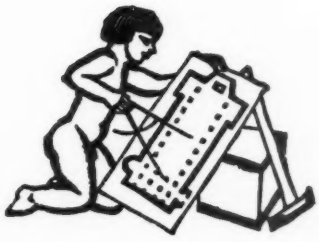
BRITISH PAVILION, NEW YORK WORLD'S FAIR

The British Pavilion at the New York World's Fair (to be opened on April 30) is complete, as shown above, with the exception of a large mural for which scaffolding is in place on the left. Part of the planting is finished for the Old English Garden in front of the tea terrace and the cocktail bar on the left. The two towers behind the pavilion are of Italy's (left) and Netherlands' buildings.

S P E E D

The sculptural group called "Speed-wings Over the World" above the entrance to the new Imperial Airways building now nearing completion in Buckingham Palace Road, Victoria, S.W. The sculptor is Mr. Eric Broadbent. *See also page 481.*



SPECIALIZATION

IT is generally assumed that as architecture becomes wider in range and technically more complicated, there must be a tendency towards specialization, and that this tendency needs to be encouraged. But at the Junior Members' meeting* at the R.I.B.A. last week, general opinion seemed very much against encouraging specialization. In fact, Mr. T. P. Bennett, who opened the discussion, and is himself a famous specialist in apartment planning of a certain type, was the only speaker who had a really good word to say for it.

There are two kinds of architectural specialization : there is specialization of individual activity within an office (once popular but now fortunately *demodé*) in which one member of a firm gets the jobs, another does the planning, another puts the architecture on, and yet another makes the working drawings ; and there is specialization as practised by a firm which concentrates on a specific type of building. It was this second kind of specialization with which the R.I.B.A. meeting was mainly concerned.

A man specializes in slaughter-houses not so much because he is interested in the psychology of planning for humane animal slaughter, but because he happened to get a slaughter-house to do for his first big job. The obvious argument *for* specialization of this kind, however arbitrarily come by, is that only by restricting your field of research and gaining wide experience in some particular type of building, can you hope to become proficient in designing that type of building. An important argument *against* is that specialization of this kind leads to architectural constipation : the architect must leave his imagination free to assimilate the requirements of any kind of architectural problem and must get himself to plan *anything*. Otherwise he grows biased, academic, sterile.

Mr. E. A. A. Rowse, who followed Mr. Bennett, went a step further than this. He said that the specialist, in perfecting his design for a special type of building, might be unconsciously producing something detrimental to the social structure : the vital need for every architect was to see architecture *whole*, every building an integral part of a planned community, every community an integral part of a planned region. The architect, said Mr. Rowse, must know how to collaborate, how to co-ordinate the findings of technical experts inside *and outside* the building industry in order to achieve this end.

This creed has been supported by the JOURNAL time and time again. It is by no means just idealism. It is a practical idea and it is bound up with the urgent need for social reconstruction—something we cannot forget about even under the very present threat of wholesale destruction.

But we must remember that Mr. Rowse's admirable architect-town-planner is, as Mr. Bennett pointed out, " the very biggest kind of specialist." Great as the need is for such men, only a very small percentage of architects can hope to cover the long term of training and finally practise as super-planners. Nevertheless, the inter-relation of architecture and regional planning should guide all architectural activity.

How, then, is the rest of the profession to be organized ? Is there any evidence of a need for specialization in any form ? There is, of course, evidence of a need for even greater specialization of technicians within the building industry as a whole, but not necessarily within the architectural profession.

Mr. Maxwell Fry pointed out that a much more flexible alternative to specialization was " group work " : round-table discussions with a group of experts and *technical* specialists who could give information on each special job. He saw no good reason why we should be too rushed to think out a fresh problem whenever a new job came into the office.

The schools, if they aim to train architects rather than life-long assistants, must aim at suppleness. Students must be taught first of all how to develop a technique for acquiring relevant information—from the point of view of organization of activities within a building and organization of appropriate materials and structure. They must also be taught—and this is often forgotten today in the enthusiasm for " analytical research "—how to translate the relevant information, freely yet with fine precision, into what used to be known (and should be still) as a "harmonious whole."

If they acquire suppleness and precision in this essential technique, they will become proficient in solving every architectural problem which comes their way. None of the really great names of this generation of architects are the names of specialists.

There is no analogy with medicine. In medicine proficiency depends largely on detailed knowledge and specific experience. In architecture proficiency depends largely on imaginative technique. Imagination should be our specialty.

* The debate was on " The Effect of Specialization on Architectural Practice." Report, p. 482.

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NOTES & TOPICS

COMPS.

I SEE that in last week's JOURNAL the two-stage system for open competitions was advocated by a correspondent.

*

He based his contention on the appalling amount of work that unsuccessful competitors for St. George's must have done for no reward ; and on the fact that the simplest block plans of the Newcastle schemes would have shown clearly which did, and which did not, conform with the assessor's definite idea of the best plan form.

*

My heart is full of sympathy for competitors, and I stand solidly behind "Another Fellow" in condemning the schedules of heating, electrical and other equipment asked for in the St. George's comp. *But . . .*

*

But I do not think an assessor is carried away by a "perfect" block plan until he has made sure that its perfection has not landed its author in a mess with his planning. And the assessor cannot be sure of this unless he has before him clear drawings of all floor plans and some sections.

*

That it is necessary for these plans to be to eighth or sixteenth scale instead of thirty-second or sixty-fourth is not proven. But clear plans there must be.

*

My own opinion is that the JOURNAL's suggestions of a more equitable distribution of assessorships between conservative and progressive men and the inclusion of some "non-competing" architects would be the simplest method of reform.

LONDON'S OWN JUBILEE

After walking along miles of London County Hall's ornate corridors in search of the L.C.C. Jubilee Exhibition I felt a little as Queen Mary must feel during one of her celebrated peregrinations of the B.I.F. But the exhibition is worth the effort. It is not displayed with very much imagination ; indeed the sequence of variously shaped rooms which contain the exhibition, with their rather aggressively "architectural" interiors, make a difficult background for any designer. But the matter, as the L.C.C.'s record would lead one to expect, is full of interest.

*

The fact that the architectural section seems to show few signs of progress is a disappointment that other sections—particularly educational ones—easily compensate for.

'MEIN GAMPF'

Bristol is to have a B.I.F. of its own. Scheduled to open next autumn, it is claimed to be the largest exhibition ever held in the West of England.

*

From the prospectus I gather that there will be six miles of exhibits—which should set a new record for weary Royal feet—and exhibits are debarred which may be "objectionable" to visitors.

*

Among banned articles are rubber stamps, cheap perfumery, pen-nibs and cheap toilet goods.

*

I hope the latter category does not include those combs of which such a quantity were ordered at this year's B.I.F. As far as I remember they were made in the shape of an umbrella and called "Mein Gampf."

CONGRESS AT HULL

There is a growing urge among architects, not least among the youngest architects and students, to involve themselves in the brisk art of propaganda. One time a haywire huddle of incoherent individualists, the profession is fast becoming a keenly banded team of clear-voiced evangelists.

*

And a good thing, too, when the gospel takes the form of the special Hull Congress number of the N.A.S.A. (Northern Architectural Students' Association) Journal, This is yet another inspired example of student journalism excellently produced, equally entertaining in picture and text.

*

Focus 3 has also just appeared. It prints the whole story of the A.A. rumpus, practically unexpurgated.

TOWN HALLS IN THE NORTH

The North-East coast, according to the *North Mail*, is spending about a million pounds on new town halls. Newcastle we all know about by now, but Stockton, Darlington, Seaham Harbour, Sunderland, South Shields and Whitby are all following suit, not to mention Tynemouth. Another local newspaper complains that town halls are now almost standardized : "A long front with three rows of windows ; a tall central tower over the main entrance, over a four-pillared porch ; cost £450,000". Can it be that newspapers are beginning to rumble us, or was this a disgruntled local architect venting a little spleen ?

SIR EDWIN LUTYENS

The rumours have been confirmed. At the last R.I.B.A. Council meeting it was announced that Sir Edwin had resumed his membership of the Institute.

Sir Edwin Lutyens, F.R.I.B.A.

An architect president of the R.A. who is not a member of the Institute is in a position which must to the public have seemed curious. Perhaps it was this that persuaded everyone concerned to patch up quarrels. In any case, all architects will welcome Sir Edwin back, not so much as P.R.A., but as a great architect and stimulating companion, who has been greatly missed.

HEIGHT OF ROOMS

At the same meeting the Council decided to recommend to the Ministry of Health that in its opinion it would be advantageous to reduce the minimum height of rooms from 8 ft. to 7 ft. 6 in., and that the model by-laws should be amended accordingly.

*

This may sound a small thing, but it will be a great help to architects if adopted—7 ft. 6 in. is quite adequate for domestic work, and, indeed, in many areas is already permitted. Most people in designing a small house find it hard to prevent it looking like a telephone box. Reduction in height by even 1 ft. will make this task a little easier.

*

While it was at it, the Council might have drawn attention to the by-law about ventilators in rooms without fireplaces. These, besides being ugly, are of negligible value from the point of view of health, and the draughts they cause are definitely dangerous. (The excuse given that they are always blocked up after the surveyor has been round is not the best reason for their existence.)

PLANNED A.R.P. AT LAST

Tecton's outstanding contribution to A.R.P., the only rational and comprehensive survey yet produced on civilian defence in English cities, has now appeared on the bookstalls. *Planned A.R.P.** based on the investigation of structural protection against air attacks in Finsbury, is a simplification of the original report for the benefit of the public at large.

*

The book has certainly appeared at a dramatic moment. It has some pretty damning statistics calculated to shake what faith we might have had in Government "preparedness," and it is written and produced with something of that clarity and precision we have come across before in Tecton's work in other fields. Gordon Cullen's really brilliant cartoons, with just the right touch of caricature and faintly cynical humour, help to keep you sane as you read this grimly necessary work.

FIRST COMPETITION FOR CAMPS

Meanwhile the Building Centre is running a competition for the design of school and holiday camps with provision for sudden evacuation in time of war. This is an excellent move, and the conditions, which I have just been reading, seem very sensible and fair. The camp is to accommodate 380 boys and girls between the ages of five and fifteen. The site is 17 acres.

*

Choice of materials and methods of construction are left to competitors, but just in case they don't realize it, I'd like to remind them that this is first and foremost a problem in sectional prefabrication ; an idea which hasn't progressed as far as it should in the last ten years and has now been given new impetus.

*

First prize is £200, with other prizes amounting to £100. Sending-in day : May 16, 1939.

BUILDING CLUB

The opening of the International Building Club last week provided an opportunity of looking over this new club's premises in Park Lane. Its situation in the angle between Park Lane and Hamilton Place, with windows overlooking Hyde Park, is an ideal one for its purpose, and Mr. Michael Rachlis, the architect, has converted a Victorian house with astonishing ingenuity.

*

Where the club gets its name "international" from I have been unable to discover, but lacking any other excuse it can almost be said to derive it from its architect, who is chiefly known in this country for, himself a Russian, having designed the delightful Italian Shipping Lines' English offices in collaboration with a German.

BUSINESS IN PORTLAND PLACE

The L.C.C. has refused to allow an office block at 34 Portland Place, and the Ministry of Health is holding the usual inquiry. What with the B.B.C., a consulate or two and several offices in converted buildings, not to mention the R.I.B.A., it seems unlikely that the scheme will not go through. Portland Place is about the only street in which one can feel that human beings may, after all, have admirable qualities.

ASTRAGAL

* Published by the Architectural Press, price 5s.

NEWS

POINTS FROM THIS ISSUE

COUNCIL FOR ART AND INDUSTRY

The President of the Board of Trade has invited Sir Frederick Marquis to become chairman of the Council for Art and Industry in succession to Mr. Frank Pick, and he has accepted the invitation.

The President of the Board of Trade has appointed Mr. Howard Robertson to be a member of the Council for Art and Industry. He has also appointed the following to be members of the Scottish Committee of the Council: Major William Black, Mr. John W. Burt, Mr. Hugh Fraser, Mr. Keith Henderson, Mr. J. B. Hutchison, Mr. William Johnstone, Mr. George Pate, Mr. Robert H. Renwick.

THE ROME SCHOLARSHIP

The Faculty of Architecture of the British School at Rome has admitted the following candidates to the competition for the Rome Scholarship in Architecture, 1939:—

C. F. Allan (King's College, Newcastle); L. F. Baker (University of London); H. C. Berneaud (Edinburgh College of Art); F. Booth (Leeds School of Architecture); M. J. Brown (Edinburgh College of Art); E. A. Cahill (University of Manchester); R. W. Cave, A.R.I.B.A. (University of London); R. Cowan (Edinburgh College of Art); N. Foley (Polytechnic, Regent Street); C. C. Giffard, B.A. (University of London); D. E. Lang (Edinburgh College of Art); M. Pattrick (Architectural Association); D. Prys Thomas (University of Liverpool); and D. G. Thornley (University of Manchester).

COMPETITION FOR DESIGN OF AIR-RAID SHELTER

The Air Raid Protection Institute, at the suggestion of the Lord Privy Seal, invites architects, engineers and others interested to submit in open competition designs for a blast and splinter-proof air-raid shelter to hold some fifty persons. Assessors: Messrs. Frank Cox, L.R.I.B.A., F.A.R.P.I., C. F. de Steiger, F.A.R.P.I., C. W. Glover, M.INST.C.E., M.INST.STRUCT.E., F.A.R.P.I., A. H. Moberly, M.A., F.R.I.B.A., F.A.R.P.I., and G. R. Falkiner Nuttall, M.A., A.M.I.C.E., F.A.R.P.I.

Premium: £105. Last day for submitting designs, Monday, May 8, 1939. Last day for questions: First post, Saturday, April 15.

THE ARCHITECTS' DIARY

Thursday, March 23

R.I.B.A., 66 *Portland Place, W.1. Exhibition of Road Architecture. "The Need for a Plan." Until March 30. 10 a.m. to 8 p.m.*

INSTITUTION OF STRUCTURAL ENGINEERS, 11 *Upper Belgrave Street, S.W.1. "Inexpensive Research Work." By Ewart S. Andrews. 6.30 p.m.*

INSTITUTION OF CIVIL ENGINEERS. *Annual Dinner of the Corporate Members and Associates. At Grosvenor House, W.1. 7.45 p.m. Birmingham and District Association. At the James Watt Memorial Institute, Birmingham. "Concrete Aggregates." By J. Singleton-Green. 6 p.m. Bristol and District Association. At the Royal Hotel, Bristol. "How Welding Can Help the Civil Engineer." By C. R. Harman. 5 p.m.*

SOCIETY OF ANTIQUARIES, *Burlington House, W.1. "English Alabaster Carvings as Records of the Mediæval Religious Drama." By Dr. W. L. Hildburgh. 8.30 p.m.*

Friday, March 24

R.A. SUMMER EXHIBITION.—*Submission of architectural drawings may be made between 8 a.m. and 10 p.m.*

Tuesday, March 28

HOUSING CENTRE, 13 *Suffolk Street, S.W.1. Tuesday luncheon: "Youth and the New Cities." By Robert Sinclair. 1 p.m.*

ILLUMINATING ENGINEERING SOCIETY. *At Caxton Hall, Caxton Street, S.W.1. Discussion on "Can Illuminated Signs be Decorative?" 7 p.m.*

Wednesday, March 29

WORSHIPFUL COMPANY OF CARPENTERS, *Carpenters Hall, E.C. "Timber Roofs and Turrets." By W. H. Ansell. 7.30 p.m.*

Conditions of the competition may be obtained on application to the Secretary of the Air Raid Protection Institute, 2 Millbank House, Wood Street, S.W.1. Deposit, one guinea.

ROYAL INSTITUTE OF THE ARCHITECTS OF IRELAND

At a council meeting of the above Institute, Mr. Alan H. Hope was declared elected to the vacant seat on the Council. In connection with the proposed amendment to the Town and Regional Planning (Amendment) Bill, 1938, the President reported that the amendment had been tabled in the Dail by Mr. James Dillon, and that on receipt of an assurance from the Minister of Local Government and Public Health that the proposal to have an Appeal Board composed of architects would be given a trial, the amendment was withdrawn. This was considered very satisfactory. Notification was received that the application of the R.I.A.I. for registration in the register of nominating bodies under the Seanad Electoral (Panel Members) Act, 1937, had been allowed.

The tower of the Imperial Airways Headquarters, Victoria, S.W.

STRUCTURAL A.R.P. IN HOSPITALS

What appeared to be an obvious mistake, but one which created a good deal of misunderstanding, appeared in paragraph 27 of Emergency Medical Services Memorandum No. 1 (Structural and other Precautions against Air Raid Risks in Hospitals) recently issued by the Ministry of Health, and the Ministry has confirmed that a mistake did, in fact, occur.

In response to the Reinforced Concrete Association's enquiry, the Minister states that the paragraph was intended to say that "a frame building is the type that will offer the greatest resistance to blast pressure and will be the least likely to collapse completely." He adds that the paragraph will be corrected in the above sense in any future edition of the Memorandum.

THE DETERMINATION OF MOISTURE IN TIMBER

The Department of Scientific and Industrial Research has issued a second and revised edition of a brief pamphlet prepared by its Forest Products Research Laboratory on the determination of moisture in timber (Moisture Content Determination, Forest Products Research Bulletin No. 14, published H.M. Stationery Office, 9d. net).

"Practically every physical property that timber possesses," the Bulletin states, "varies with the amount of moisture that the wood contains. Strength, weight, machining qualities, shrinkage, and electrical resistance, as well as immunity from fungus attack, are dependent upon moisture content.

Unfortunately, this quantity cannot be estimated by visual examination; many trials have shown that sight, feel, and weight are all insufficiently accurate guides to the moisture state of the wood. The determination of moisture content on sound scientific lines is, however, a simple process, and the certainty that the knowledge of its value brings well repays the trouble.

In air-seasoning, moisture content tests indicate when the timber has reached the driest possible state; and in kiln-seasoning, no quantity is more important, for the treatment is varied according to the moisture content of the stock.

Further, moisture content provides the only sure way of telling when timber is correctly seasoned for any particular use. It has been found that woodwork assumes a definite moisture content according to the class or type of environment in which it is placed. Thus furniture in a living-room has a moisture content of 12 per cent., and if timber is to be seasoned for fabrication into furniture, it is to this moisture content that it should be dried.

Simple conditions such as these do not obtain in a new building, for such a place is damp, although it is ever tending to its steady state. Only a simple test with timber samples is required to show, in

terms of moisture content, just how damp the building is and to indicate when fine joinery can be installed with safety."

The Bulletin describes the usual method of finding moisture content from the initial weight of a sample of wood and its dry weight. A graph for working out the results, without resorting to tedious calculations, is provided. Distillation methods for moisture content determination and the precautions to be taken with resinous timbers are also dealt with. A section is also devoted to electrical moisture meters which depend for their action either on changes in the electrical resistance of wood with its moisture content or on the electrical capacity of the water and wood in a sample.

SOUTH WALES INSTITUTE OF ARCHITECTS: WESTERN BRANCH

At the annual general meeting the following officers were elected for the session 1939-40: Chairman, Mr. F. A. Broad, L.R.I.B.A., F.S.I.; Hon. Secretary, Mr. J. Herbert Jones, F.R.I.B.A.; Hon. Treasurer, Mr. O. S. Portsmouth, F.R.I.B.A.; Hon. Auditor, Mr. Ernest E. Morgan, F.R.I.B.A.; Branch Committee: Messrs. Edwin Smith, F.R.I.B.A., P.A.S.I., Neath; E. E. Morgan, F.R.I.B.A., Swansea; W. S. P. Cottrell, Carmarthen; W. K. Graham, A.R.I.B.A., Swansea; Captain J. Evans, L.R.I.B.A., Llanelly, and Messrs. E. M. Lloyd, Swansea, and D. H. Lewis, Neath, Students' Representatives.

Representatives of the Branch on the Council of the South Wales Institute of Architects: Messrs. F. A. Broad and J. Herbert Jones, *ex officio*, and Edwin Smith, E. E. Morgan, W. K. Graham, J. Evans, W. J. Jenkins, L.R.I.B.A., Swansea, C. de Courcy Penn, Swansea (Associates' Representative).

SLUM CLEARANCE AND REHOUSING

The most recent figures showing the position of slum clearance and rehousing are summarized below.

Clearance Areas and Orders: During February local authorities declared areas comprising 1,780 houses representing the displacement of 6,056 persons, as compared with 5,201 houses and a displacement of 16,827 persons in January.

The Orders submitted during February covered 3,363 houses and the displacement of 12,766 persons, as compared with 3,542 houses and the displacement of 11,124 persons in January.

The Orders confirmed during February covered 2,583 houses and 10,415 persons, as compared with 2,590 houses and 9,848 persons in January. The total number of houses in confirmed Orders is now 231,801, involving the displacement of 966,771 persons.

Rehousing Progress: The latest available figures are those for January. At the end of that month there were 51,242 houses under construction, as compared with 53,073 at the end of December and 68,381 at the end of January, 1938. 5,142 houses were completed during January, as compared with 20,839 during December and 6,389 during January, 1938. The great majority of these houses are being provided for rehousing persons displaced in connection with slum clearance schemes. New houses approved during February numbered 5,178, as compared with 6,009 in January, and 7,976 in February of last year.

BUILDING CENTRE CAMP COMPETITION

The Directors of the Building Centre invite designs for a camp suitable for use as a residential school for 400 children between the ages of five and fifteen years, to be used (a) *by education authorities for children transferred periodically from town schools;* (b) *as a holiday camp for children in the same category as above;* (c) *as an evacuation camp in time of emergency for children in the same category as above.*

The assessors will be chosen from the Committee appointed to organize the competition. The committee includes: Miss M. Crowdy, Professor A. E. Richardson, A.R.A., F.R.I.B.A., and Messrs. J. M. Easton, F.R.I.B.A., Robert Atkinson, F.R.I.B.A., Maurice E. Webb, D.S.O., M.C., F.R.I.B.A., R. T. James, M.Inst.C.E., T. E. Scott, F.R.I.B.A., V. E. Vincent, F.I.O.B., and F. R. Yerbury, Hon. A.R.I.B.A. Miss A. J. Dicker, A.R.I.B.A., is Hon. Secretary to the Committee. The first premium offered is £200 and further prizes of £100 may be awarded in one or more instances at the discretion of the assessors.

Conditions may be obtained on application to Mr. F. R. Yerbury, The Building Centre, 158 New Bond Street, W.1, price 2s. 6d. post free. Designs must be delivered to the Building Centre, addressed to Mr. F. R. Yerbury, not later than 6 p.m. on Tuesday, May 16. No questions will be answered.

NEWS IN BRIEF

● Mr. Alfred John Taylor, F.R.I.B.A., of 2 Forester Road, Bath, who died on December 25 last, aged sixty years, left estate of the gross value of £40,825 (net personalty £36,251).

