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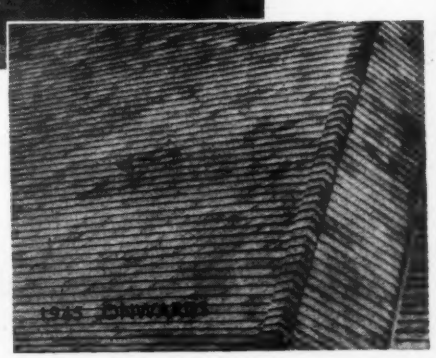

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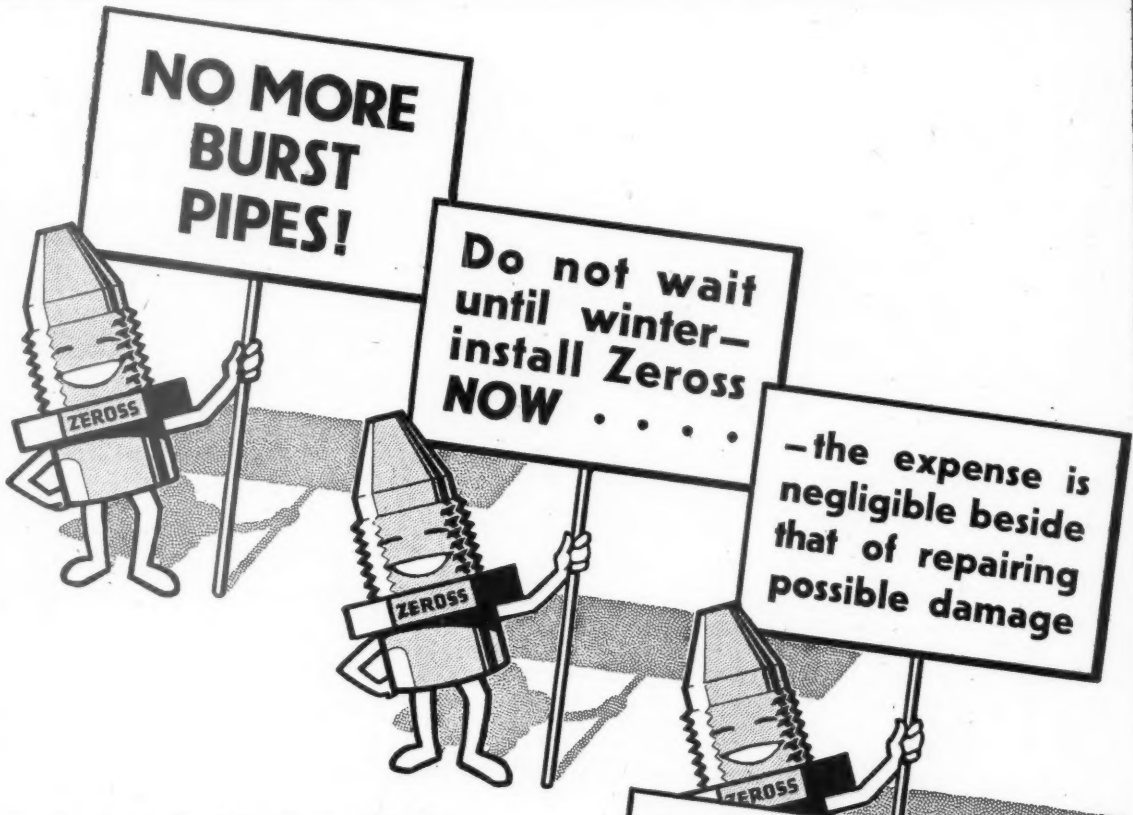

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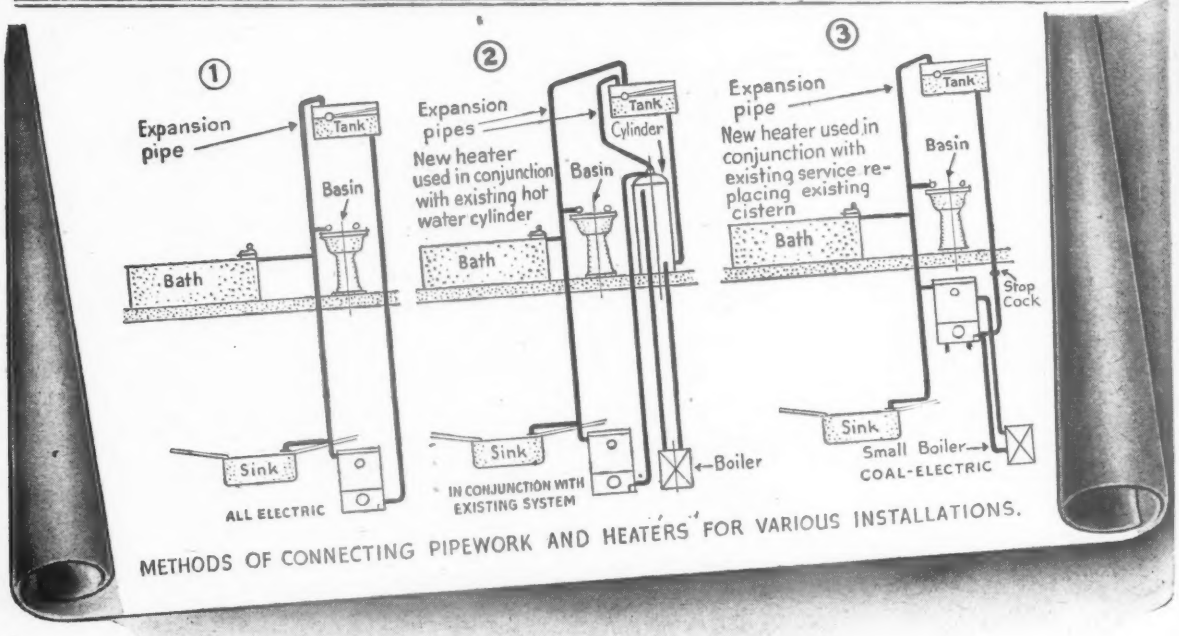

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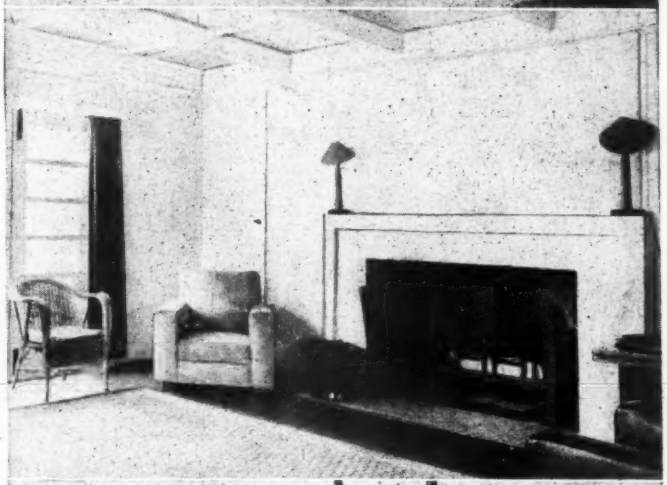

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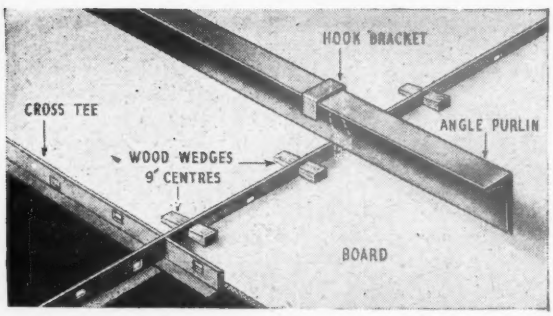

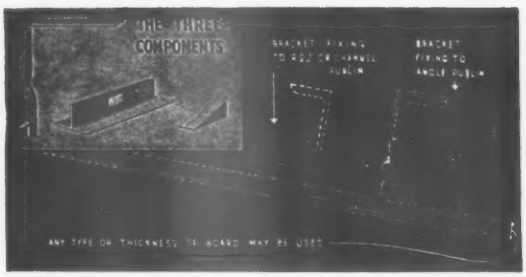

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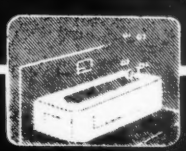
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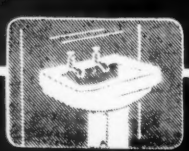
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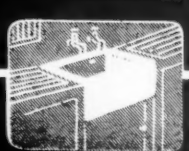
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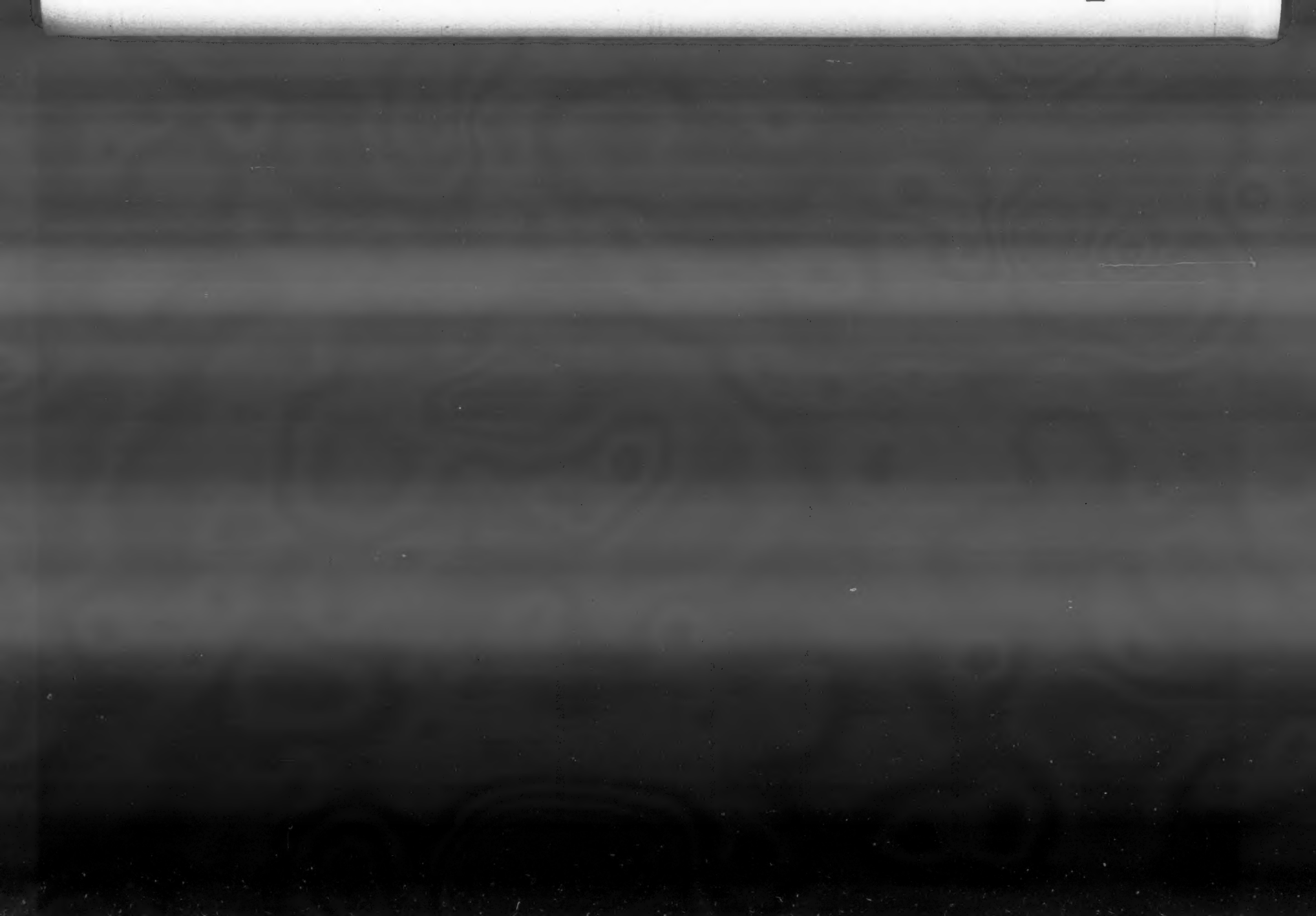

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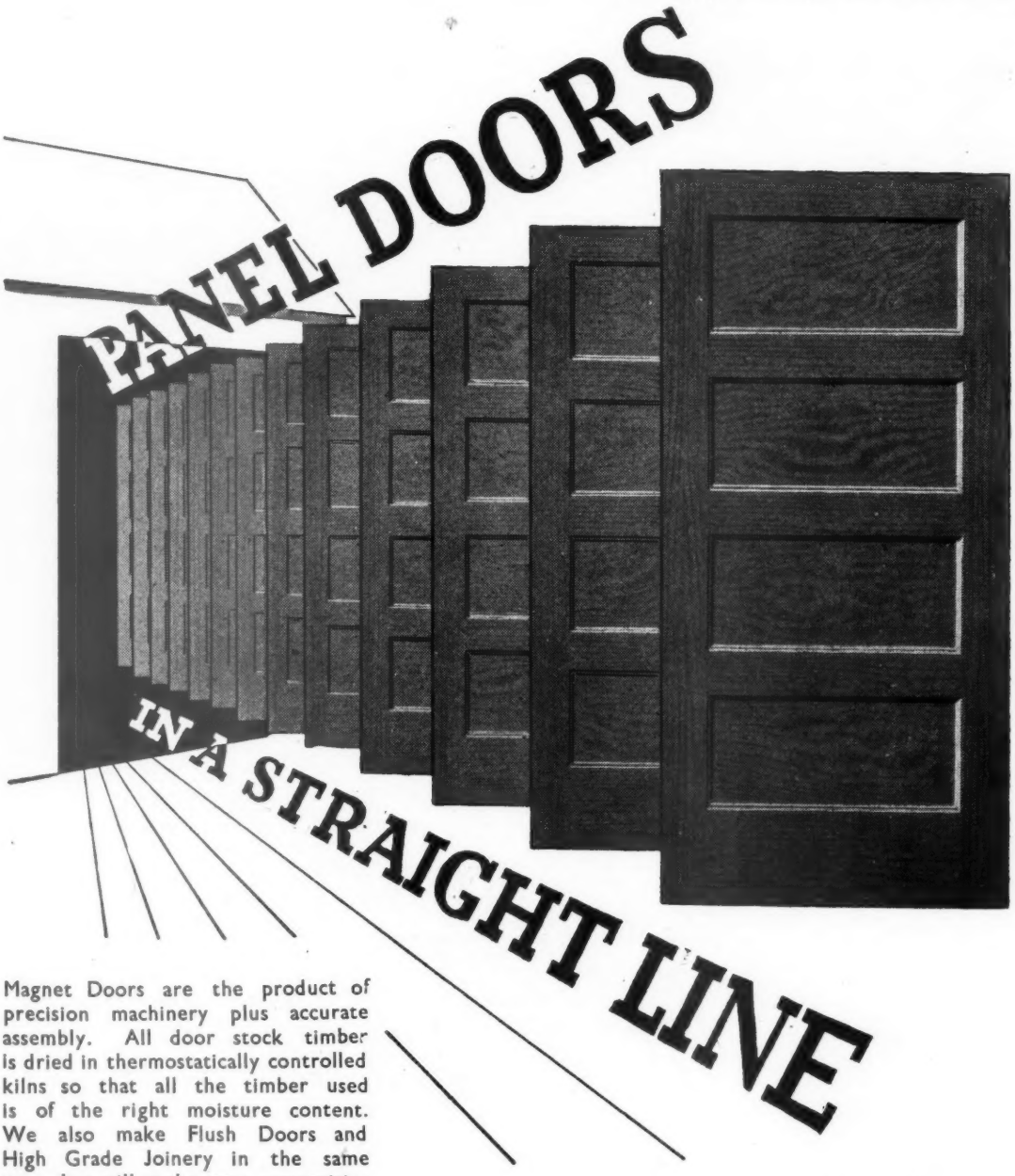

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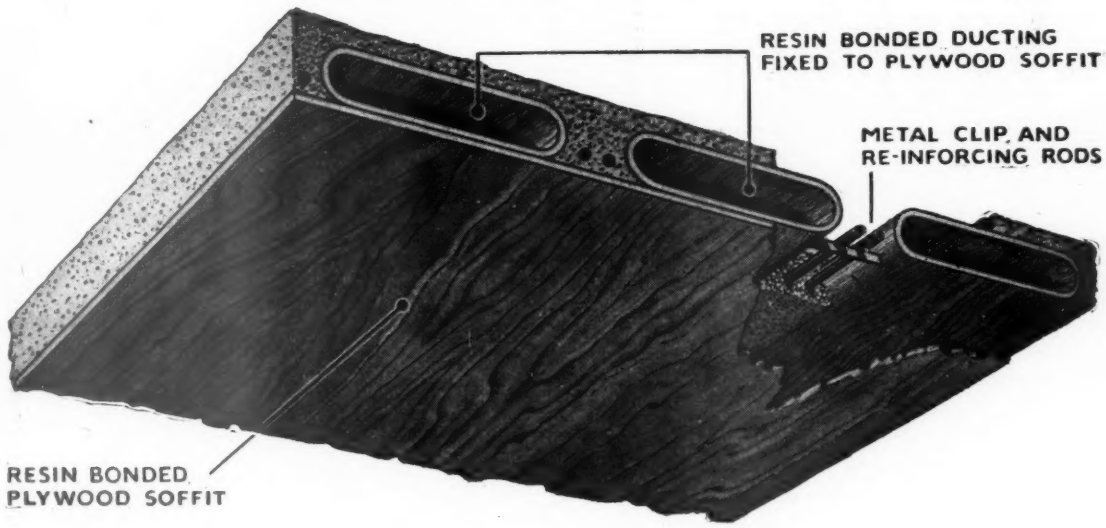

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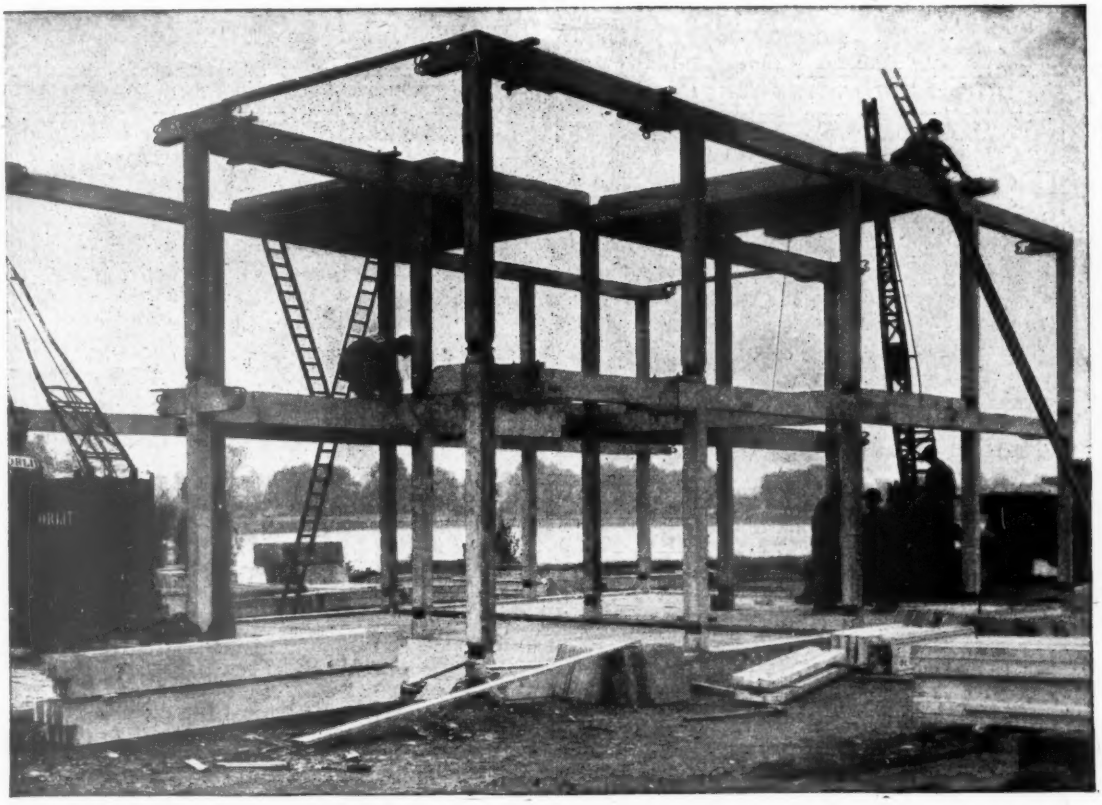

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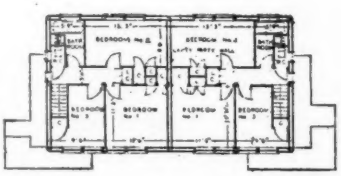

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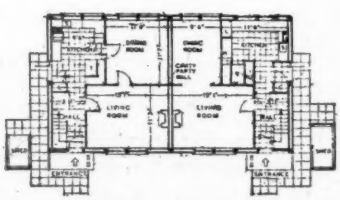

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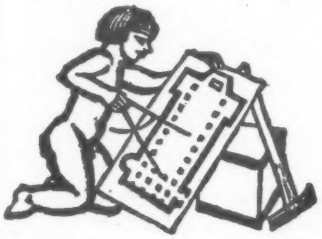

DIARY FOR JULY AUGUST AND SEPTEMBER

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.

