certificates in Building. It uses only the most elementary mathematics, and confines itself to statically determinate structures. Although it may be difficult to deal with indeterminate structures at this level, it would have been desirable at least to refer to structures like continuous beams and rigid frames, which are of the greatest importance in modern building practice. The detailed analysis of such structures has to be left to the specialist, but if the architectural profession is to be kept up-to-date, it is essential that students should have some elementary knowledge of the basic forms of reinforced concrete and welded steel structures. Section II. which comprises about one third of the whole book, refers only to traditional forms of structures and, as it stands, might have been written some 50 years ago. This may satisfy the syllabus for examinations, but does not provide the right training for students of architecture and building.

HEATING and Ventilation

1822 **Electrical Accidents**

AN ASSESSMENT OF ELECTRICAL ACCIDENTS IN RELATION TO OTHER ACCIDENTS. *A memorandum prepared by the Institution of Electrical Engineers.* (*Journal of the Institution of Electrical Engineers, July*, 1944, *Part I, p.* 257.) Scrutiny of fatal accident statistics, especially those which are domestic and have electrical causes. Appraisal of some electrical fire statistics.

This is a report devoted primarily to an analysis of electrical causes of death, about which a good deal is heard from time to time. The report was prepared on the instruction of the Council of the Institution of Electrical Engineers.

The statistics quoted are remarkably interesting, and perhaps unexpectedly so for architects. The interest for them lies in two directions. First, the number of electrical accidents forms a very small proportion of the total accidental deaths per annum, being less than 100 out of 16,000 or more (1938), and would hardly appear to justify all the attention they receive, especially as the rate (*pro rata* for the electricity sales) has not varied very much since the last war. Possible reasons for the constancy of this rate are discussed.

The second and more remarkable fact is merely incidental to the report; it is a quotation of the death rates due to accidental falls in houses. These hugely exceed the electrical fatalities and are rapidly increasing. Falls on stairs rose only from about 400 to 800 per annum between the wars, but falls described as in house rooms, etc., increased from about 300 to around 1,200 per annum.

One is tempted to speculate on the cause of this increase, but the matter would appear to call for more serious investigation. Even the death rate due to falls on stairs—which is about ten times the total elecrical fatalities—seems to demand attention.

Incidentally, one may remark also that it appears to be at least as dangerous to stay home as to go out on the streets.

1823 **Factory Heating**

EFFICIENT FACTORY HEATING WITH MAXIMUM FUEL SAVING. *E. B. T. Tanner* (*Air Treatment Engineer, May*, 1944, *p.* 69.) Discusses advantages of unit heaters compared with radiators, overhead pipe-coils and plenum heating.

The author concludes that solid fuel boilers are the most economical source of heat for the average factory where no special considerations arise. Among the types of apparatus considered are (*a*) radiators, (*b*) overhead pipe-coils, (*c*) plenum heating, (*d*) unit heaters. The author claims that unit heaters are the most satisfactory, as they fulfil seven of the eight main requirements of a factory heating and ventilation system. Each of the requirements is discussed in relation to unit heaters.

1824 **Air Pollution**

CLEAN AIR AND PRACTICAL POLITICS. *G. A. C. Saword.* (*Journal of the Royal Sanitary Institute, October*, 1944.) Suggestions for practical plan to reduce air pollution.

This paper is interesting for its somewhat new approach to the subject. First are some brief quotations showing the extent of the damage caused by pollution and some reasons why nothing satisfactory has been done to reduce the nuisance. The author then proposes a new approach by:—

(i) A publicity campaign on a national scale.
(ii) Records of pollution to be taken by all local authorities.
(iii) The licensing of stokers—some excellent arguments are put in favour of this.
(iv) Equipment of boilers with adequate recording instruments.
(v) Control of types of fuel to purposes for which they are best suited.
(vi) Control of new types of apparatus. For this the suggestion is that all new plant should be tested and registered by the Department of Scientific and Industrial Research.
(vii) Special industries which cannot avoid smoke emission should have to declare this fact to town-planning authorities.
(viii) Other sources of pollution.

The author is not in favour of transferring control to central Government departments.