● The Dudley Corporation has appointed Mr. H. T. Buckland, F.R.I.B.A., as assessor of the competition for the new market hall and shops.

● Two weeks have passed since Team Valley Trading Estate accepted the wager of a Czecho-Slovakian who challenged the North-East to build a 21,000 sq. ft. factory in the record time of 60 days. The 'stake' put up by Mr. M. Sigmund, the factory owner, was up to £60 a year additional rent. The steel erectors have already completed their work, beating their estimate of eight days by three days, and bricklayers are working under floodlights during the night shifts, each competing for the honour of the highest quota.

● Mr. T. Forbes Maclennan, speaking at the opening of the annual Scottish National Building Exhibition in Edinburgh last week, said:

"A great deal of nonsense has been talked about jerry-building, but it is no worse than it was fifty years ago. The lay-out has also been criticised, but the fault is not with the design and lay-out of individual houses but with the roads. The need is for a national planning of the roads." Modern builders, he said, should be congratulated on the numerous houses they had erected.

● Mr. E. Maxwell Fry, speaking at the annual meeting of the Kensington Housing Trust, criticized the Ministry of Health for ignoring transport problems in relation to housing. London, he said, would have to be reduced in size in the next ten or twenty years, and he hoped that the Royal Commission on the Location of Industry would recommend the prohibition of new industries coming to London.

● The City of Bristol Municipal and West of England Industries Exhibition is to be held at

The International Building Club in Park Lane, W.1, was opened on Saturday last. Above is a mural, by Edward Bawden, over the snack bar.

Eastville Park, Bristol, from September 26 to October 14 inclusive.

● School of Planning and Research for National Development.—An "open forum" meeting will be held at 7 Bedford Square, W.C.1, on Thursday, March 30, at 8.30 p.m. Subject: "Soil Survey as a Basis for National Planning—an Example of 4,000 square miles." Chairman: Mr. Malcolm Messer, Editor, "The Farmers' Weekly." Speaker: Mr. Ray Bourne. A general discussion will follow. The meeting is open to the public. Admission free.

EXHIBITIONS

[*By D. COSENS*]

AN exhibition of recent works by Picasso is bound to be interesting if only in showing what this amazingly versatile and quite unpredictable painter has been doing lately. For he is an international figure, incomparably the greatest painter and experimenter of our age, and the most important since Cezanne. The full extent of his influence has yet to be realized. The whole of the so-called modern movement, not only in painting but, what is far more important to the average man, in all the applied arts, though it does not directly derive from Picasso, is unmistakably stamped with his influence. And too ardent admiration of his work has been as great a pitfall to young artists today as was that of Matisse to the preceding generation, for, forgetting that there is no short cut to his superb draughtsmanship and sense of design, they are tempted to seek an easy formula that will imply his vision. It looks so easy—a jug and a dish of fruit, painted in different moods, in the light of different days, but painted with a sureness that is the result of complete realization. This exhibition of his recent works at Rosenberg and Helft's is very happy, almost gay. Yet another Picasso has risen from the ashes of Guernica, and he is painting now without either the tragedy or the disillusion that, even when it was not openly stated, has nearly always been so near the surface of his work. It is useless to enumerate the relative virtues of each separate painting, for all are masterpieces.

●

A painter who should, and who undoubtedly will, be much more widely known than he is at present is John Tunnard, who is holding a remarkably interesting exhibition at the Guggenheim Jeune Gallery—by far the most interesting work by an Englishman to be seen at any gallery at the moment. Here, again, it is difficult, and rather arbitrary, to pick out individual paintings for praise, for, throughout, his work is extraordinarily sensitive, and although his compositions must, in their exact relationships, be entirely intellectual and calculated, they have a warmth and spontaneity unusual in abstract art. This may be largely due to his preference for painting out of doors, and also to the speed at which he works, for twenty-eight of these pictures appear to have been painted in 1939—which works out at about one in two days. He has a sense of texture which again is rather unusual in abstract art, and his colour and just balance of design are outstanding. This is, or should be, painting for the architect, and for the architecture of today.

●

Recent Works of Picasso. Rosenberg and Helft, 31 Bruton Street. Until April 1.

Paintings by John Tunnard. Guggenheim Jeune, 30 Cork Street. Until April 8.

R.I.B.A.

Either because publicity had been better organized or because the subject was one of interest to a larger number of members than usual, or for both reasons, there was a full house for the discussion on specialization at the Informal General Meeting at the R.I.B.A. on March 15.

The four speakers who opened the discussion, each from a different point of view, made contributions that were neither co-ordinated nor opposed; as a result the proceedings rather lacked direction and the views expressed, although not opposed, were continually at cross purposes.

Mr. T. P. Bennett confessed that his special line of practice was one that he had wanted to follow since he was fourteen, which just shows what can be achieved by foresight and persistence. Otherwise he cleared the field by defining all the various kinds of specialization and suggesting reasons why specialization of some sort is generally inevitable. Personal likings or abilities; the pressure of time which did not allow architects to know everything persuaded them to know something well; pressure from clients who wanted jobs completed the day before yesterday, which premiated the man who knew the groundwork of a special kind of work at the start; and the element of mere chance which sometimes drove men to specialize against their will—to specialize in a type of building in which they had had one outstanding success.

Mr. E. A. A. Rowse, Head of the School of Planning and Research, asked, "What was the architect's job?"—absorption with matters of style, with 6%, with the special, even anti-social, needs of the individual? The architect was concerned with needs in the widest sense; he had to discover not merely what the clients' needs were, but the community's needs; he had to correct the faults of environment. This was architecture. We shirked burdens by limiting our responsibilities. The R.I.B.A. had looked at architecture in too narrow a way; to produce good buildings was not everything. A new architectural mind capable of seeing over a wide range was needed, a comprehensive mind capable of collaborating with similar minds in other fields to produce a "collective brain." We did not know the public.

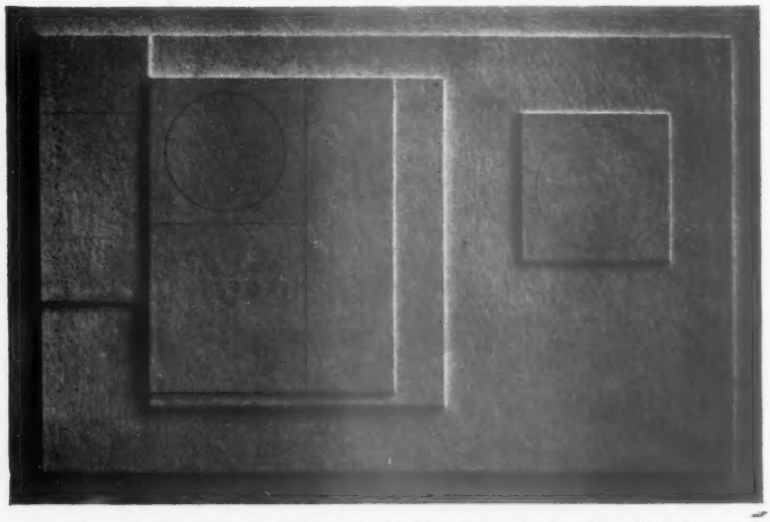
If Mr. Rowse's remarks were interpreted by some as being against specialization, others could take them as Mr. Bennett took them—"the man who is trying to plan the whole of England is the hell of a specialist."

Mr. Cadbury-Brown said that architects, by the very fact that they were architects and not politicians, were essentially specialists; nevertheless specialization could be a deadening thing. In the specialist's office architecture was in danger of being submerged by organization; jobs were adapted to the organization, whereas the intelligent non-specialist was always trying to adapt himself to his problem, to get closer to his clients. Also specialists were apt to be blended by experience.

Finally, Mr. Basil Ward, in his turn, asked what specialization meant: an architect designs buildings of one kind and is a "specialist," but this was not specialization, merely making the best of a bad job, the bad job being the place of the architect in the world and the state of the world itself. Architects spent their time expressing their own immortal souls. Mr. Ward quoted Maynard Keynes and R. H. Tawney to show how nasty the world was and to point various morals concerning the degeneracy of architects and society. Specialization had come to far too easy terms with the business and industrial world.

There has been little specialization in great periods and there was little now in countries such as Sweden, where architecture was healthy.

The discussion consisted of three contributions. Mr. Magnay suggested that we were necessarily so much on top of ourselves that it was difficult to understand our own problems: by examples from the teaching profession he sought to show that specialization was bad—nevertheless, some specialization was inevitable, but there had to be co-operation between the units inside the profession, and the profession and the world outside.



"Relief, 1938," from the exhibition of paintings and reliefs by Ben Nicholson now on view at the Lefèvre Galleries, King Street, S.W.1

● The questions set at the Intermediate, Final and Special Final Examinations held in November and December, 1938, have been published, and are on sale at the Institute, price 1s. (exclusive of postage).

PROFESSIONAL ANNOUNCEMENTS

Mr. Cecil Brangnell, A.R.I.B.A., late staff architect to Messrs. Harold Samuel Properties and Associated Companies, of 15, Stratton Street, Mayfair, W.1, having acquired the practice of Messrs. E. H. and A. C. Harbottle, F.L.R.I.B.A., County Chambers, Queen Street, Exeter, as from September 5, is now in practice solely at the latter address.

FIONA HOUSE, BLOOMSBURY

BY MARSHALL AND TWEEDY: ASSISTANT, S. F. BURLEY

PROBLEM—*A hostel for 70 women and woman students of all nationalities. Comfortable accommodation, central dining room and recreation rooms were required.*

SITE—*As the site was bounded by Heathcote Street on one side and Prospect Terrace on the other, the L.C.C. waived some of their restrictions on site cover. The building was designed with a view to possible future extension eastwards.*

CONSTRUCTION—*R.C. frame with R.C. hollow-tile floors. External walls are 13½-in. brick, a 2-in. Dutch facing being used, with artificial stone dressings. Internal partitions are 2½-in. hollow block. Windows are standard steel casements.*

INTERNAL FINISHES—*Dining room: panelled in elm with sycamore dressings; oak strip floor. Lounge: panelled in Australian walnut and sycamore; floor, gurjun strips. Bed-sitting rooms: plaster, with pine strip floors. Corridors: painted walls and ceilings, cork tile floors. Entrance hall: terrazzo tiled.*

SERVICES—*Low-pressure hot water from hopper-fed solid-fuel boilers. Electric lift in metal casing glazed with obscured glass.*

COST—*Contract price, £25,900. Price per cube foot, 1s. 10½d.*

Above, a detail of the front to Heathcote Street. Overleaf, a general view and detail of the Heathcote Street front.

FIONA HOUSE • BY MARSHALL AND TWEEDY: ASSISTANT, S. F. BURLEY

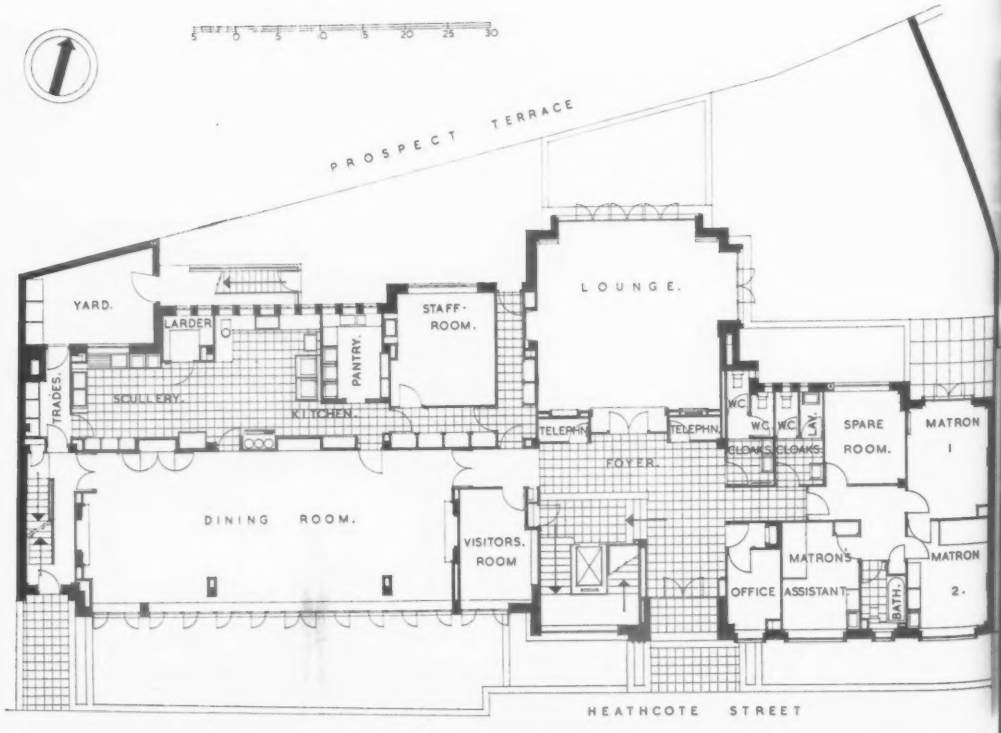
FIONA HOUSE • BY MARSHALL AND TWEEDY: ASSISTANT, S. F. BURLEY

Right, a corner of one of the bed-sitting rooms, and a detail of the visitors' room.

On the facing page: 1, the entrance hall; 2, the lounge; 3, the dining room; 4, the fireplace in the lounge.

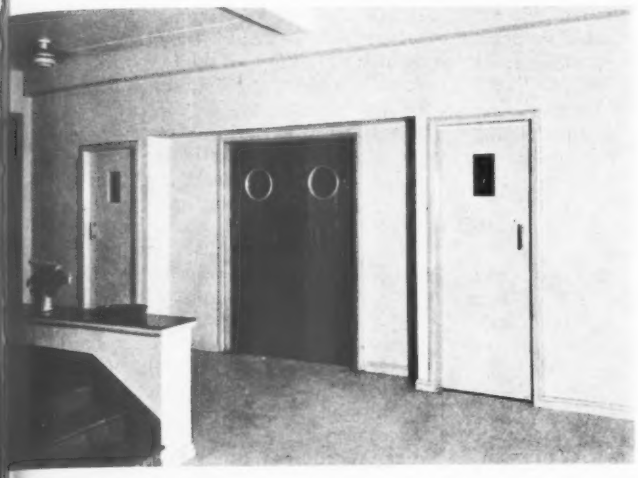
The general contractors were Kirk and Kirk, Ltd.; for list of sub-contractors, see page 508.

TYPICAL FLOOR PLAN



GROUND FLOOR PLAN

FIONA HOUSE, BLOOMSBURY • BY MARSHALL AND TWEEDY



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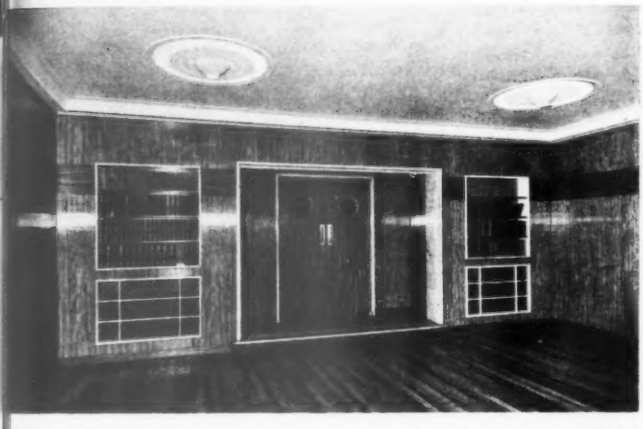

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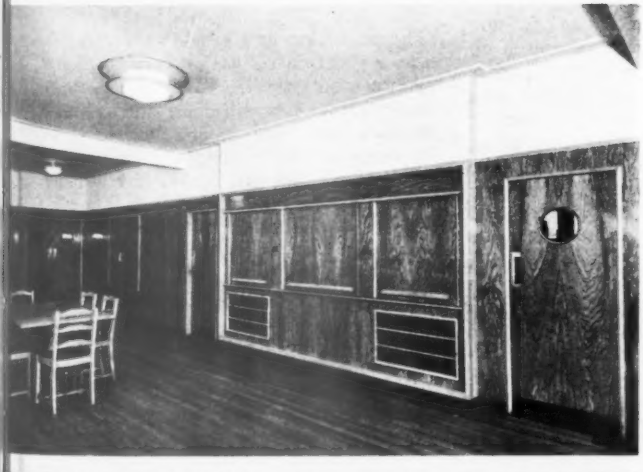

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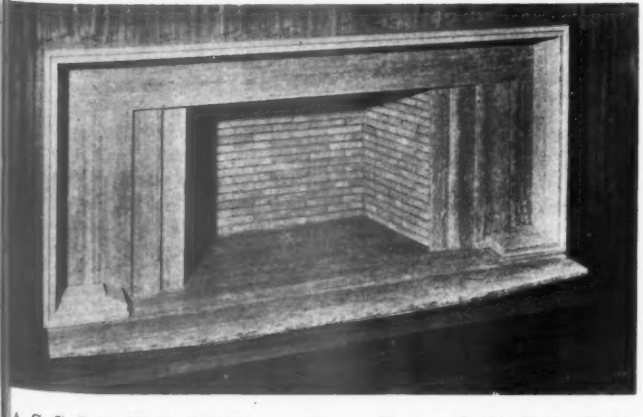

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ASSISTANT, S. F. BURLEY

LETTERS

LONDONER
BLOOMSBURY
I'M TELLING YOU
A LIGHTING EXPERT
RAM
R. A. MANTHEI
HUGH QUIGLEY
R. A. DUNCAN
HENRIETTA HALTWHISTLE

The R.I.B.A. A.R.P. Committee.

SIR,—A.R.P. in all its more important phases is primarily a planning problem, as you have rightly pointed out.

If the architect is no more than a technical designer then perhaps it is right that he should not concern himself with the problem as a whole; it is right that he should sit quiet until he is asked to design and construct some specific structure; it is right that he should then get on with the job, build it and on completion take no responsibility for its fundamental rightness or wrongness. That is, indeed, what he has done in the past; he has designed and taken fees for dwellings which he knew were fundamentally bad and could only become slums; for housing which he knew was too crowded and cramped; for factories which he knew were unhealthy workplaces; for office buildings which he knew were inadequately lighted; for class-rooms which he knew were too large; and the profession has never made any organized protest against the pressure to which its members are subjected or the work they are asked to carry out. It has never taken steps to assist its members in resisting what they know to be fundamentally wrong.

Individual members and the profession as a whole have shrugged their shoulders and excused themselves: "That is all our clients asked for." The profession has never itself laid down a recommended minimum for any class of building; it has been left to local authorities and Government Departments to prevent the worst by a most curious network of laws, regulations and rules enforced by an extraordinary number of odd devices. Even now, insane though it may seem, architects spend a great deal of their time in cursing the poverty-stricken minima laid down and a great deal of their ingenuity in trying to dodge the requirements.

While these are, broadly speaking, the facts, they do not represent the architect's opinion of himself and his work. He does not look upon himself as a technician of limited scope; he claims, and the profession claims, that his is an expert's voice entitled to be respected above all others on all planning and social questions related to architecture and building.

Yet the profession does not get this respect and attention because it does

not live up to its own standard of performance.

Take A.R.P. at the present time ; few of the architects who are designing and actually building shelter accommodation have made any thorough examination of the fundamental factors involved, and the profession as a whole has made no pronouncements of any kind nor has it given guidance to its members.

Architects are recommending their clients to build for the same purposes and to meet roughly the same conditions, structures which vary from timber-lined trenches to specially reinforced concrete structures with walls and roofs several feet thick. Their ideas vary probably even more than those of the average layman and they are no more soundly based.

The very fact that nound so and comprehensive basic data is available to architects proves that they have made no serious study of the subject. Broadly speaking, the sources readily available for the average architect are :—

(*a*) : A competent but limited report by a group of young men, based mainly on experience in Spain and figures gathered from *other* countries (the A.A.S.T.A. Report). That this 16-page report is the most valuable source available is in itself sufficient commentary on the present state of affairs.*

(*b*) : A report of a conference on A.R.P. held at the R.I.B.A. during 1938, at which lectures were given which were so cautious and so uninformative that the conference must be regarded more as a propaganda meeting than as an "Instructional Course."

(*c*) : An argumentative book by Professor Haldane (A.R.P.).

(*d*) : A miscellaneous compilation of official data and trade material edited by C. W. Glover (Civil Defence).

(*e*) : A host of technical and semi-technical articles and ill-considered reports by various bodies, none of which is authoritative, and all of which are incomplete and unrelated.

The fact that there has been no demand for better information, not so much as a murmur, seems to show that architects are content to design without knowing what they are designing for.

Under these circumstances the claims of the profession to be heard are empty and they will not be heard ; their opinions *can* be no better than those of anybody else.

A.R.P. has presented this country with a most serious problem which must be most seriously examined by architects if they are to have any influence in its solution. It is essential first to decide whether the problem is one which should be solved separately by each individual architect in his own way or whether it is one which should be dealt with collectively by the profession as a whole.

The individual architect is now being asked two questions by his past clients and by new ones : "What do you recommend should be done to make my buildings safer?" "What do you recommend should be done to protect the occupants of my building?" The first question is the lesser problem ; it may be just as difficult to solve, but the difficulties are of the technical-economic kind, and the results of inadequate work at most will be disastrous only to the client's bank account at some future time. The second question also has its technical-economic difficulties, but it has human and social aspects which prevent any answer being given unless it is related to the shelter problem as a whole.

It is quite impossible for the profession to make any claims to be regarded as a body worthy of attention on this subject if it is content to base its recommendations for shelter accommodation upon the money each individual client *wishes* to spend on the work. This is unfortunately the basis on which architects are at the present time designing shelters, and it results in such idiocies as the case of two factories in the same locality, one of which is spending £20,000 on the protection of approximately 700 employees, while the other is spending a few hundreds on protecting over a thousand employees.

If the profession is content to continue this policy, then it relegates itself to the position of, say, a body of morticians, willing to take from any layman instructions for the burial ; it disclaims all ultimate responsibility, and it may live comfortably on the fees it can get as a white-collar trade until such time as it is discarded and replaced by something more adequate to the needs of the country.

If, however, this policy is to be discarded, then the larger social aspects affecting shelter design must be taken into account and the individual architect attempting to solve the problem (even for one small client) finds that he must examine and relate to one another :—

a : The penetrative and explosive capacities of H.E. bombs.
b : The possibilities of incendiary bombs.
c : The possibilities of gas bombs.
d : The likelihood of each being used.
e : The possible numbers in which they might be used.
f : The effects of blast and fragmentation, etc., on materials.
g : Ditto on construction.
h : The density of building in the district.
i : The density of population in the district.
j : The likelihood of widespread fire, flooding, etc.
k : The type of locality and the proximity of important targets.
l : The type of active defence measures.
m : The evacuation policy for the district.
n : The effect of industrial transference, if any.
o : The local protection policy.
p : The local protective services (fire brigades, etc.).
q : The national protection policy, if any.