CARDIFF. *Timber House Exhibition.* At David Morgan Ltd., The Hayes, Cardiff. The exhibition will be opened by Percy Thomas, President of the RIBA. (Sponsor, TDA Bristol Channel and South Wales area.) AUG. 13-25

GLOUCESTER. *Housing Exhibition.* At the Chapter House of Gloucester Cathedral, Gloucester. (Sponsor, HC.) JULY 27-AUG. 10

LONDON. *Royal Academy of Arts.* One Hundred and Seventy-Seventh Summer Exhibition. JULY 26-AUG. 12

Newer Heat Exhibition. At the Building Centre, Conduit Street, W.1. In view of the interest shown in the new fires and cookers at the exhibition the Coal Utilization Joint Council has arranged for the exhibition, which was due to close on June 30 to be continued until July 28. Open from 10 a.m. to 5.30 p.m. daily, Saturdays until 1 p.m. (Sponsor, BCUJC.) JULY 26-28

News of the World Housing Exhibition. In Selfridges' basement, Oxford Street, W., admission free. The exhibition is designed to tell the story of housing, its problems, difficulties and possibilities, with the aid of photographs, plans, full-size specimen rooms and actual equipment and fittings. The screens show photographically what has been done by local authorities and private enterprise, in the 20 years between the wars; while plans, models, sketches and photographs give some idea of post-war schemes. Emphasis is given to the need for community development rather than the building of housing estates. Full-size rooms are the central feature of the exhibition, completely furnished and fitted on post-war lines. The Ministry of Works has lent its Portal prefabricated unit, which includes a kitchen and bathroom. The organizers of the exhibition have added to this a living room and bedroom. There are two other sets of rooms. A flat is shown consisting of bed-sitting room, kitchenette and bathroom—a bachelor type of dwelling—showing fittings built into small spaces. The ground floor of a rural cottage indicates the use of the utility room with such fittings as a solid fuel cooker and drying cabinet. There is a separate display giving constructional details of modern building methods (including various systems of prefabrication), and another display of equipment and fittings. 10 a.m. to 5 p.m. Saturdays 10 a.m. to 12.30 p.m. (Sponsor, *News of the World.*) JULY 26-AUG. 11

Daily Herald Post-War Homes Exhibition. At Dorland Hall. (Sponsor, HC.) 10.30 a.m.-6.30 p.m. JULY 26-AUG. 25

Summer School on Health Education. By the Central Council for Health Education at Chelsea Polytechnic, London. AUG. 15-29

MANCHESTER. *Manchester and District Planning Exhibition.* At the City Art Gallery, Mosley Street. The exhibition is the result of research by engineers, architects, surveyors and other experts, working together under the direction of R. Nicholas, the City Surveyor and Engineer of Manchester, and Honorary Surveyor to the Manchester and District Regional Committee. Over two years ago a start was made with a very small planning staff, and although the City Council approved of a large extension of this staff, great difficulty was encountered in obtaining the services of efficient and capable assistants. The partial completion of the air raid shelters programme released a number of technical assistants for planning, but the majority of the large amount of work has been carried out during the past 18 months. At the peak of the output the staff consisted of 29 technicians and 20 draughtsmen working at high pressure on the City Plan, whilst 10 technicians and 8 draughtsmen were similarly engaged on the Regional Plan. Information has readily been given by other Departments of the Corporation and by the Surveyors to the other 13 constituent authorities of the Regional Committee. The City Surveyor was authorized to prepare and publish these tentative plans, but the constructive criticizm of individuals and all sections of the community is sought, in order that the respective authorities may be in a better position to gauge the requirements and wishes of the public when official schemes are adopted. (Sponsor, Manchester City Council.) JULY 26-SEPT. 8

Town Planning Institute Conference. AUG. 31-SEPT. 1

MIDDLESBROUGH. *Exhibition of the Middlesbrough Survey and Plan.* Directed by Max Lock, Consultant to the Middlesbrough Corporation. At the Town Hall. (Sponsor, Middlesbrough Reconstruction Committee.) 10 a.m. to 8 p.m. Sundays, 2 p.m. to 5 p.m. JULY 26-AUG. 3

NOTTINGHAM. *Country Life and Country Needs Exhibition.* By the Nottingham Rural Community Council. JULY 27-AUG. 25

OXFORD. *Homes to Live In Exhibition.* At Oxford WLA. (Sponsor, BIAE.) JULY 26-28

NEWS

THURSDAY, JULY 26, 1945
No. 2635. VOL. 102

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

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

★★ *means important news, for reasons which may or may not be obvious.*
Any feature marked with more than two stars is very big building news indeed.

At the meeting of the Council of the Royal Sanitary Institute held in June, Mr. David M. Watson, B.Sc., M.Inst.C.E., was elected as CHAIRMAN OF THE COUNCIL OF THE ROYAL SANITARY INSTITUTE to take office on 1st October, 1945.

Although Manchester has 22 parks, 52 recreation grounds and 35 small open spaces, with a total area of 2,209 acres, this amounts to ONLY THREE ACRES OF OPEN SPACE per 1,000 of the city's population. Visitors to the Planning Exhibition which was opened by Mr. W. S. Morrison at the City Art Gallery on July 20, will see how Manchester plans to increase the city's open spaces to seven acres per 1,000 of the population which is the minimum urged upon local authorities by the National Playing Fields Association. Until 1845, there were no open spaces to provide amenities for Manchester's rapidly growing population. In that year land for two parks—Philips Park and Queens Park—was acquired by popular subscription and presented to the city. Now with a hundred years' achievement behind them, Manchester people may, by visiting the exhibition which remains open till September 8, study at leisure plans for the future of their city. Diagrams drawn up by experts reveal, among other amenities, plans for parkways, regional parks, sports centres, and a green belt. (See Diary on this page.)

From AN ARCHITECT'S *Commonplace Book*

COUNCIL HOUSE CULTURE. [*From* British Architects and Craftsmen, *by Sacheverell Sitwell (Batsford).*] The glories and tragedies of five years of war may have blinded us somewhat to the flight of Time. For we are nearing the middle of the twentieth century, and it is with a shock we realize that the field of Waterloo was fought, already, a hundred and thirty years ago. It can be, therefore, that we have travelled sufficiently far into the continuous present to contrast our survival out of a ruined Europe, lying in shame and misery, with those centuries of a universal language in the arts of life. We do not speak of the Middle Ages, but of the Age of Reason and the reign of order. They had wars, but they were not fatal ; and they had miseries in plenty, but those were as nothing compared with the horrors of our times. It is of no use now, when we have come so far, to argue that the past was contemptible for its illiteracy, or for its legal use of torture. For there are the prison and the concentration camp, and we know how minds can be perverted by mass-education. We know, too, that standards of life were improving before the war, but have we not lost in other ways as much as we have gained ? Can we get it back again ? Is not the life of the individual in our large towns, near the cinema and the fried fish-shop, with the air-raid shelter opposite, hideous and shameful compared with that of any savage ? Is our's to be a world only of dog-races and the cup-final ? When we consider the spiritual values in our council houses, should we not envy the Papuan and the black fellow of the Torres Straits ? The golden age is dying even now, before our eyes, among the Stone Men of Malekula and the dancers of Orokolo. In New Guinea our steel birds drop their bombs among the birds of paradise, and the blessings of civilization have been brought to the built-up terraces of the living Stone Age.

★

Lord Zetland declared open the exhibition of the MIDDLESBROUGH TOWN SURVEY AND PLAN of Mr. Max Lock, consultant architect to Middlesbrough Corporation.

The exhibition, held in Middlesbrough Town Hall, includes a model of the existing town hall with a municipal office extension to the east. There is a modern shopping centre to the west of the town hall, a theatre and cinema centre to the north, and a cultural centre to the south, including a civic hall, art school, and art and sculpture gallery planned as an extension to the present public library. They are all grouped round an enlarged Victoria Square. The model also includes a suggestion for a new railway station.

Mr. Kenneth W. Bland, student, RIBA, has been awarded THE ASHPITEL PRIZE, 1944.

The Ashpitel Prize is a prize of books to the value of £20 awarded to the candidate who, taking the Final Examination to qualify as an Associate, shall most highly distinguish himself among the candidates in the Final Examinations of the year.

★

The Minister of Town and Country Planning has appointed Mr. R. H. Mattocks, PP.T.P.I., and Mr. J. S. Allen, M.T.P.I., A.R.I.B.A., to prepare an Outline Plan and Report for the WEST CUMBERLAND DEVELOPMENT AREA.

The Minister has had under consideration the planning of this area, and particularly as a Development Area in the light of the Distribution of Industry Act. That Act will undoubtedly lead to changes affecting the area, and under Section 3 of the Act provision for the needs of the district in respect of basic services, including transport, power, housing, health and other services, may come under review. It is desirable that this should conform with a general physical plan for the region founded on a comprehensive survey of all the problems involved including the preservation of amenities. The Minister believes this can be best achieved by the appointment of special consultants to prepare an Outline Plan and Report for that part of Cumberland included in the Development Area. He has, therefore, made this appointment, after consultation with the Cumberland County Council, to whom the District Councils have relinquished their powers and duties in connection with the preparation of planning schemes. Mr. R. H. Mattocks is a Past President of the Town Planning Institute with long experience of planning. He prepared some years ago an outline plan for the Leeds and Bradford region. He has served as planning consultant to a number of Joint Executive Planning Committees. Formerly a Regional Planning Officer of the Ministry of Town and Country Planning, he recently returned to private practice with Mr. J. S. Allen. Mr. J. S. Allen is Principal of the School of Architecture and the School of Planning in the Leeds School of Art.

An effort to raise one million pounds for a PORTSMOUTH WAR MEMORIAL is announced by the Lord Mayor.

A committee has decided that the memorial should comprise the rebuilding of the two voluntary hospitals damaged in air raids, a garden of remembrance in the precincts of the cathedral, the provision of a vellum book of honour to be placed in the cathedral recording the names of the inhabitants who have fallen in the war, and the completion of the nave of the cathedral.

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The following members have notified the RIBA that they have been RELEASED FROM THE SERVICES and are resuming practice.

They would like to receive trade catalogues, information sheets and other data, etc.: Colonel R. B. Armistead, M.C. (F), 10, Booth Street, Bradford; Edgar Bunce (A), 25, Sea Road, Bexhill-on-Sea; R. A. Cooksey (F), in partnership with Mr. A. Hugh Hasnip (L), under the title of Arthur W. Cooksey & Partners, at 11, Garrick Street, London, W.C.2 (Tem. 6106), and "Stanchions," The Ridgeway, Tonbridge, Kent (Tonbridge 283); Major Peter Dunham (A), Architect to the Witney Rural District Council for post-war housing, 14, The Hill, Witney, Oxon; Major A. G. Jury (A), Architect's Department, Borough of Taunton, 2, Baldwin Road, Taunton; Major John Maclennan, R.E. (A), 3, Bon-Accord Crescent, Aberdeen; Major D. R. Nicholls, R.E. (L), F.S.I., F.INST.ARB., 21a, High Street, Chard, Somerset (as from July 17); W. J. Carpenter Turner (A), Minster Chambers, Great Minster Street, Winchester.

The Ministry of Town and Country Planning has appointed an ADVISORY COMMITTEE ON ESTATE MANAGEMENT.

The Minister of Town and Country Planning has appointed a committee consisting of officers of his department and prominent members of the Chartered Surveyors' Institution and of the Auctioneers' and Estate Agents' Institute with the following terms of reference: "To advise the Minister on any question relating to estate management and estate development of land acquired or appropriated for the purpose of the Town and Country Planning Acts, 1932 and 1944, which may be referred by the Minister to the Advisory Committee." The Committee, to be known as the Central Advisory Committee on Estate Development and Management, will consist of the following members:—Lawrence Neal, Deputy Secretary, Ministry of Town and Country Planning (Chairman); H. W. Wells, Chief Estate Officer, Ministry of Town and Country Planning (Deputy Chairman); B. V. Gillet (President of the Chartered Surveyors' Institution); H. H. Robinson (Past-President of the Auctioneers' and Estate Agents' Institute); E. Guy Bigwood, J.P., C.A., F.S.I., F.A.I.; W. S. Goodbody, F.S.I.; K. Marr-Johnson, F.S.I.; D. Ivor Saunders, F.S.I. The Secretary is Mr. D. M. Lawrence, Ministry of Town and Country Planning.

County Architect of Hertfordshire

Mr. C. H. Aslin, the new County Architect of Hertfordshire, has, for the past sixteen years, been Borough Architect of Derby. Commencing his architectural education in Sheffield in 1910, where he served articles with a local architect, and attended the Sheffield University Department of Architecture, he was in the Services from September, 1914, to January, 1919, and upon demobilization obtained a post with the Sheffield City Architect, where he remained until October, 1922. From that year to 1926 he was architect to the County Borough of Rotherham, and from 1926 to 1929 Deputy County Architect of Hampshire. An Associate RIBA in 1920, and a Fellow in 1932, he has been a member of the Institution of Structural Engineers since 1925, and a Member of the Official Architects Committee of the RIBA since its formation. He is also a member of ARCUK. From 1941 to 1943 he was President of the Notts, Derby and Lincoln Architectural Society, and served as Chairman of the RIBA Reconstruction Committee for No. 8 Civil Defence Region from 1940 to 1943. In Derby, his office carries out work for all the Committees of the local authority, and includes schools, hospitals, police buildings, housing, etc. Perhaps the most interesting work carried out during his service was the Central Improvement Scheme, which consisted in clearing a large area of the banks of the River Derwent, and building thereon river gardens, bus station, open markets, police courts and offices, and new municipal offices.

The London Brick Company will be pleased to supply free of charge to Technical Schools and similar institutes small quantities of MINIATURE BRICKS FOR DEMONSTRATION PURPOSES.

Publication in August of a book on the WORK OF THE POLISH SCHOOL OF ARCHITECTURE at Liverpool University is announced.
The book of 200 pages of drawings and plans will illustrate the work done by the school from 1942-1945 in training architects for post-war reconstruction in Poland. If ordered in advance, the price per copy is one guinea from the Publication Committee, the Polish School of Architecture, 26, Abercromby Square, Liverpool, 7.

The Timber and Pulp Mission which visited Finland early this year made provisional agreements with Finnish Trade Associations for the purchase of SOFTWOOD, PLYWOOD AND WOODPULP.
The agreements were subject to ratification by the Finnish Government. The Finnish Government has now ratified these agreements. For their part HM Government has undertaken to make available certain Finnish requirements from this country. A Finnish Mission is expected to arrive shortly to discuss details of the arrangements.

★

Four pairs of permanent brick houses are being built by the Bournemouth Corporation, the first to be ERECTED ENTIRELY BY APPRENTICES under the Apprentice Master scheme devised by the Building Apprenticeship and Training Council.
Laying the commemorative stone, on which the initials of the 23 boys engaged on the work are engraved, Sir Malcolm Trustram Eve, chairman of the Training Council, said: A number of projects for attracting youth to the industry, and seeing that they are properly trained have been devised. Here to-day we are concerned only with one. The sight of these houses actually going up represents to me a cherished dream in the first stage of transformation into reality. If this Apprentice Master system is to be the success we look for, four elements are necessary: A keen and enterprising Local Joint Apprenticeship Committee for the building industry, a willing and co-operative local housing authority, a skilled and understanding apprentice master and craft instructor, and a body of enthusiastic youths of the right sort who wish to learn their craft in the best practical way. We have all these four elements in Bournemouth, and I view the results before us to-day with pride for what they are and high expectation of what they may lead to. Let this be the first of very many such schemes.

MORE ABOUT JOINTS

JOINTS in wall sheeting—external and internal—especially for dry construction, are a problem that is exercising the minds of many of us at the present time. The problem is chiefly a visual one, for the practical problem largely solves itself, by the adaptation of roofing techniques in which the sheeting joint has already been perfected in many materials—lead, asbestos-cement, iron, glass, timber, felt. Unfortunately a large sheet of siding material requires only a small fillet to make the joint. The pattern made by the fillets is very visible against the smooth surface of the sheeting and, compared in the mind's eye with the robuster proportions of classical pilasters or traditional half-timbering or panelling, a disappointing thinness is imparted to the design. Moreover, the obvious way to fix the fillets is with nails or screws through the face. This gives another sort of disappointment to the design.