1825 **Air Conditioning**

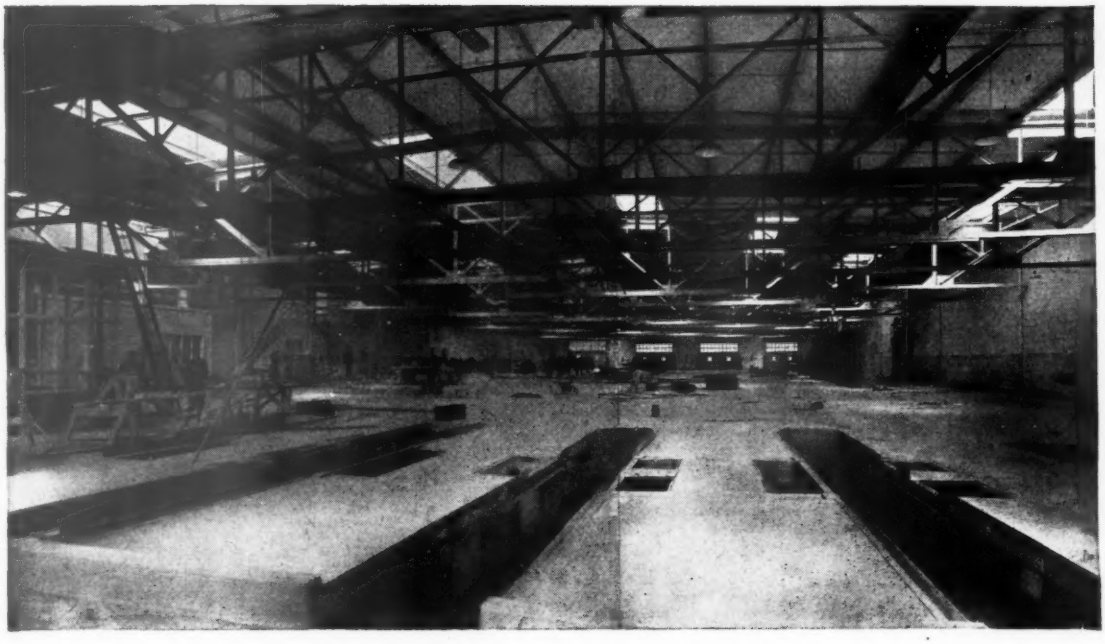
MULTI-ROOM BUILDINGS POSE AIR CONDITIONING PROBLEMS OF THEIR OWN. *W. L. McGrath* (*Heating, Piping and Air Conditioning, August*, 1944, *p.* 470). Requirements in hotels, offices, flats, etc. Individual control in each room desirable.

Requirements for air-conditioning in hotels, offices and flats differ from those for theatres, shops and factories in that individual control of conditions in each room is desirable. Multi-room buildings must to large extent be treated as so many individual jobs. Difference in solar heat gain, internal heat gains and temperature requirements further complicate matters. (Further article will describe equipment suitable for such buildings.)

1826 **Wiring in Bulk**

MASS INSTALLATION (ELECTRICAL). *T. Dunwoody.* (*Electrical Review, June* 30, 1944, *p.* 929.) Review of wartime experience on camp sites with wiring and cable-laying in bulk, with suggestions for future development.

In the laying of many cables in wartime, faults have developed as a result of damage to the sheath. The causes of damage are various, *e.g.*, puncture by picks, falls of bricks, use of flints for infill, and subsidence in the trench. Preventative measures and the proper laying of cables is discussed. Some disadvantages of laying cables in



BUS GARAGE FOR THE MONTREAL TRAMWAYS COMPANY

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PATENT WELDED TUBULAR CONSTRUCTION

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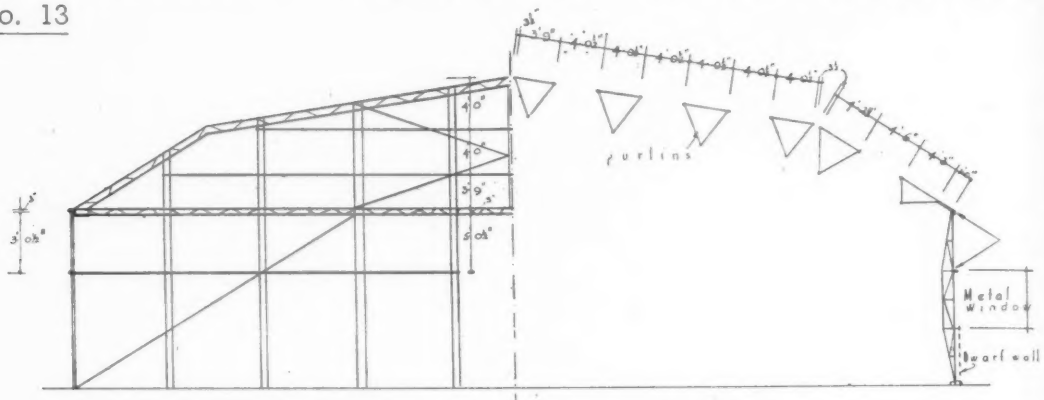
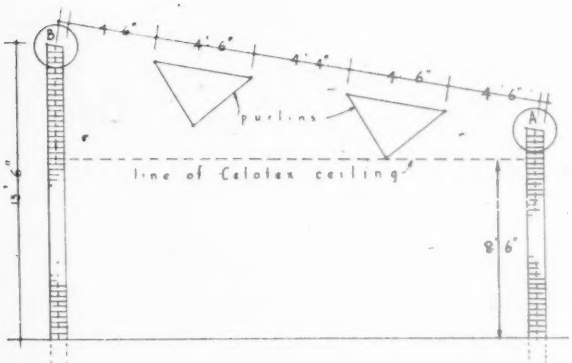
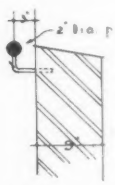