At first sight it may seem that some of these factors could only remotely influence the design of shelters or other precautions, but, in fact, they are all very directly concerned ; for example, the possibility of a local reservoir or canal flooding a particular district would directly influence the design of shelter accommodation, even of the smallest and simplest kind, and the absence of any effective local fire-fighting services would equally affect any recommendations made in regard to the effects of incendiary bombs.

The scope of the investigation required and the inaccessibility of information, both go to make it quite impossible for each individual architect to carry out the research independently for himself. Yet the solution of this problem which is so large and so difficult carries with it responsibilities far greater than any which architects have approached for centuries.

On the solution of this problem depends the economic state of this country for years to come ; the lives of thousands, if not millions, of the people in this country during the coming war ; and the appearance of the face of England for a century or more to come ; the solution will affect the work and life of every person in this country for generations to come.

The thing *is* too large and too serious to be left to individual architects to solve in haphazard fashion on the basis of whimsies and guesswork with a leaven of optimism (or is it irresponsibility?)

The profession as a whole *must* undertake a great investigation, and thrash out from fundamentals the principles to be followed so that its individual members can apply themselves to the problems of their clients within the broad framework laid down. But what has the profession, the R.I.B.A. done?

We are told (sometimes with a certain show of pride) that the R.I.B.A. has been "working" on this problem for four years ; that it held a conference in Portland Place in 1938, that it has organized and held several meetings in various parts of the country ; that it has appointed an A.R.P. Committee with wide terms of reference to draw up any reports on recommendations considered necessary.

All these steps may be good, the method of approach may be right ; but the results? There are none.

After four years in which the R.I.B.A. has been "working," its members are still groping, fiddling and guessing—no lead has been given to them, no report made, no recommendations, no opinion registered. On this problem, the greatest problem put before architects in this country since the Great Fire, we have an A.R.P. Committee which meets once a month for, I believe, two or three hours.

Is it a committee of intellectual giants who can take problems such as this so easily in their stride?

Is the profession content to wait until

* Tecton's Finsbury Scheme, "*Planned A.R.P.*" (A. P. 5s.), has been published since this letter was received.

1 CONCRETE

2 CONCRETE

3 STEEL

4 STEEL

In a recent letter M.M. drew attention to the better design of the steel poles, and particularly to the elegance of 4.

the Government has launched out upon a national programme, right or wrong, before it gives an opinion on what is best?

There are a series of fundamental questions to be answered before there can be any sound basis for A.R.P. work. Some of these questions might be :—

1 : Are shelters necessary?

2 : If so, what is necessary : communal, private, large, small, above ground or underground?

3 : Should the protection given vary according to the conditions and should it be standardized throughout the country?

4 : Can shelter design be related to vulnerability in any way? If so, how?

5 : Is evacuation desirable—if so, what form should the new accommodation take?

6 : What are the relative merits of temporary camps, permanent holiday camps, permanent rehousing and national replanning?

The R.I.B.A. must, if it is to play any worthy part in the solution of these problems, mobilize its forces to undertake some fundamental work and some hard thinking; although four years have been lost and cannot be regained, it is not too late even now. But easy-going committee meetings are *not* enough.

LONDONER

Stay North, Young Man

SIR,—I am 24 years old and have qualified for my A.R.I.B.A. after five years at a school. On entering an office recently I was told I was only worth £3 10s. a week as I had only had three months' office experience. This seemed a good reason.

But in the same office is a man of 23, an excellent detailer, well up in construction. He earns £3 15s. and says that when *he* was taken on a year ago he was told that not being school-trained he was not worth more.

Question : What kind of man *is* worth £5 a week at 24?

BLOOMSBURY

SIR,—I am an Associate of the R.I.B.A., with good experience and capable of holding a responsible post; yet I have been unemployed for the past seven months.

With reference to "Askme's" letter, in last week's JOURNAL, I think it just about time that sarcastic remarks by unqualified members of the profession —who have never speculated a penny towards their career, and have been lucky enough to always find a job open for them, chiefly because of that precious office experience—ceased.

I'MTELLINGYOU

CROYDON

Lighting Standards

SIR,—Has your correspondent M.M. or his introducer, Mr. William Ellis, been to Morecambe lately, or to Bexhill-on-Sea? At both places there are concrete lighting standards, surmounted with woof-birds, short winged central above, long tails from slender bodies reaching down and to the rear of the poles, and long necks curving out and up to carry the lanterns, all concrete to withstand the sea air and wind pressures.

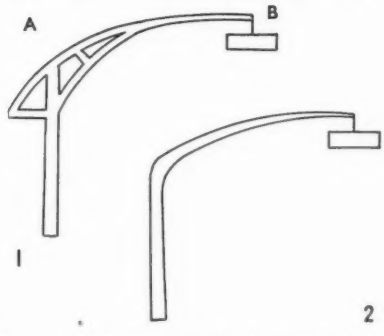
Look at one; it is a woof-bird truly. But look at the lot along the promenade, and the effect is show—show in a show place.

To come back to the concrete column (of which, having bought and erected some hundreds, I may claim to have some experience), does your contributor imagine himself the only person of taste in the matter? Has he ever tried to evolve an idea in this direction, which can be economically produced and adopted by most engineers for their lighting schemes?

A LIGHTING EXPERT

MORECAMBE

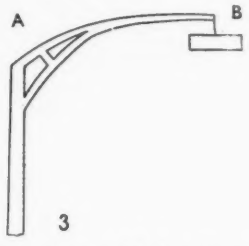
SIR,—I enjoyed the letter by "Right Will Prevail," in your issue for March 16. He criticizes M. M. for his lack of intelligence, while he displays his own complete absence of this all important quality by his own remarks on stresses and strains. First of all, the "bobtail" in question (see Fig. 1)



has a negligible weight in comparison with the cantilever arm and its hanging lamp. Its centre of gravity is considerably nearer to the column than that of the combined arm and lamp. Therefore, the product of the load and distance for the former is very much greater than that for the latter. In other words, the counter moment produced by the "bobtail" is negligible.

Perhaps your correspondent means stresses and strains when he says so, and is not referring to moments. Let us therefore consider these stresses and strains. Fig. 2 shows a simple cantilever form of lamp standard (which I hope M. M. will approve). The moment at A is the same as that at B. Assuming that the sectional areas are the same, the section at B has to be more strongly reinforced than that at A, because B has to withstand a direct force due to the weight of the lamp, etc., in addition

to the moment. Now let us look at Fig. 3 (this is M. M.'s ideal shape).



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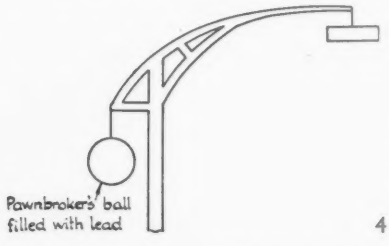
We have now provided a stronger and more rigid cantilever arm at the support A but still retain the same section as before at B. Therefore the weakness is in the column (comparatively speaking, of course). We have seen that the addition of a bobtail has little effect on the moments and does not strengthen the column at B. I would suggest that for structural efficiency the ingenious device shown in Fig. 4 be adopted. By suitable



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counter-balancing no primary moments would be induced in the column at the top.

I will follow the true spirit of the correspondence by signing my letter with a *nom de plume*. But "Right Will Prevail" has a sporting chance to know who is the man who dares to put him in his place. With his vastly superior intellect he can deduce it.

London. RAM

P.S.—By the way, I am in no way connected with the design of these standards.

Liverpool School of Architecture Society

SIR,—May I be allowed to correct the part of the report in your issue last week of the Liverpool School of Architecture Society, in which you state that Professor Salvisberg had already proposed an exchange of his students with those from Liverpool. Actually, I said that he was agreeable to such an exchange taking place, a suggestion which I made to him in the first place. I am taking pains to explain this as Professor Salvisberg, I feel sure, had no particular desire in the first instance to send any of his own students to this country for further training (perhaps for a good reason) whereas he was kind enough to consider the question of accepting a few Liverpool students for a short term in his office; but, owing to the difficulty of Home Office regulations it would be necessary to send the same number of his own students here on an exchange basis.

The difficulty, of course, is to persuade good English architects to accept these excellently trained students from Switzerland, and pay them enough to live on. I feel sure that it would be a tremendous advantage to the younger members on the staffs of such architects to have the opportunity to mix with these students and pick up good modern ideas on architecture which I am sure, must be an advantage to their chiefs.

London. R. A. MANTHEI

Crematoria

SIR,—I am touched by the reference to myself in Astragal's notes in the March 16 issue—not only touched, but slightly over-awed.* If one has to be an expert on ancient memorials and relics, I suppose the study of crematoria may be just as interesting as the sampling of the flavours of mummies and shrivelled heads from Borneo.

It is very fitting indeed that our oldest and most sacred industry, the gas industry, should associate itself most closely with this kind of study. It could do no other, and I should not be lacking in veneration for what may, in the very near future, be added to our collection of lost and venerated and extinct old things. That is why I weep no tears on the failure of electricity in the heating of crematoria, although I should doubt your statistics. But then, being a statistician, I must not run down my brother craftsmen.

The electrical industry has a proper scorn for such marginalia. It likes the big things and the big gestures. It brings life and beauty to the great achievements of humanity. It flourishes on the opposition of quaint Victorian survivals, such as the Council for the Preservation of Rural England, but it shows a nice discrimination in the selection of landmarks to decorate its transmission lines. As you wisely remarked, on a previous occasion, the towers have really only been put on the landscape to inspire the poet's vision, and they are, of course, maintained accurately and constantly in place by the lines which sway so magnificently from one tower to another. In certain haunted districts you may even find fairy circles round the bases of the towers, because, you see, leprechauns and wayleave officers have very much in common. They have just a little bit of mischief in their make up which adds to the piquancy of their achievement, but I feel that until our knowledge of the art becomes greater, it would be inadvisable to mix up electricity pylons with crematoria.

HUGH QUIGLEY
Central Electricity Board

* Astragal said "If there is another side to this burning question (that only one out of 48 recent crematoria has been fired by electricity) someone had better say so—quigley."

Borders Case

SIR,—The problem of quality could be quite simply solved on lines which I have previously recommended, namely, that all buildings (with the exception of a few monumental buildings) should be considered as temporary and subject to a licence for the appropriate term of years, the period to be determined by the quality of construction and design. The term of years could range from 25 to 100. The licence could be extended upon special application to be granted if circumstances warranted it.

The scheme is simple because it requires an extension of by-laws only, and no elaborate and costly machinery to put into operation. Such by-laws would assist in solving the following problems:—

Town Planning—Protection of the purchaser—Elimination of false residual values—Cheaper cost of rebuilding on site value only.

Provided the law was not made retrospective, there would be no economic hardship in doing away with the fiction of the permanency of buildings. A great and vital industry would tend to have an even level of production and consequently improve the general national economy.

R. A. DUNCAN

London.

Cerne Giant

SIR,—I think architects must be simply disgusting people if they tolerate your Mr. Astragal's attack on the Vicar of Cerne Abbas.* How *could* he liken dear Mr. Ray to that *horrid* innkeeper in Mr. Chesterton's *poems* who let a white horse go to rack and ruin: but there is *all* the difference between a beautiful horse and a horrid giant without trousers. How could one suggest that this is a holy mountain? It is monstrous to think that the horrid people who carved it were anything else but *indecent*, probably French *refugees*, since such things are entirely *foreign* to the *British* character!

I feel sure that the body Mr. Astragal mentions would have obliterated this horrid thing years ago if they really wanted to preserve rural England, and *such* a bad influence for the young village folk too.

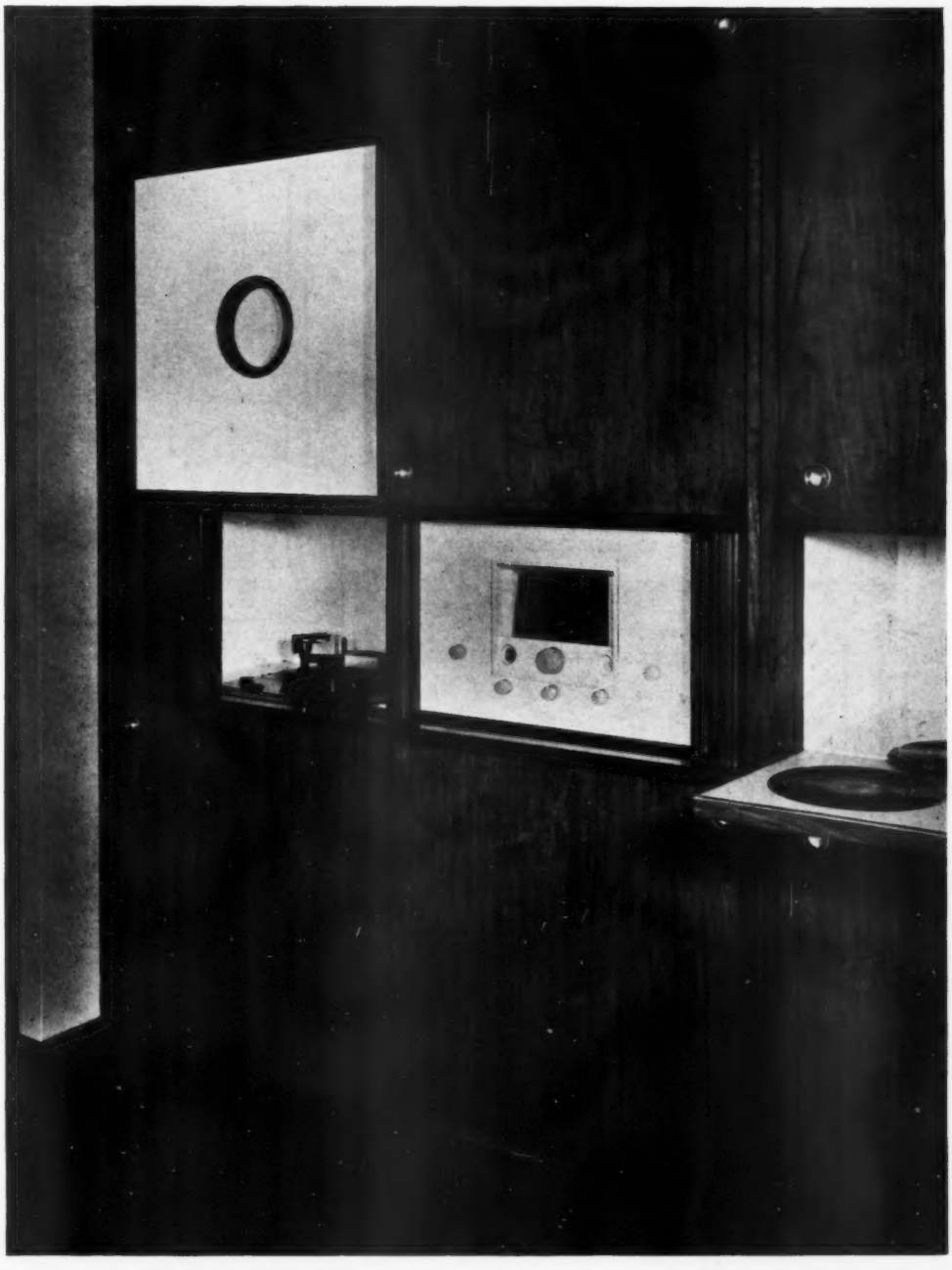
I hope you will publish this letter to show that there is one clean-minded British woman who is willing to champion the Vicar of Cerne Abbas.

HENRIETTA HALTWHISTLE (MISS)

* The vicar recently expressed the hope that the Cerne Giant could be done away. "It is ugly and of no real significance."

WORKING DETAILS : 735

WALL FITMENT • HOUSE NEAR HALLAND, SUSSEX • SERGE CHERMAYEFF



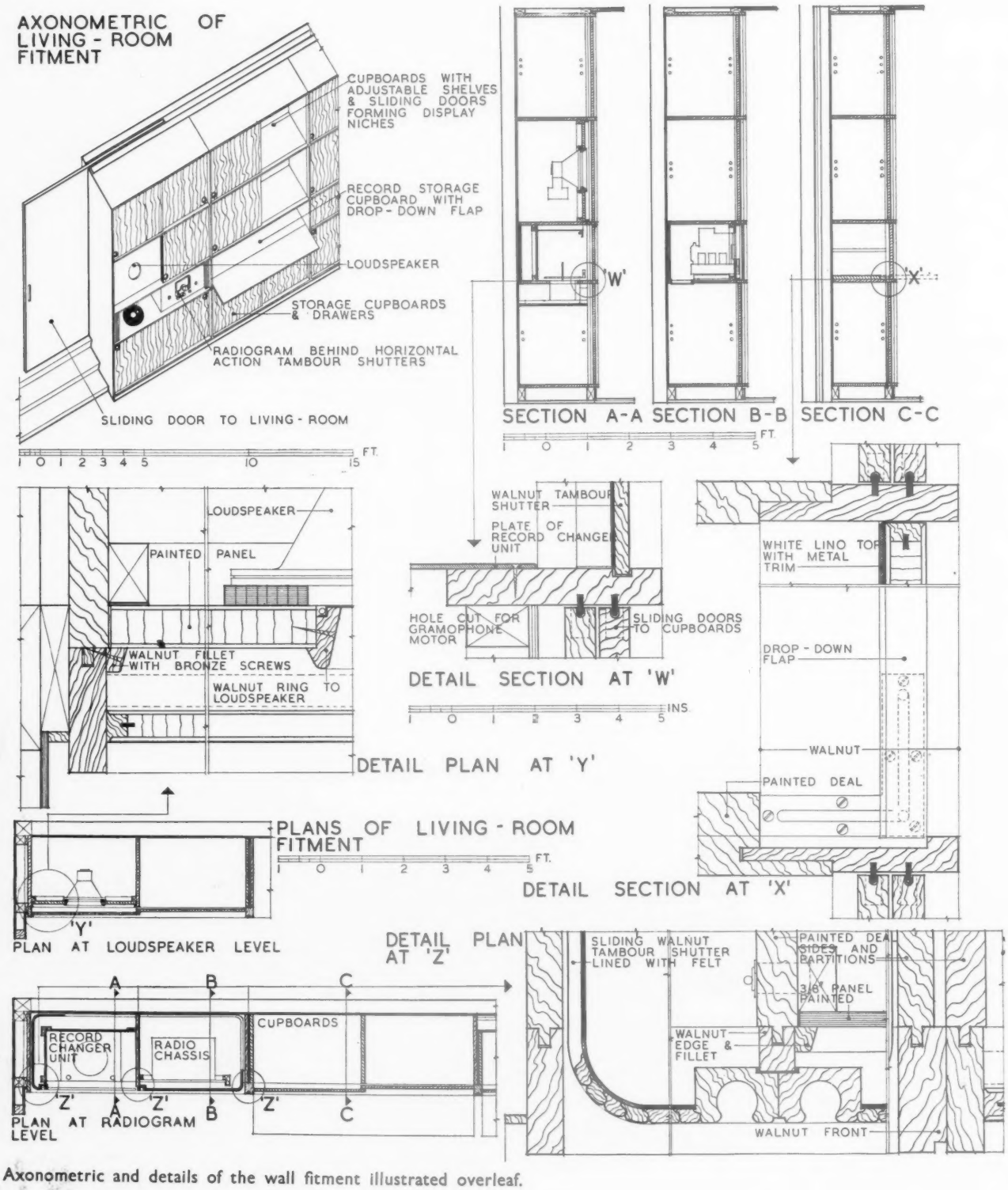
The wall fitment illustrated occupies the back wall of the living room, and is part of a continuous spine of cupboards running the whole length of the house. It consists of a series of compartments with sliding fronts for displaying works of art, and below these are cupboards, radiogram and cocktail cabinet.

The radiogram is set behind sliding tambour shutters, and the cocktail cabinet and storage cupboards have drop-down flaps. The whole of the wall fitment is in walnut.

The photograph above shows a close-up of the radiogram, and that below a general view of the wall fitment. Details are shown overleaf.

WORKING DETAILS : 736

WALL FITMENT • HOUSE NEAR HALLAND, SUSSEX • SERGE CHERMAYEFF



Axonometric and details of the wall fitment illustrated overleaf.

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INFORMATION SHEET

SUPPLEMENT

SHEETS IN THIS ISSUE

715 Hot Water Radiators (Pressed Steel)

716 Furniture Layout

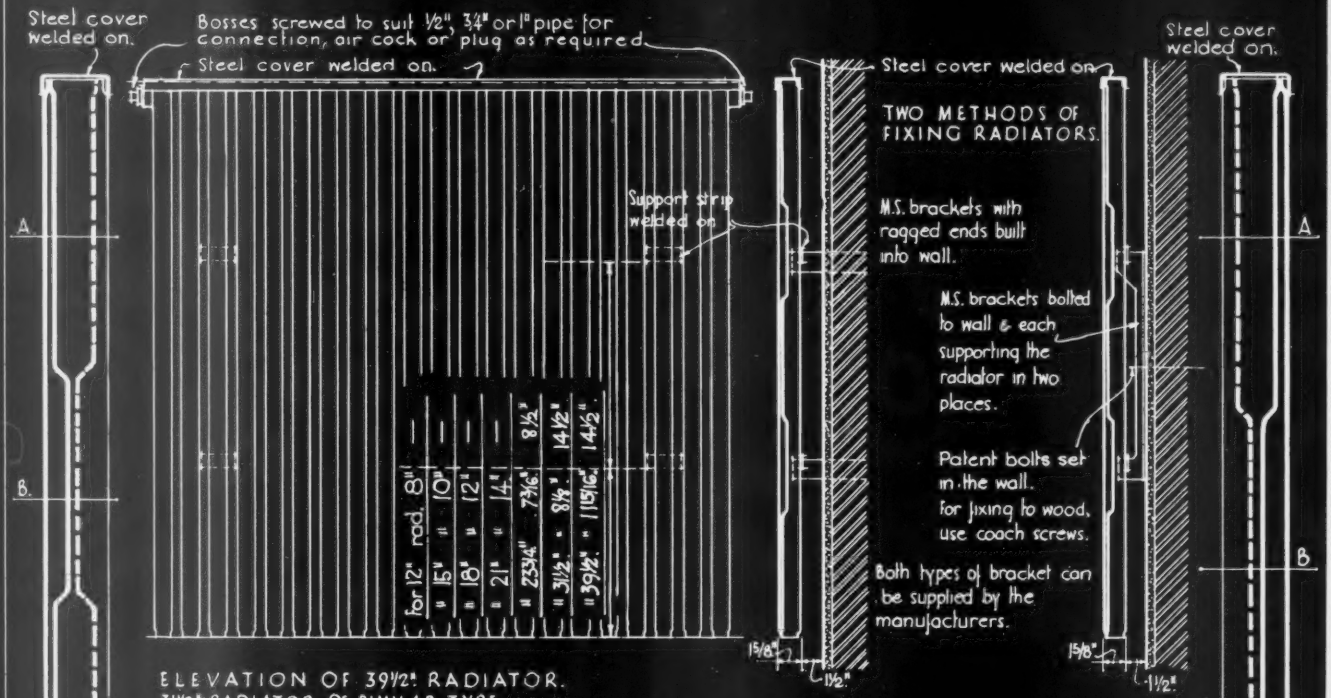
All the Information Sheets published in The Architects' Journal Library of Planned Information since the inception of the series to the end of 1938 have been reprinted and are available in the four volumes illustrated here. Price 21s. each.