There are several ways of getting over the difficulties. First of all, the horizontal cover fillet must be eliminated altogether as such—the eye refuses to accept it as anything but a degenerated piece of structural framing—and panels must be the full storey or room height. After that there are three main methods employed: to conceal the joints in the all-over pattern of the sheeting, to secure the fillets by secret fixing and design the spacing of the fillets with extreme care, and to eliminate the joints so far as possible.

The method of concealment by pattern is the well-known arrangement of corrugated sheeting, where the laps are hardly noticeable amid the strong lines of the corrugations. A more subtle use of the same device is found in the Gropius prefabricated house, where the panel-units are faced with vertical v-jointed timbering and there is a loose board to slip in afterwards over the joint between the panels, affording complete concealment. Horizontal weatherboarding and corrugated sheeting (the latter as on the BISF house at Northolt) is an example of the same method turned through 90°. This makes the junction at storey levels easy, only to pose an almost insoluble problem at the corners. At Northolt a virtue is made of necessity by painting the corner fillets in a contrasting shade.

The secret fixing and careful spacing method has made much progress lately. Regular spacing is a by-product often of the unit method of design for prefabrication. Having chosen your unit, you must work everything to that unit of spacing, and submit to a discipline more rigid than the modulus of the Orders. But if this is done well, the resulting rhythm imparts a classical perfection to quite modest little structures. As for the secret fixing, one only has to mention the modern clip-in cover fillet. This is used with success both internally and externally, and appears to provide the complete answer. It is, of course, a development from the clip-*on* cover, after the real fixing has been effected by a base fillet attached with ordinary wood-screws.

C

Elimination of joints is a term that covers several solutions. Wall-papering is a good example of joints cut so fine and the pattern matched so accurately that they are almost impossible to find. Intermediate between wallpaper and wallboard is the flexible wallboard provided in rolls of 8 or 9 feet wide. This is turned up and unrolled across a whole wall and stuck on, the openings for windows and doors being cut away afterwards. In this manner the only joints are at internal angles where they conceal themselves. There seems to be no reason why, with the recent improvement in adhesives, the wallpaper technique should not be used for fixing wallboards in general (as it is already for glass wall coverings) and the joints made simply by very finely cut and butted edges.

With welded metal sheeting the joints can be butt-welded and rubbed down. Then, if the whole surface is painted with a paint having a coarse filler such as stone dust, the result is complete concealment of joints. This method is somewhat extravagant for site assembly, and is more suitable for constructions assembled into large units in the factory. This leaves only the joint between the units for a cover fillet. But, as can be seen at the AIROH house, a few widely spaced fillets can easily be disposed in a manner not to give offence.

The Architects' Journal
War Address: 45, The Avenue, Cheam, Surrey
Telephone: Vigilant 0087-9

NOTES & TOPICS

THE PLANNING ACTS

Producing a useful book on the legal and administrative side of Town and Country Planning is always a difficult matter so far as arrangement is concerned. So much of it demands textual reference to the Acts themselves, as they are the first, and often the only, key. Mr. Smith-Saville has taken the bull by the horns and arranged his book (*The Planning Acts*, 1943/5, published by *Estates Gazette*, 244 pages, 16s. 6d.), in the form of an annotated reprint of the major Act of 1944, the Planning (Interim Development) Act, 1943, and the Licensing Planning (Temporary Provisions) Act, 1945. It is probably the best solution.

*

The book is intended as a practical guide for lawyers, surveyors, estate agents and all concerned in the development, management and ownership of land, and as such it serves its purpose very well. The annotations are clear and complete. There is a useful index, and, something of an innovation, the author includes in his annotations important statements of policy made by the responsible Ministers during the debates in Parliament on the Bills. He justifies this (if justification were needed) by pointing out that so much is left under the Acts to the discretion of one Minister or another that it should be useful to have available the declared intention of the Ministry when considering the effect of a section. The book comes in the indispensable class.

*

As a lawyer, the author naturally takes an adverse view of the exclusion of a right of appeal to the courts in so many cases and the substitution of the will of the Minister. It is quite true that no good law should be uncertain, but there is another side to the argument. Legal interpretation of a statute is, in theory, definite enough, but it is not definite in fact until a judge has given his decision (and not been overruled on appeal). A Minister can be questioned in the House on his interpretation of his powers, and he can change his mind, a thing no judge can do once his decision is given.

*

Further, a Planning Act is something inherently different from the kind of enactment that says, 'thou shalt not steal.' Once 'stealing' is defined such a law remains effective for ever. A Planning Act is intended to control rather than govern the fluid future in areas that differ profoundly from each other. In short, a Planning Act is only half what it might be, and what it should be, if it is treated as a static and restrictive thing and not as something dynamic and positive.

IN THE COURTS

The recently decided case of *Moss v. Chesham Urban District Council* contains two points that are of general interest to any professional man who works for a local Council. The plaintiff was employed by the defendant Council as surveyor and water engineer from 1927 to 1941. In 1940 he was given notice, under the terms of his written agreement, and after the expiration of the notice brought an action claiming two things.

*

The first was that part of his salary was paid by the Ministry of Transport, and that the agreement between the Ministry and the Council under which this part was paid contained a provision that the appointment, retention or dismissal of the official towards whose salary they paid should be subject to the approval of the Ministry, that being one of the stipulations in the Act by which the Ministry was authorized to make these payments.

*

The Judge held that, even though this be the case and even though the

Ministry might not have consented to the official's dismissal, the official received no protection from an agreement to which he was not a party. His case stood or fell by the provisions of his own agreement with the Council.

*

The other point is of wider interest. The plaintiff had been paid his salary up to the termination of his employment, but he claimed damages in addition because, he said, his standing and reputation as a surveyor had been damaged by the dismissal. This, too, was negatived by the Court. There is one exception to the general rule, and that is in the theatrical profession.

*

There a contract for employment not only entitles the performer to the salary; it entitles him to a chance to perform and so improve his standing, and his market value, with the public. The Judge held that a contract of this kind did not contain any parallel implied promise.

*

It is interesting to apply the reasoning in this case to the position of an architect employed by a Council. In the majority of cases the same view would probably be taken by a Judge as was taken in this case, but there might well be exceptions. Supposing the Council were contemplating a considerable housing project, and that the newly appointed architect would have full responsibility for the professional side of that. Supposing his contract were brought to an end before he had a chance of developing his plans. The case would be even stronger if the Council were about to erect a building that would inevitably be outstanding.

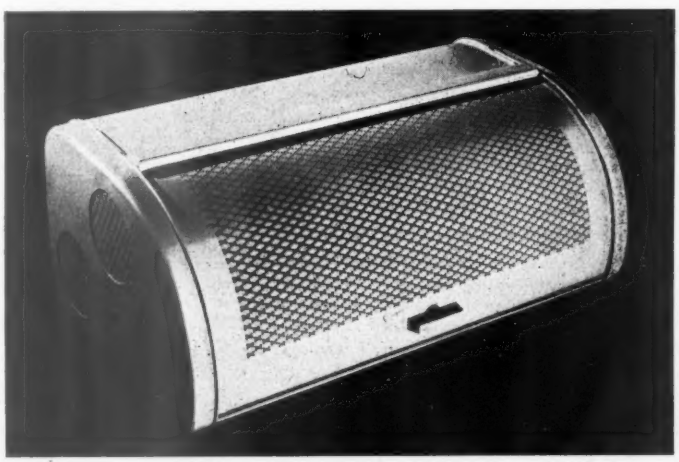
POT-AND-PAN APPEAL

The recent aluminium exhibition at Selfridge's was obviously intended to further the interests of the aluminium industry. But it will have furthered the interests of the public as a whole if, by demonstrating the eye-appeal of aluminium ware, it forces the makers of other metalwares to improve the design of their products.

*

Saucepans have had to give way to Spitfires during the war, but now they should soon come into their own again. Starting from where they left off in 1939, the makers of domestic metalware have plenty of scope for improvement in their designs. However, already in the 1930's there were signs of intelligent innovations, notably in the kitchen tools with brightly coloured handles that attracted one's attention on every Woolworth hardware counter, and also in the larger type of enamelled product known as Worcester Ware made by an old-established concern which, under the ægis of the Metal Box Co., took on a new lease of life. The nice looking bread bin shown here with its circular air vents and sliding door is one of their products.

ASTRAGAL



An enamelled metal bread bin of Worcester Ware, with sliding door and circular air vents. See Astragal's note above.

LETTERS

G. P. White, Lt., R.A.

G. B. J. Athoe,

Secretary, The Incorporated Association of Architects and Surveyors.

Indian Building Methods

SIR,—While serving with HM Forces in India I have been fortunate enough to be able to devote my spare time in the study of building methods used in this country.

Ignoring the more up-to-date forms of structural development, which may be found in the large cities and towns, culminating in that great project New Delhi, my attention has been devoted to the type of house construction employed in the villages and smaller communities.

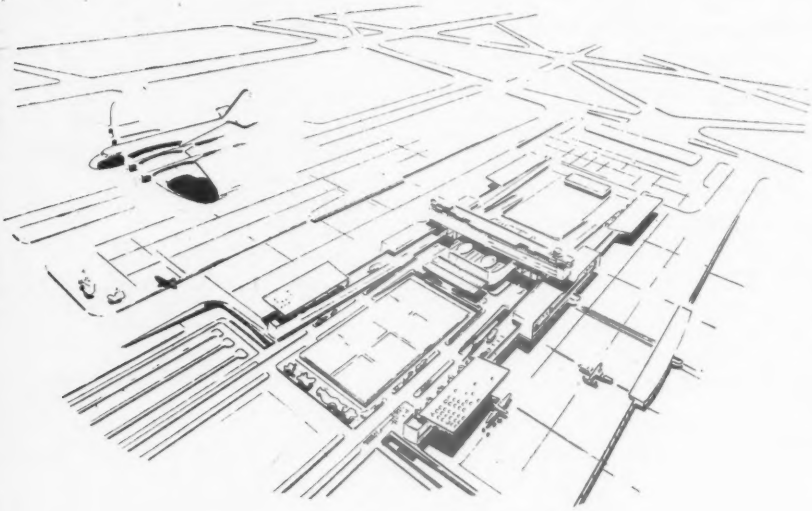
The difference between our own methods and those used out here will at once become apparent, as shown in the following notes on the erection of a single storey building, typical of the average dwelling place.

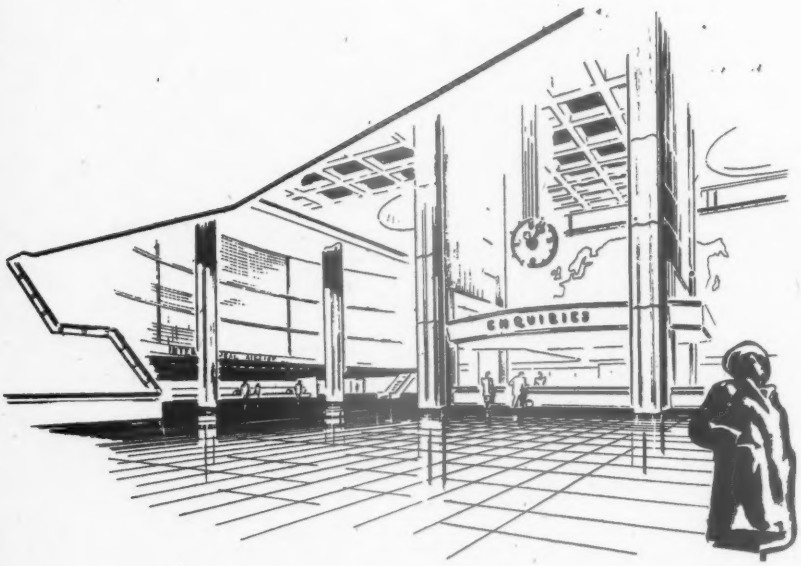
The building outline was marked out in the conventional manner, i.e., with pegs and line, and work quickly proceeded on the extremely shallow trench excavations, the latter being chiefly due to the complete absence of concrete foundations and footings. Bricks were of the same dimension as our standard type, and obviously the walls conformed to a 9 in. thickness. Little or no attention was paid to pointing, although a definite attempt was made to conform with the specified English bond. Window and door framing was extremely crude, and the use of such a refinement as a rebated jamb was completely unknown to the builder.

Suspended floor construction was not used, instead a combination of brick on edge and stone blocks resting on the immediate subsoil, provided the necessary flooring material.

The main walls had no lateral support

PROPOSED AIRPORT, WARSAW





Two sketches from Plans for a Post-War Civil Airport in Warsaw, *published by the Polish Ministry of Industry, Commerce and Shipping (Aeronautical Department). Top, an aerial view. Below, the main hall of the terminal building. The purpose of the booklet is "to enable interested parties to become acquainted with Poland's efforts aiming at the reconstruction and development of her air communication." The proposed site of the airport lies to the south-east of the City near the east bank of the Vistula, and is about four miles from the Central Railway Station. The hangars would eventually cover an area of more than 25 acres, and runways and roads would cover 363 acres. There would be seven runways, of which four would be parallel to the direction of the prevailing wind. These four would permit 180 plane movements per hour. Ground facilities lie in the centre of the site within a rectangular shape, the two longer sides being parallel to the four main runways. Part of the airfield to the north of this site is used only for the landing of planes, the southern part for taking off. In the eastern part are the three runways for secondary wind directions. The main building is in the form of an H, the centre part containing passenger and goods accommodation and the two long wings containing the platforms for the incoming passengers. Parallel to these run the platforms for the outgoing passengers. The two northern platforms are for international flying operations and the two southern ones for internal operations. Joining these two pairs is a fifth one for transit planes. On the other side of the main building, to the west, are various car parks and helicopter stances. Approach roads run up to the building on its main axis from the west.*

from ceiling joists, these being non-existant. They, however, gained a certain amount from the roof trusses, which in this particular case were of a King-Post pattern. Each truss was prepared on the site from rough unfinished timber, and then erected in one piece.

Roofing material consisted of reed thatching on a light framework. Ready made sections of thatching were man-handled into position and fixed to the roof framing by means of cord and strip of bark.

Materials were conveyed to the site by the use of bullock carts, an extremely slow and tedious process, which quite probably envolved a journey of several miles, with a load not exceeding 4 or 5 cwt.

Finally, a word on scaffolding. This was comprised externally of a very rickety framework, consisting of bamboo poles lashed together with creepers, or occasionally a form of hemp. I have yet to see any scaffolding which would come anywhere near the Home Office requirements.

These points I have made seem to reflect rather harshly on the methods employed. As to why they are so, it is not for me to say. It is a question which falls under two possible headings. First, the comparison of standards, and secondly that process we call evolution.

In conclusion of this letter, I should like to offer you my personal thanks for the chance your excellent journal has given me, as an architect and student, to keep in contact with the latest architectural news, while so far from home.

India G. P. WHITE

The Admiralty Extension

SIR,—The western side of the Admiralty's extension alongside the Horse Guards Parade is an eyesore, and it seems high time that something was done about it. High authority backs that opinion. I have heard the building described variously as looking like a prison and a Middle East fort. As the building is very far from being a temporary one, it is worth while taking trouble and incurring expense to give it a civilized appearance.

It would be quite simple to face the outside walls with Portland stone, which weathers better than any other stone in London—St. Paul's Cathedral and St. Martin-in-the-Fields are examples of its use. Concrete would not appear to be a suitable material as a surface finish, for the Victoria Coach Station and Olympia cannot be claimed as successes.

The Admiralty extension faced with Portland stone would, with its large unwindowed surfaces, lend itself to sculptural treatment, and thus bring it into harmany with the other end of the Mall. Without any strengthening the roof would stand a large-sized group of statuary, such as a quadriga. The plain surfaces would give an admirable opportunity for a splendid architectural treatment, which might include niches for the setting of memorial statuary and make the whole aspect worthy of this most important site.

And to round off the scheme, let all the statues flanking the Nelson Column be of naval men. There is plenty of room in London for the present occupiers of sites in Trafalgar Square. Compared with Army memorials and statues, the Royal Navy comes off badly. Here is a golden opportunity to adjust the balance.

G. B. J. ATHOE,
Secretary,
The Incorporated Association of
London Architects and Surveyors

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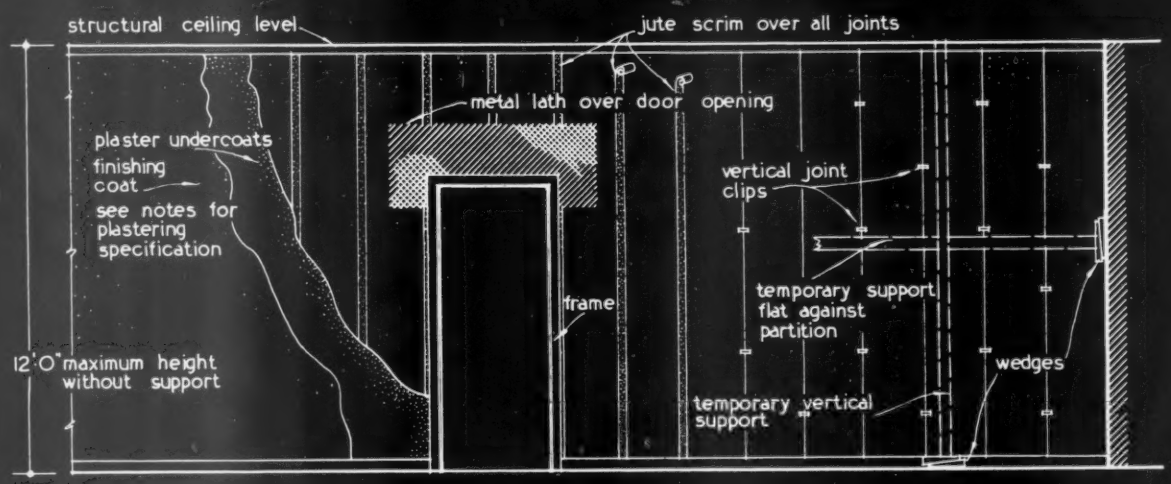
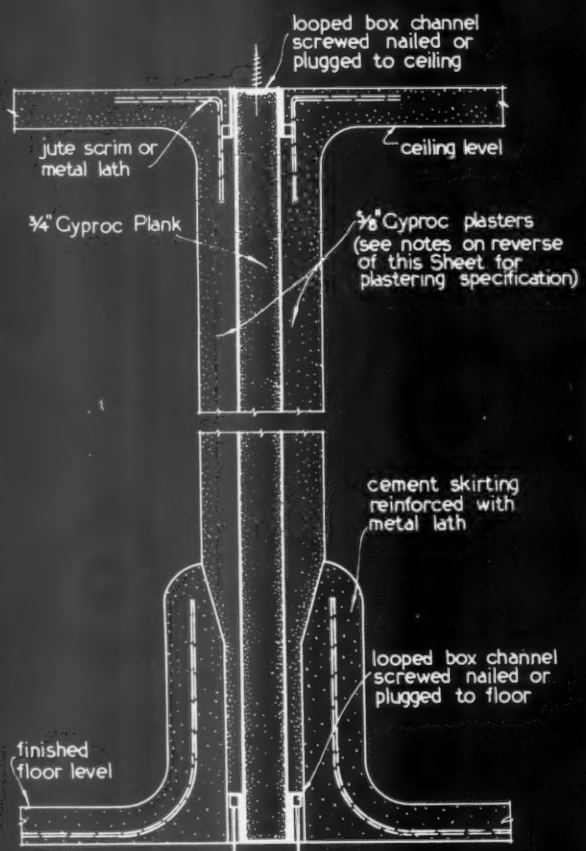
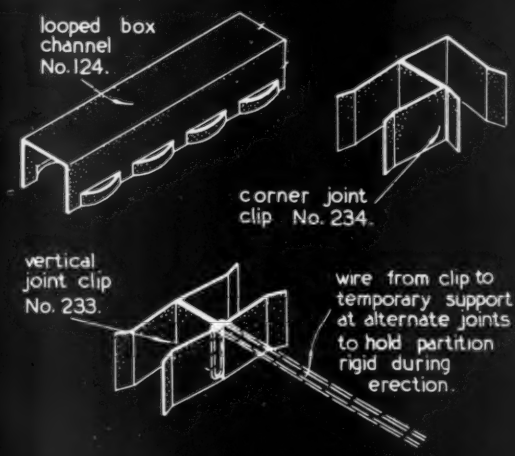
TYPICAL CONSTRUCTIONAL DETAILING, USING LOOPED BOX CHANNEL FIXING.



