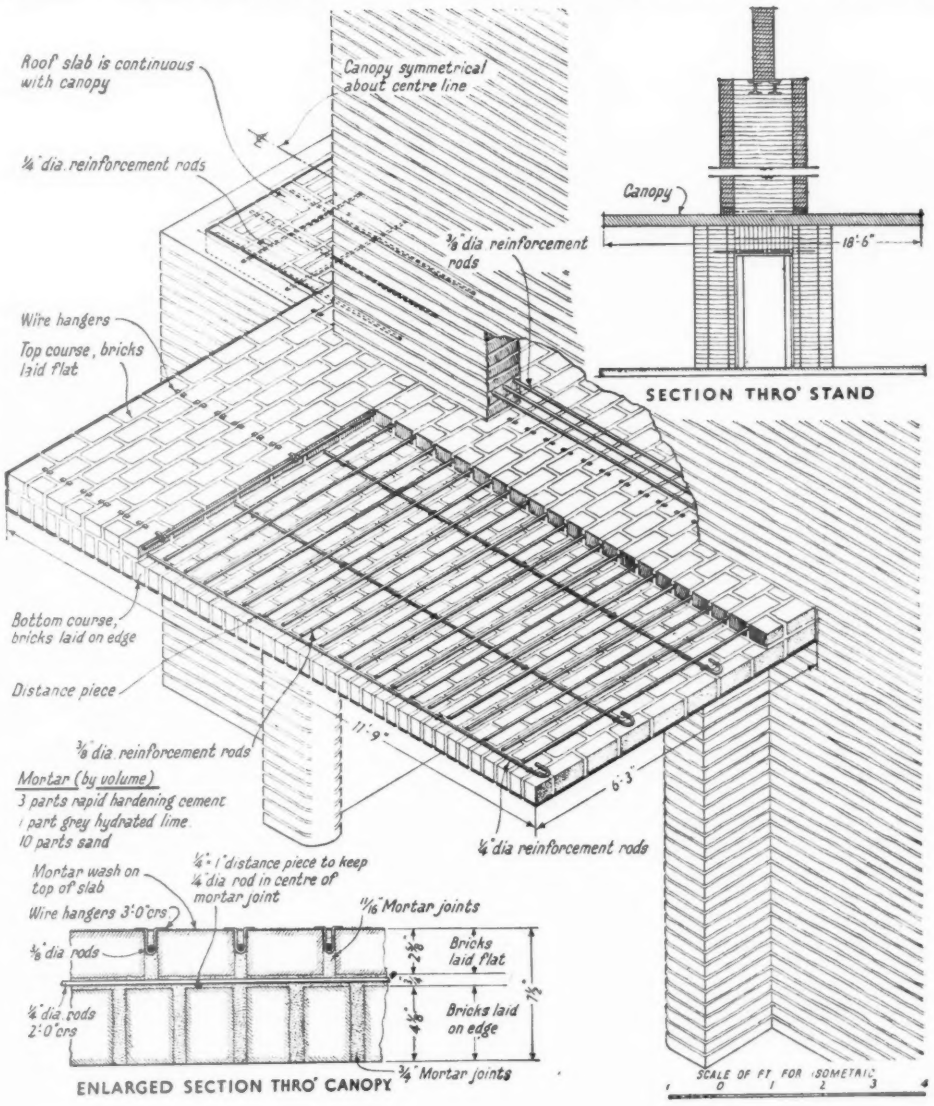
REINFORCED **BRICKWORK**

Steel finds a new function in giving brickwork greater fluidity and strength. The illustrations show a brick canopy to an exhibition stand carried out in ordinary 'Phorpres' Rustic facing bricks reinforced with $\frac{3}{8}$" diam. steel rods through the mortar joints. Such brickwork has definite advantages as a form of reinforced construction.



A Bulletin on "Reinforced Brickwork" by Clay Products Technical Bureau of Great Britain will be sent free on application to our head office.

Consultant for reinforced Brickwork:
Hugo Filippi, Secretary, Reinforced Brick Masonry Research Board of America.

Architect: Julian Leathart, F.R.I.B.A
Isometric by courtesy of "BUILDING."

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THE ARCHITECTS' JOURNAL

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The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

THURSDAY, JUNE 10, 1937. NUMBER 2212 : VOLUME 85

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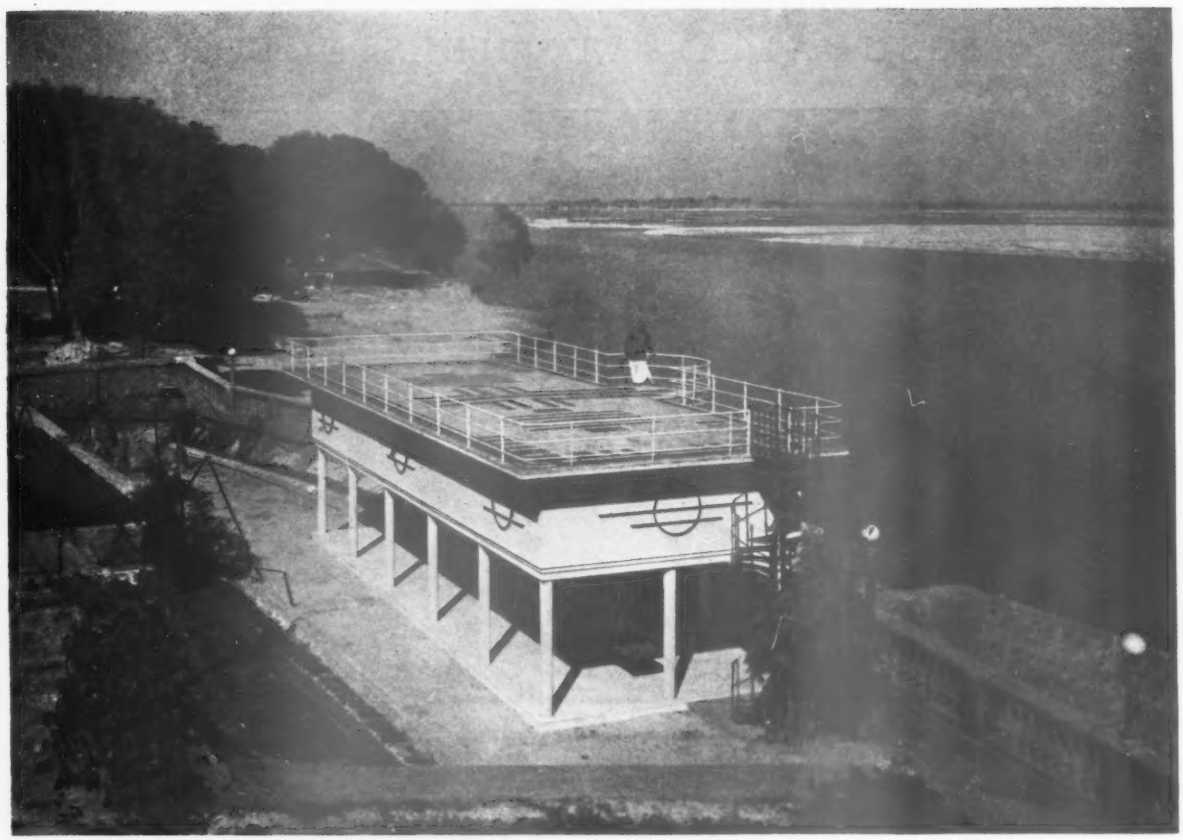
MESSUHALLI AT HELSINGFORS

BY A. HYTÖNEN AND R. V. LUUKKONEN

THE Messuhalli is a concert and exhibition hall and stadium with a seating capacity of 7,000. The building has reinforced concrete trusses and columns and external walls are part brick and part concrete. Roofing is of shingles and internal walls are of stretched fabric and ceiling of plaster board.

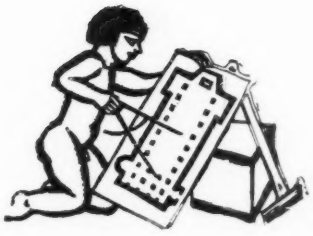
The external finish is white with orange awning and slate green flower boxes. Entrance hall has yellow pay-desks and apple-green coat racks, and restaurant has a crimson carpet and cream walls painted with Chinese screens and hung with carpets ; furniture is slate green and flower boxes are black.

The photographs show day and night views.



LOGGIA ON THE GANGES

A reinforced concrete loggia and observation deck at a country house on the right bank of the Ganges, near Cawnpore. The architects and engineers are Messrs. Frizzoni of Cawnpore.



"PLANNING"

PLANNING, the fortnightly broadsheet of PEP (Political and Economic Planning), has just published its one hundredth issue. It has celebrated this centenary by asking many eminent people what they think of what it has done so far; and, deservedly, the work of PEP and its secretary, Mr. Max Nicholson, has been praised and its continuance encouraged.

Planning is a fortnightly broadsheet of a few thousand words, each issue being in the form of a monograph by PEP's anonymous experts on one of the large political or industrial problems of today. On electricity or gas supply, population, agriculture or coal-mining, *Planning* presents the facts, notes tendencies and makes suggestions of policy. But especially it presents the facts, gathered through a membership of economists, politicians, civil servants, statisticians, industrial and agricultural experts, town planners and architects who place at its service the best array of expert knowledge now available in Britain.

The need and justification of PEP and *Planning* are both peculiarly present-day. There was a time when the functions of government and the chief problems of national livelihood were few and simple enough to be thoroughly understood and continuously criticized by the average citizen; and the average citizen did understand them, and did criticize them. Today the situation is totally different. The average man's interests are no longer political. As the functions of government have extended and grown more complex, as national trade and industry become more weirdly interlocked with world politics and world economics, the average man has given up pretending to understand either of them, his newspapers have given up pretending to guide him in anything but generalities, and the surveys of great problems which are put before him are tending more and more to be partizan and propagandist. It is from these things that *Planning* is justified; taking great problems one by one it acts as a bridge by which the ordinary citizen can gain a comprehensible and truthful view of them.