PART ELEVATION GABLE END

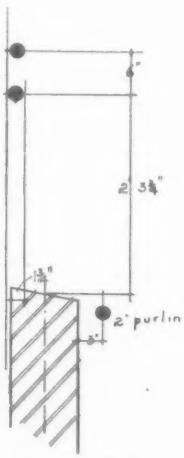
PART SECTION



TYPICAL SECTION OF OFFICE ANNEXE



DETAIL AT "A"



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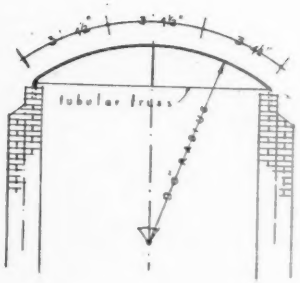


TYPICAL SECTION BLACKOUT LOBBY

CONSTRUCTION AT GABLE ENDS

This Data Sheet shows part gable elevation and section of the welded tubular structure described generally in Data Sheet No. 12.

The triangular shaped purlin frames are designed so that the upper chords come at 4 ft. centres to carry the roof covering of corrugated asbestos sheeting; the gable end steelwork provides sheeting rails for the vertical sheeting, the steelwork being clothed with asbestos to a depth of 5 ft. 6 in. below eaves level. Steel glazing frames, 5 ft. 6 in. in depth, are hung from the lowest sheeting rail and bricked from sill level to ground level with a 4½ in. wall.

An office annexe in brick is provided at one gable end (see perspective in previous Data Sheet) comprising two administration areas 35 ft. 0 in. wide divided by a 10 ft. "blackout" lobby; triangular purlin frames span the 35 ft. areas with purlin rails at 4 ft. centres.

NOTE.—These Data Sheets are appearing fortnightly in THE ARCHITECTS' JOURNAL—*the complete series is available in Folder Form and application for copies should be addressed to Scaffolding (Great Britain) Limited, Saunderton, Princes Risborough, Bucks.*

trenches for drains and water-piping are emphasized.

The author expresses frank opinions about common wiring methods. For instance, screwed conduit is described as too expensive, inflexible and difficult to install; the ability to draw cables in and out is a negligible advantage, and the conduit itself provides an exposed path for heavy fault currents. Slip conduit is said to have all these disadvantages, and to be unreliable. The resistance of the joints is also too variable. The protected cables are thought to be on the whole the most useful at present, though the author looks forward to improved types of plastic covered cable.

LIGHTING

1827 *Ostwald Colour System*

A SYMPOSIUM ON THE OSTWALD COLOUR SYSTEM. (*Journal of the Optical Society of America, July*, 1944.) Series of papers on philosophy, analysis, specification, and application of Ostwald system.

This series of papers is for the advanced colour student. In view of the prolific writings of Ostwald himself, it forms a convenient summary of the significance of his system. A paper by Faber Birren is included on the commercial application of the system. It is interesting to discover that his colour consultant, who has done a great deal to develop colour in factories, bases his work largely on the Ostwald system.

1828 *Colour Harmony*

GEOMETRIC FORMULATION OF CLASSICAL COLOUR HARMONY. *Parry Moon and D. E. Spencer* (*Journal of the Optical Society of America, January*, 1944, *p.* 46). History and theoretical basis of colour harmony, its analysis in geometric terms. Some examples of use of the analytical methods.

Reference was made recently in these columns to a paper by the present authors introducing the idea of colour harmonies worked out by geometrical methods (No. 1656:2:11). Apparently there is to be a series of papers on the subject, and this second one is of considerable importance.

It is pointed out that most major artists have formulated colour theories, but that in the absence of a method of colour specification, such theories had to remain incomplete and inadequately stated. In 1931 international agreement on colour designation was secured, and lately a so-called metric colour-space—*i.e.*, a graph—has been developed enabling geometrical definition of colours to be made. With this foundation it becomes possible for the first time, it is stated, to produce a scientific theory of colour harmony, and this is now to be attempted in a series of papers.

Classical harmony ignored the effect of colour area and the adaptation of the eye, and these two aspects will be treated later. This paper merely correlates and presents scientifically the classical theories.

There is a short history of colour harmony. It is noted that accent has usually been placed on hue, and it was until about 50 years ago that Chevreul introduced the ideas of harmonies of contrast and analogy in terms of hue, saturation and brightness.

The present development is based on two postulates, which are discussed fully. These are that pleasing combinations are obtained when:—

(1) The interval between any two colours is unambiguous, and when

(2) Colours are so chosen that the points representing them on the graphical colour-space are related in a simple geometrical form.

The "interval" to which reference is made is a dimensional interval on the graph, representing equal perceptual steps as the eye sees colour.

At this point it is found that there is an analogy with musical harmony, the "intervals" on the colour-space (the graph) being similar in conception to "intervals" between musical notes; and consequently that intervals of the wrong order can produce colour discord, while other intervals produce more pleasing combinations in various degrees.

It is noted that the second postulate is based on the æsthetic principle that pleasure is experienced in the recognition of order. That is well established in the qualitative sense; and in this paper it is given quantitative significance.