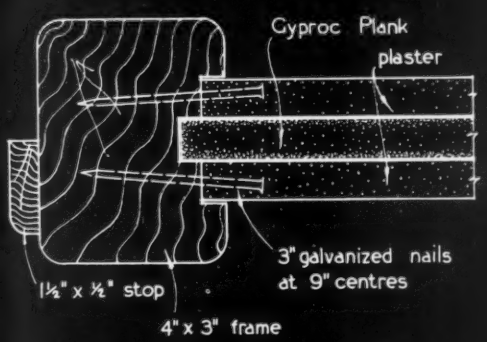
TYPICAL ELEVATION. — showing method of temporary support during plastering.



SECTION SHOWING DETAILING AT FLOOR AND CEILING LEVELS



STEEL SECTIONS AND PRESSINGS USED FOR SECURING PLANKS



DETAIL SHOWING FIXING FOR TYPICAL DOOR FRAME (timber)

Issued by Gyproc Products Ltd.

INFORMATION SHEET : PARTITIONS, GYPROC 2" SOLID PARTITIONS I.
Sir John Burnet Tait and Lorne Architects One Montague Place Bedford Square London WC

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 955 •

PARTITIONS

Product : GYPROC 2-in. Solid Partitions (1).

General :

This Sheet deals with the use of ¾-in. Gyproc plank suitably secured at floor and ceiling levels and plastered on each side to form 2-in. fire-resistant partitions.

It sets out the general construction and indicates one method of securing the Gyproc planks at floor and ceiling levels—by means of a pressed-steel looped box channel.

Alternative methods of securing the partition are set out on Sheet 2.

Characteristics :

The Gyproc 2-in. Solid Partition being gypsum throughout, is fire resistant, strong and durable, and free from any inherent tendency to crack. No timber need be used. It affords many of the advantages of solid masonry construction at a lower cost, is lighter and occupies much less space.

Range :

Partitions up to 12 ft. 0 in. high may be self-supporting, but above this height permanent horizontal support should be provided at not more than 10 ft. 0 in. centres.

Detailing at Floor and Ceiling Levels : A number of methods are available for securing the Gyproc plank at floor and ceiling levels. One arrangement is dealt with on this Sheet and three further methods are described on Sheet 2.

Fixing by means of Looped Box Channel :

In this arrangement, the ¾-in. Gyproc plank is held between pressed-metal box channels screwed, nailed or plugged at floor and ceiling levels. These channels are pressed out with loops which provide a high degree of rigidity and ensure a secure bond with the undercoat plaster. The ceiling cove should be reinforced with jute scrim or metal lath, and the skirting with metal lath.

Vertical Joints :

Vertical joints are secured with pressed-metal clips and covered with jute scrim. Where a corner joint is required a special 90 deg. double clip is available. Exposed corners should be reinforced with corner beads fixed over the jute scrim.

Plastering Specification :

No plaster containing lime or Portland cement shall be used in contact with Gyproc plank.

The surface of Gyproc plank shall not be wetted before plastering. Where conditions permit, both sides of the partition shall be plastered simultaneously.

All joints shall be scrimmed with jute scrim not less than 3 in. wide, set in Paristone plaster and sand mixed in the proportions 1 part Paristone, 2 parts sand by weight (approximately 1 : 1 by volume).

Undercoats : *First or Rendering Coat :* The rendering coat shall consist of Haired Paristone Hardwall Gypsum Cement Plaster and sand in the proportion, 1 part Paristone, 2 parts sand by weight (approximately 1 : 1 by volume).

It shall be applied in the normal manner to a thickness of approximately ½ in. scratched with an undercut key and allowed to set.

Second or Floating Coat : The second or floating coat shall consist of Haired Paristone plaster as above, and sand in the proportions 1 part Paristone, 3 parts sand by weight (approximately 1 : 1½ by volume).

It shall be applied in the normal manner to a thickness of approximately ½ in. and left roughened to receive the finish coat.

Finishing Coat : The finishing coat shall be Unhaired Paristone Hardwall Gypsum Cement Plaster gauged 3 parts Paristone to 1 part lime putty. Alternatively, Glastone finishing plaster shall be used.

The total thickness of the three coats of plaster shall be ⅝ in. each side.

Door Openings :

Door openings may be constructed as shown on the face of this Sheet. The jambs should be keyed to the plaster by means of 3-in. galvanized nails at 9-in. centres and reinforcement over the head should be provided by a sheet of expanded metal lathing on each side.

Issued by : Gyproc Products Limited

Head Office : Westfield, Upper Singlewell Road, Gravesend, Kent
Telephone : Gravesend 4251-4
Telegrams : Gyproc, Gravesend

Glasgow Office : Gyproc Wharf, Shieldhall, Glasgow, S.W.1
Telephone : Govan 614
Telegrams : Gyproc, Glasgow

Registered Office : 21, St. James's Square, London, S.W.1
Telephone : Whitehall 8021

During the latter part of the war the author of this article was associated with the repair of bomb-damaged reinforced concrete floors of a large London departmental store. Here he describes the novel method of repair used which saved valuable time and money. The article should give useful information to those concerned with the repair of the many similar cases of damage which still remain, as well as of future peace-time cases of fire damage.

A New Method of Concrete Floor REPAIR

[by Cyril H. Fitch, A.R.I.B.A., F.S.I.]

Early in April, 1941, during a heavy raid on London, a well-known Departmental Store suffered a direct hit (not for the first time) from a heavy bomb, and although penetration occurred in only the three topmost storeys an extensive fire ensued which destroyed all woodwork and joinery (including the hardwood block flooring laid directly upon the screeded concrete floors) in the two topmost storeys.

When the débris had been cleared away and it became possible to view the effects of the fire upon the main structure of the building, extensive replacement of the structure appeared necessary. The standard of construction of the building is of the highest, it being of excess cube capacity, steel framed, with pot type RC slab panel floors, and roof with a superimposed concrete fill in which are contained the various pipe services, such as electrical and telephone wires, sprinkler and water supply pipes, etc.

The shortage of suitable buildings in London to house Government and Military departments became acute when the war effort approached its zenith, and the affected parts of the building became the object of official interest, for it contained large horizontal areas eminently suitable for the needs of the moment. But the need was urgent, and the space had to be available in a few months to be of any value in the emergency.

The general view was that it would be necessary to remove the floor panels entirely and replace with new work, in itself a long period job, especially as this would occasion the removal of the fill with all the supply services contained therein, and the removal and reinstatement of the flat asphalte roofing even presuming that the structural steel was not substantially affected. Moreover, suitable labour was in short supply. The task was impossible to achieve by the recognized method of reinstatement. Alternatives must be sought.

A close inspection of the concrete casings and coverings showed that the fire penetration had not been as deep as was at first anticipated, and the structural steelwork not materially impaired. The underside of the pots between the RC ribs had generally been so badly burned that it had either fallen or had become useless. The concrete of the ribs was burnt to an average depth of 3 in., and the reinforcement rods imbedded therein had been badly heat affected, particularly where the concrete cover had cracked and broken away. This inspection revealed that out of a total thickness of floor slab of about 16 in. only the lowest 3 in. were affected, albeit the most important, as therein was contained the load-carrying portion of the slab. Repair instead of replacement was the obvious answer, but the question "How?" took longer to solve.

Eventually a dim recollection of houses being built after the previous war by cement rendering blown on to expanded metal-covered wood framing suggested a solution, *i.e.*, the removal of all affected concrete and the re-building of the ribs to their original depth by use of the cement gun. Contact with a suitable firm established its possibility, although this actual type of work had never been executed before; however, a practical trial would soon prove the point.

The reinforcement had suffered extensively, and would need particular attention. Sample lengths were cut from various slabs where most adversely affected, and these were tested for yield and ultimate stresses. They were found to be considerably lower than standard—up to 25 per cent. loss in some cases—but from these results could be calculated the amount of supplementary reinforcement needed to support the dead and super load requirements. Suitable schedules were drawn up indicating the additional reinforcement required for each slab of different span.

A method of repair could now be evolved, thus:—

(1) The slab to be relieved of dead load deflection by the use of tubular steel props with jacking screws.

(2) All discoloured concrete in the ribs to be removed by small pneumatic chisels, leaving a face of hard undamaged concrete to build upon.

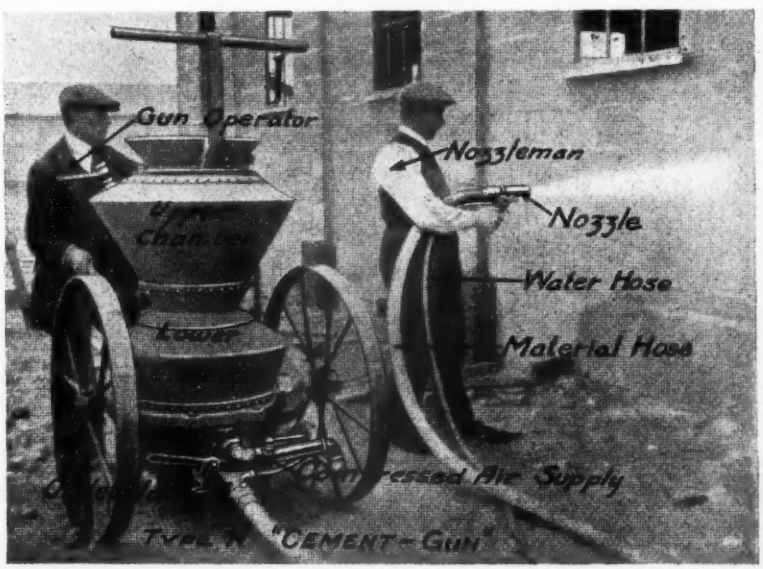
(3) Existing reinforcing bars to be straightened and held in position by lugs bedded in the unaffected concrete and the supplementary reinforcement (in the form of fabricated mesh) fixed alongside the original by clamps held in position by the lugs.

(4) The full depth and width of the ribs to be built up by cement gun.

(5) Expanded metal mesh to be fixed by wires tied to the reinforcement bars, and the whole soffit of the slab to be built up with cement gun, and trowelled off to even surface for final plaster finish.

Estimates of time, labour and cost were compiled, and these showed that the job could be completed within the limit required, the skilled labour involved being extremely low in proportion, and the cost almost one-third of replacement works.

In the natural course of events the Building Authorities' approval was sought, and the project received their interested attention, for this was a novel solution to a problem which had presented itself in many instances throughout the country. The



The type of cement gun with its pneumatic placing machine used in the repair of the floors described in this article.

Building Research Station requested that it might follow the various stages of preparation and repair, and eventually test a typical slab for deflection and recovery; this was readily agreed to.

In order to assure the cement gun contractors in the matter of adhesion of new concrete to old, a portion of a rib was built up, and two days after shooting an atempt was made to split the two materials by use of cold steel chisel and hand hammer. This proved impossible, so a portion of the new work was chipped away until the old was reached, and on examination of the final chippings it was seen that these were composed of old and new concrete combined. With this assurance work commenced in earnest, and as soon as a typical slab was completed the loading test was carried out.

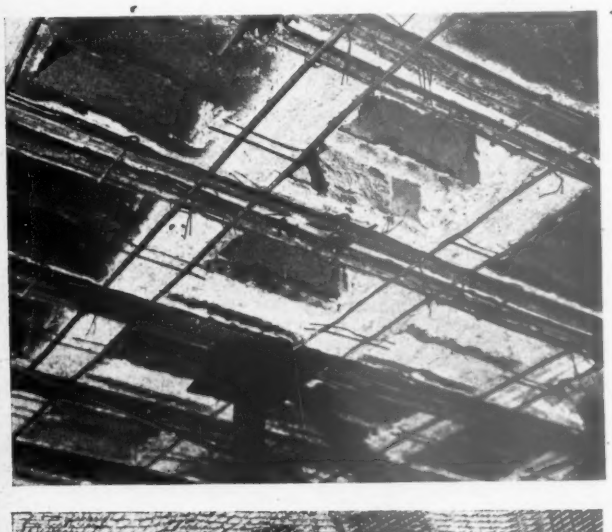
The method employed was to provide an even loading on the upper surface by stacks of stone slabs, spaced apart to obviate arching, the adjoining floor slabs being left free of super loading to represent the worst case possible. The load was increased by 20 lbs. per square foot at a time, up to 1½ times the required super loading. This maximum load was allowed to remain for three days, when it was removed in steps of 20 lbs. every 1½ hours. Deflection measurements were taken at six special points in the slab. At the centre of the slab under maximum load deflection was less than 1/1,000th the span. The recovery when the load was removed was nearly 60 per cent., and was still further increased as time passed.

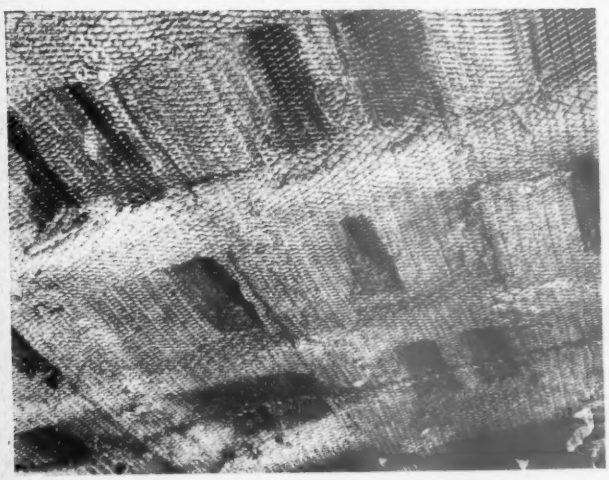
Strain gauge wires were also fixed to the underside of the slab, and these showed that the maximum reinforcement stress at the centre of the panel was about 8,000 lbs. per sq. in. On removal of the load the strain dropped 50 per cent. and showed further considerable reduction up to two days afterwards. No cracks or other signs of weakness showed themselves during the test. Strain comparisons at two points along the same rib showed satisfactory bonding between concrete and reinforcement at maximum loading.

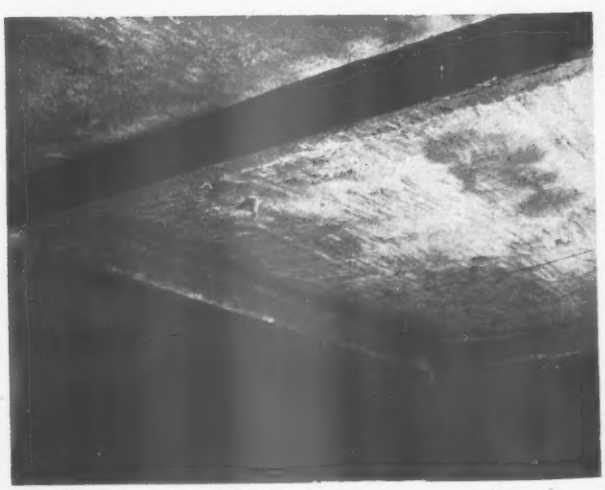
The Building Research Department expressed themselves thoroughly satisfied with the method of repair and the test results achieved.

The whole of the work was completed within scheduled time; the skilled labour employed was about 10 per cent. of the whole engaged, and the cost even less than originally estimated.

The circumstances of the case were somewhat unusual, as in the event of replacement a considerable proportion of the total cost would have been absorbed by the removal of the concrete fill and pipe services contained therein and their reinstallation after the renewal of the actual floor slabs. Nevertheless without doubt there is a large number of buildings with the same pot type RC floors which have suffered damage and which can be repaired in a similar manner, thus saving valuable time, labour and money, all most desirable objects at the present time.







Top left, a typical view of the underside of the slab after damage by fire. Above, four progress photographs of the repairing process. Top left, the fire-damaged concrete and pots are removed, the reinforcement is re-positioned and supplementary reinforcement is fixed ready for the cement-gun work. Top right, the reinforced beams are built up to their original depth ; the fixing wires for the expanded metal soffit are showing. Bottom left, the expanded metal soffit is fixed ready for the screed from the cement gun. Bottom right, the finished cement soffit is trowelled off and scored for the ultimate plaster finish. [*Photographs published by courtesy of the London County Council.*]

PHYSICAL PLANNING SUPPLEMENT

Above is a view from Glasgow University Tower looking over the north-western area of the city. Glasgow is a city which more frequently inspires awe than admiration, in fact, many a traveller looks upon it as a source of self-congratulation if he is able to curtail his visit there –this in spite of the famed hospitality of its inhabitants. The planning report reviewed on this and the following pages is therefore of particular interest; it is the work of ROBERT BRUCE, B.Sc., M.Inst.C.E., M.Inst.M. & Cy.E., Master of Works and City Engineer.

A plan for GLASGOW

The First Planning Report to the Highways and Planning Committee of the Corporation of Glasgow is published in two volumes, one of which contains a folio of maps, plans and drawings, some of which are reproduced on the following two pages, and the other the report. The proposals have been completed in fifteen months with a depleted staff, and their scope is therefore limited. It is intended to publish a subsequent report covering the wider aspects of planning, which will include lay-outs of each Community Area. The report is reviewed by J. A. COIA, F.R.I.B.A., H. J. CRONE, P.A.S.I., and W. LINN, A.M.I.C.E.