Nor is that all. The activities of the Government in controlling and guiding the conditions of life for the average Briton are bound to increase. And with them one of the most important duties of Members of Parliament must increase also. M.P.'s—not to mention members of the Government—must understand the complexities of economic and social problems today; and must understand and be able to criticize the Government machinery set up to deal with them. And being for the most part ordinary men and women—are they not our representatives?—they find these things difficult and will in the future find them more difficult. *Planning*, cautious, expert and non-political, can keep these people informed of developments in the aspects of their responsibilities which they cannot study in detail. *Planning* and PEP are not without critics. They are non-political and encounter all the difficulties of political neutrals. They have been referred to as offspring of the Conservative Party and the Five-Year Plan, as a stalking horse for Fascism, monopoly's fig-leaf, and as an organization which has everything in common with socialism except socialism. The diversity of these tributes is flattering to PEP; more valid as a criticism is the impression gained from some of the broadsheets that while its marshalling of facts is always clear-cut, its recommendations show now and then a vagueness as of a compromise hammered out by a group of differing experts.

Possible defects in *Planning*, however, do not lessen its qualities which are most important here. Its interest to architects lies in the facts it collects; its broad summaries of great problems; its admission that industry, power, transport and social services must come under an increasing measure of central control; in its determination to look ahead and put forward suggestions for efficient control; and, particularly, in the number of problems which it has considered in which it is equally important for architects to look ahead. Housing, the raising of the school age, industrial location and regional planning, transport and land settlement are all examples of problems on which PEP was ahead of the country in general, and rather more ahead of perfunctory offers by the predominant architectural society to play a part in one or two of them.

PEP has emphasized that not the least of its functions is to sort out from new developments those which are likely to be of lasting importance. This PEP, with its careful mingling of experts and laymen in its groups, is obviously more fitted to do accurately than any professional society. But architects could and should look ahead at least as far as the indisputably important; and judging from PEP's record and Sir Stanley Baldwin's imperishable estimate, they will still be about two years ahead of their fellow citizens.

Architects, as individuals, were pioneers of town-planning and better housing in Britain. One cannot estimate how much better off they would have been now if, through the R.I.B.A., they had backed up that pioneering with the whole of the Institute's influence; but it would have been a great deal. Whether architects agree or not with *Planning's* solutions for present and future problems, they ought to imitate or to share in PEP's determination to be prepared for the future. And architects who are members of PEP could surely use the influence won by that body to try to convince other architects, through the R.I.B.A., that, even in the narrowest sense, it can pay to look ahead.

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NOTES & TOPICS

CIVIC LEADERS IN DESIGN

A correspondent, nicely suspended between indignation and sardonic humour, asks me whether I have noticed the little matter of the Gloucester City Architect. I had not ; but enquiries do seem to show that this appointment is worth a line or two.

*

About two months ago the City and County Borough of Gloucester advertised for a city architect and estates manager at a salary of £700, and in the particulars of appointment sent to candidates the first paragraph of "Duties," most properly, read :—

> To be responsible for the preparation of designs, drawings, sections, elevations and specifications for all new buildings, or alterations or additions to existing buildings of what nature soever as may be required by the Council or any of its Committees.

*

Now £700 is not a princely income (one wonders what the Gloucester M.O.H. gets), and no doubt experience of working in and controlling the architectural works of a local authority of the right size and kind weighed heavily with the Gloucester city fathers. On the other hand, £700 a year is not negligible ; Gloucester has a reputation to keep up of being a gracious and historic city ; and throughout Britain there are now stimulating examples to be seen of what great things can be done by city architects, or housing directors, who have been appointed and supported by Councils which mean business and are sufficiently enlightened to know what an architect is.

*

I therefore feel some sympathy with my correspondent, a member of the R.I.B.A., in his surprise at finding that the Gloucester appointment has gone to Mr. A. Morgan, Deputy City Surveyor and Waterworks Engineer, of Gloucester. I can find no A. Morgan in the Register of Registered Architects.

PRISONS : A PROFESSIONAL CHALLENGE

The debate in the Commons last week on prison reform was extremely representative of all reforming debates. Prison population was falling, very few "first convictions" returned, more humane interpretations of the regulations were being encouraged—and so on. Several old lags stressed the clients' point of view, and Sir Robert Tasker told a story about boxing in the war.

*

Sir Samuel Hoare, however, was at one with the Opposition in the view that existing prison buildings were the greatest obstacle to effective reform. The new Home Secretary did not go so far as to hint that replacement was being considered—he merely said they were all old, dark, and generally unsatisfactory ; but here and there new wings were being built in accordance with modern ideas.

*

I feel architects ought to take up the question of prison reform ; in part because existing prison conditions have hardly a defendant, and in part because I doubt whether there is anyone now alive in Britain who has designed a whole prison. One or two open competitions would put the old guard going on terrific rustications, and the progressives—on barbed wire?

COLLAPSE

Quite by chance I happened to arrive on the scene of last Friday's Brunswick Square collapse within an hour or so of the first alarm. And as I stood in the gaping crowd I couldn't help being grateful that I'm not on one of our sensational dailies and hadn't a story to turn in on time.

*

For the rumours flying round were astounding. "There's three in the ruins—there's two bodies gone in the ambulance already—it was the gas done it—there weren't nobody there—they were all on the top floor when it happened—it was an aeroplane come down—no warning—they were warned last Monday—Ernie says . . ."

*

Never having had to give an eye-witness' account in a court of law I don't know how accurate *I* should be in the circumstances, but as far as I can discover nobody was hurt, though I can't imagine how anybody was able to survive. Bricks and great slabs of walling in the road, joists and flooring boards with chair backs peeping through on the ground floor—quite Spanish.

*

But not altogether to be wondered at; for there is some more demolition work in progress at the opposite corner of the square, and after seeing walls being pushed over in square feet at a time I'm not at all surprised that one building should have decided to come down a little before it was meant to.

ARCHITECTS AND N.D.C.

If the *Sunday Express* is to be believed, the Treasury is busy thinking of something of a shock for architects, and for that matter most other professional men. The shock is about another shilling in the pound, or very

The photograph of the central tower of the new London University Building which is referred to by Astragal on this page.

near it, though presumably it will be on increased profits rather than total income.

*

Many friends who complain that they haven't enough work will presumably be no worse off than they were, and the really successful firms presumably pay so much in supertax already that a bit more won't make all that difference.

*

But one way of reducing profits is to pay one's assistants rather more ; or, after the example of one or two of the best firms, to pay assistants a percentage on the profits.

NEW BUILDINGS AT ST. JOHN'S

There have been a lot of rumours at Cambridge about new buildings at St. John's. Rumours of modernists and traditionalists, of murmurings among the younger Fellows and a digging in of heels amongst the old guard. In fact, during my occasional visits I have been constantly reminded of the opening paragraphs of *Barchester Towers* and the burning question : " Who is to be the new bishop of Barchester ? " At Cambridge it was : " Who is to be the architect for John's new buildings ? "

*

No one can reproach Cambridge Dons with taking architecture lightly. I have sometimes thought that its greatest architectural tragedies were caused by their being too resolute for safety first.

*

At John's no lessons were overlooked. The University library, the new Magdalene building and the building with which Queens' has started the new transpontine movement—all, apparently, have been thought about. And the upshot is that Mr. Edward Maufe and Mr. J. M. Easton have been asked to prepare alternative designs.

*

We are not told the name of the assessor, but the responsibility is terrific.

*

I assume, for I have not been told, that the new buildings must be across the river, between New Court and Merton Cottage. And as one approaches it from John Street one will pass, court by court, down history from 1480 or so to 1820—and then what ? I can only plead desperately that John's will not, like so many of the colleges, escape the question by pseudo-traditional " harmonising."

PUBLICITY

The attention of the Practice Standing Committee has been drawn to the fact that the publishers of certain journals are approaching architects for details of their professional activities, which the publishers propose to embody in the editorial columns of their journals. In the case of one particular firm of publishers, several members forwarded to the Institute the proposed article as drafted by the editor and sent to the architects for any additions or amendments the architects desired. In each case the wording of the articles is identical, with the exception of the names and addresses of the firms of architects to whom they were sent.

*

So *this* old dodge has cropped up again, for the above quotation is taken from the current R.I.B.A. *Journal*, and the rest goes on to say that architects mustn't allow themselves to be taken in.

*

I've been asked by an enterprising young man if I'd like a personal publicity agent (12 guineas a year), but never for an article on my work. This notice reads as though the preliminary letter must have been just a trifle transparent.

PRIVATE HOTELS

Whilst my room was being distempered a week or two ago, I was forced for a night to take refuge in one of those " Private Hotels " which lies somewhere to the north of Queen's Road Station. It is always an experience to see how another section of humanity lives.

*

As hot and cold water and electric light were advertised, I expected something really modern—something in the Hotel Bristol or the Sherry-Netherlander tradition. I got tradition all right, one old man had lived there thirty-three years ; Empires have fallen and oceans have been flown and still he returns nightly to the same Tuscan-columned porch, the same Nottingham lace curtains, and the same brass-knobbed bedstead. It is only fair to say that the fires and the armchairs were excellent—the h. and c. very so so.

STEEL IN THE NEW UNIVERSITY BUILDING

When I saw the photograph on this page I could scarcely believe my eyes, for there seemed to me a palpable steel frame and I have been brought up to believe that the only steel in Mr. Holden's building was in the floor beams.

*

None the less the photograph doesn't lie; for I have been to see for myself and there *is* a steel frame. The exact height of the tower I forget, but it seems to me rather high for straightforward weight-carrying brick (unless the lower floors are almost solid).