Sheets issued since index :

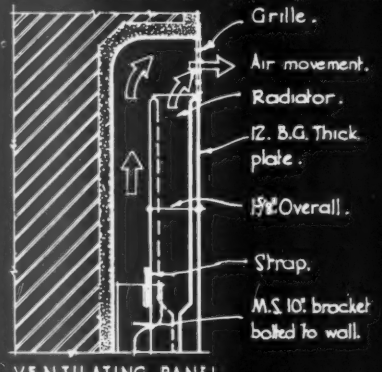
701 : Tile Hanging
702 (420 revised) : Fixing Insulating Board
703 : Sheet Metals
704 : Plan Elements
705 : Metal Work
706 : Plan Elements
707 : Furniture Layout
708 : Plan Elements
709 : Flue Construction
710 : Natural Lighting
711 : Glass and Glazing
712 (109 revised) : Quarry Tiles
713 : Glass and Glazing
714 : Metalwork

23-15

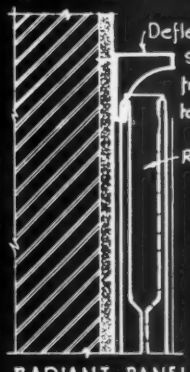
THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION.



ELEVATION OF 39½" RADIATOR.
31½" RADIATOR OF SIMILAR TYPE.
23 3/4", 21", 18", 15" & 12" RADS. OF SIMILAR ELEVATION BUT DIFFERENT SECTION, SEE DETAIL.



VENTILATING PANEL.



RADIANT PANEL. CONVECTOR.

SIZES OF RADIATORS.

Heights: 12", 15", 18", 21", 24", 31½" & 39½".

Depth. : 15/8" for all sizes of radiator.

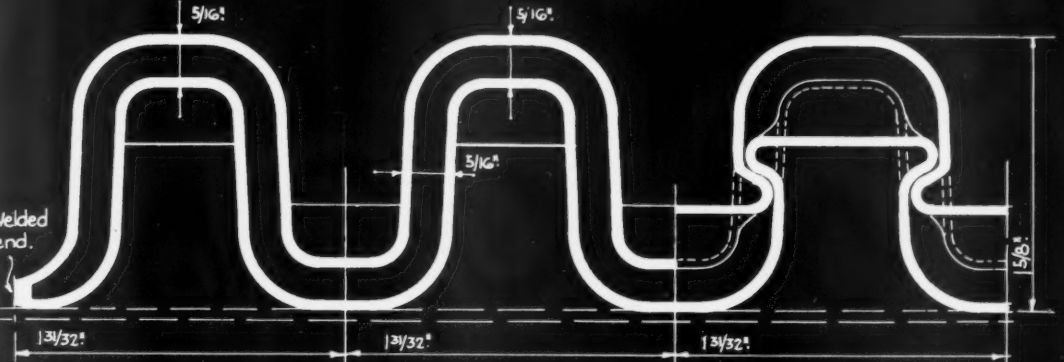
Length: Multiples of approx. 2", see dimensions given on back hereof.

Curved work: Radiators are made in curved sections down to a radius of 48", (for bay windows etc.)

Angles: Sections can be obtained at angle for bay windows &c.

¼ FULL SIZE SECTION THROUGH 23¾" RADIATOR. 21", 18", 15" & 12" RADS. OF SIMILAR TYPE.

¼ FULL SIZE SECTION THROUGH 31½" RADIATOR. 39½" RADIATOR OF SIMILAR TYPE.



PART PLAN OF RADIATOR, FULL SIZE. Plan similar for all models.
PLAN THROUGH CORRUGATIONS AT 'A'. PLAN THROUGH DOVETAIL DEPRESSIONS AT 'B'.

Information from Joseph Sankey & Sons Ltd.

INFORMATION SHEET: SANKEY PRESSED-STEEL HOT WATER RADIATORS.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1 • Alan C. Bayne.

74.273.34.

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 715 (106 Revised) •

HOT WATER RADIATORS (PRESSED STEEL)

Name of Product : Sankey Radiator

General :

Water entering the Sankey radiator through one of the top inlets at first flows horizontally across it. To reach the bottom outlet, the water is induced, by the locked dovetail depressions, to descend vertically down the corrugations. Near the bottom of the radiator the descending columns of cooled water are diverted and again flow horizontally towards the outlet.

The radiant heat transmitted by Sankey radiators is approximately 33⅓ per cent. of the total heat output.

All radiators are tested with an internal air pressure of 90 lbs. per square inch.

Construction :

The radiator is constructed of two corrugated steel sheets, welded together on all four sides. The two sheets are also locked together at the centre by suitably formed dovetail depressions. The space for water between the two sheets is $\frac{1}{16}$ in. Suitably screwed bosses are welded into each corner for connection to pipes and valves. A cover strip in the form of an inverted channel is fitted to the top.

All radiators are supplied finished one coat priming paint.

Valves and all connections are the usual standard fittings.

Sizes :

The radiators are made in seven standard heights :— 12 in., 15 in., 18 in., 21 in., 24 in., 31½ in. and 39½ in. Single radiators are made in lengths in multiples of 2 in. up to a length of approx. 10 ft.

General Data : *See table below.*

Name of Manufacturers : Joseph Sankey & Sons, Ltd.

Address : Hadley Castle Works, Wellington, Shropshire

Telephone : Wellington 500

London Office : 168 Regent Street, W.1

Telephone : Regent 3261

The figures on Heat Transmission given on the right of the table below have been prepared as a guide for Heating Engineers as to the emissivity of these Radiators, and are correct under the conditions stated.

Temperature of Radiator surface ... 160°F. Emissivity Factor ... ... 0·94
Temperature of Air in Room ... 60°F. Convection coefficient ... ... 0·34
K. Factor ... ... 1·60
Difference ... ... 100°F.

Engineers are referred to the Heat emission chart in the manufacturers' list, and advised to arrive at their own figures from the known conditions, which naturally vary with the job.

Height Inches	Width Inches	Length Inches	No. of Corrugations	Approx. Length Over Sockets	Floor Space Occupied Sq. Ft.	Volume External Cub. Ft.	Weight Empty Lb.	Weight Full Lb.	Heating Surface Sq. Ft.	Price per Sq. Ft. of Heating Surface	Heat Transmission B.Th.U. per hour		
											Radiant Heat	C'vected Heat	Total Heat
12	1⅛	24½	12	25	·29	·29	19	22	8		430	850	1280
		32½	16	33	·38	·38	25	29	10·5		580	1100	1680
		40	20	40½	·47	·47	32	37	13·2		720	1380	2100
		47⅞	24	48½	·55	·55	38	44	15·8		850	1670	2520
		56	28	56½	·64	·64	44	51	18·5		1000	1950	2950
		63½	32	64½	·73	·73	50	58	21		1200	2150	3350
15	1⅛	24½	12	25	·29	·36	24·5	28	10		550	1050	1600
		32½	16	33	·38	·47	31	36	13·3		730	1390	2120
		40	20	40½	·47	·58	40	47	16·6		900	1750	2650
		47⅞	24	48½	·55	·69	47	55	20		1100	2100	3200
		56	28	56½	·64	·80	55	64	23·2		1300	2440	3740
		63½	32	64½	·73	·91	63	73	26·5		1500	2750	4250
18	1⅛	24½	12	25	·29	·46	29	33	12		670	1250	1920
		32½	16	33	·38	·61	38	44	16		860	1700	2560
		40	20	40½	·47	·75	47	55	20		1100	2100	3200
		47⅞	24	48½	·55	·88	57	66	24		1360	2450	3810
		56	28	56½	·64	1·0	66	77	28		1550	2920	4470
		63½	32	64½	·73	1·1	76	88	32		1750	3200	4950
21	1⅛	24½	12	25	·29	·51	34	39	14		760	1480	2240
		32½	16	33	·38	·66	44	51	18·7		1050	1950	3000
		40	20	40½	·47	·82	55	64	23·4		1300	2420	3720
		47⅞	24	48½	·55	·96	66	76	28		1550	2920	4470
		56	28	56½	·64	1·1	77	90	32·8		1760	3490	5250
		63½	32	64½	·73	1·3	88	102	37·4		2100	3900	6000
24	1⅛	24½	12	25	·29	·58	37	43	15·6		850	1650	2500
		32½	16	33	·38	·76	50	58	20·8		1200	2100	3300
		40	20	40½	·47	·94	62	72	26·0		1450	2700	4150
		47⅞	24	48½	·55	1·1	75	87	31·2		1750	3250	5000
		56	28	56½	·64	1·3	87	101	36·4		2000	3800	5800
		63½	32	64½	·73	1·5	100	116	41·6		2330	4320	6650
31½	1⅛	24½	12	25	·29	·74	50	58	21·0		1200	2150	3350
		32½	16	33	·38	·96	66	77	28·0		1550	2920	4470
		40	20	40½	·47	1·2	83	96	35·0		1900	3700	5600
		47⅞	24	48½	·55	1·4	99	115	42·0		2350	4350	6700
		56	28	56½	·64	1·6	116	135	49·0		2700	5100	7800
		63½	32	64½	·73	1·8	132	153	56·0		3400	5500	8950
39½	1⅛	24½	12	25	·29	·95	62	72	26·4		1500	2700	4200
		32½	16	33	·38	1·2	83	96	35·2		1900	3700	5600
		40	20	40½	·47	1·5	104	121	46·2		2550	4850	7400
		47⅞	24	48½	·55	1·8	124	144	52·8		2800	5650	8450
		56	28	56½	·64	2·1	145	168	61·6		3500	6350	9850
		63½	32	64½	·73	2·4	165	192	70·4		4000	7250	11250

The Heat Transmission figures given above are on the assumption that the radiators are fully exposed in still air, and the "radiant" figures are calculated from actual test figures. This is equal approximately to 33⅓ per cent. of the total.

Length over sockets subject to confirmation at the time of placing orders.

Radiators of shorter, intermediate, and longer lengths can be supplied; and within certain limits, radiators can be built to a radius, or sections built at an angle to each other.

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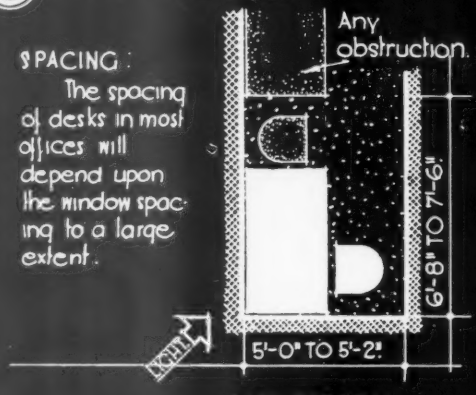
THE CLEARANCES GIVEN ARE MINIMA FOR REASONABLE, COMFORTABLE AVERAGE CONDITIONS.
For the layout of furniture in general offices, see previous Sheet No. 707.

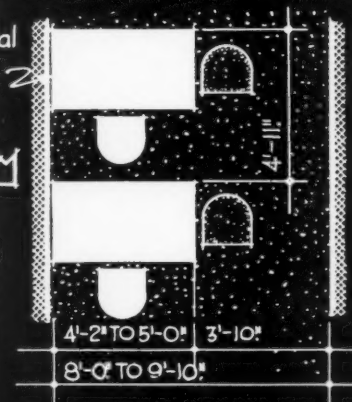
(A.) PRIVATE OFFICES.

SPACING: The spacing of desks in most offices will depend upon the window spacing to a large extent.



ONE PERSON.

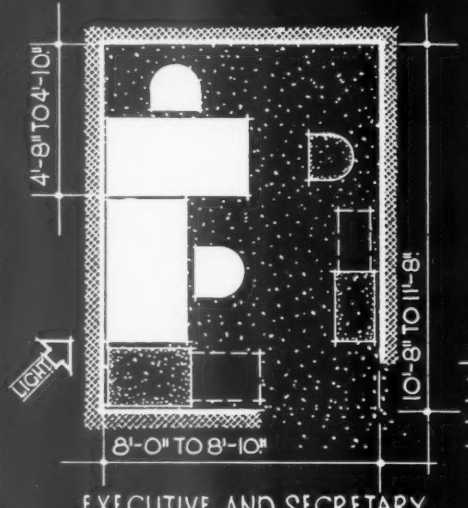
LIGHTING: Unless top lighting or shadowless artificial light is available, the direction of light for all clerical work should be from the front-left as shown.



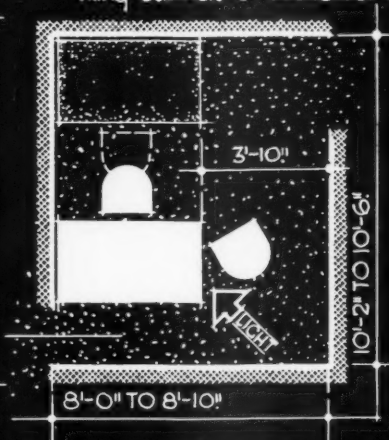
TWO OR MORE PERSONS

WORK: The desks shown throughout this sheet are suitable for general-purpose office use.

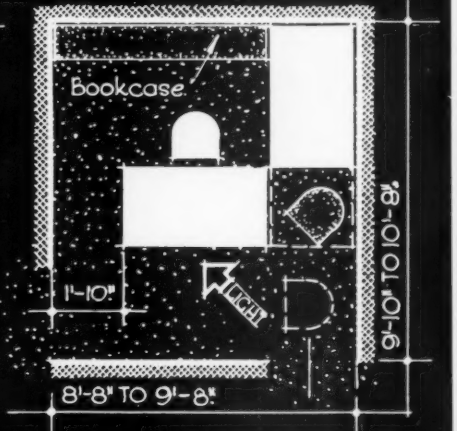
Filing cabinets & bookcases should receive front light.



EXECUTIVE AND SECRETARY.

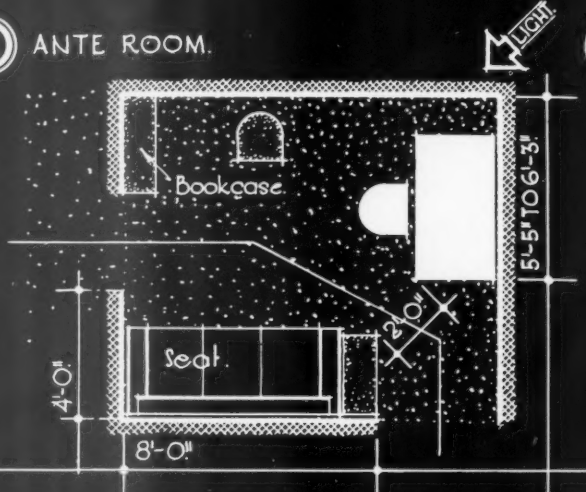


ONE PERSON, TWO DESKS.



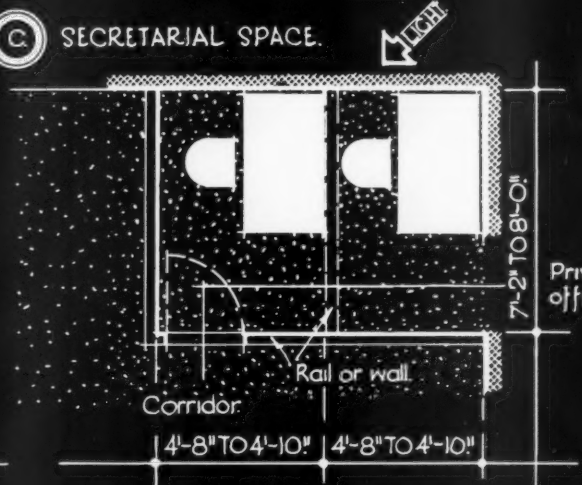
DESK AND WORK TABLE.

(B.) ANTE ROOM.



ONE PERSON AND SPACE FOR WAITING.

(C.) SECRETARIAL SPACE.



ONE OR MORE SECRETARIES.

INFORMATION SHEET: LAYOUT OF PRIVATE AND SECRETARIAL OFFICES.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.

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INFORMATION SHEET

• 716 •

FURNITURE LAYOUT

Subject : Layout of Private and Secretarial Offices

General :

This Sheet sets out a number of arrangements of desks and filing cabinets for private offices, and for a typical ante-room and a secretarial space.

Sizes of Furniture :

As both office desks and chairs vary considerably in size, the furniture shown represents the general average for clerical workers, as is shown on the previous Sheet of this series, No. 707. Desks are assumed to be 2 ft. 6 in. by 4 ft. 6 in., and chairs 18 in. wide, measuring 18 in. from the edge of the desk to the back of the chair when occupied.

Smaller chairs are used but are less common ; if larger chairs are required correspondingly more space should be allowed, the furniture sizes not then being a controlling factor.

Clearances :

The side and back clearances allowed should be considered as comfortable minima ; they can be reduced if necessary, but this should not be done if it can be avoided. In some offices a more generous allowance is considered essential.

The dimensions usually read to obstructions such as walls, columns, etc., but in some instances low obstructions such as desks and rails will require less clearance than that shown.

Spacing of Desks :

The spacing of desks shown in the diagrams is controlled by the space allowances considered necessary. In practical work this spacing will depend to a large extent upon the window spacing unless artificial light is to be used continuously. This becomes an important factor wherever the solids between windows are large in relation to the window width, unless top light is available.

The arrangement of the furniture in any of the particular plans is not to be considered the only layout possible. Each grouping is intended merely as a guide in the development of an individual scheme.

Lighting :

Unless top lighting or shadowless artificial lighting is used, the direction of light for all clerical work should be from the front-left as indicated on the drawings. The proper lighting of clerical desks is not merely a question of comfort but an important factor in the accuracy of the work done.

Where filing cabinets or bookcases are included in the general layout, they should receive some form of light on the face of the fitting.

Previous Sheet :

The first Sheet in this series is No. 707, and deals with the layout of office furniture.

Suggested redevelopment of Claremont Park, Surrey. From "Gardens in the Modern Landscape."

BOOKS

GARDENS

[By RUSSELL PAGE]

Gardens in the Modern Landscape. By Christopher Tunnard. Architectural Press. Price 15s.

MR. CHRISTOPHER TUNNARD'S book comprises a collection of various essays on landscape and garden, all of which are highly stimulating and very controversial. It is very difficult to review it as a complete book as it has no consistent theme. Mr. Tunnard writes on some of the lesser-known gardens and gardeners of the eighteenth century with a great deal of knowledge and real enthusiasm. His essay called "Oriental Aesthetics" is equally exciting, and is perhaps his most solid contribution towards garden design. His curiously eclectic taste has hardly had time to fuse into a general understanding so that one reads and re-reads the book with a feeling of confusion which is increased by the extremely complicated make-up of each page which appears to vary with the topic discussed. Half the illustrations bleed off the page, half are neatly vignetted in the eighteenth-century manner, there is a constant change of type, short captions are in italics and long explanatory paragraphs on the illustrations run from page to page in yet another face. Excellent for the presentation of new ideas in a journal, this type of make-up does small service to Mr. Tunnard, whose serious work deserves a more sober setting. Actually there is such a wealth of ideas in this book that one has to read sentence by sentence, and almost every sentence is highly debatable. "Music belongs again to mathematics" brings one up with a rude jolt in a chapter called "Functional Aspects of Garden Planning." Does Mr. Tunnard wish to convey that music had a mathematical basis and lost it? It is a curiously limited understatement.

The qualities of emotion are not to be translated into intellectual theories, the gap between them is literally unbridgable. Hence, like all modern writers on what are called æsthetics, Mr. Tunnard has necessarily fallen down. If he is discussing the garden as a work of art I am inclined to wonder why he has to drag in that King Charles' head called "functionalism." To me this is a beastly word—a kind of chromium plating added on to a vital and necessary thing. It is used as though purpose and necessity had not always been the skeleton on which houses and gardens, etc., were built. Shadow and sunlight are both "functional" in a garden, just as a bucket is functional if it holds water. If it doesn't it ceases to be a bucket anyway. Versailles was "functional" as an agreeable parade ground for Louis XIV; the Parthenon functional for Pallas Athene, just as Balmoral was functional in conveying the British or Scottish sympathies of a Hanoverian Queen and a husband from Saxe Coburg. In other words, isn't "functionalism" implicit?

Another statement which could only be made in such a trough between civilizations as that in which we live today is the following. "Only today with the death of the culture which lauded the axial vista, that most snobbish of all forms of Renaissance planning has the cult of symmetry begun to suffer a deserved eclipse."

Why, Mr. Tunnard, is the axial vista snobbish? What is meant exactly by "snobbish"? Usually the word implies a false pretension. How does this apply here? If people in the fifteenth century chose to select from the classics a sense of balance, what more natural than that they should choose to extend into a garden form their sense of measure, of direct approach, of white against black? If you choose to call them snobbish in rebelling against the half-seen and the shadowy are we not equally snobbish in deriding them and preferring (for example) a balanced spatial garden composition lifted from the work of certain Buddhist monks of Kyoto in the fifteenth century?

Eclecticism is a part of the Museum Age in which we live. That we take this or that influence and use it because it is our fugitive pleasure is all right, but over the limited period of known history how can we say, "This is the new age—these are the new formulations, things from the past that do not happen to charm us particularly are barren!"

Well, theoretical speculation is no fun unless one is allowed to lose one's way from time to time, and, faced with a more solid problem, Mr. Tunnard shows himself capable of clear thought. His study of Claremont Park is excellent. Its past history and distinguished planning are ably described and analysed, its present condition sadly exemplifying the worst aspects of present-day residential planning is made quite clear. Furthermore, Mr. Tunnard has produced a well-considered alternative which, while it may be too late for its immediate purpose, is a most excellent example of landscape and town planning linking the amenities of a more spacious age to the narrower economics of modern suburban life.

As far as writing goes, if Mr. Tunnard will turn his patience, his talent for writing and, above all, his real love for what he is doing away from the minor pictorial and literary aspects of a major art he will achieve a remarkable book.

FURNITURE

The Evolution of Furniture. By Lucretia Eddy Cotchett. Batsford. Price 12s. 6d.

THE Evolution of Furniture can be called an anthology of the best in this form of art which each age worthy of memory has produced, with

Pain's Hill, Surrey: a view to the house across the park. From "Gardens in the Modern Landscape," reviewed overleaf.

enough of the art and social history of the times skilfully combined to turn it from being a book for specialists into a story which would have an appeal for everyone.