The City of Glasgow, which is the subject of the plan reported upon herein, is an industrial city containing within its boundaries an area of 53 square miles and having a population of 1,127,825.

Until 1832 the city was quite a small burgh. The industrial revolution made Glasgow as it is to-day. The growth of the city was too rapid for co-ordination, and has resulted in haphazard development. Predominant characteristics of this too rapid development have been the extensive use of the tenement form of housing with only upper middle and upper class terrace and villa building. This is clearly shown in the illustration above.

The city is almost entirely dependent on the heavy engineering, mining and ship building industries. Glasgow and the Clyde have gained world renown for the ships that have been built there. Within the city there are a considerable number of localities and burghs which, although merged with the parent body, still retain a high degree of local identification.

Between the wars the city has spread and become a great conurbation. This conurbation will be very difficult to loosen up, and is complicated by the extremely serious housing situation in Glasgow. It was estimated in 1939 that 82,109 families were living in overcrowded conditions in the city. At present the Local Authorities have 96,000 applications for houses from people having no houses at all. In addition, the population's dependance on heavy industries creates great difficulties in decentralization. The problem is further accentuated by the fact that many of the industrial establishments are vast concerns employing several thousands of workers.

The city has developed radially along the roads and linearly along the river banks. The basic problems are those usual in such cities: central congestion, unorganized land use, uncontrolled spread. All of these are further complicated by the problem of cross river communications.

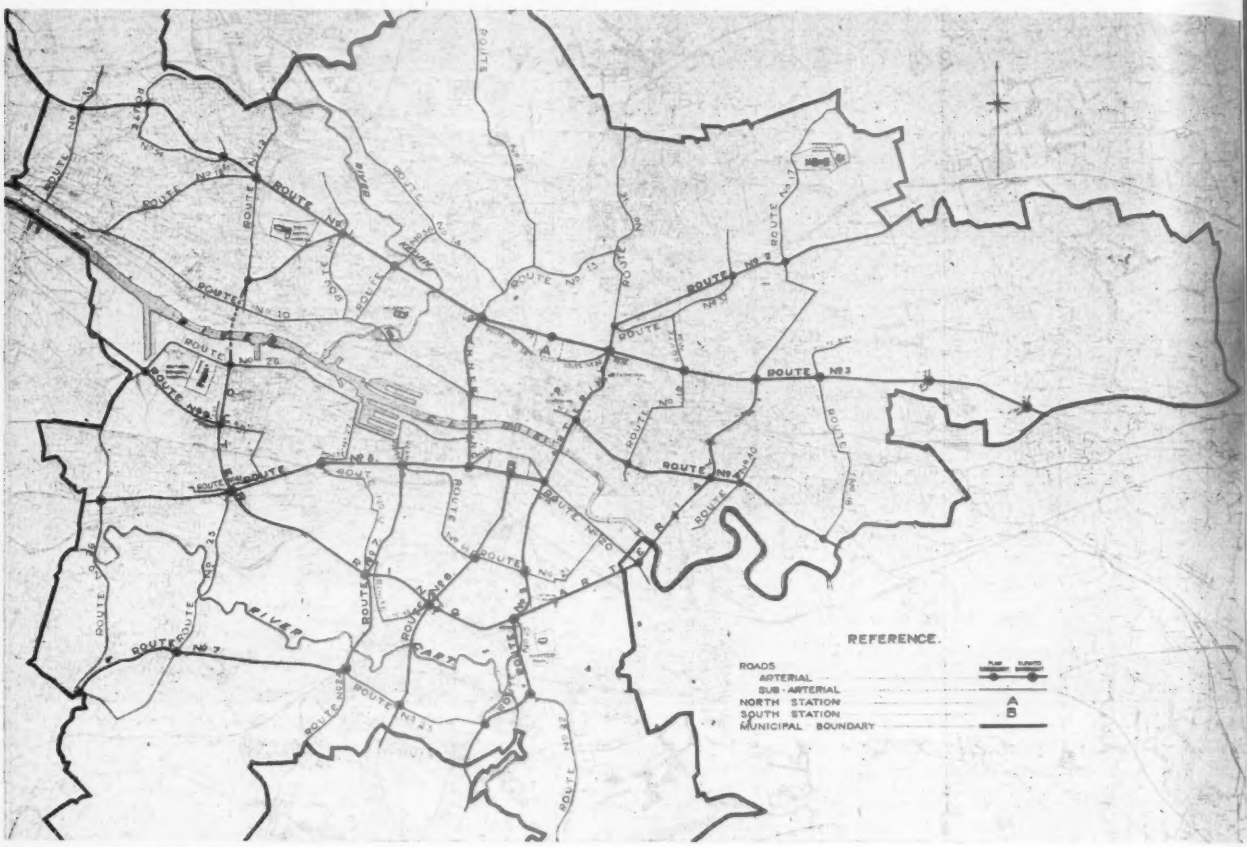
the city engineer's report

The report is a sincere attempt to solve the problems summarized above in accordance with the permitted limits of statutory planning. It reveals a high degree of ability on the part of the City Engineer and his staff, more so when it is borne in mind that the entire research and plan were carried out in fifteen months.

The report is merely the City Engineer's preliminary planning proposals. It claims to cover the whole plan and to be based on community planning. In actual fact the report covers only road and transport proposals, an outline development scheme for the inner core of the city and a statement of views on the advisability of deliberately planning Glasgow and district as a conurbation. No details are given with regard to the proposals for the remainder of the city, although the report covers housing, industry and allied matters in a very general way.

the road and transport proposals

The proposal here is to plan a road system, with an inner core formed from existing streets, which will enclose and insulate the central area. In addition, there is to be an outer ring road. The roads are divided into three main groups: arterial, sub-arterial and local roads. Access to and from the arterials will be by elevated roundabouts or, in some instances, by roundabouts on the level of the road. The proposed transport system envisages modernized tram cars travelling underground in the central areas and occupying a



Above are the road planning proposals for the Glasgow area. To achieve segregation of different types of traffic the three classifications of arterial, sub-arterial and local roads are used, the first two of which are illustrated here.

transport

central reservation on the arterial roads away from the centre, co-ordinated into a system with the existing underground and the local rail services electrified. Buses are to be used to connect up between the localities and the stations. The idea behind the high speed arterial roads and the underground transport system is to give the maximum speed and, thereby, to bring the suburban areas closer in time to the central core, thus the transport plan is the first step in centralization.

The report shows no proposals for the reform of road systems in the outlying areas. It does, however, indicate that by re-planning and cutting out a number of redundant roads in the centre very considerable areas of space can be brought into use. The co-ordinated transport network, which is proposed, is to a great extent already in existence, consisting of an extensive tramway network and a very limited underground run by the Corporation with a number of suburban railway lines no longer extensively used, as the railways, being steam, are slow and the station accommodation is limited.

the inner core

The proposals for the re-development of the city centre visualize complete re-building over a period of 50 years' time. The aim is to open up this area, to establish definite use zones, and to provide more adequate public buildings and more modern office accommodation than is presently available. The zones to be provided are: residential, industrial, shopping, business, entertainment, civic and open space.

The proposals to provide residential development in the central area where it has been argued that high land values make such development impossible in accordance with modern standards, is defended on the grounds that the housing is for the wealthier type of tenant.

The ultimate redevelopment is to be achieved by progressive stages. The first step will be closing of redundant streets and the progressive redevelopment of building sites; thereafter will follow the erection of new public buildings, including the formal layout proposed for the central area of the development. Two new stations are to be provided by amalgamation of the four existing stations and cutting back the lines to site them on the perimeter. The principal shops are to be gathered from all the central streets and to be amalgamated on, what seems, a hopelessly inadequate main shopping centre.

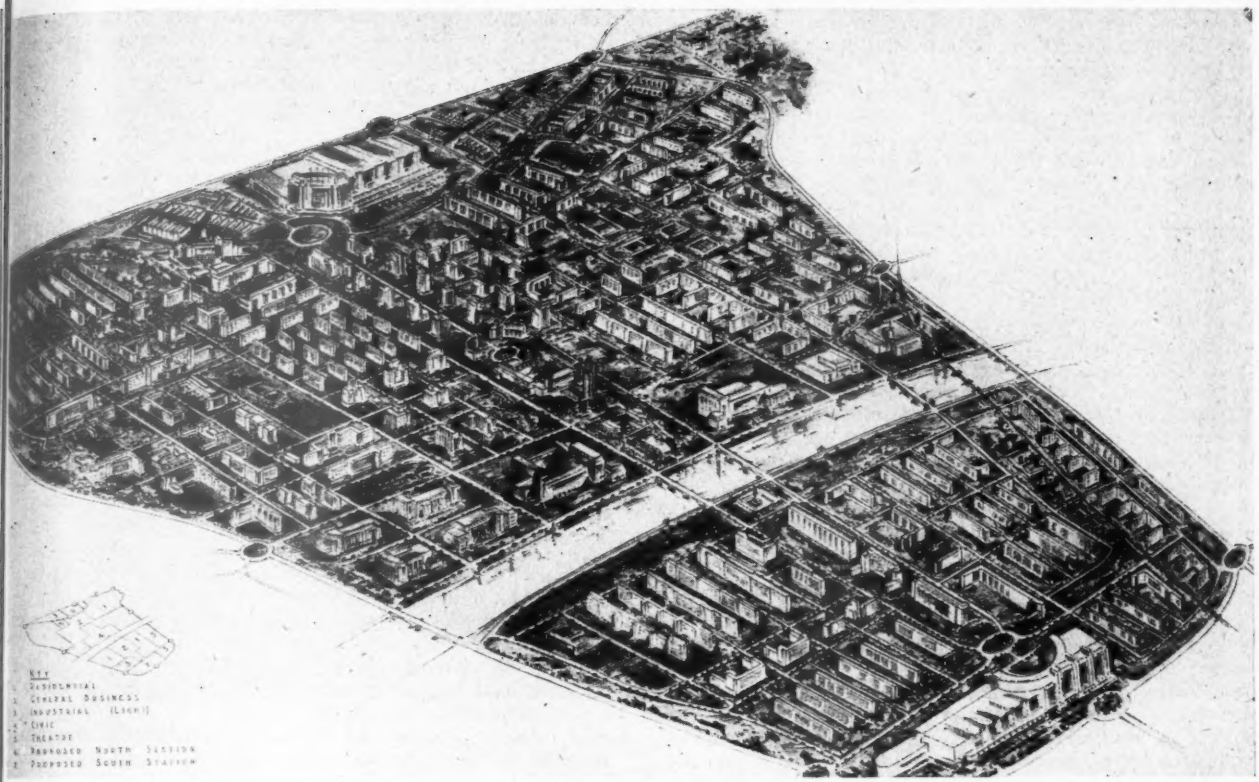
the conurbation

The argument that the only way to overcome the difficulty of conurbation is to legalize and plan this conurbation is developed at considerable length. In this built up mass, Glasgow is the dominant burgh. It is contended that it is less densely developed than some of the surrounding burghs, and it has more unbuilt-on land. It is proposed that the re-entrant angles in the Glasgow mass should be developed along planned lines, thereby easing congestion in the surrounding burghs. The following shows the line of argument.

"It is submitted that it would be a reasonable approach to the problem to regard the Glasgow conurbation as an aggregate of, say, 25 'little towns,' each separated from the other by physical boundaries such as railways, rivers, main roadways (parkways wherever, possible), or green wedges, and to ensure that the existing green belt around it is never diminished by extending the conurbation and that its population is henceforth controlled."

views on proposals

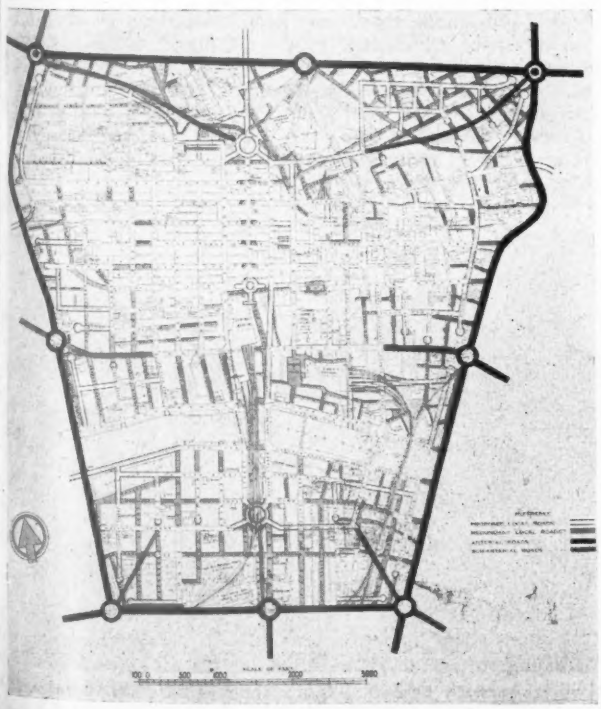
In general, it is our considered opinion that the report, in so far as it goes, does make a real attempt to grapple with the fundamental problems in replanning the centre of Glasgow. It has, however, a considerable number of defects.

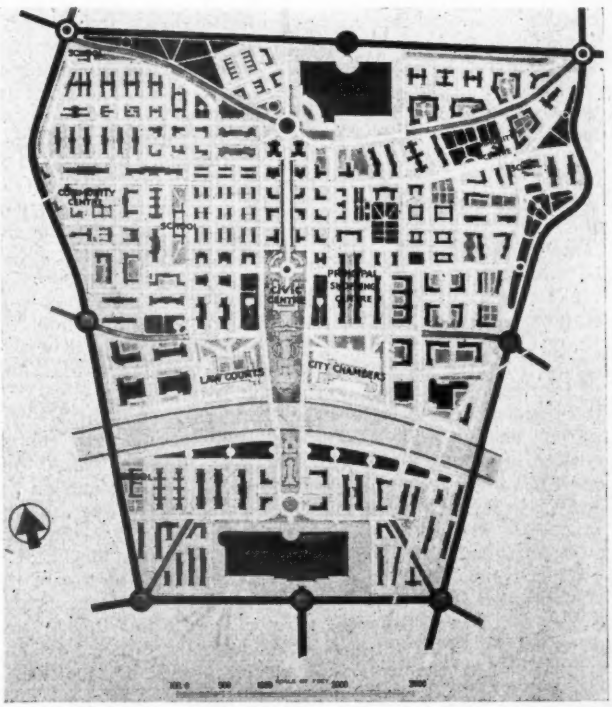


the inner core

Above is a perspective which aims to give a general impression of the manner in which the inner core of the city might be developed. It is pointed out that the lines of the roads are, oddly, not strictly in accordance with the proposed layout.

Below is a map showing the modification of the existing road system in the proposals for the inner core of the city. Dark tone denotes arterial roads; medium tone, sub-arterial; light tone, redundant local roads; and white enclosed by two dark lines, proposed local roads.





Above is a plan of the suggestions for the rebuilding of the central core of the city, which are also shown in perspective at the top of the page. The new North Station, on the site of Buchanan Street Station, combines that station with Queen Street Station. The new South Station, having its southern boundary at Cumberland Street, combines the Central Station and St. Enoch Station.

The road and transport plans will, of necessity, predetermine the community units or precincts, and in consequence certain areas of strong local identification will be broken up.

The city centre presently defined as at the Central Station is assumed to be dependent on certain unspecified factors. There is strong local opinion that the Central Station itself is, to some extent, the centre of the city, and to move the station means the probability of moving the city centre south of the river. To set against this, there is at present a tendency for business and commercial premises to be re-sited in the area west of Charing Cross, which is just outside the inner core proposed. The plan does not show any proposals which would limit this tendency, and in consequence, a conflict may be set up between two potential nuclei.

The fact that the report is strictly speaking a gathering together of first proposals cannot absolve its author from consideration of basic facts. The lay out as shown on plan and in perspective which is proposed for the central area, fails to conform to the contours in a number of places. This is particularly evident in the north western area, which is north of Sauchiehall Street. This ground rises very rapidly from Sauchiehall Street; the gradient of some of the streets being 1 in 6. To develop buildings against these contours is an extremely expensive task apart from the æsthetic difficulties inherent in "against contour" building.

The proposals make very little mention of the problem of high land values, except for the mention of housing referred to above. Although it is estimated that the planned reorganization can be achieved in 50 years, there are a considerable number of substantial buildings in the area whose life is well beyond 50 years. Unless the laws relating to land values and compensation are radically altered, it would appear most unlikely that the proposals, as outlined, will be achieved. It should be borne in mind that Glasgow has suffered no bomb damage of any consequence. Less than five buildings in the central area have been destroyed.

The provision of roundabouts is so numerous that the proposed arterial plan will be liable to serious congestion in the vicinity of these roundabouts. The sub-arterials, as shown, leave extremely long walking distances to be covered before contact is made with proposed bus services. It is possible that this is to be met by local bus services not shown, but the point is left in doubt. The provision for horse drawn traffic crossing the arterial roads is inadequate, and there are various points at which it will be necessary for horse drawn traffic to use the arterial roads thereby creating confusion.

For many years Glasgow Corporation has been urged to extend its underground services, but the question of economics was always held up as the reason for not carrying this out. It has often been pointed out that the London underground has never been able to defray the interest cost of the capital expenditure. The report now proposes to build at least two tunnels each nearly two miles long with stations, etc., and both of these involve tunnelling under the River Clyde. There is also the proposal to have a new road tunnel of large dimensions on the outer ring road. This will be very costly, and no mention is made of any possible toll being levied, as is done at the Mersey Tunnel. If there are to be two additional tunnels why should they run so closely alongside the existing subway tunnel? Could one not run further west and one further east with stations on the two cross lines forming the links and thereby open up the inner core and make walking distances shorter? If, however, it is intended that the new electric vehicles, the L.M.S. electric trains and the existing underground are to use the same tunnel, then congestion on this section from Bridge Street to Cowcaddens will be very great, and L.M.S. and other rolling stock will have to be designed to fit the existing tunnel, and, consequently, all platforms must be modified.

wider issues

The initial proposals are, on first consideration, bold. A second examination, however, reveals the fact that certain issues, vital to the future development of Glasgow, have not been faced. Glasgow is a city which combines areas of extremely high density with areas of extremely low density. The areas of high density are found situated close to the inner core. To re-plan the city means replanning those areas, and, if this is to be done successfully, then planning should, it would seem, start with the people living in the local communities which together build up the city and create the demand for an inner core.

So far as can be gathered from the report, housing development is to be continued on the perimeter areas up to the limit of the boundaries. Although it is stipulated that such development is to be community planning no indication is given as to how development which has never created community planning in the past is going to do so in the future.