*

Perhaps Mr. Holden will explain.

ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

The City of Gloucester appoints a City Architect and Estates Manager 988

"*In the great majority of buildings it will rarely be possible for financial reasons to provide shelters that will resist a direct hit of any bomb larger than 25 lb.*" .. 993

Three competition results 994

"*The total membership of the R.I.B.A. Council is 81. Of these there are only two salaried members*" 1008

£80,000 ROAD IMPROVEMENT

On Monday last the Ministry of Transport announced that a new layout had been adopted for the improvement of the London–Oxford Road (A 40), at Hayes, Middlesex, where a scheme of widening estimated to cost nearly £80,000 is to be carried out by the Middlesex County Council. There will be dual carriageways, cycle tracks, and footpaths, and the Ministry of Transport has made a grant from the Road Fund towards the cost of the scheme. The scheme is the first part of a comprehensive plan for the modernization of the London–Oxford Road between Southall and Uxbridge.

CONVENTION OF THE R.I.A.S.

Mr. Percy Thomas, President of the R.I.B.A., speaking at the twenty-first annual convention of the Royal Incorporation of Architects in Scotland, at St. Andrews, said that, owing to the increase in the number of official architects, at one time it looked as if the profession would be split into two parts, but he was glad to say that wiser counsels had prevailed. He continued: "I believe there are many directions where it is a distinct advantage to have an official architect, just as I know many official architects realize that for certain types of work the architect in private practice, free from official duties, has greater opportunities of producing fine buildings. What is more important is that we should see that properly qualified architects are employed for all architectural work. There is still in many parts of the country work being carried on by men with no architectural qualifications of any kind.

"With regard to house-building, in spite of the panel system very little improvement is apparent in our new buildings, and I am afraid no real progress will be made until the Ministry of Health insists on all authorities assuming control of elevations, and seeing that their recommendations are carried out."

THE ARCHITECTS' DIARY

Thursday, June 10

ROYAL ACADEMY EXHIBITION, *Burlington House, W.1. Until August 7.*

ARCHITECTURAL ASSOCIATION, 36 *Bedford Square, W.C.1. Exhibition of Work, including Sketches, Set Stills and Working Drawings, by Film Art Directors in various parts of the World. Until June 12.*

BUILDING CENTRE, 158 *New Bond Street, W.1. Exhibition of Working-Class Furniture and Household Equipment. Organized by the Council for Art and Industry. Until June 26. Also Exhibition of the premiated designs in the competitions for the new mental hospital and new mental deficiency institution, Lathom Park. Until June 19.*

INSTITUTION OF STRUCTURAL ENGINEERS. *Fifth Summer Conference. At Glasgow. Until June 11.*

Friday, June 11

LONDON SOCIETY. *Coach Drive to Magna Charta Island, Wraysbury, Bucks. Departure from Lancaster House at 2 p.m.*

Wednesday, June 16

ST. PAUL'S ECCLESIOLOGICAL SOCIETY. *At 6 Queen Square, W.C.1. "Some Dorset Churches." By Edward Yates. 8 p.m.*

LONDON SOCIETY. *Visit to buildings in Tottenham. 2.45 p.m.*

Friday, June, 18

TOWN PLANNING INSTITUTE. *At Caxton Hall, Caxton Street, S.W.1. "Recent Developments in City Planning and Housing in the U.S.A." By Captain R. L. Reiss. 6 p.m.*

Saturday, June, 19

LONDON SOCIETY. *Visit to the new buildings of the Battersea Grammar School, Abbotswood Road, Streatham. 3 p.m.*

BIRMINGHAM'S CIVIC CENTRE

On Tuesday last the Birmingham Council received the General Purposes Committee's report relating to the scheme for the building of about one-half of the eastern block of the civic centre, estimated last July to cost £259,550; it is now estimated, however, owing to the increased costs of building and materials, that the cost will be £344,049 and that there is no indication that the price peak has yet been reached. The Committee considered, in these circumstances, whether to defer additional work, but decided to recommend no delay of the whole scheme owing to the pressing need for accommodation.

ST. JOHN'S COLLEGE, CAMBRIDGE

Mr. Edward B. Maufe, M.A., F.R.I.B.A., and Mr. J. Murray Easton, F.R.I.B.A., have been asked to prepare drawings, in competition, for new buildings for St. John's College, Cambridge.

THE CRYSTAL PALACE

A statement about the future of the Crystal Palace site may be expected in the near future. The trustees are now considering certain proposals "of a national character." No specific information is yet available.

ALL HALLOWS

All Hallows, Lombard Street, will be closed shortly, the union with St. Edmund the King having taken effect.

When the appeal of the City Corporation and certain societies against the union was being heard before the Judicial Committee of the Privy Council, the Ecclesiastical Commissioners undertook to consult an advisory board of architects with regard to the fittings in All Hallows Church, which are to be re-erected in a new church to be built in outer London. This advisory board has now been appointed on the nomination of the President of the R.I.B.A., and will consist of: Mr. H. S. Goodhart-Rendel, F.R.I.B.A., Mr. H. M. Fletcher, M.A., F.R.I.B.A., and Mr. Edward Maufe, F.R.I.B.A.

PHILHARMONIC HALL, LIVERPOOL

The Liverpool Philharmonic Society, a an extraordinary general meeting last week, decided to proceed with the erection of the new hall at a cost of £95,781, compared with the original estimate of £82,000.

BUILDING BYELAWS

The adoption of a complete set of building byelaws by town and county councils is recommended in a circular issued by the Department of Health for Scotland.

To help local authorities in framing byelaws, the Department, in consultation with representatives of various interests, has prepared two model sets, one for counties and one for burghs. These model byelaws give effect to the requirements of the Burgh Police, Public Health and Housing Acts, and deal with such matters as density of houses, ventilation, lighting, details of structure, precautions against fire, sanitary accommodation and plumber-work and drainage.

Copies of the Model Byelaws may be obtained from H.M. Stationery Office (price 9d., post free 10d.).

FLATS, EAST SHEEN

The Barnes (Surrey) Council and local residents have won their fight to prevent the building of flats and garages on the old Sheen Wood estate at East Sheen.

The Council refused a firm of builders leave to build, over 500 residents signed a petition against the scheme, and the Ministry of Health, to whom the builders appealed, has now confirmed the Council's decision.

MANCHESTER SOCIETY OF ARCHITECTS

Mr. W. A. Johnson, F.R.I.B.A., was last week elected president of the Manchester Society of Architects in succession to Colonel G. Westcott.

BUILDING SOCIETIES' LOANS

"Since the Armistice British building societies have lent more than £1,207,000,000 to assist home-ownership," said Sir Enoch Hill, President of the Halifax Building Society, speaking at the opening of the Society's new office premises at Nottingham last week.

Of the 3,000,000 houses built in England

and Wales since the War, he continued, nearly 2,000,000 had been bought by their occupiers with the aid of building society funds.

THE LATE A. W. HENNINGS

We regret to record the death, at the age of 81, of Mr. Arthur William Hennings, president of the Manchester Society of Architects from 1920 to 1922 and a past member of the Council of the R.I.B.A. Mr. Hennings was elected an Associate of the R.I.B.A. in 1888, a Fellow in 1920 and retired in 1935.

ON THE AIR

Thursday, June 10. National Programme. Fifth of a series of talks : Your Home and Mine. "The New Farming." By Geoffrey Boumphrey.

MANCHESTER UNIVERSITY SCHOLARSHIPS

The Manchester Education Committee offers a limited number of Scholarships and Exhibitions tenable in any one of the three years' Full-time Day Courses leading to the degree of Bachelor of Technical Science (B.Sc. Tech.) at the Municipal College of Technology (Faculty of Technology in the University of Manchester).

Candidates for scholarships must have passed, or hold exemption from, the Matriculation Examination of the Joint Matriculation Board of the Northern Universities and must also be qualified to enter upon a higher course. The scholarships will be open to part-time day or evening students in the college and others whose parents are ratepayers of the City. In the event of there not being sufficient Manchester students qualified to enter upon a higher course, and only in that case, the Committee may offer the scholarships to suitably qualified students who have no ratepayer qualification.

Candidates for exhibitions must have passed, or hold exemption from, the Matriculation Examination of the Joint Matriculation Board of the Northern Universities and be qualified to enter upon an ordinary course. Candidates for these exhibitions must be ratepayers, or children or wards of ratepayers of the City of Manchester.

Forms of application and all information may be obtained by written application to the Registrar, College of Technology, Manchester, 1. Completed forms of application must be sent in on or before June 20, 1937.

SCHOLARSHIP IN BUILDING TECHNOLOGY

In connection with the Degree Course in Building in the Faculty of Technology of the University of Manchester, the North Western Federation of Building Trade Employers has again decided to award a scholarship which will be tenable in the Manchester College of Technology.

The scholarship will be of the value of £60 per annum for three years, beginning with the new session in October next.

Information concerning the conditions of award of the scholarship may be obtained from the Secretary, North Western Federation of Building Trade Employers, National Buildings, St. Mary's Parsonage, Manchester.

A drawing of the proposed bandstand enclosure, Weymouth. The architect is V. J. Wenning, whose design was awarded first place in an open competition. Elevations and plans were reproduced in the JOURNAL *for May 27.*

EXHIBITION OF WORKING-CLASS FURNITURE

Sir Kingsley Wood, Minister of Health, opened an exhibition of working-class furniture and household equipment at the Building Centre, last week. The exhibition, which will remain open until Saturday, June 26, has been organized by the Council for Art and Industry.

Sir Kingsley said that housing progress was such that about a million people in this country moved last year into new houses. There was a real need for advice and assistance which would enable houses to become real homes. It was extraordinary, for instance, what difference a skilful use of colour in the home could accomplish—a drab and dingy room simply made for depression and ill-health, pleasing colour tones often made for cheerfulness and good health.