The story concerns the world's "home" and man's great longing to "live" in every sense, the basis of which must be a beautiful environment.

It is not the province of the book to argue the respective merits or anomalies of the systems under which the art of furniture design has flourished, or momentarily in Time relapsed, but the explanation of those systems has plenty of interest.

From the days of Phidias and Ictinus, Mrs. Cotchett leads an informative conducted tour through Time which ends, with perhaps a slight jar after travelling so fast, in the centre of the 1937 Paris Exposition.

In spite of covering such a tremendous period, the book is untainted by cataloguism, retains its interest to the end, and is well worth reading.

R.I.B.A.
COUNCIL MEETING

NOTES FROM THE MINUTES OF THE COUNCIL

Special Committee on Architectural Education.—The Board reported that it proposed to set up a Special Committee on Architectural Education to consider the present state of architectural education and to make recommendations.

Appointments—Representative on the Court of the University of Liverpool.—Mr. Harold A. Dod (F.), President of the Liverpool Architectural Society.

Architects' Registration Council of the United Kingdom.—Professor L. B. Budden (F.) and Messrs. Joseph Addison, M.C. (F.), Percival C. Blow (A.), T. A. Darcy Braddell (F.), H. Chalton Bradshaw, C.B.E. (F.), John Dower (A.), A. G. Henderson (F.), A. B. Knapp-Fisher (F.), Hubert Lidbetter (F.), H. P. G. Maule, D.S.O., M.C. (F.), Anthony Minoprio (A.), A. H. Moberly (F.), Thos. E. Scott (F.), Sydney Tatchell (F.) and Geoffrey C. Wilson (F.).

Admission Committee of the Architects' Registration Council of the United Kingdom.—Messrs. H. Chalton Bradshaw, C.B.E., (F.), J. D. Hossack, O.B.E. (F.), H. G. Spencely (A.) and Geoffrey C. Wilson (F.).

Officers of the Board of Architectural Education for 1939-1940.—Vice-Chairmen: Mr. Hubert Lidbetter, Chairman, Mr. A. B. Knapp-Fisher (Chairman of the Examinations Committee), Professor R. A. Cordingley (Chairman of the Schools Committee), Mr. Joseph Addison (Chairman of the Prizes and Scholarships Committee), Mr. C. Anthony Minoprio, Hon. Secretary. The R.I.B.A. members of the Board and the various Committees of the Board were also appointed.

R.I.B.A. Prize Juries—The Banister Fletcher Essay Prize Jury.—Mrs. M. N. Robinson and Mr. F. E. Green, in place of Mr. Anthony Minoprio and Mr. S. C. Ramsey.

The Soane Medallion Jury.—Mr. Oswald P. Milne, in place of Mr. Anthony Minoprio.

British Standards Institution.—Timber Industry Committee.—Mr. A. H. Barnes (F.) and Mr. G. N. Kent (L.). *Cement, Concrete and Mortar Industry Committee.*—Mr. A. H. Barnes (F.) and Mr. Walter Goodesmith (A.). *Standardisation of Domestic Electrical Refrigerators Committee.*—Mr. Walter Goodesmith (A.). *Technical Committee to consider the preparation of standard requirements for the provision in buildings during construction for ducts for service pipes for water, gas and electricity.*—Mr. R. J. Angel (F.), Mr. H. Lewis Curtis (A.) and Mr. Colin J. Dixon (A.). Mr. A. H. Barnes was appointed as an additional representative on the following Technical Committees of the British Standards Institution:—B/10 Standard Definitions and Tests for Fire Resistance and Inconductibility, B/19 Unit Weights of Building Materials, B/24 Timber Specifications, B/45 Concrete and Brickwork in Building Construction.

Joint Sub-Committee of the Practice, Science and Town Planning, Housing and Slum Clearance Committees on the Ministry of Health Model By-laws.—Mr. A. H. Barnes (F.) in place of Mr. R. J. Angel (F.) as one of the representatives of the Science Committee. Professor S. D. Adshead (F.), Mr. Stanley Hamp (F.), and Mr. Basil R. Ward (A.) to represent the Town Planning, Housing and Slum Clearance Committee.

Air Raid Precautions Committee.—Mr. Walter Goodesmith (A.) and a representative of the Association of Architects, Surveyors and Technical Assistants.

Salaried Members' Committee.—Mr. S. E. T. Cusdin (A.) to represent the Junior Members' Committee.

Reinstatements.—The following ex-members were reinstated:—As Fellow: Mr. W. W. Scott-Moncrieff. As Associates: Messrs. P. E. Palmer and J. F. M. Watts. As Licentiate: Mr. W. Houlker.

Resignations.—The following resignations were accepted with regret:—Messrs. Frank Jamieson Forster (A.), Arthur Douglas Barron (L.), Charles Ernest Sadler (L.), Ernest Edward Douglas Smith (L.), James Ellwood (RET.L.).

Transfer to the Retired Members Class.—The following members were transferred to the Retired Members Class:—Messrs. William Henry Adams (F.), Raymond Bush (F.), Frederick Clark (F.), Charles Cressey (F.), John Bruce Merson (F.), Arthur Henry Ough (F.), James Augustus Souttar (F.), Edwin Summerhayes (F.), Sidney Walter Bensted (A.), Albert Edward Brooker (A.), Reginald Percy Chamberlain (A.), Frank John Toop (A.), Frederick George Beaumont (L.), Louis Alfred Blangy (L.), Merwanji Framji (L.), Septimus Charles Hanson (L.), James Caldwell Prestwich (L.), Charles Shirt Righton (L.).

SHREWSBURY TECHNICAL COLLEGE

DESIGNED BY A. G. CHANT (COUNTY ARCHITECT)

PROBLEM—*A technical, commercial and art college for Shrewsbury and district.*

SITE—*The site has a fine view towards the west, over the Abbey gardens and River Severn.*

CONSTRUCTION AND EXTERNAL FINISHES—*The basement is constructed in R.C., to form a waterproofed tank. The building is of brick, and R.C. floors. Lower parts of external walls are in local Grinshill stone, and otherwise are faced and hand-made sand-faced bricks. Partitions are also brick. The roof is covered with Roman tiles.*

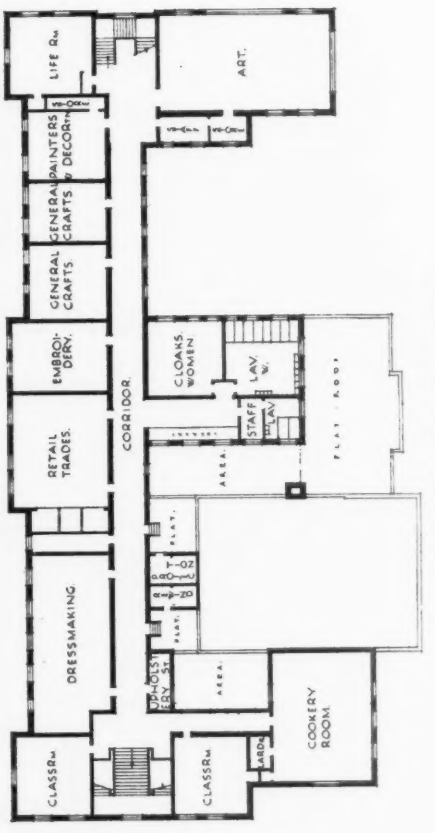
INTERNAL FINISHES—*The walls generally are plastered. Entrance hall, floor and staircases are finished in Roman Travertine marble. Main corridor floors and exhibition hall have been finished in cork, with Travertine borders and skirtings. Assembly hall is of teak strip, and basement teaching rooms have maple strip floors on wood joists.*

SERVICES—*Heating is by low-pressure hot water with accelerator pump. A small service lift is provided to serve the cookery room on the second floor.*

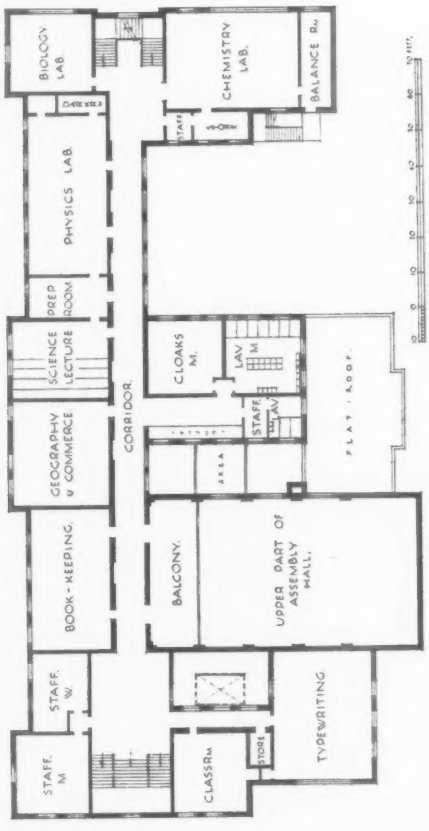
COST AND CONTRACT PRICE—*£52,200; price per cube foot 11d.; and price per cube foot for carcassing 11d.*

Above, the main entrance.

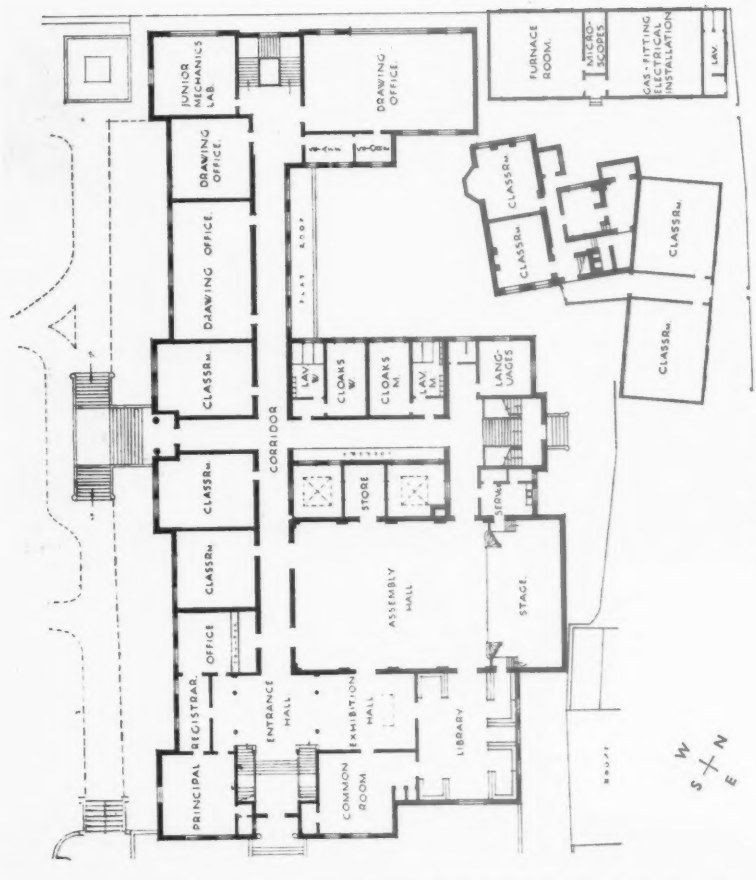
The general contractors were F. Crowder, Ltd.; for list of sub-contractors, see page 508.



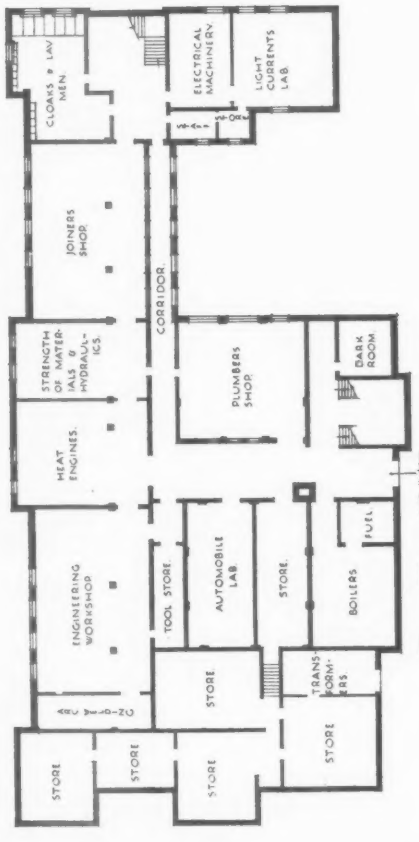
SECOND FLOOR PLAN



FIRST FLOOR PLAN



GROUND FLOOR PLAN



BASEMENT PLAN

Facing page : the main front from the River Severn.

SHREWSBURY TECHNICAL COLLEGE • BY A. G. CHANT

Facing page : the main front from the River Severn.

BASEMENT PLAN

SHREWSBURY TECHNICAL COLLEGE • BY A. G. CHANT

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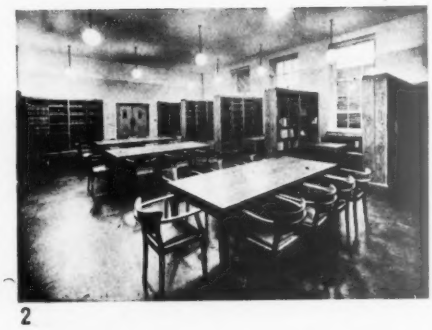

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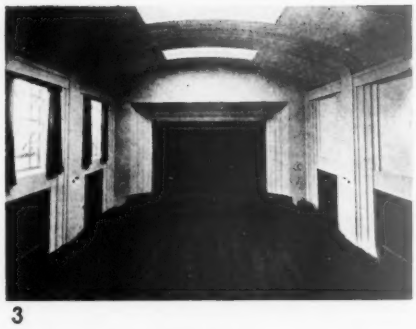

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4

1: The south front; 2: the library; 3: the assembly hall; 4: the exhibition hall.

Notes from the Building Research Station on*

DECORATING NEW PLASTER AND CEMENT

QUESTIONS about paint and its application have always been very numerous among the enquiries received at the Building Research Station. Evidently the subject is one involving many problems arising from the nature of the materials and their reaction one with another. As regards the technique of painting different types of building materials, each brings its own special problems; for example, wood requires different treatment from metal, and metal from plaster and cement. The two last-named materials have been under investigation at the Building Research Station for a number of years not only as regards the properties and use of the materials themselves but also their effect upon decorative coatings applied to them.

COLLABORATION WITH THE PAINT RESEARCH STATION

In matters concerning paint the Station has the benefit of close contact with the Paint Research Station, and in recent years the two organizations have collaborated in the policy of publishing practical information about the use of paint. As an instance, the Building Research Station has just contributed a bulletin† to a series which is being produced by the Paint Research Station. This bulletin first discusses the various factors which are liable to affect the decorations on new plastered surfaces and shows the causes of the various difficulties experienced in this class of work in practice. It then goes on to discuss individually the different types of plastering materials, pointing out the special characteristics of each which may affect decoration, and indicating the appropriate precautions which should be taken to minimize the risk of trouble.

EXAMPLES OF PAINT FAILURE ON PLASTER

To illustrate some of the difficulties encountered in practice, and to show the need which exists for a better understanding of plaster and paint and their effect upon one another, a few examples have been selected from the many problems which have been investigated :—

(1) *Discoloration and Blistering of Paint on Parian Cement.*

Trouble was reported with the interior decorations of a large private house. The external walls were of brick, in cavity construction, and the internal partitions were in 9-in. solid brickwork. The interior surfaces were rendered with Portland cement and finished with a skimming coat of Parian cement.

The plaster was primed with a "sharp" coat of white lead, gold size and turpentine immediately following the trowel, and the remaining coats (one transparent coat, three lead undercoats, scumble and glaze) were applied about two weeks later.

During the following year extensive dark discolorations appeared in several rooms; these stains were found to be due to fungus growth. Some of the rooms were re-decorated, an attempt being made to "hold back" the stains by applying a coat of styptic knotting to the affected area, but the discoloration re-appeared, and the paint also developed blisters.

At this stage, eighteen months after the building was completed, the Building Research Station was asked to inspect and advise. Four of the living rooms were affected, and it was noticed that the defects occurred almost entirely on partition walls. The defects were of three kinds: (*a*) black patches characteristic of mould growth, (*b*) wet blisters containing yellow liquid, (*c*) dry blisters containing hard granules. Even where no blistering had occurred, the paint was showing very poor adhesion, and could easily be stripped off; the plaster underneath was perceptibly damp.

All the defects were considered to be associated with the damp condition of the walls. Fungus growth, of course, is always indicative of dampness. The yellow liquid in (*b*) was actually a solution of soaps produced by attack of the oil in the paint by the combined action of alkalis and lime; the latter was presumably carried through the plaster finish from the Portland cement backing by the moisture in the brickwork and cement, for examination of the Parian plaster finish did not suggest that lime had been added. The hard granules in (*c*) consisted of salts which again had probably been carried through by moisture from the interior of the wall.

The defects were therefore of a complex nature, and an exact account of the way in which each occurred would be too long to include here. From the practical point of view, however, what is important is that water was the medium of all the reactions concerned. The whole trouble, therefore, was primarily due to the fact that the large amounts of water originally present in the massive brick partitions had been sealed in by applying several coats of impervious paint to both sides of the walls very early in the life of the building. Where the moisture had had a means of escape, i.e. by way of the cavity in the case of the external walls, comparatively little trouble

† *The Decoration of New Plaster and Cement.* By H. M. Llewellyn and H. J. Eldridge. Obtainable from the Paint Research Station, Teddington, price 1s., post free 1s. 2d. Remittance should be sent with order.

was experienced. It is worth noting that the plaster under the paint on the partitions was still quite damp after 18 months, although the house had always been well warmed and ventilated, showing how slow drying may be from paint-covered walls.

Here then was a case of a large and well built property where trouble had arisen solely through applying a particular style of decoration at too early a stage. Had the final decoration been delayed and a porous flat-oil paint or distemper been used in the first place, the walls would have been able to dry and a year later the final decoration could have been successfully applied.

(2) *Blistering of Paint on Keene's Cement.*

In an office building nearly 40 years old, one floor was converted into a suite of offices. Partitions were erected and plastered on both sides with Keene's cement. The plaster was primed and painted with oil paint about 10 days later, and these decorations remained perfectly satisfactory for three years.

Recently, the rooms were redecorated by applying two further coats of oil paint. Within a month, blistering of the paint occurred in one room only. This room was again decorated, but once more blistering occurred within a month and this time gradually extended.

The surface of the plaster where the blistering took place was found to be powdery. Samples of the paint film and of the powdery plaster were submitted to the Station for examination. Tests showed that the powdery layer contained oil, and this observation gave the key to a solution of the problem.

The presence of oil suggested that the primer originally used was not "sharp," but contained a fair proportion of oil. Numerous tests have established that if such a primer is applied to plasters of the Keene's type at an early stage in their life, the oil is liable to penetrate and interfere with the setting of the plaster, producing a weak surface layer, which thus makes a poor foundation for the paint coating.

A powdery layer is also sometimes produced on this type of plaster if the surface dries too rapidly—a defect known as "dry-out" of the plaster. In the present case the plastering was done in summer weather, and the work was left bare for ten days, so the conditions were such as could have given rise to "dry-out."

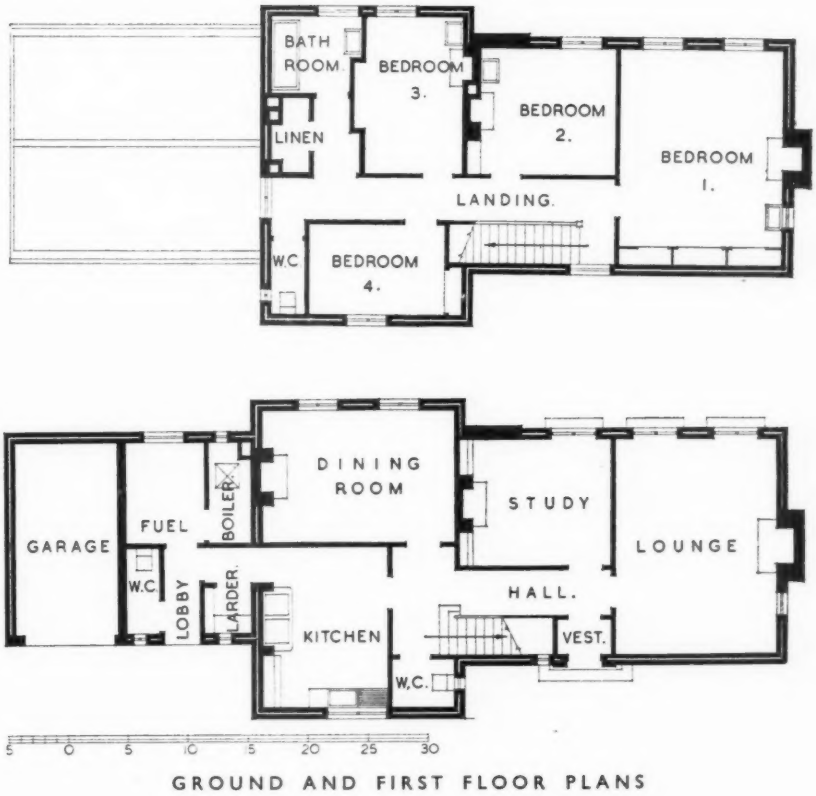
There were, therefore, two possible explanations of the powderiness of the plaster surface. Nevertheless, it happened that the state of the plaster was not so weak as to cause failure of the original decorations. The paint film, however, cannot have been adhering strongly to the surface, for the application of two further coats of paint at the time of redecoration was sufficient to break down the adhesion between the original coats and the plaster, with the result that the whole coating blistered and peeled.

This is a good example of a case where, as often happens, the cause of a failure is attributed (not unnaturally) to the material latest applied, whereas the true cause often has to be sought in the procedure adopted at an earlier stage.

Although the trouble actually developed in only one room of the suite, it seemed very probable that in the other rooms the paint was only just adhering, and that further painting might start trouble there also. It is likely, that in fact the margin of safety is often very narrow, and it can only be increased by a more intimate understanding of the requirements of each

HOUSE, NORTHAMPTON

BY SIR JOHN BROWN AND A. E. HENSON



GROUND AND FIRST FLOOR PLANS

PROBLEM—*A clergy house near Northampton.*

CONSTRUCTION AND FINISHES—*11-in. hollow walls with golden brown facing bricks, and stone tiles; floors are in Columbian pine. The staircase is oak, and the staircase hall is paved with stone slabs. Internal walls are generally plastered and distempered in various colours. Skirting and door frames are black.*

COST—*Approximately £2,700.*

The general contractors were Underwood and Weston; for list of sub-contractors, *see page 508.*

individual type of surface which has to be painted.

In the present case, for example, it was necessary to keep in mind factors which were liable to interfere with the setting and hardening of the Keene's cement ; for that would have pointed to the desirability of using a " sharp " primer and of taking precautions to avoid rapid drying in the early stages.