Many of the areas in Glasgow had, at one time, high local identification. In most instances sufficient of this local consciousness remains to make it possible that rehabilitation of local life could be achieved. This, however, would require a planned measure of decentralization. If such local rehabilitation was stimulated the intensity of traffic in the centre would be eased and much less sweeping redevelopment proposals could be used to achieve the same effect.

Proposals are primarily two dimensional, and it is doubtful whether in the preparation of them any considerable thought has been given to the fact that Glasgow's need is city building rather than two dimensional planning. In a city where there are a considerable number of dominant hills and where the Clyde's shipyards and wharfs and the heavy engineering establishments of northern and eastern Glasgow constitute the life blood of the whole community, it would appear that the planning proposals, to succeed, would require to be based on these, rather than on an artificially created city centre.

The architectural layout has repeated in large scale the past insidious method of building development; buildings planned in lane principles on a predetermined road plan without due consideration of its double function, the means of travel and the means whereby it can be part and parcel of the buildings adjoining.

As first planning proposals the report is interesting. We wonder, however, if the time would not have been better used in the preparation and publication of complete statistical information in plan and print form showing everything necessary before consideration of the actual remedies. Glasgow is a serious planning problem. The solution of the problem, at the building level, will require the ultimate co-operation of the architects, surveyors, builders, land owners, industrialists, and people of the city. The report is so deficient in large brush mark drawings showing such things as wind and smoke tendencies, lack of sunlight effects, lack of open space effects, the random siting of industries, the random build up of houses, the faulty location of industries and houses and the inter-departmental lack of co-ordination of essential services, that it prevents true appreciation and judgment. To the native critic it must, inevitably, leave a doubt, perhaps unjustified, that adequate compilation of statistics has not been undertaken.

Above is Renfield Street, a main thoroughfare in Glasgow.

MEDICAL CENTRE

FOR AN INDUSTRIAL COMPANY

DESIGNED BY CYRIL M. TOWNEND

GENERAL—This building has been erected in the past months by the Lockheed Hydraulic Brake Co. at its works at Leamington Spa, as a staff medical centre.

It contains a resident doctor's consulting-room, a dental clinic, a surgery and rest rooms, therapy treatment rooms, facilities for the removal of foreign bodies from the eyes, and a bathroom for the treatment of skin diseases.

It was designed in the firm's architectural office and built by its own Building Department and sub-contracting firms under the Staff Architect, Cyril Townend, A.R.I.B.A.

Due to war-time conditions, the building, as completed, is for a short term policy, providing at this stage a single surgery. A future extension will provide further facilities. A temporary sound-proof screen has been erected to form the male and female rest rooms in the future surgery. The present therapy treatment and nurses' rooms are designed as future rest rooms, giving immediate access from each surgery, one for men and one for women. The front elevation faces south and looks on to a bowling-green. The sports fields are at the rear.

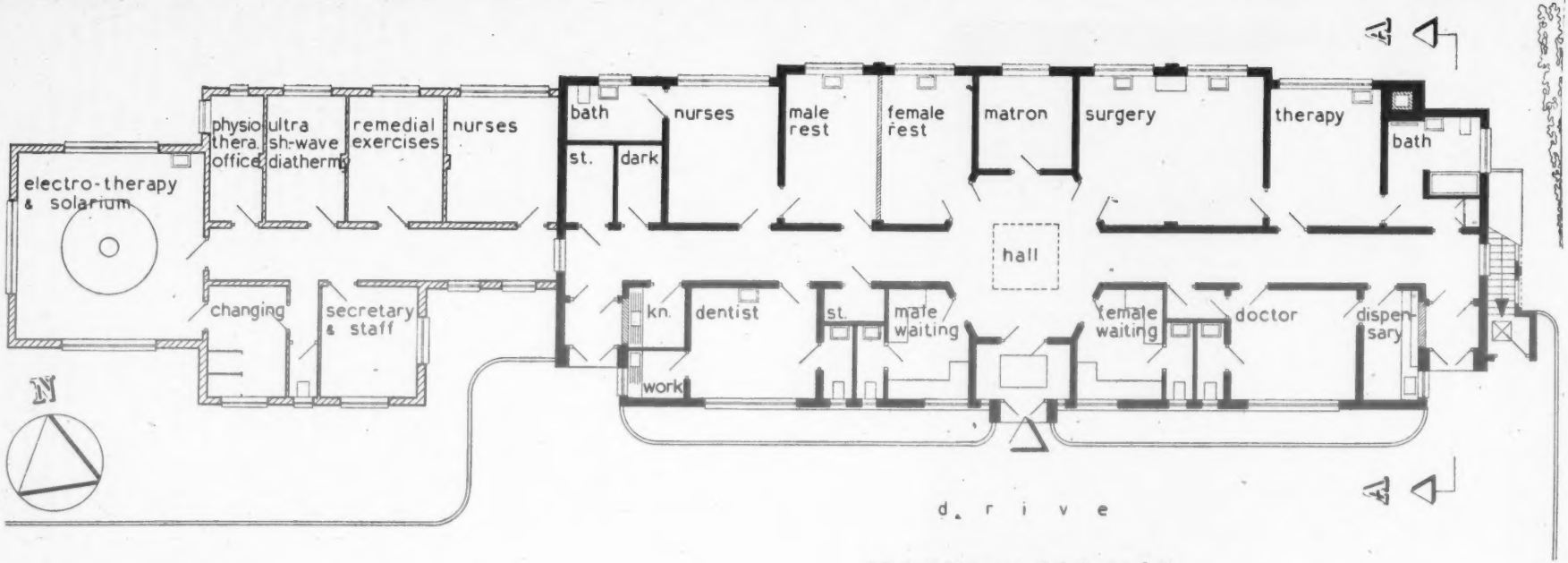
CONSTRUCTION—This is of 11-in. cavity walls in common brick. Floors are of concrete with terrazzo finish throughout, except those in the doctor's consulting room and matron's room, which are finished in Kenwood *in situ* flooring.

The roof is of pre-cast Marley Tile concrete beams with Welinlith slabs screeded, with an asphalt finish.

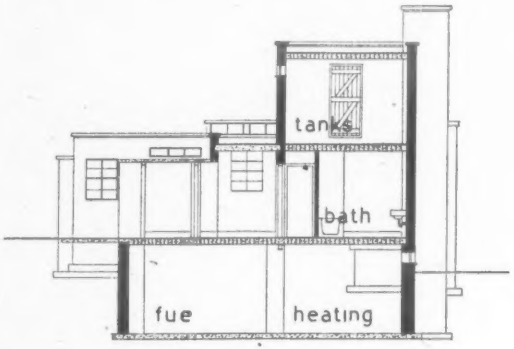
All electric light conduits are laid direct on top of beams with junction boxes for drawing cables having direct access from the flat roof.

Internal walls are tiled and plastered in the surgery and essential rooms. The general colour scheme is in pastel greens with darker green painted dadoes and black capping.

SERVICES—Heating is from an independent boiler in the basement below the bathroom, with service ducts running below the centre corridor and along the north elevation. Plumbing and services are concealed throughout. The radiators have connections from ducts below the floor level, in which all services are run.



GROUND FLOOR PLAN



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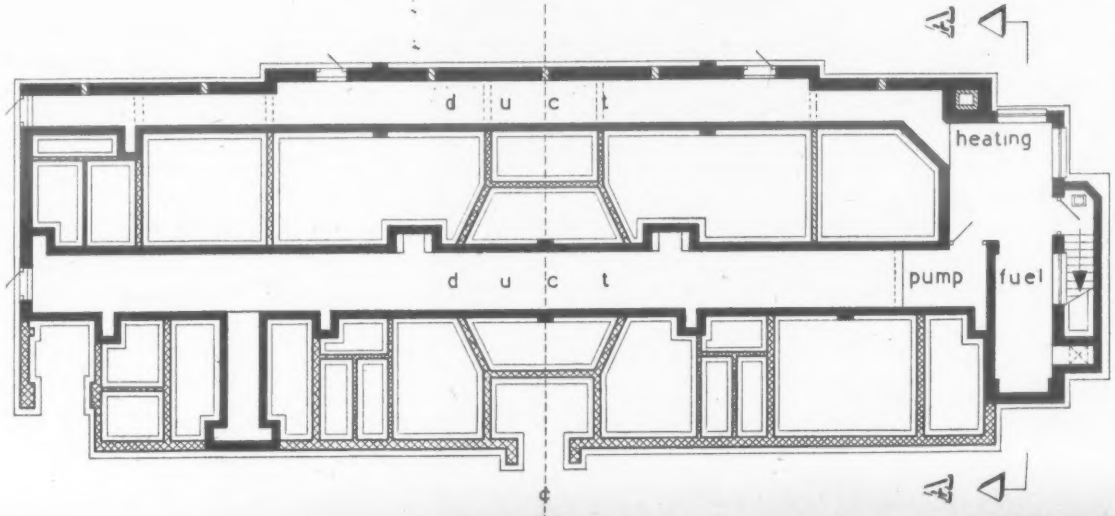


BASEMENT PLAN

[Scale : 1/8" — 1' 0"]

On facing page, ground floor plan showing future extension on the west, basement plan showing boiler room and service ducts, and cross section at AA, all to scale of $\frac{1}{16}$ in. to 1 ft. 0 in. Above, a view of the entrance hall looking east. Below, right, the surgery.

MEDICAL CENTRE FOR AN INDUSTRIAL COMPANY

INFORMATION CENTRE

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

PHYSICAL PLANNING

2038 *New Community Town*

DESIGN FOR THE NEW COMMUNITY TOWN OF HALEWOOD. *Watson Garbutt.* (*Rural District Council of Whiston, Lancs.*) Liverpool must decentralize. Adjacent rural district of Whiston preparing to receive some of surplus population. Brochure describes suggested satellite for 20,000 to be built on fringe of borough.

The area is hemmed between two railways and crossed by a major road, whose importance may be lessened after the construction of a suggested sub-arterial from Liverpool to Widnes.

The layout is described as a modern adaptation of the London Square and the Village Green. Sites near the centre will be reserved for bungalows for aged persons and semi-detached houses divided into flats for single persons.

Leathers Lane connects the centre with the station. It is proposed to widen this road and lay it out as the social and commercial centre with gardens, double carriage way, and parking space. The senior school is centrally situated and intended to form the base for the town's cultural activities.

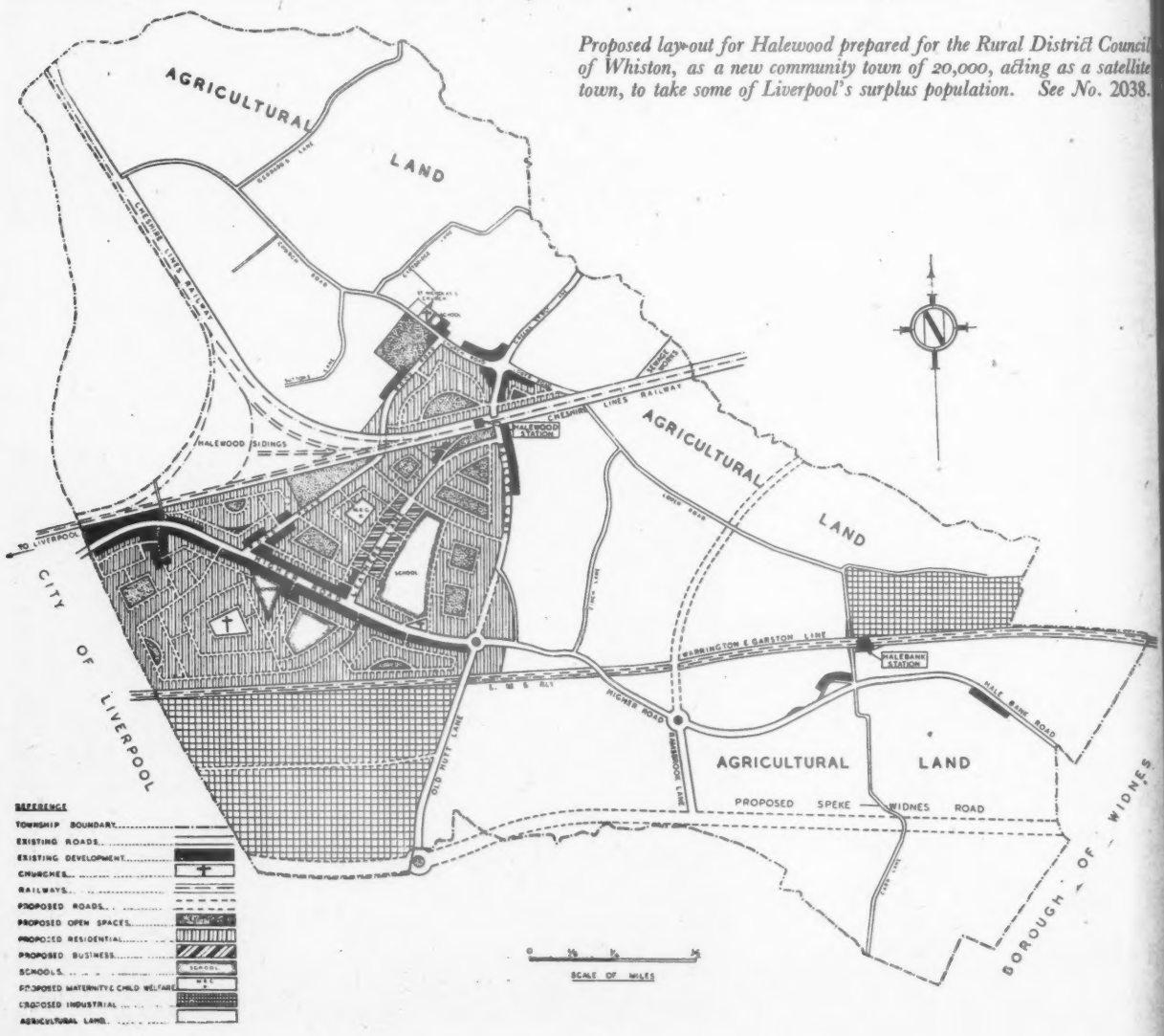
It is hoped to reduce the widths of residential streets and to retain many public footpaths, which will eventually be provided with 4 ft. 6 in. hard surface and suitably designed signposts.

HEATING and Ventilation

2039 *Smoke Abatement*

JOINT CONFERENCE OF THE INSTITUTE OF FUEL AND NATIONAL SMOKE ABATEMENT SOCIETY. (*Institute of Fuel*, 2*s.* 6*d.*) Text of eight papers read at recent conference on atmospheric pollution and prevention: (1) Atmospheric Pollution (G. M. B. Dobson); (2) Coal and Civilization (Major S. F. Markham); (3) Small-scale Steam-raising Plant (S. N. Duguid); (4) Cleaning of Boiler Plant Flue Gases from Electricity Generating Stations (John Bruce); (5) Industrial Furnaces (R. J. Sarjant); (6) Smoke Abatement in the Clay Industries (E. Rowden, W. Noble and T. Green); (7) Atmospheric Pollution from

Proposed lay-out for Halewood prepared for the Rural District Council of Whiston, as a new community town of 20,000, acting as a satellite town, to take some of Liverpool's surplus population. See No. 2038.



R

EW

REMOVE RESTRICTIONS

on Planning

"The use of a local Gas Geyser system for a domestic hot water supply means greater freedom in house planning. With a centralized hot water system the draw-off taps must be carefully related to the heating source and to the hot water storage, and this greatly detracts from the flexibility of any building plan. Other considerations may, upon occasion, make it undesirable to plan compactly, but it should be remembered that an open plan embodying a central system of supply necessitating long pipe-runs entails high circulation losses. *A local gas geyser system*, however, *imposes no planning restrictions; the geyser itself occupies no floor space and storage space for fuel and water is unnecessary.* These advantages suit the present tendency in domestic designing to make use of every square foot of space. Gas geysers also allow considerable economies in flue construction and plumbing."

C. R. FOWKES, A.R.I.B.A., A.M.T.P.I.

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EWART & SON, LTD. 169 REGENT ST. W.1. – WORKS: LETCHWORTH, HERTS. ESTD. 1834.

Domestic Appliances (A. Blackie); (8) Railway Smoke (M. G. Bennett).

The first two papers dealt with the problem of pollution, and the remaining six with methods of reducing or preventing it.

Dr. Dobson pointed out that the larger part of the pollution in this country is due to the combustion of coal. About 5 per cent. of the coal we burn passes into the air as pollution; and now amounts to some 9 million tons a year—equivalent to 100 tons a year from each square mile. About 3 million tons are solid particles and 2 million tons of this is so fine as not to settle under gravity. The products of combustion contain, besides carbon dioxide and water vapour, sulphur dioxide, ash, soot and tar. Three tons of sulphur dioxide are liberated for every 100 tons of coal burnt. The maximum concentration in towns is about 2 parts per million of air (6 milligrams per cubic metre); and the maximum concentration which can be continuously breathed is 10 p.p.m., but ½ p.p.m. is injurious to plants. Ash remains in the air for relatively short periods, an account of its generally large size. Smoke, on the other hand, tends to remain for longer periods. By filtering air through a filter paper, a sample of smoke may be obtained. It is estimated that 85 per cent. of the suspended impurity is combustible and 15 per cent. is ash. The maximum concentration of smoke in urban areas is about 5 milligrams per cubic metre, and in such cases the loss of visible light may amount to as much as nine-tenths.

Pollution is continuously removed from the air by natural means—gravity, rain, and contact with objects on the earth's surface. Dr. Dobson pointed out that consequent upon the fuel economy campaign, there had been a substantial reduction in pollution.

Major Markham reviewed the controlling influence of climate on civilization, and pointed out that centres of civilization have shifted from the region of the 70 deg. annual isotherm (*e.g.* Egypt, Peru and Persia) to cooler regions when once it was found possible to heat buildings (*e.g.*, Greece, Rome and N.W. Europe). The Industrial Revolution caused a large increase in the use of coal, which amounted to 50 million tons a year in 1850, and to three times that figure now. In consequence, the hours of sunshine have been reduced, and the duration and intensity of fogs have been increased, with apparent increase in tuberculosis, rheumatism, cancer and respiratory disease. Major Markham said the monetary cost was obvious, and mentioned a figure of £300 million a year, but this was challenged in the following discussion. The effects of pollution included loss through fog, extra light, extra cleaning, extra doctor's bills, accidents, delays, damage to buildings and equipment, increased gloom and death rate, and general loss of beauty.

Mr. Duguid made a number of suggestions for reducing the emission of smoke from small boilers, mainly careful control of combustion.

Mr. Bruce reviewed current practice in power stations. Cyclone extractors are used where mechanical stoking is employed, but the use of pulverized fuel demands the use of electrostatic precipitators for flue-gas cleaning. In selecting a suitable plant, it is necessary to take into account the probable dust concentration and size grading. Attention was drawn to the B.S. Code for testing flue gas-cleaning devices.