He pointed out that the problem of providing decent homes was in many cases not merely the provision of an adequate shelter. There were a number of people who did not possess sufficient furniture and equipment to make their new house a home because they had not the means to enable them to do so. They might start off with even less than they possessed in their old inadequate homes because, on transfer to the new houses, some of the old household effects had to be destroyed for health reasons. Local authorities had power under the Housing Act to provide furniture for their tenants in such cases. A scheme at Birmingham enabled furniture to be supplied in suitable cases to young married couples. There was a scheme at Gateshead which had been started because it was found that a number of families, as a result of slum clearance operations, were found to be using only one or two rooms in the new houses provided for them because they had not a sufficiency of furniture and household equipment. The Corporation generally through local retailers provided furniture and the instalment payments were collected each week with the rent. It was noteworthy that notwithstanding the industrial difficulties at Gateshead arrears of instalments were under 2 per cent. of the amounts due for payment. The Corporation was raising the standard of the tenants without cost to the rates, local retailers had an opportunity of catering for a section of the community who would otherwise not do business with them, and many happy and comfortable homes were made. This was a limited but important social field, and such efforts as these certainly gave many new opportunities for a fresh start in life for a number of our fellow citizens.

CORRECTION

In the issue of the JOURNAL for June 3, a perspective by Mr. Lawrence Wright was described as being "Flats and garages" by Messrs. Leathart and Granger. The building is, in fact, a garage only and was designed by Mr. Julian Leathart.

R. I. B. A.

COUNCIL MEETING

Following are some notes from a recent meeting of the Council of the R.I.B.A. :—

Twenty-third Annual Conference of the National Association for the Prevention of Tuberculosis.—Sir George Oatley (F.) was appointed as the R.I.B.A. delegate to attend the above Conference, which will be held at Bristol from July 1 to 3.

The Factories Bill, 1937.—On the recommendation of the Practice Standing Committee it was agreed to write to the Home Office offering the assistance of the R.I.B.A. and its Committees in framing the regulations which will have to be prepared and issued by the Home Office when the Factories Bill becomes law dealing with reasonable standards of temperature, ventilation, lighting, sanitary accommodation, overcrowding, etc., in factories.

Proposed New Class of Correspondents.—On the recommendation of the Foreign Relations Committee the principle of creating a new class of "Correspondents" was approved. This class would be additional to that of Honorary Corresponding Members and would include men whose knowledge of the English language, enthusiasm for English architecture and energy as correspondents would make them particularly useful to the Institute and to members of the Institute travelling abroad.

The Constitution of the Building Industries National Council.—Certain amendments in the constitution of the Building Industries National Council were formally approved.

Reinstatements.—The following ex-members were reinstated:—As Fellows: Messrs. Herbert Reginald Cowley, George Hastwell Grayson (retired F.), and William Gilmour Wilson. As Associates: Messrs. William Haigh Harrall and John Burton Healing. As Licentiates: Messrs. Alfred James Madgin and Frank Ralph Priest.

Resignations.—The following resignations were accepted with regret: Messrs. Frank Catling (L.), Charles William Glover (L.), and William Patterson (L.).

Transfer to the Retired Members Class.—The following members were transferred to the Retired Members Class:—As Retired Fellows: Major William Caple and Messrs. Edward Turner Powell and Edwin Evan Smith.

Election of Students.—The following Probationers were elected as Students of the R.I.B.A.:—W. Chapman (School of Architecture, The Polytechnic, Regent Street, London); P. Charlton (Liverpool School of Architecture); J. Cheyne (Robert Gordon's Colleges, Aberdeen); D. Clark (Glasgow School of Architecture); D. Duncan (Architectural Association); R. Fairbairn (Special Exemption); K. King (Architectural Association); A. MacFarlane (Glasgow School of Architecture); G. Middleton (Robert Gordon's Colleges, Aberdeen); (Miss) J. Morley (School of Architecture, The Polytechnic, Regent Street, London); T. Oxley (University of London); A. Robertson (Robert Gordon's Colleges, Aberdeen); J. Thompson (Liverpool School of Architecture); P. Thornton (Architectural Association), and E. Whitaker (University of Sheffield).

EXHIBITIONS

The present exhibition of Sisley's at Tooth's gives a fairer impression than the one held at the Lefèvre Galleries earlier in the year of the work of this rather unequal artist. Always a painter of great sensibility he is here shown at his best, for all the pictures in this collection are of the 1870–84 period, when he was absorbed with the impressionist movement, and when from the earlier influences of Corot and Monet he had reached his own certainty. "Pommiers en Fleurs" is a particularly lovely example of the fresh exciting atmosphere of spring that he excelled in painting, and in looking at this collection of his work it is hard to believe that only twelve years earlier he had been painting correctly enough for the Salon, and even harder to realize that during his lifetime he never sold a picture for more than five pounds.

At the same gallery the Vuillard's and Bonnard's are perhaps even more worthy of note. Vuillard's quiet interiors into which the summer light so often falls through half-lowered blinds just outside the picture, and into which one seems to have escaped from the dust and traffic outside, always have something of Proust's quality of arresting for an instant the lost Paris of yesterday.

●

Basil Jonzen is a young Swedish painter not only of very considerable promise, but as his exhibition at the Redfern Galleries shows, of remarkable achievement. He has a good sense of light and colour, obviously influenced by Van Gogh. But the influence has been digested, it is not an obsession. He paints quickly, laying on his paint very thickly, and this rapid putting on to canvas of just what he sees keeps his work far livelier than is usual with the direct representational type of landscape painting. All the paintings at this exhibition were painted at Teneriffe in strong sunlight, and it is difficult to imagine Jonzen painting under a dull northern sky—a limitation undoubtedly, but one that it is very easy to overlook.

D. COSENS

●

Paintings by Sisley, 1870–84. Paintings by Vuillard and Bonnard. Tooth's, 155 New Bond Street. Until June 19.

Recent Paintings by Basil Jonzen. Redfern Gallery, 20 Cork Street. Until June 26.

ARCHITECTURAL ASSOCIATION

Following are some extracts from a paper entitled "Architects' Part in Passive Air Raid Defence," read by Eric L. Bird, A.R.I.B.A., at a general meeting of the Architectural Association on Tuesday last.

My excuse for speaking on this subject is that for nearly two years I have been one of the R.I.B.A. representatives advising the Government, in common with those of other interested professions, on the relation between air bombing and structures. We have had made available to us a large amount of technical information, some of it confidential. The extremely complicated nature of the subject—a fact which an architectural audience will fully realize—has necessitated long and closely detailed study.

Technical Aspects

I would first indicate that the object as far as architects are concerned is twofold. The first and most important is to provide protection for personnel; the second is so to construct buildings that they will resist the effects of air bombing and remain as far as possible usable after air raids have ceased. The first requirement implies that a particular building will be provided with a shelter giving as much protection as possible against all forms of attack. The second involves certain considerations in construction and to a limited extent in planning.

Resistance of Structures

With regard to the construction of buildings, a first requirement is to exclude or limit the effect of the incendiary bomb. The small kilo bomb can be kept out by a slab of solid reinforced concrete 5 ins. thick, reinforced both ways; the 25 lb. incendiary bomb by a thickness of 18 ins. An alternative to the 18-ins. roof on a multi-floor building is to make several or all floors 5 or 6 ins. thick, which will confine the larger incendiary bombs to the upper floors. General fire-resisting construction throughout is obviously desirable, and also the reduction of inflammable material in the upper storeys to a minimum. In wooden roofs a layer of 2 ins. of dry earth or sand over attic floorboarding will confine the fire from a kilo bomb to the roof space, but such a measure is intended only for existing buildings. Since the small incendiary bomb can be tackled by a sufficiently courageous person, easy access to attics and roof spaces is desirable. A heavy bomber can carry upwards of 1,000 of these kilo bombs.

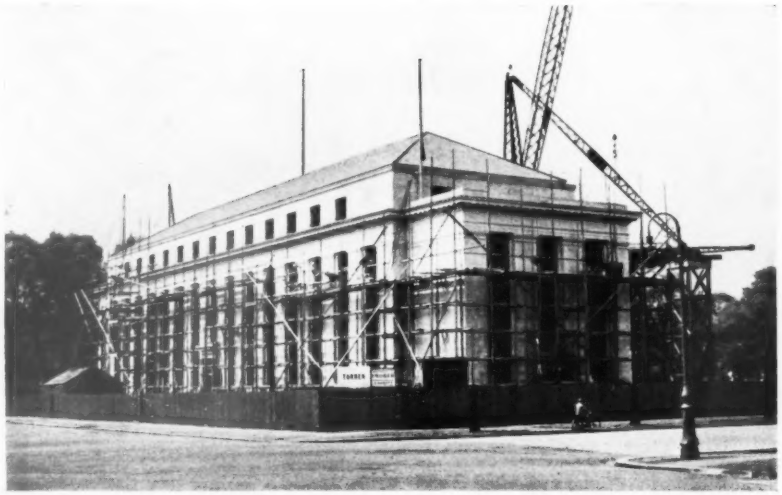
It is probably not feasible to attempt to prevent the high explosive bomb from penetrating a building. In almost all cases roofs thick enough to exclude the smaller bombs will only be possible over small shelters. A thickness of 15 ft. of reinforced concrete is required to exclude the 500 lb. semi-armour piercing bomb. Something, however, can be done to limit the effects of explosion. It is a well-known fact that the more an explosion is confined or "tamped" the greater is its disruptive effect. There is much to be said for the use of large areas of glass that will allow the blast of an internal explosion to escape, provided an adequate shelter is provided in the building for its personnel. On the other hand, solid construction will tend to resist and confine the effects of the lighter bombs, particularly splinter effect. This matter is still the subject of investigation, but it is agreed that framed buildings, either of steel or reinforced concrete, are preferable to the older solid wall type, partly because they resist racking stresses better and partly because the panel fillings will fail first under blast pressure, leaving the general structure in some degree intact.