As regards remedial measures, it would obviously be useless to suggest any attempt at repainting without first removing the paint and the weak powdery plaster layer beneath it. If the powderiness were found to extend to any appreciable depth, it would be necessary to plaster the surface afresh.

(3) *Blistering of Plasterwork.*

In the case just described the plaster surface, and eventually the paintwork, became defective by reason of the particular procedure and materials adopted in the first painting operations. The following is an example of a failure which would probably have occurred in the circumstances no matter what paint was used.

The trouble occurred in a large single-storey room which was built between two wings of an existing private house in such a way as to leave a covered court between the new room and the old front of the main building ; there were thus two new walls, the front external wall which was built in 18-in. brickwork, and the back partition in 14-in. brickwork. The two side walls were formed by extending the existing walls of the wings.

Before plastering, the old stucco was hacked off the side walls. The whole of the walls of the room were then plastered with a cement-lime-sand undercoat, and finished with a skimming coat of a well-known proprietary wall plaster. In the covered court the new partition was similarly plastered except that the undercoat consisted of lime-sand mortar instead of cement and sand.

Shortly before the plastering was done there was a heavy thunderstorm during which parts of the walls became saturated with water, since the roofing and guttering had not at that time been completed. The plastering was done in hot, dry weather.

The plaster was primed, immediately after trowelling, with a thin wash of " sharp " primer. When, after three or four weeks, the time came to complete the decorations, the plaster was found to be soft and blistering in one or two places ; these were rubbed down and re-primed, and the whole was then given two undercoats of oil paint. Soon afterwards blistering was again seen in several places on the lower parts of the walls. The paint here showed poor adhesion and the plaster beneath it was soft and powdery, whereas in the upper portion it was harder and firmer with the paint adhering more strongly.

The defective areas were stripped and repainted after an interval of a week, and the whole was finished with graining colour and varnished. Blistering, however, soon appeared again, and became more extensive, but at no time was any trouble experienced in the court.

Although the failure was reported to the Station as blistering of the paintwork, it was apparent as soon as the work was inspected that it was really the plaster skimming coat which was swollen and soft, and in consequence of this, the paint coating necessarily became distorted and unsightly. The defects all occurred in places where the brickwork had become saturated with water during the storm, before it had been plastered.

The following is suggested as the explanation of the trouble :—

The plaster used for the skimming coat was one which, like the Keene's cement mentioned in Case 2 above, takes some time to complete its hardening process by combining with the required amount of water. When the skimming coat was applied, the weather was hot and dry, and consequently the water was removed from the plaster before the hardening process was complete—in other words, the plaster suffered a " dry-out." At the same time, the brickwork backing still contained a considerable quantity of water after the storm, especially of course, in the lower portions, but this water could not pass through to the plaster quickly enough to prevent " dry-out " because of the relatively impervious nature of the cement under-coating.

Later, however, when the loss of water by drying was stopped by the application of several coats of paint, moisture from the backing gradually made its way into the plaster, and the chemical process of hardening started once more.

If the hardening process with certain types of plaster is interrupted and resumed later, local swellings and other effects occur such as those seen in the present case and these can be reproduced in the laboratory. This " delayed expansion," as it is termed, thus takes place if water eventually finds its way into a plaster which is suffering from " dry-out." The expansion and buckling is gradual, and may continue over several months, and it is evident that the type of paint which happens to have been used makes little difference to the result.

The absence of any defects on the wall in the court is explained by the fact that the plaster undercoat used here (coarse stuff instead of cement and sand) was more porous and the water was thus able to pass up to the plaster surface quickly enough to prevent " dry-out."

Although the plaster in question was one which is widely used, it very seldom suffers from troubles such as those described and there is little doubt that in the present case no difficulty would have been experienced but for the fact that the walls became soaked. If the danger introduced by this fact had been realized at the time, the proper course would have been to allow the brickwork to dry before plastering, and it would also have been advisable to guard against the plaster drying too rapidly during hot weather.

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The chief object in describing these three cases has been to show briefly some of the ways in which troubles can arise in practice. The recently published bulletin discusses in detail these and other sources of difficulty, under the following headings :—

(*a*) The chemical action of plasters on paints.
(*b*) Loss of adhesion.
(*c*) Efflorescence.
(*d*) Defects in the plaster.
(*e*) The growth of moulds.

The bulletin describes the practical means of combating these various factors and shows, in the case of individual plastering materials, which of the factors is most likely to be operative.

It is hoped that the bulletin will be of assistance not only to the decorator, but to all others concerned in producing a satisfactory job, for it will be apparent, on reading the information given, that the best results can only be achieved by the fullest possible co-operation between all parties concerned.

LAW REPORT

PROPOSED ALTERATION TO PREMISES

Rex v. *Weston-super-Mare Licensing Justices—ex parte Powell. Court of Appeal. Before Lords Justices Slesser, Clauson and du Parcq*

THIS was an appeal from a King's Bench Divisional Court, consisting of the Lord Chief Justice and Justices Charles and Macnaghten, discharging a *rule nisi* granted at the instance of Mr. W. H. Powell, the licensee of the Three Queens Hotel, Weston-super-Mare, calling upon the licensing justices for that Petty Sessional Division to show cause why a writ of mandamus should not issue directing them to hold a transfer sessions meeting to hear and determine an application by Mr. Powell for the approval of the justices to certain alterations at the hotel. The application was made to the justices under section 71 of the Licensing (Consolidation) Act, 1910.

The grounds of the rule were that the justices had refused to hear and determine the application made to them according to law.

It appeared that plans for the proposed alterations were duly deposited with the justices' clerk, for the incorporation of certain adjoining premises, which had hitherto been separate from the licensed premises, and an enlargement of the existing saloon bar.

The justices came to the conclusion that the contemplated alterations would not destroy the identity of the premises as already existing and that the alterations were desirable and necessary. But in view of the decision in *Rex* v. *Southampton Justices*, they held they had no power to grant the application, as the bulk of the alterations were to premises not already licensed. The alterations, so far as they related to the premises already licensed, would be approved.

The Divisional Court held that the words " an alteration in any licensed premises," in the section of the Act in question, meant what they said, viz., an alteration in licensed premises, and not an alteration in licensed premises accompanied by alterations in premises not licensed, and that the scheme included alterations relating to property outside the licensed premises and that the scheme for the existing licensed premises contemplated increased facilities for business purposes. The Court therefore discharged the rule and it was from that decision that Mr. Powell now appealed.

After long legal argument the Court reversed that decision and allowed the appeal and made the rule absolute.

Lord Justice Slesser, in giving judgment, said the sole question for consideration was whether in the circumstances the words " alteration in the premises " were to be construed so narrowly as to limit the consideration by the justices to internal alterations in the existing physical premises, or whether they were to be given the more liberal construction that an alteration might be sanctioned, which if the alteration were made would yet bring the premises so altered within the ambit covered by the licence.

In his lordship's opinion, the latter construction was correct. The word " in " in the words " in the premises " should be construed to extend to alterations not only inside the physical premises before the time of the proposed alteration, but also to alterations of the premises as they would be when altered.

His lordship then reviewed the case of *Rex* v. *Southampton Justices*, where the additions sought to connect with the main structure a separate villa adjoining the hotel, and said the justices and the Divisional Court appeared to follow that case. But in his view that case and the facts of the present case were sufficient to distinguish the two cases.

In his lordship's opinion, it was competent for the justices to give their consent to an alteration in the physical premises in question once they had come to the conclusion that the proposed alteration, on being made, would bring the altered premises within the ambit of the licence. The appeal would be allowed.

The Lords Justices concurred.

Corporations Should Build New Towns

An invitation to great building firms and great municipalities to carry out a scheme of decentralization of population by directly undertaking the creation of new planned towns, was extended by Mr. F. J. Osborn, the hon. secretary of the Garden Cities and Town Planning Association, at a conference recently held at Trinity College, Cambridge. The conference was held by the Garden Cities and Town Planning Association in conjunction with the Cambridge Research Branch of the Council for the Preservation of Rural England.

In the course of his speech, Mr. Osborn demonstrated that if a municipality created a town of 50,000 people on a site of 7,500 acres, of which 2,500 only would be building land, at a cost of 8½ million pounds, the municipality, as landowners alone, would make a handsome annual surplus. At the moment, when people are rehoused in central tenement schemes, there is an annual loss to the Exchequer and the local rates of a quarter of a million a year for forty years.

South Wales Institute of Architects

At the annual general meeting of the Central Branch of the South Wales Institute of Architects, on March 9, at the Park Hotel, Park Place, Cardiff, the hon. treasurer's report and balance sheet showing the healthy financial condition of the Branch were read and confirmed.

The Election of Officers and Executive Committee

The following were elected for the year commencing July 1 :—

Chairman : Mr. John W. Bishop, A.R.I.B.A.

Hon. Treasurer : Mr. Harry Teather, F.R.I.B.A.

Hon. Secretary : Mr. W. S. Purchon, M.A., F.R.I.B.A.

Executive Committee : Mr. C. F. Jones, A.R.I.B.A.; Mr. Ivor Jones, A.R.I.B.A. ; Mr. Gordon L. Griffiths, L.R.I.B.A., A.M.T.P.I. ; Mr. T. Alwyn Lloyd, J.P., F.R.I.B.A., PP.T.P.I. ; Mr. L. R. Gower, A.R.I.B.A.

Members of Council : The following were elected as the representatives of the Branch on the Council of the South Wales Institute of Architects : Mr. E. Attree, L.R.I.B.A. ; Mr. John W. Bishop, A.R.I.B.A. ; Mr. E. A. E. Evans, A.R.I.B.A. ; Mr. L. R. Gower, A.R.I.B.A. ; Mr. Gordon L. Griffiths, L.R.I.B.A., A.M.T.P.I. ; Mr. J. A. Hallam, M.T.P.I. ; Mr. L. R. Harries, L.R.I.B.A. ; Mr. A. J. Hayas ; Mr. T. Alwyn Lloyd, J.P., F.R.I.B.A., PP.T.P.I. ; Mr. W. S. Purchon, M.A., F.R.I.B.A. ; Mr. F. W. Roberts, L.R.I.B.A. ; Mr. C. Rosser, A.R.I.B.A. ; Mr. Percy Thomas, O.B.E., LL.D., PP.R.I.B.A. ; Mr. Howard Williams, A.R.I.B.A. ; Mr. J. Williamson, A.R.I.B.A. Representatives of Associates and Students : T. D. Gedrych and R. L. Jenkins.

TRADE NOTES

[*By PHILIP SCHOLBERG*]

Stainless Steel Lavatory Basins

THE advantages of the stainless steel sink, which are, essentially, ease of cleaning and freedom from chipping, are within limits of reasonable importance in the ordinary lavatory basin. Benham and Sons have recently introduced a stainless steel lavatory basin which is illustrated at the head of these notes. It is pressed out of one piece of 20-gauge " Staybrite " and has a dull polish inside. The overall sizes are 22 in. by 16½ in., and the price is 6 guineas, which seems quite enough for a lavatory basin, although it is certainly less than some of the more extravagant pedestal types.

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Whether stainless steel is a suitable material for a lavatory basin or not, I do not know. Some people may like it, possibly for its novelty value, but so much propaganda is being done nowadays for baths and lavatory basins in what manufacturers will insist on calling pastel shades that this basin may be a little difficult to fit into a private bathroom unless there is a stainless steel bath and w.c. as well, but you can at least have stainless steel tiles on the wall to complete the scheme and enable you to shave more or less anywhere.

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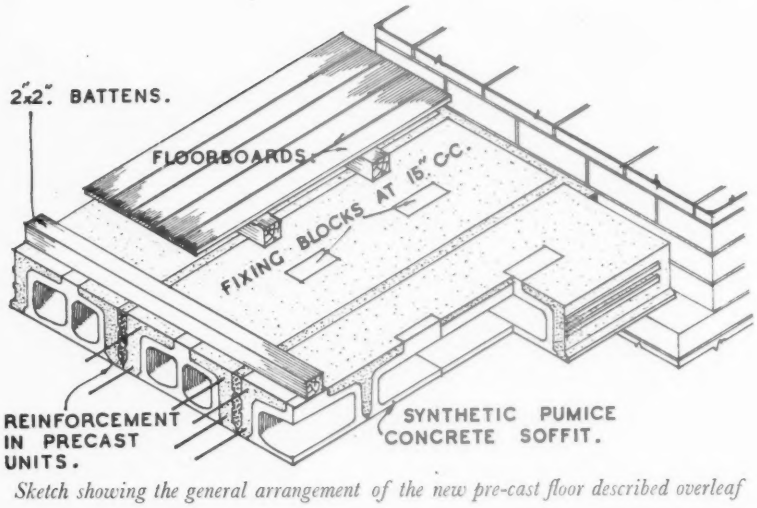
It seems possible, however, that this fitting may be useful in hospitals, for its complete freedom from chipping means that there can never be any of the unsanitary cracks and crevices which the ordinary basin may produce.—(*Benham and Sons, Ltd., 66 Wigmore Street, London, W.1.*)

Sealing Fireplace Openings

In the Home Office recommendations for the gas-proofing of rooms in private houses, it is pointed out that the fireplace opening must in some way be made airtight, and I have just come across a small device which seems to do this in quite a sensible way. The ordinary fireplace opening has a narrow metal frame permanently built into it, the other half of the fitting consisting of a flat sheet metal screen which can be fitted in a few moments without any complicated tools. The standard width is 16 in., and the finishes vary from black to stainless ; the price is 1 guinea. Just how important gas-proofing will be during air raids is a question which can better be decided by the Home Office, but this little fitting seems to me to be not only useful for the specialized purpose of gas-proofing but quite handy if peace lasts for a few more months. In summer the plate can be used to fill up the opening and stop soot from falling down into the hearth, and it also gives a respectable looking finish and will avoid the ferns in pots or crinkly paper which many people seem to think the proper furniture for an empty fireplace. During the winter the cover plate can also be used temporarily for drawing up a sluggish fire, and there will be no need to fiddle about with sheets of newspaper, realizing that two hands are not enough and that the whole thing is going to burst into flames any minute.—(*A. Spinoy & Co., Ltd., 6 Archway Central Hall, St. John's Road, Highgate London, N.19.*)

A New Pre-cast Floor

Britannia Floor and Construction Co., an associate of Stent Pre-Cast Concrete, Ltd., have just issued particulars of a new method of reinforced concrete for construction. In this floor pre-cast reinforced concrete beams are used, grouted together in the ordinary way, the special feature of the floor being the hollow tiles, which are made of volcanic pumice. These hollow tiles are bonded by a special process which gives them considerable strength, though it is still quite easy to knock a hole with a screwdriver in the underside for fixing light points or other necessary fittings. Pumice as a material has a low coefficient of thermal transmission, is light in weight, and gives a very good key for ceiling plaster. The sketch on page 508 shows the general arrangement of the Type A floor, and it will be seen that the pumice blocks are exposed at 15-in. centres each way, and in effect become small fixing blocks to which floor battens can be easily nailed. This type of floor is made in four different thicknesses, 5 in., 6 in., 7 in., and 8 in., and is suitable for almost any type of floor or ceiling finish. This firm also produces a Type B heavy-duty floor for garages and warehouses, but in this type the pumice blocks are omitted and the floor is a simple pre-cast beam. It may be used where a flat soffit is not needed, or



Sketch showing the general arrangement of the new pre-cast floor described overleaf

where it is intended to use a suspended ceiling.—(*The Britannia Floor and Construction Co., 2 Central Buildings, Westminster, London, S.W.1.*)

The Decoration of New Plaster and Cement

Painting and decorating on newly plastered surfaces is always a problem, not only for the architect but also for the builder. Not very many jobs keep up to estimated progress schedules, the plaster has not enough time to dry out properly, and wall finishes are applied in a hurry because the building is needed for immediate use and only a very few clients can be persuaded that a coat of distemper is better for the first six months or so until the walls have dried out properly and the final finish can be safely applied. There is also the fact that many plaster materials, owing to their alkaline nature, have a destructive action on paints and distempers, and even if this chemical action is absent, there remains the possibility of mechanical damage to the finish by salts deposited at the surface of the plaster during the drying process. The latest publication* of the Council of the Research Association of British Paint and Varnish Manufacturers deals with these problems and draws attention to the various defects which may be observed and suggests ways in which they may be prevented. This publication has been written by the Building Research Station and starts off with a simple statement of first principles such as the quantity of water in newly-built walls, the composition of different types of distemper and flat oil paints, and then deals with such factors as chemical action, loss of adhesion, efflorescence, defects in the plaster itself, and the growth of moulds. Finally, there are notes on the method of dealing with different types of plaster and cement, with fairly elaborate instructions for dealing with the different sub-divisions of the calcium sulphate plaster group. This information is exactly the sort of thing which the architect needs, though there still remains the difficulty that so many plasters are marketed under rather meaningless trade names, and there is no means of telling the group to which a particular brand belongs, nor is there any guarantee that the manufacturers will not change the composition of their plaster slightly and continue to market it under the same name. This difficulty, however, may be overcome by using the Building Research Station's booklet on calcium-sulphate plasters which was reviewed in these notes on November 10 last year. In this nearly all the current trade names are classified according to their composition.

Laundry Machinery

Since only last week one of His Majesty's Judges produced some fairly typical judicial humour on the things that laundries can do to buttons and shirts, it would be invidious for me to make any comments on the same lines. I have, however, been looking with considerable interest through a series of catalogues from D. and J. Tullis, who make laundry machinery of all kinds. Most people, I suppose, have rather vague ideas about the sort of machines which laundries use, but I had no idea that there was such a variety of machines for different specialized purposes. There are presses for dealing with the collars and cuffs of shirts on one frame, stands like rhinoceros's horns for sleeves, and I find also an enormous six-roll ironing machine which looks like a rotary press for a mammoth-circulation daily. Messrs. Tullis have, I gather, been making laundry machinery since 1891, and employ about 500 men. It may be assumed that not very many architects are asked to build laundries, but there are many buildings such as hospitals and large institutions which do their own laundry work, and it is obvious that some machinery of the smaller kind will be necessary here. The firm makes washing machines specially for hospital use, and these catalogues are worth looking at if only to discover what elaborate machinery is used in an industry which is much maligned and which nobody bothers about very much except for complaints.—(*D. and J. Tullis, Ltd., Clydebank, Scotland, and Sussex Place, Hammersmith Broadway, London, W.6.*)

Maintenance Scholarships in Architecture

The Architects' Registration Council of the United Kingdom offer for award in June, 1939, certain Maintenance Scholarships in Architecture. The scholarships will consist of a grant for the payment, in whole or in part, of the school fees and necessary subscriptions, instruments, books, etc., and, when necessary, a maintenance allowance not to exceed as a rule £100 a year. The scholarships will be renewable from year to year until the student has finished his or her school training. They will be available for students of British nationality who could not otherwise afford such training to enable them to attend architectural schools approved by the Council. The scholarships will be available both for students who have already begun their training and for students wishing to begin their training. They would not normally be granted to students under 17 years of age. Particulars and forms of application may be obtained from the Secretary to the Board of Architectural Education, Architects' Registration Council of the United Kingdom, 68 Portland Place, London, W.1. The closing date for the receipt of applications, duly completed, is March 25, 1939.

**The Decoration of New Plaster and Cement.* By H. M. Llewellyn and H. J. Eldridge. The Paint Research Station, Waldegrave Road, Teddington, Middlesex. Price 1s.

THE BUILDINGS ILLUSTRATED

FIONA HOUSE, W.C. (pages 483-487) Architects: Marshall and Tweedy. Assistant, S. F. Burley. General contractors: Kirk and Kirk, Ltd., who were also responsible for the excavation, dampcourses, partitions, glass, fireproof doors, joinery, and pine wood. Subcontractors and suppliers included: Flooring Contracts, Ltd., foundations and reinforced concrete; R. Y. Ames, Ltd., bricks; D. G. Somerville Ltd., Durus stone; Hollis Bros. & Co., Ltd., gurjun and oak; Matthew Hall, Ltd., central heating; Berkeley Electrical Engineering Co., Ltd., electric wiring; Figg & Co., Ltd., stairtreads; Comyn, Ching & Co. (London), Ltd., door furniture; Williams and Williams, Ltd., casements and window furniture; Kingsmill Metal Co., Ltd., metalwork; Peerless Kitchen Cabinets, Ltd., Peerless built-in furniture; Dennison and Millais, Ltd., furniture; Marryatt and Scott, Ltd., lifts; Smith's English Clocks, Ltd., clocks.

SHREWSBURY TECHNICAL COLLEGE (pages 501–504). Architect, A. G. Chant, County Architect. General contractors: E. Crowder, Ltd. Sub-contractors and suppliers included: A. H. Barker and Partners, electrical work; Rashleigh Phipps & Co., Ltd., electrical contractors; T. S. Elder, responsible for carrying out the heating and hot-water engineering works; Midland Educational Co., Ltd., general furniture; W. and J. George, Ltd., laboratory furniture; Trussed Concrete Steel Co., Ltd., reinforced concrete; Thomas Greenwood and Sons, bricks (commons); Blockleys, Ltd., facing bricks; Lilleshall Co., Ltd., glazed bricks; Grinshill Quarries, Ltd., Stanton and Bettany, Ltd., Geo. Armitage and Sons, Ltd., and Empire Stone Co., Ltd., stonework; Henry Hope and Sons, Ltd., metal windows; W. H. Smith & Co. (Whitchurch), Ltd., structural steelwork; Roberts, Adlard & Co., Ltd., roofing; Engert and Rolfe, Ltd., asphalt; Robinson & Co., turret clock; Shrewsbury Gas Light Co., gas installation; Leeds Fireclay Co., Ltd., Building Material Supply Stores, Ltd., and J. and R. Howie, Ltd., sanitary fittings; J. Gerrard and Sons, Ltd., wood block floors; H. and E. Davies, and J. M. Pearce, wrot ironwork; E. Davies, metal ducts; J. and E. Hall, Ltd., hand lift; Cork Insulation Co., Ltd., cork flooring; Craven, Dunnill & Co., Ltd., floor tiles; J. and H. Patteson, Ltd., travertine marble pavings; Lockerbie and Wilkinson, Ltd., cloakroom fittings; Honeywill and Stein, Ltd., acoustic tiles; S. Dixon and Son, Ltd., fire appliances.

CLERGY HOUSE, YARDLEY GOBION, NORTHAMPTON (page 505). General contractors: Underwood and Weston, who were also responsible for the joinery. Subcontractors and suppliers included: "Ibstock Facing Brick," Excelsior Patent Stone Co., Ltd., artificial stone; Stamford Stone tiles; D. Anderson and Son, Ltd., "Sandor" roofing felt; Seaton and Peet, central heating; Northampton Tile and Fireplace Co., Ltd., grates; E. Goldstone, Ltd., electric wiring; Dent and Hellyer, sanitary fittings; J. W. Martin, door furniture; Hope and Son, Ltd., casements; Mathews Bros., metalwork; Excelsior Patent Stone Co., Ltd., floor tiles.