The last sections of the paper are devoted to a classification of harmony types. There are three classes depending on the introduction of one, two, or three variables. Since only three terms are used in the definition of colour, these classes are fundamental and no others exist. Harmonies are tabulated in each class, and finally three examples are discussed.

QUESTIONS and Answers

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

1829 *Factory Addition*

Q *I have a client who wishes to make a small addition to a factory. He is engaged on work for Government Departments and presumably their backing would be required. I should be glad to know the correct procedure.*

Considering that my client has for some time been engaged on Government work, and with the existing space has managed to fulfil these contracts (although admittedly under cramped conditions), and that these contracts are unlikely to increase at this stage, I should value your opinion on the likelihood of permission being obtained for:—

(*a*) *The very minimum of work and construction of a temporary nature.*

(*b*) *A light construction, but with, say, proper flooring ground slab and foundations which would take a more permanent building at a later date.*

(*c*) *A ground floor construction which would allow of additional floors being added at some later date.*

A Procedure varies, and we can only advise you to get in touch with the Production Department of the Ministry which is most interested in your client's products. Normally, if the Production Department is satisfied they will put you in touch with the proper Technical Departments, who will discuss your proposals.

It is quite impossible for us to say what is likely to be approved in your case, but normally when an extension is considered necessary, a proper building in conformity with Wartime Building Standards is permitted. Any question of the construction being of a temporary nature or suitable for further extensions, depends entirely upon the particular circumstances.

SOCIETIES AND INSTITUTIONS

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

APRR

Honor Oak Estate

Meeting of the Association for Planning and Regional Reconstruction. Talk by L. E. White, Honorary Secretary of the Honor Oak Community Association, on THE HONOR OAK LCC ESTATE. The facts given concerned Honor Oak, but its planning and sociological problems are of much wider significance and show that housing is not enough.

L. E. White: The estate housed 5,000 people in 25 blocks of four-storied flats, and one of five. Building was begun in 1933 on a 40-acre site. This is roughly quadrilateral in shape, bounded on three sides by high railway embankments and on the fourth by a large cemetery. Beyond these physical barriers, there is a Municipal Housing Estate in the Borough of Deptford to the north-east; a lower middle class suburb in the Borough of Camberwell to the west, and to the south a rather respectable, slightly decaying, district of Lewisham containing some new speculative housing. The boundaries of these three local authorities meet at the estate.

Building was started on low ground at the northern corner in the Borough of Deptford, and the dwellings conformed to the LCC "modified" housing standard. Over a quarter of the estate had been completed and occupied by 1935. Only then was the school built. A nursery school was added in 1938, and a small terrace of seven shops was included in a block completed about 1936. These,

together with a ramshackle tin café and a scout hut on the northern tip, complete the social amenities.

Open space takes the form of asphalted courtyards between the blocks, and a rough surfaced playground of about one acre on the southern boundary. The only green spots on the estate were the narrow grass strips in front of each block (formerly completely railed off, now no longer green), and a small patch by the nursery school. This is the proposed site for a future Health and Community Centre combined.

The parish church is off the estate, a Roman Catholic church and school are some quarter of a mile away by way of a footbridge over a railway, and the nearest public house is considerably further. Lewisham Borough maintains a branch Infant and Child Welfare Centre in one of the flats, but residents on the Deptford side have to go a mile to their centre. A railway station can be reached by road in about 12 minutes; the nearest bus and tram stop is 7 minutes away over a footbridge. Access to the estate in the early years was confined to two roads at the northern tip and one footpath on the south. The latter was later widened for vehicular traffic, and after considerable agitation on the part of the tenants, two footbridges over the railway in the direction of Crofton Park were opened up. Despite the fact that one of these is adequate for wheel traffic, it may not be used for such purposes, and ambulance and civil defence vehicles have had to go about a mile and a half round in order to get on to the estate.

In addition to these physical errors of planning, were the social problems of over 5,000 people. Tenants were moved into Honor Oak from some of the worst slum clearance areas in Rotherhithe, Bermondsey and Deptford; there was no particular policy in selection other than a reasonable ability to pay the rent; but families were fairly large—the average in 1939 was still about 4.45 persons—and uniformly poor. The social breach between the new tenants and the established citizens on the other side of the rails, made up of differences in health, in appearance, in manners and in mental abilities, was widened by rankling fears of deteriorating values and spoliation of property. On the other side, the new tenants found no help or advice to aid them in their adjustment from their former crowded, friendly and familiar conditions to their strange, new, and rather drab isolation. There was no common meeting place for organized or spontaneous activities, not even for administrative purposes. Little wonder that those, with energy and the means to move, did so at the earliest opportunity—the average yearly turnover from 1934-39 was 24.6 per cent., and in one year reached 33.8 per cent.—and that those who have been unable to move out have sunk into apathy.