The punching effect of splinters is considerable. The following thicknesses of material will afford protection against splinters from bombs up to 500 lb. exploded not less than 50 ft. away. Mild steel plate, 1½ ins.; stock bricks in cement mortar, 13½ ins.; reinforced concrete with normal reinforcement, 12 ins., with special reinforcement designed to resist the punching shear effect of splinters 10 ins.; sand or earth revetments, 2 ft. 6 ins.; shingle or ballast contained between wood or corrugated iron 2 ft. Numerous other materials have also been investigated.

The blast of large high explosive bombs is their principal destroying agent. The pressures are intense though sustained for very brief periods of time. The translation of known blast pressures into equivalent static loadings for application to the design of structures is now proceeding and at present there is little information on this which is not purely empirical.

When considering the effect of gas on structures two precautions require mention. The first is to prevent as far as possible the drawing of gas into buildings by, for example, extract ventilation systems; the second is to facilitate decontamination where a persistent gas has been used. For the latter, impervious surfaces are desirable so that the poisonous liquid or dust can be washed off. The use of such surfaces is, of course, not possible universally, but may be considered in special cases.

Mustard gas has an affinity for bitumen which it dissolves into a poisonous paste that is difficult to decontaminate. This represents a problem of no small importance in regard to roads and flat roofs.



Temple of Peace and Health: The Headquarters of the Welsh National Memorial Association, Cardiff. Percy Thomas, Architect.

Shelters

This also is a complicated subject to which an enormous amount of thought and research is being devoted. Each building presents its own special problem, but it is here possible to lay down more exact general principles than in the case of design of structures. It must first be realized that complete protection is feasible only in mined or tunnelled galleries with a thickness of 60 feet of earth above. The alternative is some 20 feet of reinforced concrete. Both these will resist the effect of a 1,000 lb. armour-piercing bomb. The use of such bombs is, however, likely to be limited to important objectives. In the great majority of buildings also it will rarely be possible for financial reasons to provide shelters that will resist a direct hit of any bomb larger than 25 lb. In other words a direct hit must be risked in most cases.

The following is a brief summary of the major points in shelter design. A shelter is best located below ground level where it will be free from blast and splinter effects, except in cases where flooding from burst water mains or sewers is considered likely. Alternatively, it may be constructed as a tank below ground with entrances above possible flood level. A shelter should not be sited immediately below large water storage tanks, safes or heavy machinery which may be dislodged by a bomb.

The most satisfactory material for construction of shelter accommodation is solid reinforced concrete or alternatively reinforced brickwork. Plain brickwork, if of sufficient thicknesses, may be used for walls. The roof, which should be of reinforced concrete, reinforced in both directions, should be designed so that it is capable of taking concentrated loads due to falling debris from the building above in case of demolition. Shelters should normally be designed to accommodate not more than 50 persons in each separate compartment, though in exceptional cases this may have to be exceeded.

Where mechanical ventilation is provided a minimum of 6 square feet of floor space per person should be allowed. Small shelters occupied by not more than 10 persons will not require ventilation for reasonable periods of occupation, and may be made airtight provided the absorbent surface area of the floor, ceiling and walls is not less than 75 square feet per person. Discomfort in enclosed shelters arises more from the rise in moisture content of the air than from increase of carbon dioxide, hence the necessity for moisture-absorbing surfaces. This can be provided by wallboard placed in the concrete shuttering and left adhering to the concrete. Plaster is liable to be shaken off by the vibration of bombs. The use of air-disturbing fans will do much to mitigate discomfort in a sealed shelter.

With mechanical ventilation, the plant should be capable of delivering a minimum of 150 cubic feet of filtered fresh air per person per hour. The intake should be not less than 30 feet above street level in order to reduce the risk of drawing in heavily contaminated air, at the same time lessening the duty on the filter. The intake shaft should be protected as far as possible by the surrounding structure against damage by splinters and small bombs and should preferably be of reinforced concrete. The plant should be operated manually or by a small independent petrol or diesel engine as a stand-by in case of failure of the power mains. The maintenance of a slight positive air pressure in the shelter is desirable as a means of preventing possible entry of gas through crevices.

At least two entrances to a shelter should be provided, both equipped with two sets of air-tight doors forming gas locks. Other requirements are lavatory accommodation, drinking water, fire-extinguishing appliances, a wireless set, etc.

There are several types of shelter other than those in the basements of buildings. Shelters may be constructed externally where land is available; this type is suitable for the open single-floor factory. Another type is the vertical shelter built as a strong tower against or included in a multi-floor building such as an office or factory. Tunnelled shelters are possible in slag heaps or steep hillsides. Lean-to shelters may be built against retaining walls.

In many cases shelter accommodation will be usable in peace time, often for storage. External shelters to factories have been designed, and some are being constructed, for use as cycle sheds. We have found that in a great number of cases minor and often inexpensive alterations to a building plan will allow good shelter accommodation to be provided. The problem is much more difficult of solution in existing buildings, though here again some ingenuity plus expert knowledge of requirements will help in devising shelters.

The Architectural Profession and Air Raid Defence

I want to urge on the architectural profession the need for study by them of the technical problems involved in passive air raid defence. They are by far the best persons to undertake this work because they understand not only construction, but the planning, use and financial basis of building. I find that many are already doing so on behalf of clients. Although most architects will approach this subject with some repugnance, the practice of architecture being essentially pacific, I think they ought not to neglect a duty to the community which they are specially qualified to fulfil.

IN PARLIAMENT

Housing in Liverpool

Mr. Kirby asked the Minister of Health if he was aware that tenders for the building of houses received by the Liverpool Corporation in recent weeks had shown a big advance in the cost per house, and that other local authorities were experiencing the same upward tendency in their tenders; to what extent such increases were due to shortage of building materials as a result of the Government's re-armament programme; and what steps he proposed to take to prevent profiteering in building materials.

Sir K. Wood said he was aware that in Liverpool and other parts of the country there had been a tendency for building prices to rise. He had no reason to suppose that this was primarily due to the reason suggested in the second part of the question. The position with regard to building materials was being closely watched by the inter-departmental Committee on the Prices of Building Materials with which he was, of course, in close contact.

Mr. J. Griffiths asked if the Minister's attention had been called to the statement by the President of the R.I.B.A. in which he gave the opinion that the prices now being charged were completely unreasonable and that there was no justification for them.

Sir K. Wood said he had not seen the statement. He was naturally anxious to see prices as low as possible. In this case the Liverpool Corporation had turned down one set of tenders on account of the prices.

Preservation of Amenities

Mr. Bossom asked the Minister of Health with regard to the resolution passed by the House on February 10, recommending the taking of active steps to ascertain whether the Government's existing powers were adequate or require substantial reinforcement to prevent the destruction of beauty in town and country and of houses of historic or architectural interest, whether such an investigation had been made; who were the persons that made the investigation; and what were their findings.

Mr. Bernays, who replied, said that investigations were being carried out in his Department as indicated by his predecessor in accepting his hon. friend's motion on behalf of the Government, and his right hon. friend was proposing to take the views of the Town and Country Planning Advisory Committee.

Houses to Let at Low Rentals

Mr. Ellis Smith asked the Minister of Health if he would give consideration to the need for a national housing scheme, to be carried out in co-operation with the local authorities, and to include standard houses to be let at rents within the means of the lower-paid wage-earners.

Sir K. Wood said that local authorities would be fully occupied during the next year or two in building houses to replace unfit dwellings and to provide the additional accommodation necessary for the abatement of overcrowding, and he did not think there would be any advantage in adopting the suggestion made by the hon. member.

Slum Clearance, Birmingham

Mr. Smedley Crooke asked the Minister of Health if his attention had been called to the hardship recently sustained by small shop-keepers in the City of Birmingham whose businesses had been ruined by the loss of customers caused by the demolition of houses in slum-clearance areas and who were unable to obtain compensation from the local authority; and whether, in view of this, he would consider the advisability of taking such action as was within the Ministry's powers to alleviate the distress of those who were being financially ruined through no fault of their own.

Sir K. Wood said that he understood that the Corporation had paid allowances in respect of disturbance of trade in 245 out of the total of 253 claims submitted to them, the total amount of compensation paid being £16,927. He had no reason to suppose that the Council were not adequately exercising their powers to make

grants but if his hon. friend had any particular cases in mind and would send him particulars he would be glad to make further inquiries.

"PLANNING"

The one hundredth issue of *Planning*, the fortnightly broadsheet of P E P (Political and Economic Planning) was published on June 1.