Mr. Blackie, after recapitulating the nature of pollution, went on to say that comparatively little ash is emitted from domestic chimneys, but they give rise to much more smoke than do industrial plants. He added that pollution by sulphur dioxide, though unseen, is just as important as the visible smoke. A table is given of the pollution produced per ton of coal used in various ways. The total pollution from domestic sources in this country is estimated at 1.14 million tons of smoke, 0.12 million tons of ash, and 1 million tons of sulphur dioxide, *i.e.*, about half the total smoke, and one-fifth the total sulphur pollution. The factors affecting the reduction of smoke, which includes the type of coal, size of coal, type of grate and method of fuelling, are all reviewed. Mr. Blackie stated that ash pollution is best reduced by prior cleaning of coal, and this also helps to reduce sulphur pollution. The latter may also be reduced by using coals of low sulphur content; and the point is made that the use of gas and electricity tends to reduce the total emission of sulphur dioxide. To minimize the emission of smoke, the use of coke and anthracite, central heating and the use of new designs of grate specially designed for more smokeless combustion of bituminous coal are suggested.

2040 *District Heating*

HEATING LAID ON. SOME NOTES ON A DANISH SYSTEM. (*The National Builder, April*, 1945.) Description of district heating system in Copenhagen. Piping, methods of insulation, trenches. Cost.

Three old power stations required only for peak load supply due to the building of a new power station are now used for a moderate sized district heating supply. Hot water is used for buildings within 500 yards of the power stations, and steam is used for larger distribution. Some details are given of the piping, methods of insulation, trenches and arrangements for expansion of piping. It is stated that the resulting heat is not as a rule cheaper than ordinary central heating by coal or coke, but it has advantages of absence of smoke and dust, and if this, together with cost of upkeep of boilers, handling of fuel and increase in usable space in buildings is considered it may on balance show a saving. If a new power station had been necessary to supply the steam and hot water, the scheme would no doubt have been uneconomic.

2041 *Hospitals*

HEATING, VENTILATING AND AIR CONDITIONING HOSPITALS. *J. G. Mench.* (*Heating, Piping and Air Conditioning, November*, 1944, *p.* 641.) Suggested methods for hospitals. Radiators and panel heating. Double wall practice for operating theatres. Air conditioning for certain departments.

For heating, cast iron radiators are most commonly used, and they have a number of advantages. Convectors are difficult to clean, and panel heating by means of pipes in the walls reduces the available floor space and may lead to congestion with the other services.

For operating theatres, the modern practice is to build a double wall, and to heat the air in the space between the two walls. In such cases double glazing and a moisture seal are necessary.

Patients' rooms are usually ventilated by means of windows. All other habitable rooms without adequate window opening should have mechanical ventilation, usually with an excess of exhaust over inlet. Such rooms include operating theatres, X-ray rooms, laboratories, laundries and nurseries. A generous supply of fresh air is required; and for operating theatres, about 12 air changes per hour are needed, with a relative humidity of 60 per cent.

Air conditioning of the entire hospital building is not generally feasible on account of the cost, but it is essential for certain departments, which require suitable conditions throughout the whole year.

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.*

2042 *Labour and Cost*

Q *Can you give me comparative costs, and man-hours, in labour and materials for a brick house of traditional construction and of between 600-900 sq. ft. total floor area divided as follows:—(1) Labour in man-hours sub-divided into work in shops and work on site. (2) Cost, either in actual figures related to a known total cost and materials cost? It would greatly assist me if these figures could be given separately for the following items:—*

(1) *Foundations and other site work, including drains.*
(2) *Walls and partitions.*
(3) *Roofs and floors.*
(4) *Painting and finishing.*
(5) *Miscellaneous and overheads.*
(6) *Components.*

These figures are required so that I may have some sort of standard by which to compart figures for various forms of pre-fabricated construction.

A We regret that no up-to-date information such as you require has been published. We have been in touch with Messrs. Davis, Belfield & Everest, who are responsible for the prices published in the Journal, and who confirm that whereas any experienced estimator could work out fairly reliable figures in relation to a particular job, general statistics might very well be misleading rather than helpful.

If you refer to the figures given by the Ministry of Works in connection with the demonstration houses at Northolt, you will find that the estimated post-war cost of the Dudley Urban and Rural Houses is £890 and £910 respectively—an average of £900 for a 900 ft. sup. house. The increase over pre-war costs is given at 77 per cent., so the pre-war cost of houses of the Dudley standard may be assessed at approximately £510.

The following is an extract from *How to Estimate*, by J. T. Rea, which, before the war, could be considered as reliable as general statistics can be.

Trade	Proportion to whole work	Materials	Labour
	per cent.	per cent.	per cent.
Excavator ..	2	10	90
Concreter ..	5	80	20
Bricklayer ..	30	67	33
Drainlayer ..	4	67	33
Mason ..	—	55	45
Slater or tiler ..	4	80	20
Carpenter and joiner ..	28	60	40
Ironmonger ..	2	75	25
Smith and founder ..	3	67	33
Plasterer ..	9	35	65
Plumber ..	7	75	25
Gasfitter or electrician ..	1	67	33
Glazier ..	1	75	25
Painter	4	40	60

From this it should be possible with a limited amount of estimating knowledge to convert " labour " into terms of man-hours, but to bring the information up-to-date the following factors would have to be taken into account:—

1. Post-war houses may differ from those considered by Mr. Rea, *e.g.*, equipment may form a higher proportion of the cost and methods of construction may be altered to obviate the use of materials in short supply.
2. Labour and materials have not increased in cost proportionately, and the increases in prices of materials have not been consistent. Moreover, only a certain proportion of the increased cost of labour is due to loss of output and, therefore, to increased man-hours.
3. Standardization will be increased even in connection with " traditional " houses which will increase the proportion of " materials " (materials and workshop labour) and decrease the proportion of " labour " (site man-hours).

As you will have gathered from the above, the matter is extremely complex, and we would advise you to employ a Quantity Surveyor or Contractor who should be able to carry out an investigation in relation to a particular project for a fee.

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.

FMB

H. U. Willink

July 10, Luncheon of the Federation of Master Builders. Speech on FUTURE HOUSING POLICY, by H. U. Willink, Minister of Health.

H. U. Willink: The Government have made known what they consider to be a practicable target of new house building. They intend that in addition to 150,000 or more temporary houses, at least 220,000 permanent houses should be built and another 80,000 should be building in two years. That is our first objective, not the final one. If we reach the first objective in advance of time we shall not pause there but go on without delay towards the final goal of a good house for every family.

Whatever we do, it is clear that in the next two years there will be more building work waiting to be done than workers to do it. It will not be a question of finding work but of deciding which work must be given preference. For the present the whole operation of building must be an ordered and planned operation. The demand for houses is so great and the process of meeting it must necessarily be so gradual that there would be a serious rise in building costs, as there was after the last war, if all demands were to be allowed to compete haphazard regardless of what the industry can do. We must, therefore, ensure that a start is made without delay, but at the same time we must see that there is not a disorganized scramble between those who should be working together.

LICENSING SCHEME

Private enterprise built three-quarters of the houses put up in this country between the wars. I am sure that we can confidently count again on the full effort of all agencies of free enterprise, whether they be large builders, small builders, housing associations, the person who wants a house built for himself or the employer who wants to build houses for his employees. There is room and a place for them all. We want to see an effective start made this building season, and arrangements have now been made for licences to be obtainable for the building of small dwelling houses. The licensing scheme will apply to houses of from 800 to 1,000 superficial feet—that is, the two-storey houses—and, in the case of one-storey houses or flats, from 730 to 930 superficial feet. The houses will be subject to a maximum contract or selling price. This will vary according to the size of the house, and may vary in different areas, but it will be subject to an overriding maximum price of £1,200, including land, roads and services. Houses built for letting will be included. The way this licensing will work is this: the builder can get an application form—a special one has been prepared and printed—either from the local authority of his area or from the Regional Licensing Officer of the Ministry of Works. He will fill it in and submit it to the local authority. We do not want to waste any time in dealing with these applications. Builders don't wish to spend their time endlessly filling in forms, and local authorities don't wish that their depleted staffs, which are already heavily pressed, should have to do unnecessary work. We are, therefore, arranging that if the proposed house has not already been approved under the byelaws, the application for licence will also serve as an application for that approval. When the local authority gets the application it will consider it by reference to the conditions as to size and selling price to which I have already referred and the builder's readiness to make an immediate start—that is, whether he has a site and labour all ready for the foundations to go in, the walls to go up and the roof to go on. I have told local authorities that where private builders have sites ready I look to them to use their best endeavours to enable an early start to be made. This involves expeditious consideration of the applications, and local authorities have to-day had a letter from me emphasizing the importance of this point and the necessity for seeing that licences are issued without delay.

" COST-OF-WORKS " HOUSES

In addition to securing the building of new houses the Government wants to help people who have had their houses destroyed by enemy action to rebuild, if these houses are subject to a " cost-of-works " payment, and high priority will be given to applications for the rebuilding of " cost-of-works " houses which are of a rateable value not greater than £100 in London and £75 elsewhere. In fact, it is the intention of the Government that these houses shall be rebuilt as part of the programme for the next two years. The man who has lost his house has a special claim.

This will also help to bring in all builders big and small. We have not lost sight of the same aim in connection with local authority building. We recognize that though tenders may have been accepted, and after making allowance for labour required for the rebuilding of " cost-of-works " houses and a reasonable quota for houses to be built by private builders on their own, there may remain unused a considerable amount of suitable labour and house building capacity in the hands of unsuccessful tenderers or builders not in a position to tender. We can afford no waste. I have therefore suggested to local authorities that where they have sites ready and consider that a number of houses additional to those covered by accepted tenders can be built, they should consider negotiating contracts with local builders at agreed prices.

EXCHEQUER GRANTS

If the Government is returned as a result of the election which has just taken place, they intend to introduce legislation without delay to settle the subsidy which will be payable on houses built by private enterprise. It is proposed that grants shall be payable in respect of houses of from 800 to 1,000 superficial feet which are subject to a controlled contract or selling price—the same selling price as that which is a condition of the issue of a licence. The grants will be payable by local authorities, and will consist either of a lump sum payment or payments spread over 5 years. Up to the first £100 the Exchequer will bear the whole cost of the grants. Above £100 the Exchequer will bear half the cost subject to a maximum from the Exchequer of £150. Thus, if an authority decides to pay £50 by way of grant the total grant payable would be £200, £50 by the authority and £150 by the Exchequer. The grant is intended to help the purchaser or tenant of the house to meet the present high cost of building, and will normally be paid to the owner-occupier or the purchaser. Since I made a statement on these lines in the House of Commons on June 14, I have been asked if it is the Government's intention to include in the subsidy scheme the builder who puts up houses for letting himself. I should like to take this opportunity of assuring you that this is so. Such a builder will get subsidy, and I shall welcome proposals for the building of houses for letting. The Government intends also to provide in the Bill that the owner-occupier or purchaser of a house which has been begun under a licence issued in accordance with the scheme I have just mentioned before the passing of the Act shall not be prejudiced by reason of his early start, and provided that the house conforms or can be made to conform with the conditions of the Act when passed, the grant will be payable. We want building to begin as soon as possible.

BUILDING STANDARDS

I have already, in conjunction with the Minister of Works, given local authorities guidance on the standards of design and construction which they should adopt for the houses they are building. The *Housing Manual* which we have issued can be useful to more than local authorities, and I hope that the standards it gives will be attained by all who are doing our building.

MOH

Private House Building

The following are extracts from a circular sent to all Housing Authorities in England by the Ministry of Health,

A PLAN for radio of the future

JUST as the social services—water, gas, and electricity—are brought to your home, distributed within it, and are always ready for use, so, it has been predicted by experts, will broadcast entertainment be "laid on" in homes of the future.

Not only will this radio service be part of the normal wiring circuit of the house, and therefore safe from damage and failure in the home itself, but it will come all the way from either the studio, or, in the case of foreign programmes, from special receiving stations, entirely by wire.

Programmes direct from the studio will be indistinguishable from the actual studio performance, as there can be no distortion or fading, and all electrical interference will be carefully eliminated. Foreign programmes will be received over aerials designed to cut out fading and distortion, and beamed on all the best programmes that the world can offer.

This service is already in action in many towns in Britain, as well as in Malta and Trinidad. Subscribers to Rediffusion have, for many years now, been able to switch to the best entertainment that the world of radio can offer, just as easily as they turn on their bathroom taps.

The weekly subscription rate is extremely low and the system is maintained in perfect order free of charge.

Rediffusion also equips factories for paging and factory music

REDIFFUSION

BROADCAST RELAY SERVICE LTD.

CARLTON HOUSE, REGENT ST., LONDON, S.W.1

operates in the following areas :

BANGOR (CO. DOWN), BARGOED, BARROW, BLACKPOOL, BROADSTAIRS, DARLINGTON, EXETER, GATESHEAD, HULL, KENDAL, LANCASTER, MAIDSTONE, MARGATE, MERTHYR, MORECAMBE, NEWCASTLE, NEWPORT (MON.), NORTH AND SOUTH SHIELDS, NOTTINGHAM, PLYMOUTH, PONTYPRIDD, RAMSGATE, RHONDDA VALLEY, ROCHDALE, ROTHERHAM, ST. HELENS, STRETFORD, SUNDERLAND, SWANSEA, WALLASEY, WALLSEND, WHITLEY BAY, WOLVERHAMPTON, and also in MALTA and TRINIDAD.

dated July 10, on BUILDING OF HOUSES BY PRIVATE BUILDERS.

SIR,—I am directed by the Minister of Health to refer to paragraph 5 of Circular 118/45 of June 20 with regard to the Government decision to grant licences for private builders to erect small houses during the present building season. As explained there, these licences will be issued by the Regional Licensing Officers of the Ministry of Works, but only in respect of houses which—

(*a*) are of a size ranging from 800 to 1,000 superficial feet in the case of two storey houses or from 730 to 930 superficial feet in the case of one storey houses or flats;

(*b*) are subject to a controlled contract or selling price which will vary according to the size of the house, subject to an overriding maximum price of £1,200, including land, roads and services;

(*c*) are approved by the planning and byelaw authorities.

It was further explained that the number of houses to be licensed in any area would be settled after consultation with the local authority and would be related to the available labour resources and the house building programmes of the local authorities. With this in view, it has been decided that applications for licences by private builders should be made through the local authority.

It will be observed that the applicant is instructed to send the form to the Clerk of the local authority in whose area it is proposed to build the house, and that Part II of the form is to be completed by the local authority before transmitting it to the Regional Licensing Officer of the Ministry of Works.

Though an overriding maximum selling price of £1,200, including land, roads and services is laid down for a house of 1,000 superficial feet (or a flat or bungalow of 930 superficial feet) it is within the discretion of the local authority to suggest a lower maximum price for their district if they consider that this is warranted by local circumstances. If they do so, the selling price for smaller houses and flats should be reduced proportionately, as shown in note 5 on the application for licence form. An appropriate reduction in the maximum selling price should be made where the application relates to a leasehold house or a house which is to be sold subject to additional charges for roads, etc.

In view of the substantial variations in rent levels between different parts of the country, the Minister does not propose to specify an overriding maximum rent, and he suggests that where proposals for the erection of houses for letting are submitted the local authority should consider the proposed rents on their merits, bearing in mind the current level of building costs in the district.

Announcements

Mr. N. Edgar, A.R.I.B.A., has been appointed Chief Architectural Assistant in the Borough Surveyor's Department, Tynemouth, and is taking up his duties in July.

Sir John M. Duncanson was released on June 30 from his duties as Controller of the Iron and Steel Control of the Ministry of Supply. He will be succeeded as Controller by Mr. C. R. Wheeler.

Major Peter Dunham, A.R.I.B.A., has been released from the Army to take up the appointment of Architect to the Witney Rural District Council for its post-war housing. He will be pleased to receive trade catalogues and technical information at his office at 14, The Hill, Witney, Oxon.

Mr. A. T. Buss, who has been appointed Works Chemist and Process Manager to the General Cable Manufacturing Co., Leatherhead, Surrey, was educated at Palmers Grays, Essex. He has been engaged for the last fifteen years on rubber and plastics research work mainly in the electrical cable industry, and during the war period has served on various Government technical committees.

Mr. Rawson F. Stagg, who was loaned to the Ministry of Works and Buildings in December, 1940, and has been directly responsible, under the Director of Cement, for the Control of the Concrete Products, Chalk, Lime and Whiting Industries, etc., in connection with the Control of the Cement Industry, has now resumed his duties in the cement interests of Thos. W. Ward, Ltd., Sheffield.

Trade Notes

Pilchers, paint manufacturers since the reign of George the Third, have moved from the Manor 8-10, Davies Street, to 6, Chesterfield Gardens, Curzon Street, London, W.1, a dignified building of the eighteenth century (once the home of the Duke of Grafton and later an Art Gallery), which will become the firm's permanent home.

Five works employees of Boulton & Paul, Ltd., Messrs. B. Wright, G. Easton, J. Boatwright, E. Whiting, and H. Blake, were presented at the Norwich Head Office with cheques to mark their completion of 50 years' service. In making the presentation on behalf of the board, the Managing Director, Mr. J. H. Tresfon, expressed the firm's pride on this occasion and paid tribute to the individual skill and craftsmanship of the men on which, he pointed out, the company's world-wide reputation for workmanship and quality had been built.

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

BOROUGH OF CLITHEROE.

BOROUGH SURVEYOR'S DEPARTMENT.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited from Registered Architects for the above appointment, at a salary of £325 per annum, plus war bonus (at present £49 8s.).

The appointment will be temporary, but may lead to a permanency.

Applications, in a plain sealed envelope, endorsed "Architectural Assistant," stating age, qualifications, previous experience and position in relation to National Service, and accompanied by copies of three recent testimonials, must be delivered to the undersigned not later than 12 noon on Thursday, 2nd August, 1945.

G. HETHERINGTON,
Town Clerk.

The Castle, Clitheroe, Lancs.
10th July, 1945. 949

COUNTY BOROUGH OF SOUTHAMPTON.

APPOINTMENT OF BOROUGH ARCHITECT.

Applications are invited from properly qualified Architects for this appointment, at a salary commencing at £1,250 per annum, and rising by annual increments of £50 each to £1,500 per annum, plus a car allowance.

The appointment, which will be held during the pleasure of the Council, will be subject to the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

A list of duties, etc., attaching to the position may be obtained from the undersigned, to whom applications, stating age and qualifications, and giving full particulars of experience and of present and all previous appointments, together with the names and addresses of three responsible persons of standing to whom reference may be made, must be delivered in sealed envelopes, endorsed "Borough Architect," not later than 11th August, 1945.