After 10 years, the Honor Oak Estate, far from raising the standards and developing the capacities of its erstwhile slum tenants, has stunted their social development. The tenants are still strangers to each other. When asked where they would go in the event of being bombed out, the great majority gave addresses in the slum districts from which they had come. It has been very hard to get people to undertake fire-watching and other civil defence activities. Destruction of property is particularly rife throughout the estate. It is almost impossible to maintain local social activities, nor can the tenants participate in the social activities of adjacent areas, for these areas are themselves poorly equipped, and the people who live there are averse from mixing with the Honor Oak tenants. The health, manners, clothes and educational attainments of the children still compare unfavourably as soon as they associate with others.

The chief defects of Honor Oak, its high density, its physical and social isolation, its civic division, its lack of social services and amenities, are the typical defects of inter-war housing. Honor Oak is remarkable only in having them all. A real cure for this particular estate is difficult—perhaps impossible—to discern. Certain obvious ameliorations can be undertaken, but it stands as an awful warning of the deterioration that may result from lack of survey of the ways of life of the people to be moved, and lack of intelligent and sympathetic anticipation of their requirements in new surroundings. Honor Oak demonstrates, graphically and unmistakeably, that HOUSING is not enough—even when accompanied by a school and half-a-dozen shops.

RIBA

Minutes

The following are notes from the MINUTES OF THE COUNCIL of the RIBA.

APPOINTMENTS

Housing Committee: Mr. Frederick Gibberd (F) as an additional member. *British Standards Institution; Committee on Paper Underlays:* Mr. J. H. Greenwood (A). *Council for Education in Appreciation of Physical Environment:* Mr. E. A. L. Martyn (F) in place of Mr. Basil M. Sullivan, who has resigned. *Delegate to National Conference of the Town and Country Planning Association:* Lt.-Col. H. P. Cart de Lafontaine (F). *Hon. Auditor:* Mr. J. D. Hossack (F) in place of the late Mr. Ronald Topham. *Town and Country Planning Committee:* The following were appointed to serve on the Town and Country Planning Committee for the Session 1944-1945: The President (*ex-officio*); Mr. Henry Braddock (A); Mr. W. Dobson Chapman (L); Mr. Brian Cooper (F); Mr. W. R. Davidge (F); Mr. J. L. Denman (F); Mr. J. Murray Easton (F); Mr. J. H. Forshaw (F); Mr. D. E. E. Gibson (A); Professor W. G. Holford (A); Mr. A. W. Kenyon (F); Dr. H. V. Lanchester (F); Mr. Arthur Ling (A); Mr. S. R. Pierce (F); Professor Sir Charles Reilly (F); Mr. H. J. Rowse (F); Mr. Gordon Stephenson (F); Mr. Basil M. Sullivan (F); Mr. Charles Woodward (A). *Representative of the Northern Architectural Association on the RIBA Council:* Major S. W. Milburn, M.B.E., M.C. (F) in place of Mr. R. Norman Mackellar (F). *RIBA Code of Practice Committee on Finishings:* Mr. Ewen S. Barr (F) in place of Mr. G. Grey Wornum (F). *British Standards Institution:* Technical Committee on Wood Lathing: Lt.-Col. George Whittaker, O.B.E. (F). Technical Committee on Sundry Fixing for Building Purposes: Mr. R. Sheppard (A). Conference on Standard Colours for Kitchen Equipment: Mr. H. E. Moss (F).

It was decided to ask the Town and Country Planning Committee to form three Sub-Committees to deal with (1) Legislation, (2) Liaison with the TPI and Education, and (3) Planning, and that the last named should be instructed to continue the work of the present Central Planning Advisory Committee.

COMMITTEE ON BUILDING RESEARCH

The Council approved a recommendation of the War Executive Committee that an *ad hoc* Committee should be appointed to consider the whole question of Building Research, and the following were appointed to serve:—Mr. P. V. Burnett (F); Mr. D. E. E. Gibson (A); Mr. Joseph Hill (F); Mr. L. W. Hutson (F); Mr. Alister G. MacDonald (F); Dr. J. L. Martin (A); Mr. Denzil Nield (A); Mr. Richard Sheppard (A); Mr. C. G. Stillman (F); Mr. Basil M. Sullivan (F); Mr. R. Wakelin (A); Mr. F. R. S. Yorke (F).

RELATIONSHIP BETWEEN MEN'S AND WOMEN'S SALARIES

The Council approved for submission to the Royal Commission on Equal Pay a statement of evidence prepared by the Salaried Members' Committee supporting the principle of equal pay for equal work in regard to employment in the fields of architecture and town planning.

COMPETITIONS INVOLVING SPECIAL METHODS OF CONSTRUCTION AND SPECIAL MATERIALS

The Council approved a recommendation of the Competitions Committee that a clause should be added to the RIBA Competition Regulations stipulating that Promoters of competitions involving the use of new methods of construction or new materials should be required to satisfy the RIBA that they are satisfactory; and that where in such a competition the successful competitor is not called upon to supervise the erection of the building, provision should be made to safeguard him adequately against any legal responsibility for constructional or other defects which may arise if the building is erected, which responsibility must remain with the Promoters.