The following is a list of the titles and dates of the broadsheets. (N.B. : The titles in italics are those of sheets now out of print.) :—

No.	Subject	Date
		1933
1	Iron and Steel	25 April
2	Town Planning	9 May
3	Britain and World Trade—I	23 May
4	Employment Policy	6 June
5	The Public Concern	20 June
6	Planning in America	4 July
7	Distribution	18 July
8	Agriculture	1 Aug.
9	Planning for Liberty	12 Sept.
10	Community Services	26 Sept.
11	Cotton	10 Oct.
12	Planning—What Has Been Done	24 Oct.
13	About the Broadsheet	7 Nov.
14	Public Relations	21 Nov.
15	Housing Survey	5 Dec.
16	Questions for Industry	19 Dec.
		1934
17	The Output of Knowledge	2 Jan.
18	The Exit from Industry	16 Jan.
19	Reconstruction of the Cotton Industry	30 Jan.
20	The N.R.A. in America	13 Feb.
21	Transport	27 Feb.
22	The Entrance to Industry	13 Mar.
23	*What P E P is Doing*	27 Mar.
24	Britain and World Trade—II	10 April
25	More or Better Agriculture	24 April
26	A New Model for Industries	8 May
27	Future British Population	22 May
28	Housing—II : Some Proposals	5 June
29	The Measurement of Needs	19 June
30	A New Employment Policy	3 July
31	The Use of Statistics	17 July
32	*About the Marketing Acts*	31 July
33	Mapping out our Way	11 Sept.
34	*Employment Analysed*	25 Sept.
35	*What Planning Means*	9 Oct.
36	*What Consumers Need*	23 Oct.
37	An Enabling Act for Industry	6 Nov.
38	Britain and World Trade—III	20 Nov.
39	Housing England	5 Dec.
40	The Enabling Bill Criticised	18 Dec.
		1935
41	How P E P Works	1 Jan.
42	Old Age and Retirement	15 Jan.
43	Land and the Community	29 Jan.
44	What Sort of Plenty?	12 Feb.
45	What has been Done—II	26 Feb.
46	*Sources of Information*	12 Mar.
47	Inquest on the Unemployment Act	26 Mar.
48	Iron and Steel—II	9 April
49	Arguments against Planning	23 April
50	*Building Social Security*	7 May
51	The Fuel Problem—I : Gas	21 May
52	*The Fuel Problem—II : Electricity*	4 June
53	Regional Development—I	18 June
54	The American New Deal	2 July
55	Making a Fit Nation	16 July
56	Marketing Boards and Distribution	30 July
57	Research and the Farmer	10 Sept.
58	The State of the Press	24 Sept.
59	Regional Development—II	8 Oct.
60	The Fuel Problem—III : Coal Survey	22 Oct.
61	The Fuel Problem—IV: Coal Reorganisation	5 Nov.
62	Milk for Those who Need it	19 Nov.
63	The Outlook for Consumers	3 Dec.
64	What are the Social Services?	17 Dec.
65	The Fuel Problem—V : Electricity Proposals	31 Dec.
		1936
66	Finance—I	14 Jan.
67	The Fuel Problem—VI : Coal Proposals	28 Jan.
68	How New Industries Grow	11 Feb.
69	Transport—the Present Position	25 Feb.
70	Transport—The Road-Rail Issue	10 Mar.
71	P E P Work, 1931–36	24 Mar.
72	The Pursuit of Health	7 April
73	The Coming Fall in Population	21 April
74	What has been Done—III	5 May
75	Unemployment Assistance Reviewed	19 May
76	The Tennessee Valley Authority	2 June
77	Grassland and Food Policy	16 June
78	Inquest on Ottawa	30 June
79	Experiments in Licensing	14 July
80	What are Social Services for?	28 July
81	The State of the Highlands	8 Sept.
82	The Freedom of the Press	22 Sept.
83	The Fuel Problem—VII : Gas Proposals	6 Oct.
84	*The Hospital System*	20 Oct.
85	A Census of Distribution	3 Nov.
86	Next Steps in World Trade	17 Nov.
87	The Location of Industry	1 Dec.
88	The Malnutrition Controversy	15 Dec.
89	Standards for Consumers	29 Dec.
		1937
90	How New England Plans	12 Jan.
91	The Mechanism of World Trade	26 Jan.
92	Industry and Health	9 Feb.
93	How Milk is Distributed	23 Feb.
94	The Problem of South Wales	9 Mar.
95	Finance and World Trade	23 Mar.
96	Milk Consumption	6 April
97	Agriculture's Part—I	20 April
98	Agriculture's Part—II	4 May
99	Agriculture's Part—III	18 May

COMPETITION RESULTS

BRISTOL

Mr. G. D. Gordon Hake, F.R.I.B.A., Mr. H. Stratton Davis, F.S.A., F.R.I.B.A., and (counting as one vote) the Rev. J. M. D. Stancomb and the Rev. I. T. Page-Wood, assessors in the competition for a new church at Redfield, St. George's, Bristol, have made the following award :—

Design placed first (£100) : Mr. Robert Potter, of 75 New Street, Salisbury.

Design placed second (£50) : Miss Joyce E. Townsend, of 59 Doughty Street, W.C.1.

Design placed third (£30) : Mr. H. F. Trew, of Burleigh House, Nettleton Road, Gloucester (in conjunction with Mr. Iorwerth Maldwyn Williams).

Commended : Messrs. Richard C. James and Meredith, in conjunction with Mr. P. N. Taylor ; Mr. W. Ellery Anderson ; Mr. Oswald Brakspear ; Mr. Thomas W. Sharpe ; Mr. J. Ralph Edwards ; and Messrs. L. W. Barnard and Partners.

The competition was limited to members of the Wessex Society of Architects.

GOSPORT

Mr. Geoffrey C. Wilson, F.R.I.B.A., the assessor of the competition for a public elementary school for the Education Committee of the Borough of Gosport, has announced his award as follows :—

Design placed first (£100) : Mr. D. A. Stewart, of Goldsmith Avenue, Portsmouth.

Design placed second (£50) : Messrs. Thomas and Townsend, of Landport Terrace, Gosport.

Design placed third (£25) : Mr. A. F. Cooper, of North End, Portsmouth.

The competition was open to architects resident or practising in Gosport and Portsmouth.

BROADSTAIRS

Prof. W. R. Davidge, F.R.I.B.A., the assessor of the competition for the planning of a portion of the late Lord Northcliffe's North Foreland Estate, Broadstairs, has announced his award as follows :—

Design placed first (£100) : Mr. Seth Stephens, of 11 Queen Street, Queen's Square, Blackpool.

Design placed second (£50) : Mr. R. J. S. Roberts, of 135 Rushams Road, Horsham, Sussex.

Design placed third (£25) : Mr. Nicholas H. N. Darby and Miss G. Hill, of Westminster Bank Chambers, Taunton, Somerset.

Highly commended : Mr. Stanley R. Miller ; Messrs. Vincent A. Jolley and D. R. Errington.

Commended : Messrs. Fawcett Martindale and C. I. Wylde ; and Messrs. Vishwanath Prasad and Alan Reiach.

The drawings will remain on exhibition at the Pavilion, Garden-on-the-Sands, Broadstairs, until June 12.

The winning designs in the above competitions are reproduced in this issue.

COMPETITION FOR CHURCH AT REDFIELD

Extracts from the Assessors' report:

Twenty-three designs were submitted, and a large percentage of the schemes showed a full appreciation of the problem laid down by the conditions and a good knowledge of church planning and design.

The standard of presentation was generally a high one, and the assessors consider that the result fully justifies the promotion of the competition within the area of the Wessex Society of Architects.

The main problems of the competition were (1) the provision of a dignified and worthy building within the limits of the funds available, and (2) the planning and design of the building in relation to the existing buildings on the site.

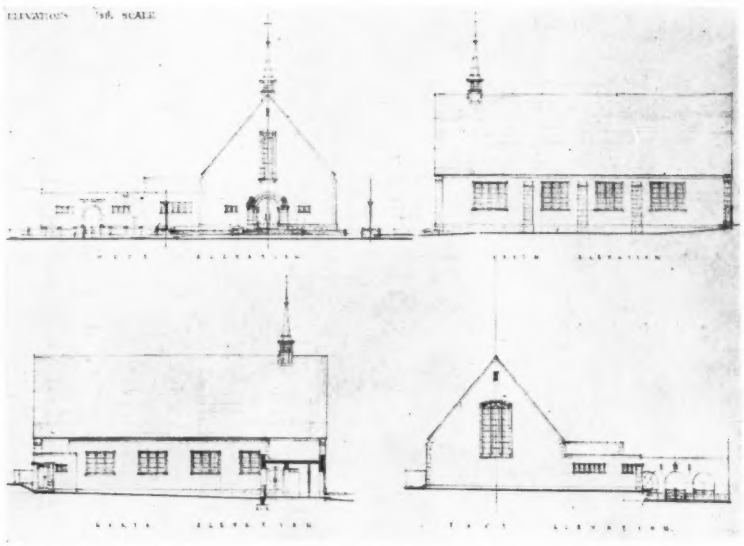
In arriving at their awards the assessors have felt themselves strictly bound by these considerations.

The assessors consider that the design placed first solves the problems in a simple and direct manner. The drawings are beautifully presented and indicate a thorough and sympathetic knowledge of planning and design for Church of England services.