R. RONALD H. MEGGESON,
Town Clerk.

Town Clerk's Office, Civic Centre,
Southampton.
12th July, 1945. 958

URBAN DISTRICT OF RUISLIP-NORTHWOOD.

ARCHITECTURAL ASSISTANT.

Applications are invited for the permanent appointment of Architectural Assistant. The invitation is open to Architects now serving in H.M. Forces, and should a Service candidate be appointed to the post, immediate application would be made for his release.

Salary £350 per annum, rising by £25 per annum to £500 per annum (plus war bonus, at present £59 16s. per annum), commencing salary according to experience.

Candidates must hold a recognised architectural qualification, have had good general experience (including Town Planning), preferably with a Local Government Authority.

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 on a prescribed form, which may be obtained from the Surveyor, Council Offices, Northwood, must be forwarded, endorsed "Architectural Assistant," so as to be received not later than 22nd August, 1945.

Canvassing will disqualify.

Applicants serving overseas may apply by letter, giving details of appointments held prior to joining the Forces, with other relevant personal details (including demobilisation group number and approximate date of release, if known), and must indicate if applicant is related in any way to a member of the Council or to a senior Officer of the Council.

B. BARKER,
Clerk of the Council.

Council Offices, Northwood, Middx.
16th July, 1945. 955

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 £59 16s. per annum, and an allowance for extended office hours.

Applications should be sent to the undersigned by 4th August, 1945.

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

J. HARRISON,
County Architect.

26th July, 1945. 965

DENBIGHSHIRE COUNTY COUNCIL.

APPOINTMENT OF ARCHITECTURAL ASSISTANTS AND BUILDING INSPECTOR.

Applications are invited for the appointment of the following Temporary Architectural Assistants in the County Architect's Department at Wrexham. Duties will include the survey of existing schools and the preparation of plans, and estimates of works necessary to bring the present premises up to Code Standard under the new Education Act.

(*a*) ONE SENIOR ARCHITECTURAL ASSISTANT. Candidates should be Chartered Architects, fully conversant in the design of school buildings. Salary £500 per annum (incl.).

(*b*) TWO ARCHITECTURAL ASSISTANTS. Candidates should be Chartered Architects, competent to survey existing school premises, together with the preparation of plans of the existing premises and the necessary alterations. Salary £400 per annum (incl.).

(*c*) THREE JUNIOR ARCHITECTURAL ASSISTANTS. To assist in surveying existing school buildings, and the preparation of plans after survey. Salary £300-£325 per annum (incl.), according to qualifications.

Applications are also invited for the appointment of BUILDING INSPECTOR. Candidates must have practical experience of Building Trade, be thoroughly competent in the preparation of specifications, detailed estimates, and builders' quantities in connection with maintenance of buildings, and must be capable of using the Dumpy Level, setting out works, and able to prepare drawings for minor projects. Preference to holders of qualifications, such as building inspector's certificate.

Salary £400 per annum (incl.). Travelling will be allowed on the approved County Scale.

All the foregoing appointments will be subject to termination by one month's notice on either side.

Applications in writing, stating date of birth, full details of qualifications and experience (including a list in chronological order of posts held), accompanied by copies of three recent testimonials, to be sent to me, the undersigned, on or before the 3rd day of August, 1945.

WILLIAM ROBERTS,
Deputy Clerk of the County Council.

County Offices, Ruthin. 962

CITY OF LEICESTER EDUCATION COMMITTEE.

COLLEGE OF ART
(*Principal*: K. HOLMES, A.R.C.A.).

Applications are invited for the post of full time STUDIO INSTRUCTOR in the School of Architecture.

Salary in accordance with the Burnham Scale.

Applications, by letter, giving details of training and experience, and accompanied by copies of recent testimonials, should be addressed to the Registrar, College of Art, Leicester, as soon as possible. Applications from members of H.M. Forces will be considered.

H. S. MAGNAY,
Director of Education.

Education Department, Newarke Street, Leicester.
16th July, 1945. 968

HIS MAJESTY'S COLONIAL SERVICE.

Architects are likely to be required in the Public Works Department of many of the Colonial Governments, and the following vacancies already exist.

(1) Sierra Leone. ONE SENIOR ARCHITECT; £840-£1,000. Temporary in first instance, but may become pensionable. Age limit 40.
Reference E.A.1592A.

(2) Uganda. ONE SENIOR ARCHITECT; £820-£1,000. On probation for pensionable employment. Age limit 40.
Reference E.A.1397A.

(3) Uganda. ONE ARCHITECT; £450-£840. On probation for pensionable employment. Age limit 35.
Reference E.A.1315A.

(4) Nigeria. EIGHT ARCHITECTS; £600-£1,000. Temporary contract employment. Age limit 45.
Reference E.A.1143A.

(5) Gold Coast. ONE ASSISTANT ARCHITECT; £475-£720. Temporary contract employment. Age limit 35.
Reference E.A.1569A.

For all the foregoing 12 appointments the point of entry into the salary scale will depend on qualifications and experience, and those appointed will, in addition to their salaries, be granted such allowances and war bonus as are generally in force from time to time. Free passages and free partly furnished quarters are provided.

Applicants for these 12 posts, and for any other similar posts, which may become vacant in the future, must be Associates of the Royal Institute of British Architects, or hold equivalent qualifications, and should have had responsible charge in the offices of architects in wide general practice; some experience in building quantities, and the drafting of specifications, will be an added advantage.

Write, quoting appropriate Reference Numbers, to Ministry of Labour and National Service, Appointments Department (A.9), Room 670, York House, Kingsway, W.C.2, for application form, which must be returned completed by 17th August, 1945. 961

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH.

Vacancies exist at the Building Research Station, Garston, Watford, for a number of ARCHITECTS. They are required for work on (*a*) preparation of Codes of Practice, or (*b*) the examination and development of designs, or (*c*) miscellaneous technical problems of building, and candidates should possess good professional qualifications, practical experience, and preferably good training in elementary science.

Salary will depend on qualifications and experience within the maximum (£650 per annum, plus Civil Service war bonus) of the temporary Scientific Officer grade.

Write, quoting D.S.I.R., to Ministry of Labour and National Service, Appointments Department, A.9, Room 670, York House, Kingsway, London, W.C.2, for application form, which must be returned completed by 3rd August, 1945. 960

WATFORD RURAL DISTRICT COUNCIL.

Applications are invited for the appointment of a temporary ARCHITECTURAL ASSISTANT on the staff of the Engineer and Surveyor's Department, at a commencing salary of £450 per annum, payable monthly, rising by annual increments of £25 to £500 per annum, plus war bonus (at present £59 16s. per annum). Car allowance on the Council's scale. The appointment will be for a minimum period of two years, after which time it will be subject to review, when consideration is given to a permanent appointment.

Preference will be given to Associates of the Royal Institute of British Architects.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937.

Particulars of the appointment may be obtained from the Engineer and Surveyor, 25, King Street, Watford, Herts, and applications, endorsed "Architectural Assistant," should reach the undersigned not later than Tuesday, 7th August, 1945.

S. A. NICHOLSON,
Clerk to the Council.

Council Offices, 25, King Street, Watford, Herts.
18th July, 1945. 963

MANSFIELD WOODHOUSE URBAN DISTRICT COUNCIL.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the above appointment in the Surveyor's Department.

Salary within Grade F, Scale 2, of the East Midlands Provincial Council for Local Authorities Administrative, Technical, Professional and Clerical Services. £280—£15—£370 per annum, plus cost of living bonus, at present £49 16s.

Applications, stating age, qualifications, experience, and commencing salary required within above scale, endorsed "Architectural Assistant," and enclosing copies of two recent testimonials, to be delivered to the undersigned on or before 2nd August, 1945.

C. J. READ JOHNSON,
Deputy Clerk.

Council Offices, Manor House, Mansfield Woodhouse, Notts.
14th July, 1945. 957

ELLAND URBAN DISTRICT COUNCIL.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the temporary appointment of Architectural Assistant, in the Engineer and Surveyor's Department. Salary £320—£20—£400, plus cost of living bonus, at present £59 16s.

Applicants must be registered Architects and A.R.I.B.A., or equivalent, and have had considerable experience of Local Authorities' Housing Schemes, and in the design of Municipal Buildings generally.

Applications from men in H.M. Forces will be considered.

Applications, endorsed "Architectural Assistant," stating age, qualifications, details of experience, and position regarding National Service, together with copies of three recent testimonials, to be sent so as to reach the undersigned not later than Tuesday, the 21st August, 1945.

Applicants should state whether to their knowledge they are related to any member or Senior Officer of the Council.

Canvassing will be a disqualification.

A. W. HOWARTH,
Clerk of the Council.

The Council Offices, Southgate, Elland, Yorkshire. 956

THURROCK URBAN DISTRICT COUNCIL.

ENGINEER AND SURVEYOR'S DEPARTMENTS.

Applications are invited for the following temporary technical appointments:—

(*a*) ARCHITECTURAL ASSISTANT. Salary on the scale £320 x £15—£380, plus war bonus, at present £59 16s. per annum.

Associateship of the R.I.B.A. will be an advantage, and experience in the design and construction of houses, including repairing, drawings and specifications, is essential.

(*b*) ARCHITECTURAL DRAUGHTSMAN. Salary on the scale £260 x £15—£305, plus war bonus, at present £59 16s. per annum.

Candidates must be neat and expeditious draughtsmen, with experience in preparing architectural drawings.

Applications, suitably endorsed, accompanied by not more than three recent testimonials, should be addressed to the undersigned, to reach me by first post Monday, 13th August, 1945.

A. E. POOLE,
Clerk of the Council.

Council Offices, Whitehall Lane, Grays, Essex.
17th July, 1945. 972

NEWMARKET RURAL DISTRICT COUNCIL.

APPOINTMENT OF ARCHITECT.

Applications are invited for the above whole-time appointment, at a salary of £600 per annum, plus cost of living bonus (at present £59 16s. per annum).

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and to one month's notice on either side.

Applicants should be Associate Members of the R.I.B.A., or hold equivalent qualifications.

The person appointed will be required to carry out all Architectural duties in connection with the Council's housing schemes, and all other similar duties that may be assigned to him from time to time by the Council. He will also be required to provide and maintain a car for the purposes of his duties, for which a travelling allowance will be paid in accordance with the Council's scale.

Applications on forms, to be obtained from the undersigned, must be made by Tuesday, 7th August, 1945.

T. H. BROWN,
Clerk to the Council.

Council Offices, Park Lane, Newmarket. 973

URBAN DISTRICT COUNCIL OF RAYLEIGH.

POST-WAR HOUSING.

The above Council invite applications from PRACTISING ARCHITECTS for the preparation of housing layouts and designs in accordance with the special scale of fees prepared by the R.I.B.A. for State-aided Housing Schemes.

Applicants should preferably, but not necessarily, have had experience in municipal housing, and should submit to me by not later than 16th August, 1945, full particulars of their qualifications and experience.

No drawings should be submitted with initial applications.

C. E. FITZGERALD,
Clerk of the Council.

Council Offices, 28, High Street, Rayleigh, Essex.
21st July, 1945. 971

Architectural Appointments Vacant

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

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

SECOND ASSISTANT wanted; housing, alterations, surveys, specifications; salary £300-£400, according to ability. Full details and when free to Traylen & Lenton, FF.R.I.B.A., 16, Broad Street, Stamford. 959

EXPERIENCED ARCHITECT; taking charge drawing office; state qualifications and salary required. Apply Box 969.

SENIOR ASSISTANTS required; must take full responsibility working drawings: hotels, flats, housing and industrial building; state qualifications and salary required. Apply Box 970.

SENIOR ASSISTANT required by West End Architects; capable of taking complete charge of important contracts. Apply in writing, stating qualifications and salary required, to J. Stanley Beard & Bennett, F/L.R.I.B.A., 101/3, Baker Street, London, W.1. 938

REQUIRED immediately, experienced Architectural Assistants. Must be first-class draughtsmen and well trained, for important large scale work. Apply, stating age, salary and experience, Herbert J. Rowse, F.R.I.B.A., Martins Bank Building, Liverpool 2. 846

ADVANCED JUNIOR ASSISTANT required by West End Architects; must be good draughtsman, experienced in detailing, making surveys and measured drawings. Apply in writing, stating qualifications and salary required, to J. Stanley Beard & Bennett, F/L.R.I.B.A., 101/3, Baker Street, London, W.1. 939

ESTIMATOR and DRAUGHTSMAN required—permanency for the right man—by a large firm of Joinery Manufacturers in the Midlands; house available. Reply, giving full particulars of previous experience, stating age, salary required, to Box 974.

Architectural Appointments Wanted

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

ARCHITECT, Continental, with wide experience, requires post; planning of large scale schemes preferred, but not essential; best British references; salary by agreement; London area. Box 64.

ASSISTANT (age 29), school trained, 10 years' experience; neat, accurate and competent draughtsman; surveys, details, perspectives, specifications, etc., is desirous of situation overseas; preferably South Africa or Channel Islands. Box 65.

EXPERIENCED QUALIFIED ARCHITECT offers part-time services, as free lance, to Architects and Town Planners, in private practice, in the preparation of schemes, maps, working drawings, surveys. Box 66.

ARCHITECT (aged 23), Dipl. Arch. (Liverpool), seeks good position in an Architect's office in or near Liverpool; just qualified, with 3 years' office experience; state salary. Box 59.

AVAILABLE immediately Assistant Architect and Town Planner; Dip. Arch. (Lond.); A.R.I.B.A.; Dip T.P. (Edin.); highest references possessed; salary required £500; preferably in private office; very varied experience; public and private offices and teaching. Box 59.

ARCHITECT, limited in some respects, but well versed in most problems of practice over a period of 27 years, would like to join London practitioner as right-hand man. Box 60

JUNIOR ARCHITECTURAL ASSISTANT, 2½ years' experience in firm of London Architects, good knowledge of building construction, desires a change for further advancement; in London or Surrey area. Box 63.

A.R.I.B.A. desires spare time evening work at home; N.W. London; quick, accurate draughtsman. Box 62.

REGISTERED ARCHITECT requires spare time work at home or full time employment; London area; neat, quick draughtsman. Box 61.

PRIVATE Work required by experienced Draughtsman; drawing and tracing contracts in architectural and reinforced concrete work carried out in very short time; moderate fees. Box 54.

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CIVIL DESIGN ENGINEER seeks appointment as Staff Building Manager large works or industrial consultants; 20 years' experience factory layouts and general services, plant structures, etc.; expenditure memorandums, contract documents, etc. Box 53.

Other Appointments Vacant

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ARTIST-DESIGNER required for product styling; must have flair for presentation and draughtsmanship; technical and inventive ingenuity an advantage; good position with industrial design team. Write Sir William Crawford & Partners, Ltd., 233, High Holborn, W.C.1. 824

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As originators of the Auto-Recorder System of Machine Milking, we have had extensive experience of planning layouts to accommodate the new technique. The Ministry of Agriculture's Clean Milk Bill, when passed, will mean a large increase in the number of new or modified farm buildings required. The position will be affected also by the findings of the English and Scottish Commissions on this important subject. The service of our Technical Department is available to any Architect who may be consulted in these matters. Write in confidence to: Gascoignes (Reading), Ltd., Berkeley Avenue, Reading.

Miscellaneous

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

A. J. BINNS, LTD., specialists in the supply and fixing of all types of fencing, tubular guard rail, factory partitions and gates. 53, Gt. Marlborough St., W.1. Gerrard 4223-4224-4225.

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ARCHITECT (L.R.I.B.A.), restarting practice, would be willing to assist other Architects by arrangement; London and Surrey. Box 964.

PLASTICS Technologist and Consultant wishes to contact live organisation needing technical assistance on application of synthetic materials. Box 967.

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Educational Announcements

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

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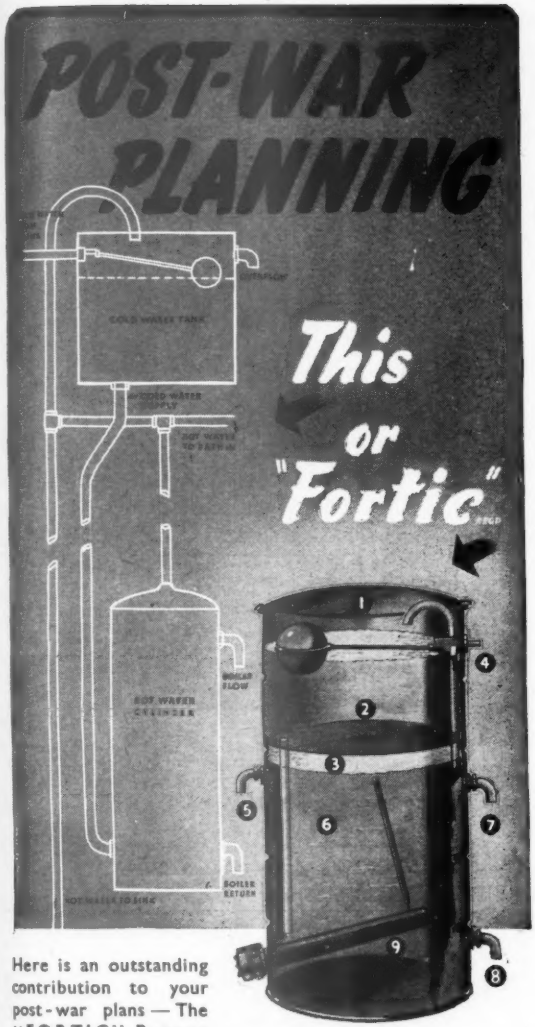
115, Gower St., London, W.C.1.
TELEPHONE: EUSTON 3305 and 3906.

R.I.B.A. and T.P. INST. EXAMS. Private Courses of Tuition by correspondence arranged by Mr. L. Stuart Stanley, M.A., F.R.I.B.A., M.T.P.I. Tutor, 161, West Heath Road, N.W. 3. Tel.: SPE 5319. 418



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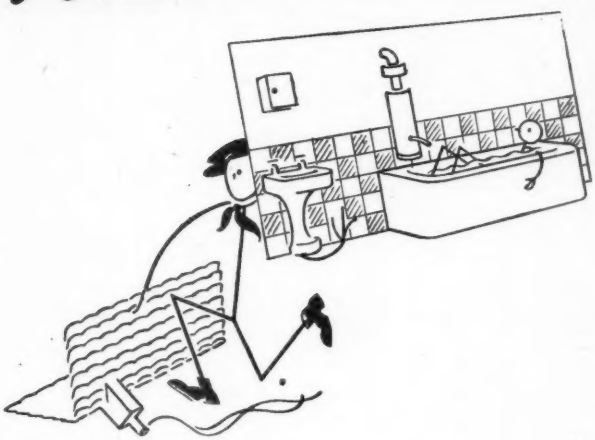

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