HOUSING PRODUCTION

The Council approved a recommendation of the War Executive Committee that a selected number of members should be invited to attend a Conference "to consider and report to the Council upon the problems involved in implementing the promise of the Government to produce four million houses in 10 years, and the repercussions on the Architectural Profession." It was also agreed that the Conference should be authorised to set up, if thought desirable, a small *ad hoc* Committee to examine the matter in detail, the membership of which should be drawn from those invited to attend the Conference, together with such other persons as the Conference may think fit to appoint.

EMPLOYMENT OF ARCHITECTS BY COUNTY WAR AGRICULTURAL COMMITTEES

It was reported that, on the instructions of the War Executive Committee, a letter had been forwarded to the Minister of Agriculture and Fisheries suggesting that he should urge County War Agricultural Committees to employ qualified architects to supervise all agricultural building work.

NEW COUNCIL OF INDUSTRIAL DESIGN

It was reported that the attention of the War Executive Committee had been drawn to the recent appointment of a new Council of Industrial Design, the membership of which contained no architect, and that the President had undertaken to write to the President of the Board of Trade suggesting that one or more architects who had specialized in Industrial Design should be added to the new Council.

ANNOUNCEMENTS

Mr. A. Geoffrey Bazeley, M.A., A.R.I.B.A., has taken into partnership Mr Guy Aldis, A.R.I.B.A., A.A., DIPL. The practice will be carried on under the title of Geoffrey Bazeley and Partners, Chartered Architects, 29, Market Jew Street, Penzance, Cornwall.

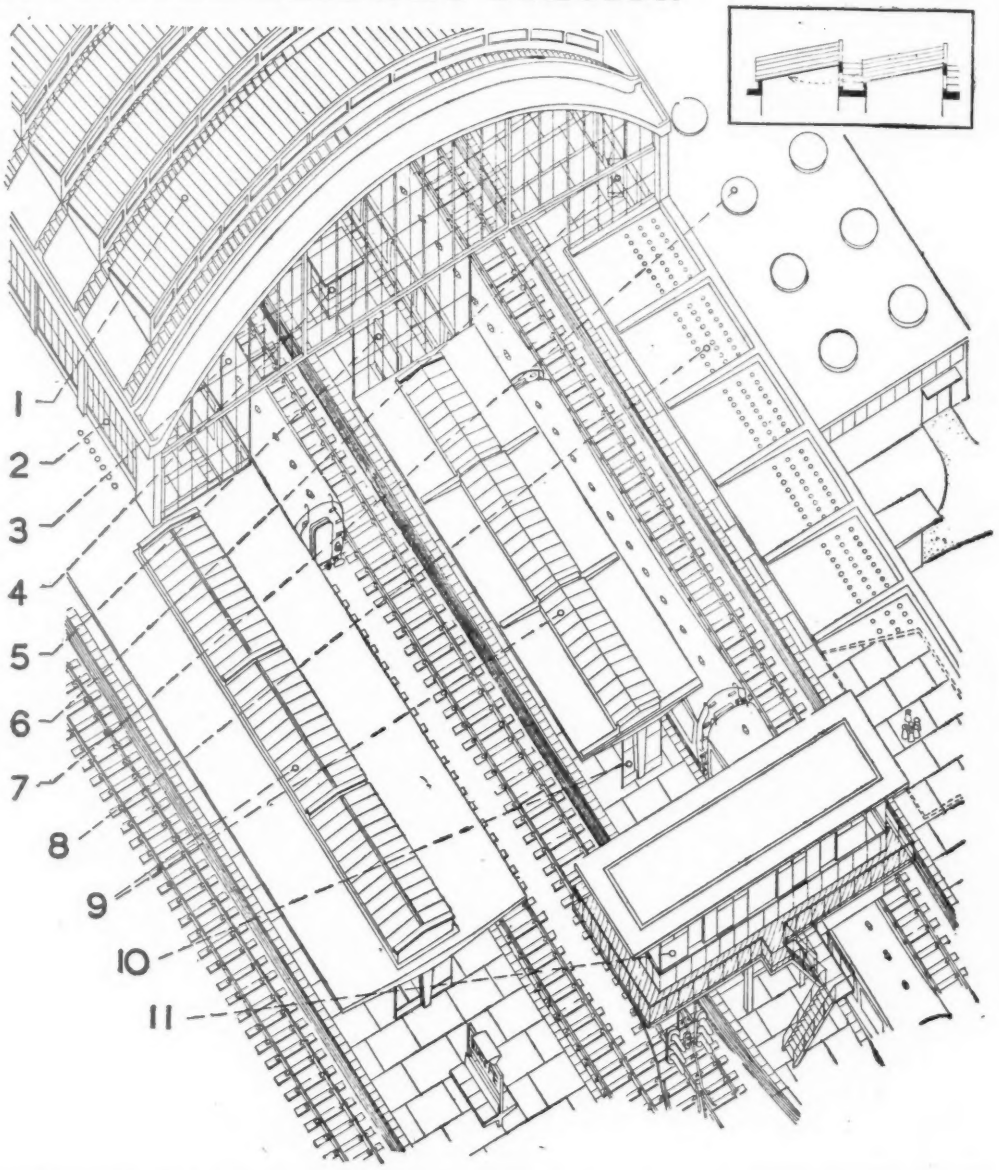
Mr. Gordon O'Neill, L.R.I.B.A., chartered architect, has resumed private practice at 65, Springfield Road, Chelmsford. Telephone 3004.