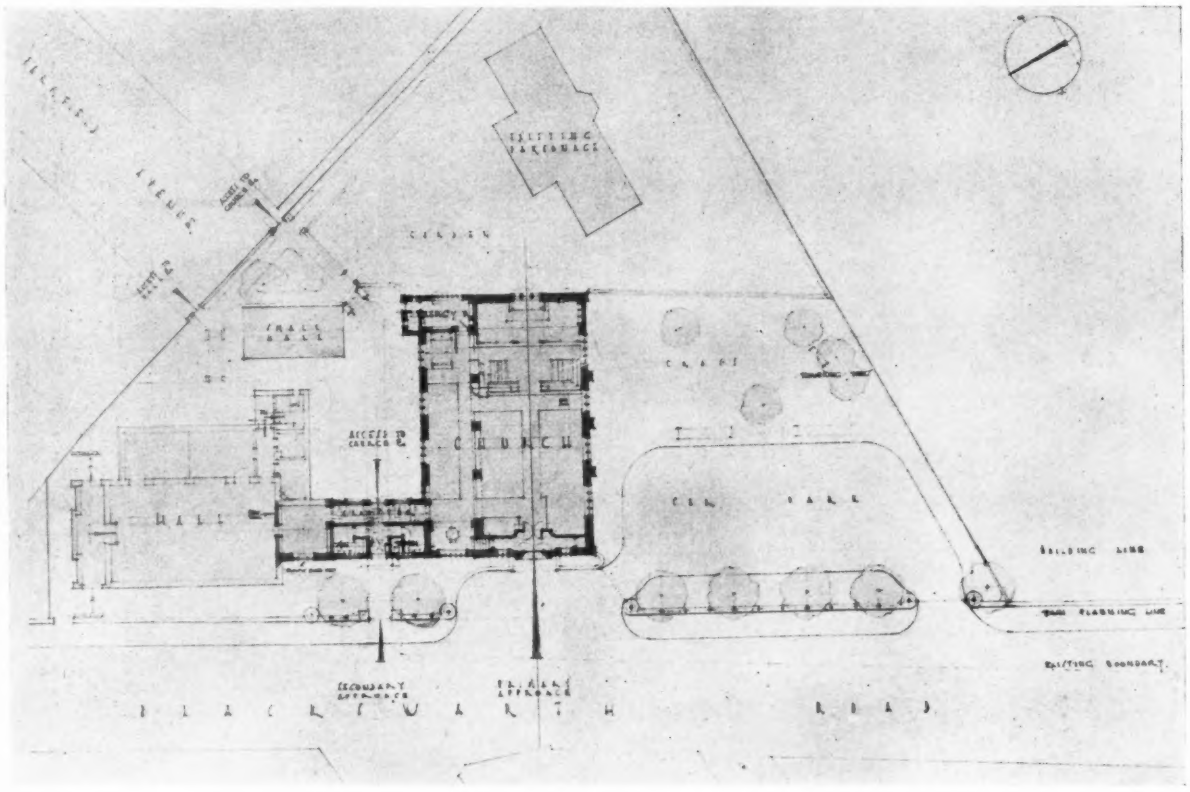
The clergy vestry, though conveniently planned near the sanctuary as laid down in the conditions, is some distance from the choir vestry. The provision of a single side aisle, however, not only forms a convenient communication, clear of the nave, between the two vestries, but also allows for additional seating for special services held in the chapel.

In preparing the finished drawings it is suggested that the author might give further consideration to the spacing and design of the windows of the south elevation in relation to the west end.

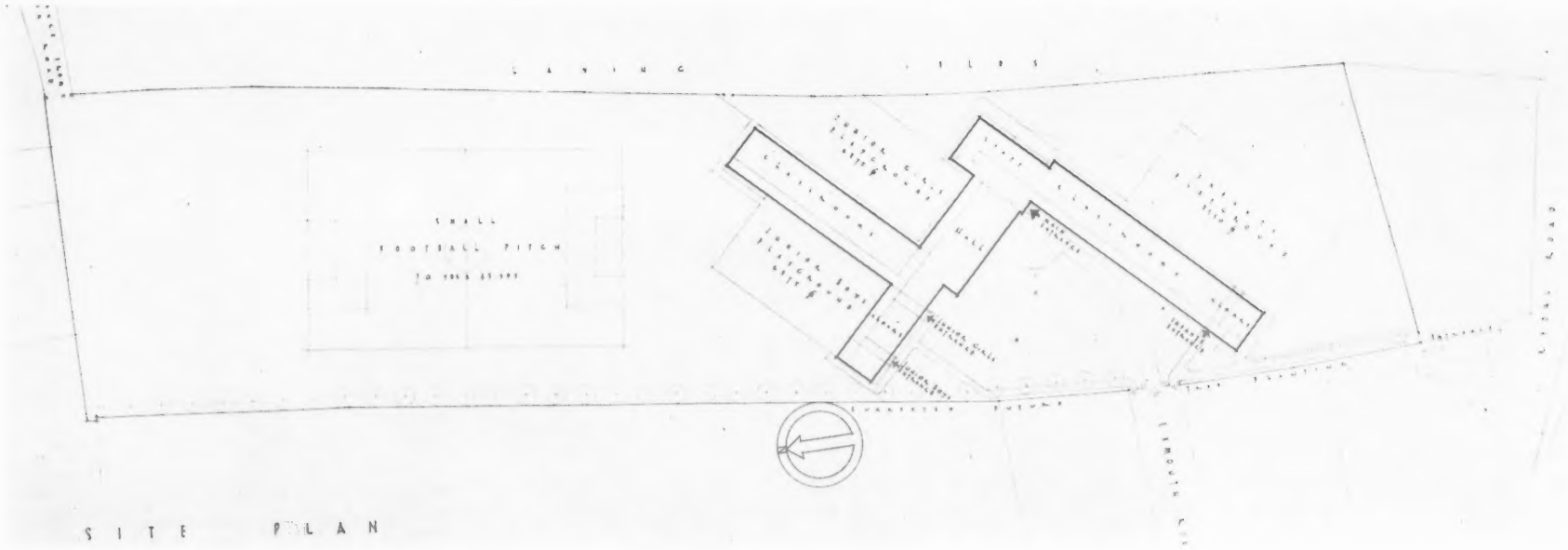
The assessors consider that, by the observance of strict economy, the building could be erected, including fees, for £6,000. The amounts allowed by the author for incidental works appear to be somewhat low, but, on the other hand, the price per foot cube stated might be slightly reduced having regard to the economical specification indicated in the author's report.



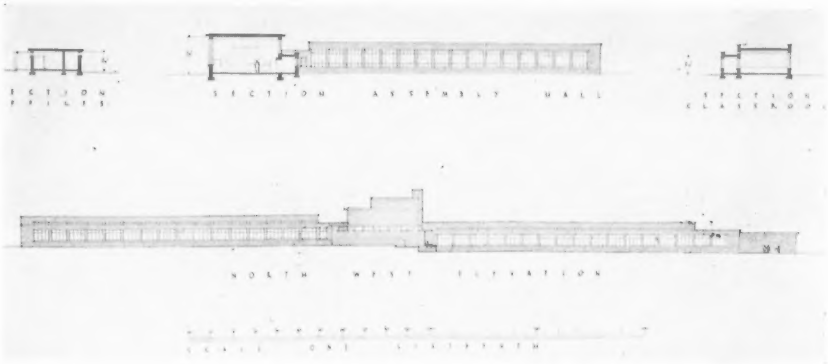
DESIGN PLACED FIRST BY ROBERT POTTER

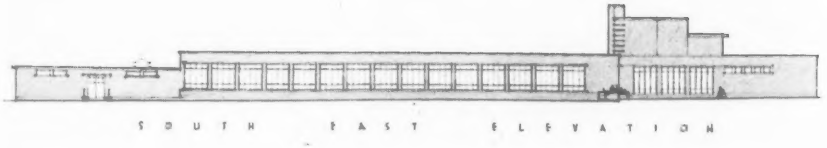


COMPETITION FOR PUBLIC ELEMENTARY SCHOOL, GOSPORT



SITE PLAN



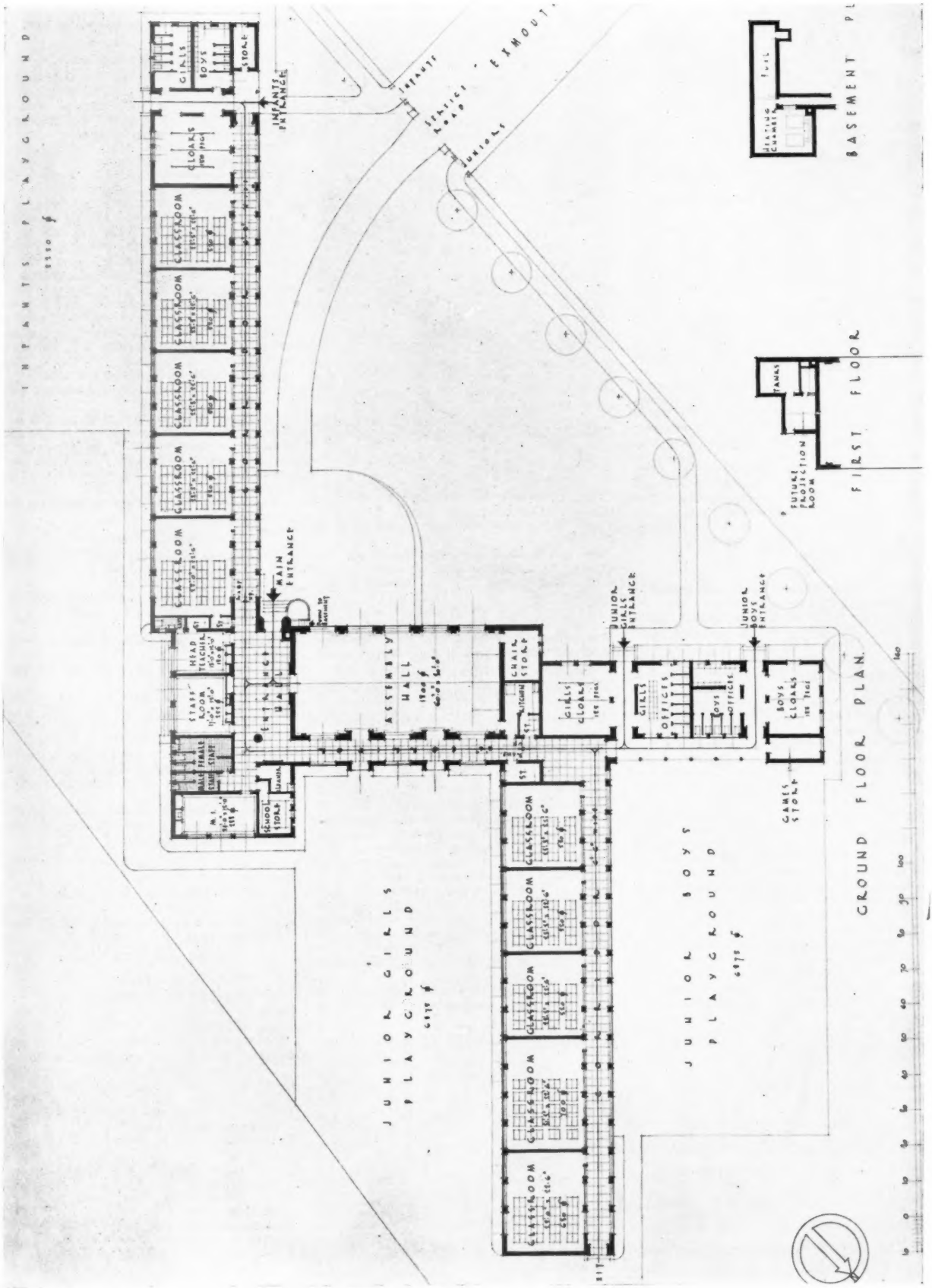


SOUTH EAST ELEVATION

DESIGN PLACED FIRST

BY D. A. STEWART

On this and the facing page we reproduce the design placed first in the competition—limited to architects resident or practising in Gosport and Portsmouth—for a public elementary school at Gosport for the Education Committee of the Borough of Gosport. Above is the site plan and, on the left, the north-west elevation, south-east elevation, and sections. On the facing page is the ground floor plan. The winner's report is printed on page 998.