IN PARLIAMENT

LIEUTENANT-COMMANDER FLETCHER asked the Secretary of State for Air on what grounds qualified architects who were Grade II or III assistants in the Air Ministry Directorate of Works, were graded as sergeants if detailed for service abroad;

and what representations concerning this had been received from professional bodies concerned.

Sir K. Wood said that no instructions had been issued for Grade II or Grade III architectural assistants in the Directorate of Works to be graded as sergeants if detailed for service abroad. He was unable to trace any representations on this matter from professional bodies.

Lieutenant-Commander Fletcher asked the Secretary of State for Air on what date the maximum salary for drawing-office staff in the Air Ministry Directorate of Works was raised from £350 to £450 per annum ; if any members of the staff recruited prior to that date were still on the old rate ; what complaints had been received on this score ; and if it was proposed that a promotion board should sit to consider the complaints and when.

Sir K. Wood said that there were three subordinate grades in the drawing-office of the Directorate of Works whose maximum salaries were raised at the end of 1936 from £277, £373 and £515 per annum respectively to £320, £420 and £550. There had at no time been a maximum salary of either £350 or £450 for this staff, but a number of officers were engaged on temporary appointments at fixed rates within this range. The promotion of officers with graded scales depended on the existence of vacancies in the grade above and the fitness of individuals for promotion. The promotions from Grade III to Grade II had now been made.

Sir T. Cook asked the First Commissioner of Works what would be the total cost of restoring Binham Priory, Norfolk ; and at what date it was hoped to complete the work.

Mr. Furness, who replied, said that the total cost of the work involved in the preservation of the remains of Binham Priory, Norfolk, was expected to amount to £5,750. The work would be completed by the end of the coming financial year.

Mr. Pilkington asked the First Commissioner of Works whether it would be possible to preserve the four successive river walls of the ancient Whitehall Palace in the new buildings to be constructed.

Mr. Furness said that it was hoped to be able to preserve the steps and river wall of Queen Mary's terrace. The other river walls referred to fell within the main walls of the new building, and it would be impossible to preserve them. They had, however, been fully recorded and photographed.

Mr. Sorensen asked the Minister of Transport whether, in the sanctioning, planning, or reconstructing of highways, he accepted as a primary necessity the preservation of places and buildings of æsthetic and antiquarian value ; whether he was aware that some of these had been unnecessarily endangered, injured, or destroyed ; and whether he would make a statement respecting the disputes over Old Oxted and the Devil's Punch Bowl.

Mr. Burgin said every care was taken to safeguard existing amenities and to preserve buildings of antiquarian value. He was not aware of the circumstances mentioned in the second part of the question nor of any dispute on æsthetic and antiquarian grounds at Old Oxted. His officers were at present negotiating with the National Trust in connection with land required at the Devil's Punch Bowl for the widening of a section of the London-Portsmouth Trunk Road.

Dr. Summerskill asked the Minister of Health whether, in view of the recent report on tuberculosis in Wales and the revelation of the low standard of housing, he would take steps to make the appropriate county authorities take over the duties of the defaulting boroughs and submit a rehousing scheme for families living in overcrowded conditions.

Mr. Elliot said that he was not yet in a position to make any statement on the recommendations contained in this report. As the hon. member would realize, the report covered a great deal of ground and was at present under consideration.

In answer to supplementary questions, Mr. Elliot said that in certain respects the report drew attention to the work of local authorities, and it was desirable that the authorities whose actions had been questioned should have an opportunity of making representations. He had already directed his personal attention to certain matters. The rural housing conditions in Wales were the subject of a good deal of attention and last summer he went round to the local authorities himself and held special conferences and drew attention to the exceptionally favourable terms now offered in connection with rural housing. He had made repeated representations to the local authorities in certain matters. In the first place he was asking the Welsh Board of Health and local authorities in Wales for their observations. Meanwhile, he was sure the House would like him to express the gratitude of the Government to the members of the committee who had devoted so much time and attention to the investigation of these questions and had produced so striking a report.

Bicycle stand at the Anti-Aircraft Quarters, Surrey. This type of stand is claimed by the manufacturers (Alfred Odoni & Co.) to be the only horizontal stand on the market providing channels for the whole bicycle with 12 in. centres, and is said to eliminate all lifting of the machines either for parking or removal.

BUILDING NEWS

LONDON

BETHNAL GREEN. *Flats.* The L.C.C. is to erect flats on the Squirries Street areas, Bethnal Green, at a cost of £188,000.

FINCHLEY. *Houses, etc.* Plans passed by the Corporation : Four flats and two houses, Edmunds Walk, Mr. L. W. Myers ; 123 flats, junction North Circular Road and Falloden Way, G. Reed Estates (London), Ltd. ; eight flats, Church Lane, A. J. Hooper and Sons, Ltd. ; 20 flats, Gordon Road, Berney and Marks ; 12 flats, Friern Park, C. F. Day, Ltd. ; main entrance hall and tower, Finchley Catholic Grammar School, Woodside Lane, Rev. Clement H. Parsons ; house, Fairholme Gardens, Mr. P. J. Preston ; house, Church Mount, Mr. S. A. Kaufmann ; house, adjoining 29 Etchingham Park Road, Mr. S. L. Giraud ; six houses, 21-26 Dorchester Gardens, G. Reed and Sons, Ltd.

LEWISHAM. *Flats, etc.* Plans passed by the B.C. : Two-storey block of flats, rear of 68-70 Burnt Ash Hill, Lee, Mr. H. F. Ball ; flats, 96-98 Newlands Park, Sydenham, Mr. G. Eaglen ; 18 houses, Wells Nursery, Wells Park Road, Sydenham, Mr. H. F. Thoburn ; two houses, 33 Mayow Road, Sydenham, Mr. R. G. Covell ; swimming bath, St. Dunstan's College, Stanstead Road, Catford, Mr. W. Granger ; maisonettes, Wells Park Road, Sydenham, Cooper Estates, Ltd. ; extensions, Optical Works, Ashgrove Road, Bromley, Wray, Ltd. ; five blocks of flats, Sparta Street Clearance Area, Mr. E. W. Armstrong ; shops with flats over, junction of Randlesdown Road and Brookehowse Road, Catford, Varley Estates, Ltd. ; houses, " The Elms," 18 Sydenham Hill, Domewood Lake Estates, Ltd. ; flats, 97-99 Perry Vale, Forest Hill, Mr. R. Carroll ; two shops and flats over, adjoining 14 Randlesdown Road, Bellingham, C. Dixon & Co.

MALDEN. *School.* The Surrey Education Committee has approved plans for the provision of a junior mixed and infants' school at Green Lane, Malden.

SOUTHWARK. *Alterations, etc.* Plans passed by the B.C. : Alterations and extensions, 76 Gravel Lane, T. G. Ryall and Son ; rebuilding, Royal Eye Hospital, St. George's Circus, Young and Hall ; additional storey to factory, 195-203 Waterloo Road, H. V. Ashley and Winton Newman.

PROVINCES

STOKE-ON-TRENT. *Houses, etc.* Plans passed by the Corporation : Two houses, Kingsfield Oval, for Mr. F. C. Gibson ; 16 houses, Pool Street, Fenton, for Mr. G. H. Wignall ; 88 houses, off Daisy Place, Heron Cross, for Messrs. P. Bailey & Co., Ltd. ; eight houses, Hollybush Farm Estate, Heron Cross, for Mr. J. Turnock ; alterations and additions, Longton Cottage Hospital, Belgrave Road, for governors ; alterations and additions, Portland Works, Longton, for Messrs. J. Aynsley and Sons, Ltd. ; seven houses, off Lower Spring Road, for Messrs. Higginson and Cope ; shop, Stansmore Road, for Burslem Co-op. Society ; 18 flats, Uttoxeter Road, Meir, for Modern Architectural Estates, Ltd.

WEYMOUTH. *Municipal Offices.* The Corporation has appointed a special committee to consider the provision of new municipal offices.

WIGAN. *Baths.* The Corporation is to erect new baths and provide gymnasium equipment and Russian vapour baths at the central establishment.

Copies of the loose supplement containing the labour rates for the principal towns and districts throughout the country can be obtained from the JOURNAL, price 2d. to cover postage.

PRICES

The complete series of prices consists of four sections, one section being published each week in the following order :—

1. Current Market Prices of Materials, Part I. (published last week)
2. Current Market Prices of Materials, Part II.
3. Current Prices for Measured Work, Part I.
4. A. — Current Prices for Measured Work, Part II.
   B — Prices for Approximate Estimates.

IMMEDIATELY below, Messrs. Davis and Belfield mention the principal changes which have occurred in the last month. Similar notes, and the deductions that may be drawn from them, will be published on this page each month.

NOTES ON PRICE CHANGES

Prices generally remain at about the same level. Such changes as have occurred are marked as indicated below.

O. A. DAVIS, F.S.I.

PART 2

Prices vary according to quality and quantity ordered.

Those given below are average market prices and include delivery in the London area, except where otherwise stated, but do not include overhead charges and profit.

CURRENT MARKET PRICES OF MATERIALS

BY DAVIS AND BELFIELD

JOINER

Prices are for standards in one delivery; when less than a standard is required, or special lengths, add £1 per standard

Joinery Timber

				Per standard £ s. d.	Per foot cube s. d.
3″×9″	Scantling	2nd	Archangel	42 0 0	5 1¼
3″×9″	,,	3rd	,, ...	28 10 0	3 5½
2″×9″	,,	2nd	,, ...	47 10 0	5 9½
2″×9″	,,	3rd	,, ...	28 10 0	3 5½
● 3″×8″	,,	2nd	,, ...	35 0 0	4 3
● 3″×8″	,,	3rd	,, ...	24 0 0	2 11
● 2″×8″	,,	2nd	,, ...	38 0 0	4 7½
● 2″×8″	,,	3rd	,, ...	24 0 0	2 11
● 3″×7″	,,	2nd	,, ...	34 10 0	4 2¼
● 3″×7″	,,	3rd	,, ...	23 10 0	2 10¼
● 2″×7″	,,	2nd	,, ...	37 0 0	4 6
● 2″×7″	,,	3rd	,, ...	23 0 0	2 9½
2″×6″	,,	u/s	,, ...	22 0 0	2 8
1¼″×11″	,,	3rd	,, ...	38 10 0	4 8
1¼″×9″	,,	u/s	,, ...	34 10 0	4 2¼
1″×9″	,,	2nd	,, ...	47 10 0	5 9½
1″×9″	,,	3rd	,, ...	35 0 0	4 3
1″×11″	,,	2nd	,, ...	50 0 0	6 0¾
1″×11″	,,	3rd	,, ...	39 10 0	4 9½
1¼″×9″	,,	2nd	,, ...	47 10 0	5 9½
1¼″×9″	,,	3rd	,, ...	35 10 0	4 3½
1¼″×11″	,,	2nd	,, ...	50 0 0	6 0¾
1¼″×11″	,,	3rd	,, ...	41 0 0	4 11¾

JOINER—(*continued*)

Flooring

		⅞″	1″	1¼″
Yellow deal, plain edge in batten widths ..	per square	19/9	22/6	27/6
Ditto, T. & G.	per square	20/3	23/–	28/–
Ditto, T. & G. narrow widths	per square		21/6	28/–
T. & G rift sawn B.C. pine in 4″ widths ..	per square		30/–	42/6
T. & G. random grain in 4″ widths	per square		18/6	

Wall Linings

Deal Match Boarding :—

1″ × 6″ T.G.B.	per square	24/–
1″ × 4½″ T.G.V.	per square	23/6
⅝″ × 6″ T.G.B.	per square	18/–
⅝″ × 4½″ T.G.V.	per square	17/–
½″ × 6″ T.G.B.	per square	14/9
½″ × 4½″ T.G.V.	per square	13/9
½″ × 4½″ T.G.V.	per square	11/3

Asbestos-Cement :—

● 5/32″ Semi-compressed flat building sheets, grey	per yard super	1/5¾
● 3/16″ Ditto	per yard super	1/6½
● ¼″ Ditto	per yard super	2 2½
● ¼″ Metal reinforced flat building sheets	per yard super	3/8½

Prices are for orders of less than 1 ton and are subject to 5% trade discount.

● **Items marked thus have risen since February 23.**

CURRENT PRICES

BY DAVIS AND BELFIELD

JOINER AND STEEL AND IRONWORKER

JOINER—(*continued*)

Wall Boards :—

Asbestos-cement wall board (in sheets 8′ 0″ × 4′ 0″ only) under 5,000 feet super	per foot super	–/2¾

The following prices are subject to 10 per cent. trade discount :—

*Asbestos-cement stipple glazed sheets (in sheets 8′ 0″ × 4′ 0″ only)	per yard super	6/6
Ditto, plain white glazed sheets (in sheets 8′ 0″ × 4′ 0″ only)	per yard super	8/6
*Marble glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″)	per yard super	7/–

	300 yards	300–1,000 yards	1,000–2,000 yards	Over 2,000 yards
¼″ Fibre board	2/–	1/10½	1/9	1/7

	25-75 yards	150–300 yards	Over 600 yards
¾″ Fireproof plaster board (per yard super)	2/2	1/10	1/6
¼″ Ditto (per yard super)	2/–	1/8	1/4

Joint tape (approx. 250 feet run)	per roll	1/6
Joint filler	per lb.	–/4

Plywoods :—

	4 m/m	5 m/m	6 m/m	9 m/m	15 m/m
Birch (A) per square	18/9	23/6	—	37/–	—
„ (B) per square	15/6	—	21/–	30/6	43/–
Japanese figured oak (A.A.) per square	33/6	—	39/3	65/–	—
Austrian oak, figured one side, plain oak reverse (A.A.) per square	—	—	86/3	92/6	—
Australian walnut, finely figured one side (boards 72″ × 36″) per square			⅛″ 67/6	¼″ 85/–	
Sycamore, figured one side (ditto) per square			75/–	85/–	
Honduras mahogany, figured one side (ditto) per square			75/–	—	
Honduras mahogany, finely figured (boards 84″ × 36″) per square			125/–	—	

Prices are for complete bundles.

Blockboards :—

Alder :—

Thickness		Boards 60″ × 183″	Boards 72″ × 183″
½″	per square	59/3	59/3
⅝″	per square	66/3	66/3
¾″	per square	72/6	72/6
⅞″	per square	79/–	79/–
1″	per square	85/6	85/6
1¼″	per square	99/6	99/6
1½″	per square	114/6	114/6
1¾″	per square	128/–	128/–

Birch :—

Thickness		Boards 60″ × 84″ & 54″ × 72″	Boards 60″ × 140″
½″	per square	43/9	47/3
⅝″	per square	50/–	54/–
¾″	per square	55/3	59/6
⅞″	per square	60/–	64/–
1″	per square	67/6	72/3

Prices are for complete bundles.

Hardwoods

Joinery Quality.

English oak	per foot cube	15/–
American oak (plain)	per foot cube	10/–
„ „ (quartered)	per foot cube	12/–
Australian Silky Oak (plain)	per foot cube	11/–
„ „ „ (quartered)	per foot cube	12/6
Walnut, European	per foot cube	18/–
Teak, Rangoon	per foot cube	15/–
„ African	per foot cube	12/–

JOINER—(*continued*)

Mahogany, Honduras	per foot cube	13/6
„ „ Cuban	per foot cube	18/–
American whitewood	per foot cube	9/–
Birch	per foot cube	8/–
Cedar (aromatic)	per foot cube	16/–
Japanese oak (plain)	per foot cube	10/–
„ „ (quartered)	per foot cube	12/–
Austrian oak (plain)	per foot cube	10/6
„ „ (quartered)	per foot cube	14/–

Sundries

Slaters or sarking felt	per yard run	–/6
Roofing felt	per yard run	–/8
Bituminous hair felt	per roll	33/–
All rolls 25 yards long by 32″ wide.		
Cork slabs, 1″ thick (3′ 0″ × 1′ 0″)	per foot super	–/4½
„ 2″ thick (3′ 0″ × 1′ 0″)	per foot super	–/8
Slagwool	per cwt. (approx.)	12/–
Building paper in rolls of 100 yards, 1-ply, 60″ wide (B.I.80 and L.G.I.80)	per roll	67/6
Ditto, 2-ply, 60″ wide (B.I.80)	per roll	135/–
Ditto, 2-ply, 60″ wide (B.I.20)	per roll	202/6
"Cabots" Quilt :—(Ex Works Twelve roll lots delivered carr. free.		
Double ply per roll 42/–	per half roll	23/6
All rolls 28 yards long by 36″ wide. Special terms for quantities.		
*Cut steel clasp nails, 1″ per cwt. 29/9	4″ per cwt.	20/9
* „ „ floor brads, 2″ „ 20/–	3″ per cwt.	19/6
*Bright oval wire nails 1″ „ 29/3	4″ per cwt.	21/3
Scotch glue	per cwt.	65/–

Floor Clips :—

		£ s. d.
One leg floor clip	per 1,000	8 8 0
2″ short leg floor clip	per 1,000	8 8 0
2″ Regular floor clip	per 1,000	8 15 0
3″ „ „	per 1,000	9 0 0
2″ Regular ceiling clip	per 1,000	8 15 0
Single leg ceiling clip (7½″)	per 1,000	10 10 0

Special terms for quantities.

STEEL AND IRONWORKER

Steelwork

		£ s. d.
Basis price for rolled steel joists sections 5″ × 3″ to 16″ × 6″, in 10 ft. to 50 ft. lengths	per ton	12 10 0
Extras on above for :—		
9″ × 7″ Section	per ton	0 5 0
4″ × 3″, 5″ × 2½″, 10″ × 8″, 12″ × 8″, 14″ × 8″ and 16″ × 8″ to 20″ × 7½″ sections inclusive	per ton	0 10 0
3″ × 1½″, 3″ × 3″, 4″ × 1¾″, 4½″ × 1¾″ and 24″ × 7½″ sections	per ton	1 0 0
Channels, angles and tees	per ton	13 10 0
Mild steel plates	per ton	13 10 0
Screw bolts	per ton	31 0 0

Fabricated Steelwork

		£ s. d.
Joists cut and fitted	per ton	16 10 0
Stanchions, ordinary sections with riveted caps and bases	per ton	20 0 0
Stanchions, compound	per ton	23 0 0
Plate girders	per ton	24 10 0
Framed roof trusses, 25′ 0″ span	per ton	25 0 0
„ „ „ 60′ 0″ span	per ton	23 0 0

These prices are approximate, and definite quotations should be obtained.

Prime Galvanized Corrugated Iron Sheets

(Ex London Stocks)

	10 cwt. lots £ s. d.	Less quantity £ s. d.
4 to 9 fts. 18 or 20 gauge, 8/3″ corrugations per ton	18 15 0	19 15 0
10 fts. 18 or 20 gauge, 8/3″ corrugations	19 5 0	20 5 0
4 to 9 fts. 22 or 24 gauge, 8/3″ corrugations per ton	19 5 0	20 5 0
10 fts. 22 or 24 gauge, 8/3″ corrugations	19 15 0	20 15 0
4 to 8 fts. 26 gauge, 8/3″ corrugations	20 10 0	21 10 0
9 fts. 26 gauge, 8/3″ corrugations	21 0 0	22 0 0
10 fts. 26 gauge, 8/3″ corrugations	21 10 0	22 0 0

*** Items marked thus have fallen since February 23**

CURRENT PRICES

BY DAVIS AND BELFIELD

PLASTERER, PLUMBER AND INTERNAL PLUMBER

PLASTERER

Plaster and Cement

		1-ton loads	5-ton loads	
Sirapite (coarse)	per ton	70/–	64/–	
„ (fine)	per ton	78/–	—	
Victorite No. 1	per ton	85/–	78/6	6-ton loads
„ No. 2 or non sweat	per ton	80/–	73/6	
Thistle (browning, haired and pink finish)	per ton	70/–	64/–	
Thistle (fine)	per ton	78/–	—	
Pink plaster	per ton	66/–	—	
White plaster	per ton	78/–	—	
Keene's pink	per ton	112/6	—	
Keene's white	per ton	117/6	—	
Super Carbo	per ton	—	47/6	4-ton loads
Carbo-setting	per ton	—	57/6	

		1 ton upwards £ s. d.
Cullamix No. 2 cream (rendering mixture)	per ton	5 10 0
„ No. 3 cream	„ „	per ton 5 10 0
Snowcrete mixture	„ „	per ton 5 5 0

Sundries

Sharp washed sand	per yard cube	8/–
Cow hair	per cwt.	40/–
Goat's hair	per cwt.	55/–
¾″ laths	per bundle	2/–
1″ laths	per bundle	2/4½
Expanded metal lathing, 9′ 0″ × 2′ 0″ ¾″ mesh × 26 gauge	per yard super	–/11
Lath nails (galvanized) 1¼″ × 14 gauge..	per cwt.	48/6
„ (bright wire) „ „ ..	per cwt.	27/–

		Less than 150 yds.	Less than 300 yds.	Over 300 yds.
¼″ Plaster board ..	per yard super	1/–	–/11	–/10
1¼″ Galvanized nails ..	..per lb.	–/5		
Scrim cloth in 100-yard rolls	per roll	2/3		

Wall Tiles

Commercial quality.

Ivory, white, etc., glazed 6″ × 6″ × ⅜″ ..	per yard super	9/9
Angle beads (1½″ wide)	per yard run	1/2⅜
„ „ (1″ „)	per yard run	–/10
Rounded edge tiles	per yard run	2/6½
Coloured enamelled bright glazed, 6″ × 6″ × ⅜″	per yard super	14/3
Angle beads (1½″ wide)	per yard run	1/4⅜
„ „ (1″ „)	per yard run	–/11½
Rounded edge tiles	per yard run	2/7
Eggshell gloss enamelled, 6″ × 6″ × ⅜″ ..	per yard super	15/–
Angle beads (1½″ wide)	per yard run	1/7½
„ „ (1″ „)	per yard run	1/0¾
Rounded edge tiles	per yard run	2/8½

PLUMBER

Lead

3½ lbs. and upwards milled sheet lead in quantities of 5 cwts. and upwards ..	per cwt.	22/6
Add if cut to sizes	per cwt.	3/–
Lead ternary alloy, No. 2 quality extra over sheet lead	per cwt.	7/–
Allowance for old lead delivered to merchant	per cwt.	13/–

Cast Iron Rainwater Goods (Painted or Unpainted)

The following prices for rainwater pipes and gutters are subject to 20 per cent. trade discount, and the prices of the fittings are subject to 5 per cent. and 20 per cent. trade discount.