Mr. Ronald Chapman, A.R.I.B.A., and Mr. Raymond Perry have moved their offices to 19, Buckingham Street, Adelphi, W.C.2.

FACTS ABOUT GLASS FOR ARCHITECTURAL STUDENTS

SPECIFICATION FOR GLASS IN A PROVINCIAL RAILWAY STATION

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



The reinforced concrete roof is based on the design of the station at Rheims by M. Ridet. This was designed specially to facilitate the cleaning of the glass, and is based on the characteristics of reinforced concrete, which lends itself to this particular type of structure.

(1) **ROOF GLAZING:** Georgian Wired Cast in patent glazing bars spanning between concrete upstands: unglazed opening for permanent ventilation and access for cleaning underside of glass.

(2) **CLERESTORY GLAZING:** 32 oz. Sheet Glass, or Cathedral Glass.

(3) **VERTICAL GLAZING OF VALANCE:** Georgian Wired Glass.

(4) **TOBACCO KIOSK:** 32 oz. Sheet Glass.

TRAIN INDICATOR: Sandblast or Acid Obscured Glass, internally lit.

(5) **TIME TABLE AND NOTICE BOARDS:** Faced with Sheet Glass.

(6) **RESTAURANT:** Polished Plate Glass in windows and doors.

(7) **BATH AND DRESSING ROOMS:** Georgian Wired Rough Cast Domes.

(8) **CANTILEVERED CANOPIES:** Glass Lenses, in concrete, or Glass Domes.

(9) **ROOF GLAZING TO CANTILEVERED CANOPIES:** Georgian Wired Cast in patent glazing bars.

(10) **GLAZED SCREEN TO ISLAND PLATFORM SEATS:** Georgian Polished Wired.

(11) **SIGNAL CABIN:** 32 oz. Sheet Glass in windows.

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

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

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D

Left, the Queen Stove, an early solid fuel heating unit. Right, its 20th century counterpart, the Allied Ironfounders' Projector heating unit, designed to give the maximum of heat per unit of fuel. At the BCIRA Exhibition. See Trade Note.

Trade Notes

The British Cast Iron Research Association has recently held an exhibition of modern building applications of cast iron.

The exhibition, organized and designed by Mr. D. L. Bridgewater, is mainly photographic and provides an interesting survey of the past, present and future uses of cast iron. The first bridge to be made in cast iron was erected over the Severn in 1799 at the place now known as Ironbridge; although, apparently, never painted or surface finished in any way, it shows remarkably little sign of wear and tear after over 160 years, and is to-day scheduled as a public monument by the Office of Works. The Crystal Palace was another early achievement, the whole of the structure being in cast iron and glass.

In recent years the industry has been materially changed by two tendencies: continuous production methods have been adopted, resulting in a much greater and speedier output and considerably enlarging the range of practical usefulness; also the greatly increased application of scientific research has led to the discovery of many new alloys, the more exact control of foundry operations, and many valuable and attractive developments in surface finishing.

The exhibition for the time being is housed at the Association's research offices at Alvechurch, near Birmingham—it is hoped that it may later be staged in London, Glasgow and in all principal cities.

A £100,000 company registered with the name of Cheecol Processes, Ltd., has taken over the rights of Cheecol Holdings, Ltd., in patented processes for the manufacture of lightweight cellular concrete; the manufacture of concrete products by extrusion; the construction of concrete roads by grouting, and other patents for the improved manufacture of concrete. By using Cheecol cellular concrete it is claimed that it is possible to build the whole of the structure of a house with unskilled labour. It is also claimed that the cellular concrete can be sawn, that nails can be driven into it easily, and that it has good insulation properties and will prevent condensation. The firm state that a number of different types of houses using this Company's processes have already been designed and approved by the Ministry of Works, and at least one county borough will be erecting a prototype house within the next few weeks. In this house no skilled labour will be used. The lightweight concrete will be centrally mixed and pumped into place between prefabricated shuttering. It is estimated that one central mixing unit will be able to construct several houses per week, and these units can be multiplied to any extent.

KNOWING HOW

The raw materials used to-day in the manufacture of Paints and Varnishes are still mainly controlled and allocated by the Government, and, under war conditions, are the best available for the purpose.

They are common to all Manufacturers, but methods of manufacture vary, and it is here that "knowing how" makes all the difference to the quality of the finished product.

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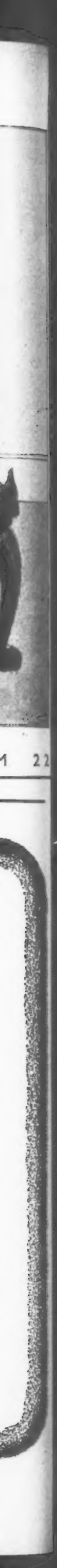

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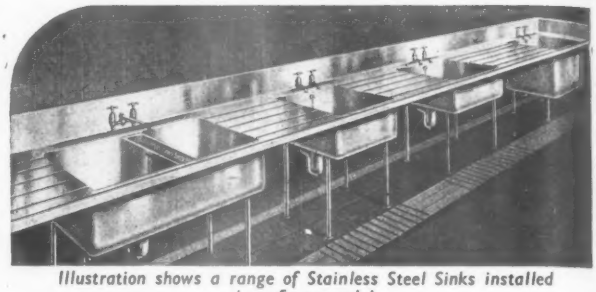

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A.B.S. INSURANCE DEPARTMENT

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Tel.: WELbeck 5721.

CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

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

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

ARCHITECTURAL ASSISTANT, temporary, required by the Borough of Wrexham.

Candidates should preferably be A.R.I.B.A. or hold an equivalent qualification, and have had experience in housing, layout of housing estates, planning, and general architectural work. (Required in connection with a neighbourhood development scheme.)

Salary £350 p.a., plus cost of living bonus, at present £49 18s. p.a. Applicants should write, quoting EA.1219XA, to the Ministry of Labour and National Service, Appointments Department, Central (Technical and Scientific) Register, Room 5/17, Sardinia Street, Kingsway, London, W.C.2, for the necessary forms, which should be returned completed on or before 12th March, 1945. 542

POCKLINGTON RURAL DISTRICT COUNCIL.

APPOINTMENT OF ARCHITECTS.

The Council will, at their next meeting to be held on Tuesday, the 13th March, 1945, proceed to appoint Architects for the preparation of plans, etc., in connection with their Post-War Programme. (First Year Programme: 110 houses approx.)

Architects are, therefore, invited to make application for this work on or before the 6th March, 1945.

Particulars may be obtained from the Clerk of the Council, Council Offices, Pocklington.

(Sgd.) J. STANLEY BROWN,
Clerk of the Council.

15th February, 1945. 540

DERBYSHIRE COUNTY COUNCIL.

ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of an ARCHITECTURAL ASSISTANT.

Candidates must be over 30, unless medically unfit for Military Service.

Salary £325, by annual increments of £12 10s. to £350, plus cost of living bonus, at present £49 8s. per annum, and an allowance for extended office hours.

Applications should be sent to the undersigned by 7th March, 1945.

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

J. HARRISON,
County Architect.

22nd February, 1945. 548

WARWICKSHIRE COUNTY COUNCIL.

COUNTY ARCHITECT.

The Warwickshire County Council invite applications for the post of County Architect.

The salary will be £1,400 per annum, rising, subject to satisfactory service, by annual increments of £50 to £1,600. In addition, a cost-of-living bonus and payment for "war-overtime" in accordance with the scale approved from time to time by the Council will be paid. The appointment will be terminable by three months' notice on either side.

Candidates should be Members of the Royal Institute of British Architects, and preference will be given to candidates having had experience under large public authorities.

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

Applications must be made on forms obtainable from the undersigned, and state the names and addresses of not more than three persons who have knowledge of the applicant's experience and work and to whom reference can be made, and should be addressed to the Clerk of the Council, Shire Hall, Warwick, in a sealed envelope marked "County Architect," and reach me not later than first post on Monday, the 12th March, 1945. Canvassing members or officers, either directly or indirectly, is strictly prohibited, and will be considered a disqualification.

L. EDGAR STEPHENS,
Clerk of the Council.

Shire Hall, Warwick.
14th February, 1945. 541

COUNTY BOROUGH OF EASTBOURNE.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the post of Architectural Assistant, at a salary of £275 per annum, rising to £325 by two annual increments of £15 and one of £20, plus war bonus, amounting at present to £60.

Applicants should possess Architectural qualifications, and should have had experience in the design and construction of Schools, Public Buildings and Housing Estates.

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

Applications, endorsed "Architectural Assistant," stating age, qualifications, previous experience, and position in respect of National Service, together with copies of two recent testimonials, to reach the undersigned not later 12 noon on Monday, 5th March, 1945.

R. WILLIAMS,
Borough Engineer.

"Bishopsbourne," Carlisle Road, Eastbourne. 528

COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE.

APPOINTMENT OF COUNTY ARCHITECT.

Applications are invited from Fellows or Associate Members of the Royal Institute of British Architects for the post of County Architect, at a salary of £1,600, rising by annual increments of £100 to a maximum of £2,000 per annum. 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.

The person appointed will be required to carry out all architectural duties (including the design and construction of buildings) that may be assigned to him from time to time by the County Council and the Standing Joint Committee.

Forms of application, together with particulars of the terms and conditions of the appointment, may be obtained from the undersigned, to whom applications should be submitted, together with copies of three recent testimonials, not later than 31st March, 1945.

BERNARD KENYON,
Clerk of the County Council.

County Hall, Wakefield.
February, 1945. 530

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