Rainwater Pipes

		2″	2½″	3″	3½″	4″	4½″	5″	6″
Round pipes	per yard	2/8½	2/9¾	3/7¾	4/0¾	4/9½	6/1¾	7/2¼	9/2
Shorts, 2′ 0″, 3′ 0″ and 4′ 0″ extra	per yard	–/3¾	–/3¾	–/3¾	–/3¾	–/3¾	–/5	–/5	–/5
Bends.. ..	each	1/9	2/–	2/6	3/–	3/7	5/–	6/6	8/5
Offsets, 4½″ and 6″ projection ..	each	2/2	2/8	3/–	3/5	4/4	6/3	7/6	9/10
Offsets, 9″ projection	each	2/10	3/2	3/9	4/8	5/7	7/6	8/10	11/2
Branches, single	each	2/7	3/1	3/9	4/4	5/3	7/6	8/5	13/1
Shoes	each	1/6	1/9	2/–	2/8	3/–	4/4	5/5	7/6

PLUMBER—(*continued*)

Square and rectangular pipes.

3″ × 3″	per yard	6/9½
3½″ × 3½″	per yard	8/4
4″ × 2″ or 2½″	per yard	7/4¾
4″ × 3″	per yard	7/4¾
4″ × 4″	per yard	9/0¾
4½″ × 3″	per yard	8/5¼
5″ × 3″ or 3½″	per yard	9/7

Gutters

		3″	3½″	4″	4½″	5″	6″
Half round gutters	per yard	1/9¼	2/1	2/1	2/2¼	2/4¾	3/7¾
Shorts 2′ 0″, 3′ 0″ and 4′ 0″ extra ..	per yard	–/2½	–/2½	–/2½	–/2½	–/3¾	–/3¾
Angles and nozzle pieces	each	1/5	1/7	1/9	2/–	2/2	3/1
Stop ends	each	–/5	–/5	–/7½	–/9	–/10½	1/–
Ogee gutters	per yard	2/1	2/3½	2/4¾	2/6	2/9¾	3/10¼
Straight back and shorts 2′ 0″, 3′ 0″ and 4′ 0″ extra ..	per yard	–/2½	–/2½	–/2½	–/2½	–/3¾	–/3¾
Angles and nozzle pieces	each	1/11	1/11	2/–	2/4	2/8	3/3
Stop ends	each	–/6	–/7½	–/9	–/10½	1/–	1/3

Mild Steel Rainwater Goods

The following prices are subject to 12½ per cent. trade discount.

24 Gauge rainwater slip jointed pipes.

	2″	2½″	3″	3½″	4″
Galvanized round pipes with ears per 6′ 0″	2/7½	3/1½	3/9	4/3	4/9
Painted round pipes with ears per 6′ 0″	2/7½	3/–	3/4½	3/10½	4/3
Painted or galvanized short lengths with ears, extra each	–/6	–/6	–/6	–/6	–/6

18 Gauge Gutters.

	3″	3½″	4″	4½″	5″	6″
Galvanized half round gutters .. per 6′ 0″	2/–	2/3	2/4½	2/9	3/–	3/7½
Painted half round gutters per 6′ 0″	1/6	1/9	2/–	2/3	2/6	3/–
Painted or galvanized short lengths extra .. each	–/3	–/3	–/3	–/3	–/3	–/3

Asbestos-Cement Rainwater Goods

* The following prices are subject to 12½ per cent. trade discount.

Orders over £30 are subject to 17½ per cent. trade discount.

Rainwater pipes.

Prices are for 6′ 0″ lengths, and 10′ 0″ lengths in 2″, 2½″ and 3″ diameters. Short lengths up to 2′ 0″ are charged as one yard. From 2′ 0″ to 4′ 0″ charged as 1½ yards. From 4′ 0″ to 6′ 0″ charged as 2 yards. Over 6′ 0″ charged as 10′ 0″.

Round pipes.

2″	per yard run	1/10
2½″	per yard run	2/0¾
3″	per yard run	2/5¾
3½″	per yard run	2/11¼
4″	per yard run	3/4¾
4½″	per yard run	4/10¼
5″	per yard run	5/9¼
6″	per yard run	7/1¾

Gutters.

Short lengths of gutter up to 2′ 0″ charged as 1 yard; from 2′ 0″ to 4′ 0″ as 1½ yards, and over 4′ 0″ as 2 yards.

		3″	4″	4½″	5″	6″	8″
Half round gutters	per yard run	1/3¾	1/6¾	1/7¾	1/11	2/8	3/3½
Ogee gutters	per yard run	—	1/11	2/0¾	2/5¾	3/0¼	3/11½

INTERNAL PLUMBER

Lead pipe in coils, 5 cwts. and upwards ..	per cwt.	22/–
Lead soil pipe	per cwt.	25/–
Add if ribbon marked	per cwt.	–/3
Lead ternary alloy, No. 2 quality extra over lead pipe	per cwt.	7/–
Plumber's solder	per cwt.	95/–
Tinman's solder	per cwt.	122/–

Drawn lead traps with brass screw eye, 6 lbs.

		1″	1¼″	1½″	2″
S. trap	each	1/7	1/10	2/3	3/3
P. trap	each	1/5	1/6	1/10	2/8
Extra for 3″ deep seal	each	–/6	–/6	–/6	–/6

* Items marked thus have fallen since February 23

CURRENT PRICES

INTERNAL PLUMBER

BY DAVIS AND BELFIELD

INTERNAL PLUMBER—(*continued*)

Screwed and Socketed Steel Tubes and Fittings for Gas, Water and Steam, etc.

		½″	¾″	1″	1¼″	1½″	2″
Tubes.							
Tubes 2 ft. long and over	per ft.	–/5½	–/6¾	–/9¼	1/1	1/4½	1/10
Pieces 12″ to 23½″ long	each	1/1	1/5	1/11	2/8	3/4	4/9
Bends	each	–/11	1/2	1/7½	2/7½	3/2	5/2
Fittings.							
Elbows, square ..	each	1/1	1/3	1/6	2/2	2/7	4/3
Elbows, round ..	each	1/2	1/5	1/8	2/4	2/10	4/8
Tees	each	1/3	1/7	1/10	2/6	3/1	5/1
Crosses	each	2/9	3/3	4/1	5/6	6/7	10/6
Sockets, plain ..	each	–/4	–/5	–/6	–/8	–/10½	1/3
Sockets, diminished	each	–/6	–/7	–/9	1/–	1/4	2/–
Flanges	each	1/–	1/2	1/4	1/9	2/–	2/9
Caps	each	–/5	–/6	–/8	1/–	1/3	2/–
Plugs	each	–/4	–/5	–/6	–/8	–/10	1/3

Fittings and flanges and tubes ordered in long random lengths are subject to the following trade discounts :—

	Tubes	Fittings	Flanges
Gas	62½%	53¾%	57½%
Water	58¾%	50%	52½%
Steam	56½%	46¼%	47½%
Galvanized gas	53¾%	46¼%	47½%
,, water	48¾%	42½%	42½%
,, steam ..	43¾%	38¼%	37½%

Brasswork. Best Quality

		½″	¾″	1″
* Brass screw-down bibcocks, with crutch top, screwed for iron ..	per dozen	33/–	51/–	90/–
* Ditto, with screw ferrule ..	per dozen	38/–	57/–	99/–
• Chromium plated easy clean screw-down bibcocks, with capstan head lettered, screwed for iron ..	per dozen	54/–	78/–	153/–
• Ditto, with screw ferrule ..	per dozen	61/–	88/–	166/–

		Brass Screwdown Stop Cocks with Unions both Ends	Brass Screwdown Stop Cocks with Screwed Ends	Brass Screwdown Stop Cocks with Male Screwed End and Iron Unions
* ½″	per dozen	44/–	33/–	41/–
* ¾″	per dozen	65/–	51/–	50/–
* 1″	per dozen	99/–	83/–	93/–
* 1¼″	each	13/6	11/9	12/9
* 1½″	each	21/9	18/6	20/3
* 2″	each	41/3	38/3	39/–

		½″	¾″	1″
* Portsmouth pattern ball valve for low pressure, screwed for iron ..	each	4/1	5/11	12/–
* Ditto, with flynut and union ..	each	4/9	6/9	13/6
* High pressure ditto, screwed for iron	each	4/1	5/11	12/–
* Ditto, with flynut and union ..	each	4/9	6/9	13/6

		2″	2½″	3″	4″
* Socket thimble sloping shoulder	per dozen	10/–	13/–	16/–	22/–

		1½″	2″	2½″	3″
Flanged ferrule thimble ..	per dozen	8/–	*10/–	*14/–	17/5

		½″	¾″	1″	1¼″	1½″	2″
Union joints for lead and iron ..	per dozen	8/3	11/3	15/5	28/2	46/9	101/2
* Single nut short boiler screws ..	per dozen	6/–	9/–	15/–	21/–	33/–	60/–
* Double nut boiler screws	per dozen	9/–	10/–	16/–	23/–	44/–	69/–
Belfast sink wastes stamped brass with brass plug diameter of outlet 2″	per dozen						19/10

Galvanized Mild Steel Open Top Cisterns riveted with internal angle iron at top and corner plates

The following prices are subject to 15% and 20% trade discount :—

	14-gauge	12-gauge	¼″ plate	5/16″ plate
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
50 gallon capacity each	2 5 11	2 14 5	3 1 7	7 0 8
100 ,, each	3 8 9	4 2 11	4 16 9	9 10 8
200 ,, each	6 6 9	6 19 5	7 18 3	13 1 0
500 ,, each	12 6 0	13 16 1	15 16 3	22 6 9
1,000 ,, each	—	21 9 4	24 19 5	34 15 4

* Items marked thus have fallen since February 23.

INTERNAL PLUMBER—(*continued*)

Galvanized Hot Water Tanks, fitted with handhole cover.

The following prices are subject to 15% and 20% trade discount :—

Capacity	16-gauge tested to a pressure of 1 lb. per sq. inch = 1½ ft. head of water	14-gauge tested to a pressure of 3 lbs. per sq. inch = 4½ ft. head of water	12-gauge tested to a pressure of 7½ lbs. per sq. inch = 10 ft. head of water	¼″ plate tested to a pressure of 10 lbs. per sq. inch = 15 ft. head of water
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
20 gallons each	2 0 3	2 3 11	2 7 8	2 12 9
40 ,, each		3 1 7	3 9 0	3 16 8
		Tested to a pressure of 5 lbs. per sq. inch = 7½ ft. head of water	Tested to a pressure of 7½ lbs. per sq. inch = 10 ft. head of water	
60 ,, each		4 19 3	5 5 5	
80 ,, each			7 5 7	
100 ,, each			8 4 5	

Screwed flanges or bosses

½″	¾″	1″	1¼″	1½″	1¾″	2″	2¼″	
1/8	2/–	2/4	2/11	3/4	3/9	4/8	6/9	Extra per flange or boss.

2½″	3″	3½″	4″	4½″	5″	6″
8/4	14/3	16/9	19/3	26/11	30/1	45/1

Galvanized Hot Water Cylinders, Mild Steel Riveted throughout, without Manhole, with usual number of flanges

The following prices are subject to 15% and 20% trade discount :—

Capacity	16-gauge tested to 5 lbs. pressure = 10 ft. head of water	14-gauge tested to 15 lbs. pressure = 30 ft. head of water	12-gauge tested to 20 lbs. pressure = 40 ft. head of water	¼″ plate tested to 25 lbs. pressure = 50 ft. head of water
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
20 gallons each	1 18 7	2 2 8	2 8 4	2 15 4
40 ,, each	2 10 11	2 16 8	3 6 1	3 15 0
65 ,, each		4 8 7	5 1 8	5 16 1
75 ,, each		5 1 7	5 15 0	6 11 4
85 ,, each			6 10 8	7 11 9
100 ,, each				8 2 5

Cast Iron Soil Pipes and Connections, L.C.C. 3/16″ metal.

The following prices for soil pipes are subject to 20% trade discount, and the prices of the fittings are subject to 20% and 5% trade discount.

	2″	2½″	3″	3½″	4″	5″ ¼″ metal	6″ ¼″ metal
Minimum weights in lbs. per 6′ 0″ length	24	30	35	41	46	78	92
Pipes coated or uncoated per yard run	3/10¼	4/0¾	4/5¾	5/–	5/8¾	11/8	14/0¾
Double sockets extra each	–/11¼	–/11¼	–/11¼	–/11¼	–/11¼	1/0¼	1/0¼
Short lengths extra 2′, 3′ and 4′ per yard run	–/3¾	–/3¾	–/3¾	–/3¾	–/3¾	–/5	–/5
Single spigot branch cast on pipe .. .. each	4/3	4/5	4/7	4/9	4/11	7/6	9/3
Single socket branch cast on pipe .. .. each	10/9	11/–	11/3	11/6	11/9	16/–	19/–
Bends, standard angles each	3/1	3/5	3/9	4/8	5/3	9/4	12/9
Large radius bends each	4/–	4/4	5/–	6/–	7/–	13/–	16/9
Inspection bends raised flange door, 4 gunmetal bolts .. .. each	16/1	16/11	17/9	18/8	19/3	31/10	36/6
Swannecks 4½″ and 6″ projection .. .. each	3/9	4/4	5/11	6/10	7/11	14/11	20/1
9″ ditto .. .. each	5/–	5/7	6/10	7/11	9/4	17/1	22/10
12″ ditto .. .. each	5/11	6/10	7/11	9/8	10/7	19/1	27/1
Single branch with two sockets. T pieces. T pieces diminishing two sockets, inverted two sockets.	3/9	4/8	5/7	6/6 each	7/6	15/10	21/8
Parallel branch pieces not exceeding 6″ centres. Y pieces. Anti-syphon branches with curved arm.	4/10	5/11	6/10	7/11 each	8/11	—	—
Double branch pieces, three sockets .. .. each	5/11	7/–	7/11	9/–	10/3	20/3	27/3
Inspection branch pieces double oval access door, 2 gunmetal screws each	12/11	14/–	14/11	16/6	17/9	29/2	36/2
Long branch pieces each	5/–	6/–	7/3	8/6	9/9	19/–	25/–

• Items marked thus have risen since February 23.

CURRENT PRICES

BY DAVIS AND BELFIELD

COPPERSMITH AND ZINCWORKER, GLAZIER AND PAINTER

COPPERSMITH AND ZINC WORKER

Copper

Hot rolled copper sheeting in 1 cwt. lots, all gauges to 24 wire gauge	per lb.	–/9½
Copper tube, seamless solid drawn	per lb.	1/0¾
Copper wire, 10 and 12 gauge	per lb.	–/9¼
Copper nails, 1″ and up	per lb.	–/11

Fittings for Copper Tubes

Compression Type :	½″	¾″	1″	1¼″	1½″	2″	2½″
Straight coupling each	1/1½	1/4¾	2/0¾	2/8	3/9¾	5/7¾	14/–
Obtuse elbow each	1/10¼	2/2½	3/3	4/1½	7/1½	10/5½	—
Tees .. each	2/1½	2/5½	4/–	5/9½	9/3	13/1½	19/3½
Crosses .. each	3/–	3/4¾	5/2½	6/8¾	10/11¼	15/3	26/4¾
Reducing coupling each	—	1/4¾	2/0¾	2/8	3/9¾	5/7¾	14/–
Bends .. each	1/7½	1/11½	2/11	3/8¾	6/7½	9/10¾	14/1
Brass stop cocks each	3/11½	5/10¾	8/7½	15/11¾	22/3¾	37/8¾	—

Extra for Polishing 25%; Chromium plating 50%; Nickel plating and polishing 50%.

Capillary Type

Straight coupling each	–/7½	–/10½	1/3¾	1/8½	2/3¾	3/4½	5/9
45° elbow .. each	1/3¾	1/8½	2/4½	3/2	4/9	7/1¾	11/1
Tees .. each	1/5½	1/7¾	2/8	3/11½	5/7½	8/3¾	12/8
Crosses .. each	1/10¼	2/0½	3/4½	4/9	7/2¾	10/6	18/2½
Reducing coupling each	—	–/6½	–/8¾	1/0¾	1/7	2/9½	4/4½
Bends .. each	1/7	1/11	2/9¼	3/9¼	5/11¼	8/3¾	11/10½

Pillar tap connection .. each 1/– 1/5½

Extra for Polishing 15%; Chromium plating 40%; Nickel plating 27½%.

Zinc

		Quantities of less than 3 cwts.	Quantities of more than 3 cwts.	Quantities of more than 5 cwts.
Sheet zinc, 10 gauge and up ..	per cwt.	33/–	32/6	32/–
			5 sheets and under	12 sheets
8 gauge zinc safe hole perforated sheets, size 8′ 0″ × 3′ 0″ ..	per sheet		4/11½	4/2½
7 gauge ditto	per sheet		4/4½	3/9
6 gauge ditto	per sheet		3/11	3/4¾

GLAZIER

Sheet Glass cut to size (ordinary glazing quality)

		In squares not exceeding 2 ft.	4 ft.	5 ft.	Over 6 ft.
18 oz. clear sheet ..	per foot super	–/2½	–/2¾	–/3	–/3½
24 oz. ditto	per foot super	–/2¾	–/3¾	–/4	–/4⅝
32 oz. ditto	per foot super	–/4	–/5⅞	–/6⅞	–/7⅞
Obscured sheet glass net extra	.. ..	–/1½	–/1½	–/1½	–/1½
⅛″ figured rolled glass, white	per foot super	–/6½			
⅛″ ditto, normal tints ..	per foot super	–/9½			
Hammered, double rolled, Cathedral white	per foot super	–/6			
Ditto, normal tints ..	per foot super	–/8½			

Thick Drawn Sheet Glass cut to size

		In squares not exceeding 1 ft.	2 ft.	3 ft.	4 ft.	6 ft.	8 ft.
⅛″ thick ..	per foot super	–/9	–/11	1/–	1/2	1/3	●1/5½
¼″ thick ..	per foot super	–/11	1/–	1/3	1/5	1/7	●1/9½
		In squares not exceeding 12 ft.	20 ft.	45 ft.	65 ft.	90 ft.	100 ft.
⅛″ thick	per foot super	✱1/5½	●1/8	✱1/8	—	—	—
¼″ thick	per foot super	✱1/9½	●2/3	✱2/3	✱2/6½	✱2/10½	✱2/10½

For selected glazing quality add 10 per cent. to the above prices.

British or Foreign Polished Plate Glass cut to size

Ordinary ¼″ Substance In Plates not exceeding		Glazing for Glazing Purposes	Selected Glazing Quality	Silvering Quality
1 ft. super ..	per foot super	1/1	1/4	1/7
2 ,, ..	per foot super	1/5	1/7	1/10
3 ,, ..	per foot super	1/10	2/1	2/6
4 ,, ..	per foot super	2/6	2/9	3/2
6 ,, ..	per foot super	2/9	2/10	3/3
12 ,, ..	per foot super	2/11	3/2	3/8
45 ,, ..	per foot super	3/1	3/10	4/2
65 ,, ..	per foot super	3/4	4/3	4/11

●Items marked thus have risen since February 23.

GLAZIER—(*continued*)

British or Foreign Polished Plate Glass cut to size—(contd.)

Ordinary ¼″ Substance In Plates not exceeding		Glazing for Glazing Purposes	Selected Glazing Quality	Silvering Quality
90 ft. super ..	per foot super	3/7	4/8	5/1
100 ,, ..	per foot super	3/9	4/10	5/4

Plates exceeding 100 ft. super or 160 in. long or 104 in. wide at higher prices.

The usual thickness of polished plate glass is about ¼″, but if required of special thickness for glazing purposes add to the above for :—

		Plates up to and including 4 ft. super	All plates over 4 ft. super
⅛″ to 5/32″ ..	per foot super	–/2	–/4
⅛″ to 3/16″ exact	per foot super	–/2	–/3
5/32″	per foot super	No extra	–/1½
¼″ bare ..	per foot super	,,	–/1¾
¼″ exact ..	per foot super	–/2	–/2
5/16″ to ⅜″ ..	per foot super	No extra	–/4½
⅜″ exact ..	per foot super	–/2	–/6

Special quotations should be obtained for other qualities and thicker substances.

Silvering

		Ordinary Quality on Polished Plate, Thick Drawn Sheet, Patent Sheet and Plain Sheet	On Embossed or Decorative Work
12 ft. super or 90 in. long	per ft. super	9d.	1/4
20 ft. ,, or 100 in. long	per ft. super	10d.	1/4
45 ft. super }	or 110 in. long per ft. super	1/–	1/5
50 ft. ,, }		1/0½	1/6
55 ft. ,, }	or 120 in. long per ft. super	1/1	1/6½
60 ft. ,, }		1/1½	1/7
65 ft. ,, }	or 130 in. long per ft. super	1/2	1/8
70 ft. ,, }		1/3	1/9½
75 ft. ,, }	or 140 in. long per ft. super	1/4	1/11
80 ft. ,, }		1/5	2/0½
85 ft. ,, }	or 150 in. long per ft. super	1/8	2/5
90 ft. ,, }		1/11	2/9½
95 ft. ,, }	or 160 in. long per ft. super	2/2	3/2
100 ft. ,, }		2/5	3/8

For silvering on fluted sheet, figured rolled and cathedral, add 4d. a foot to the prices set out in the first column for polished plate, etc.

Silvering bent glass, double or more, according to bend.

For plates over 100 ft. super add 3d. per ft. super for every 5 ft. or part of same.

Plates over 160 in. long at special rates.

Stripping for re-silvering, add 8d. per ft. super.

Wired Glass Cut to Sizes

¼-in. Georgian rough cast .. .. per ft. super 10d.

	In squares not exceeding 1 ft.	2 ft.	3 ft.	4 ft.
¼-in. Georgian polished plate per ft. super	2/6	2/8	2/10	3/2
	8 ft.	12 ft.	20 ft.	30 ft.
¼-in. Georgian polished plate per ft. super	3/8	3/10	4/2	4/6

Supplied in sizes up to 110 in. long and up to 36 in. wide.

For cutting to allow for wires in adjacent pieces to be " lined up," add 4d. per foot super.

PAINTER

White ceiling distemper	per cwt.	11/6
Washable distemper ..	per cwt.	60/–
Petrifying liquid	per gallon	4/6
Ready mixed white lead paint (best) 5-cwt. lots, in 14 lb. tins	per cwt.	66/–
White enamel	per gallon	25/–
Aluminium paint	per gallon	20/–
Stiff white lead, genuine English stack process, 1-ton lots, in 1-cwt. kegs	per cwt.	49/3
Driers	per cwt.	36/–
Linseed oil raw (5-gallon drums)	per gallon	3/–
,, boiled ,, ,,	per gallon	3/3
French polish	per gallon	11/6
Knotting	per gallon	16/–
Oil stain	per gallon	12/–
Varnish, oak	per gallon	10/–
,, copal	per gallon	16/–
,, flat	per gallon	20/–
Turpentine, genuine American, 5-gallon lots	per gallon	3/3
Creosote, 1-gallon lots	per gallon	1/4
Putty	per cwt.	13/–
Size	per firkin	3/6
Best English quality gold leaf, 23 carat	per book	2/4½
Extra thick, ditto	per book	3/6

✱Items marked thus have fallen since February 23.