SOUTH EAST ELEVATION

sections. On the facing page is the ground floor plan. The winner's report is printed on page 998.

THE GOSPORT COMPETITION

THE WINNER'S REPORT

General

Position on Site.—The proposed position of the building towards the southern end of the site near Exmouth Road and Rydal Road, has resulted after careful consideration, the following points having been noted :—

1 : Minimum of service road which enters from Exmouth Road.

2 : Use of fall of site for draining playgrounds, road and paths. The stepping of the floor levels in the south-east corner reduces cube. The run of soil drains towards the sewer in Rydal Road will minimize the amount of excavation required.

3 : In the estimation of the author the major number of children will come from the district S.E.—S.W., owing to recent building-up of this area, so that convenient and shortest access to the school can be provided.

4 : The close proximity of services in Exmouth and Rydal Roads will reduce installation expenses. Had the building been at the north end of the site it would have been necessary to take a sewer across adjoining property, thus entailing an easement.

5 : By so confining the school to one end of the site, the remainder of the area is not sterilized and can be used for other purposes should the Local Authority so require in the future.

6 : The sub-soil is more suitable for building, the strata of brick clay being shallower than in other parts of the site.

Planning

The scheme has been designed with regard to the following points :—

1 : *Aspect.*—All the classrooms have a south-east aspect, the plan is so arranged that in no instance are they cut off from direct sunlight by any other part of the building. The medical inspection room has been given north-east light.

2 : *Lighting.*—All classrooms receive natural light from both sides, the windows on the south-east walls to be as large as possible with sills 1 ft. 6 ins. above floor.

3 : *Ventilation.*—All classrooms to have natural cross ventilation at ceiling level ; assembly hall and offices are also cross ventilated.

4 : *Plan Type.*—An "open" plan has been proposed as the author is of the opinion that the quadrangle is both noisy and dirty, whereas the former type allows of free passage of air around the building and in no instance will one working part of the school overlook another.

A single floor building was decided upon as it was considered inadvisable to have stairs where young children are circulating. Where the fall of the site has necessitated "stepping" the corridors have been ramped in preference to building steps.

The Plan

Two classroom wings have been provided with offices at the ends nearest the entrances to the site. These are linked by the assembly hall, the staff rooms being situated in the south-east corner giving central administration and control of the main entrance.

As requested in the Conditions, a small kitchenette has been provided adjoining the assembly hall; this will reduce congestion when pupils are receiving their morning milk and will also allow of light cooking should the assembly hall be used for other purposes. The kitchenette is top lit and ventilated, thus facilitating the escape of steam, etc., from cookers.

The large entrance hall besides making for smooth circulation can also be used as a crush area when the assembly hall is being used for special functions, and will also be a convenient place for pupils to wait for medical inspection.

It is proposed to build in a showcase where pupils' work can be displayed to visitors.

Over the entrance hall are placed the tank room, and future projection room with its adjoining rewinding room. Access to these will be by cat ladder, and over the adjoining flat roof thus complying with fire regulations.

The heating chamber has been placed under the entrance hall in a central position and convenient for obtaining fuel supplies, the entrance is by a short flight of steps under the main entrance.

Ample storage has been provided for books, chairs, kitchen supplies and games requirements.

Playgrounds

The playground area has been divided into three : (1) Infants; (2) Junior Boys; (3) Junior Girls. In all cases there is easy access to the offices.

The infants have the south end of the site entirely to themselves and, if necessary, the surrounding grassed area can be used in dry weather.

The junior boys' playground is nearest the football pitch and it was deemed advisable to give them a more elastic area than the junior girls who can use part of the infants' grassed area.

Site Works

It is proposed to lay the playgrounds to natural falls with drainage to soakaways. Excavation will be necessary to level the car park outside the main entrance where a turning circle of 40 ft. has been provided.

The north, south and west boundaries will be fenced in with 6 ft. 6 in. unclimbable railings. It is proposed to retain the continuous earth bank on the eastern boundary and fix an unclimabable fence on the playing-field side of same. It is suggested that at some future date a dwarf hedge could be planted on the bank.

Between the building and all paths and playgrounds grass margins are shown, having a minimum width of 3 ft. these will prevent pupils and staff from knocking into open windows.

Tree planting and turfing should be carried out at a later date.

The laying out of the football pitch as indicated on plan has not been allowed for in the estimate, as this part of the site requires extensive treatment before it can be used for games.

Construction, Materials, Etc.

Wherever possible a bay unit has been used to simplify and cheapen the general construction.

Foundations.—To be of Portland cement concrete to depths as required with necessary reinforcement where point loads occur.

Walls.—In accordance with the suggestion in the Conditions it is proposed to construct the building throughout of brick. Local bricks are suggested with a dark brick plinth. All external walls to be of cavity construction.

Roofs.—The roof throughout to be of timber construction bearing on walls and R.S.Js. as required, the whole to be covered with three layers of patent felt and 1-in. insulated covering. The roof to the projection room will be of fire-resisting construction.

Floors.—All classrooms, assembly hall and staff rooms to be laid with strip boarding nailed to creosoted dovetailed wood fillets set in concrete screed on surface concrete. All corridors, cloakrooms, heating chamber, stores, kitchen and offices to be of grano. on concrete.

Floor to tank room and projection room to be o fire-resisting construction.

Windows.—Should current rates permit, it is proposed to use steel windows throughout, those in the classrooms to be hopper hung at bottom, sliding folding in the middle, and pivot hung at top. Other windows to be hung as required.

Doors.—Flush panel type of standard size except in offices.

Internal Finishings

Classrooms.—Board floor, flush brick walls, painted, with hand plaster dado 4ft. high, plaster ceilings.

Corridors.—Grano. in 2 ft. by 2 ft. squares with flush brick walls; hand plaster dado 4 ft. high; plaster ceilings.

Assembly Hall.—Board floor, plaster walls and ceiling.

Staff Rooms, etc.—Board floors, plaster walls and ceiling.

Pupils Offices.—Fair-faced brickwork (white), painted cement dado 4 ft. high, grano. floors.

General Services

Drainage.—All surface water to be carried to soakaways at convenient points on the site. soil drainage system to be taken to sewer in Rydal Road.

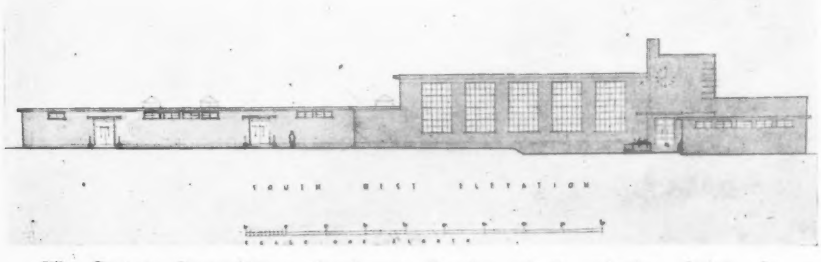
Heating.—By low pressure hot water supplied by coke-fired boilers. Hot water will be supplied to lavatory basins throughout.

Cost

Section A.	cu. ft.
Assembly hall, 62 ft. 6 ins. by 32 ft. 6 ins. by 23 ft.	46,600
Projection room, 22 ft. by 10 ft. by 9 ft.	1,980
Tank room, 10 ft. by 8 ft. by 9 ft. ..	720
	49,300

Cost at 9d. per cu. ft. (approx.) £1,848 16s.

Section B.	
North classrooms, 133 ft. 6 ins. by 24 ft. 3 ins. by 15 ft. 6 ins.	50,000
Corridor to north classrooms, 133 ft. 6 ins. by 12 ft. 6 ins. by 7 ft. 6 ins.	12,400
South classrooms, 130 ft. by 24 ft. 3 ins. by 15 ft. 9 ins.	50,432
Corridor to south classrooms, 130 ft. by 12 ft. 6 ins. by 7 ft. 6 ins. ..	11,950
Junior offices 82 ft. by 22 ft. by 12 ft. 9 ins.	23,000
Junior games store, 16 ft. 6 ins. by 12 ft. 6 ins. by 7 ft...	1,445
Infants offices, 47 ft. 6 ins. by 24 ft. 3 ins. by 13 ft.	15,050
Infants games store, 14 ft. by 7 ft. by 13 ft.	1,275
Staff rooms, etc., 59 ft. by 36 ft. by 13 ft. 6 ins.	28,700



The Gosport Competition : South-west elevation of the winning design, by R. D. Stewart.

Section B.—cont.	cu. ft.
Kitchen and chair store, 32 ft. 6 ins. by 11 ft. by 13 ft. 3 ins.	4,735
Corridor to kitchen and chair store, 24 ft. by 13 ft. by 12 ft. 3 ins. ..	3,820
Corridor to assembly hall, 62 ft. 6 ins. by 11 ft. 6 ins. by 7 ft. 6 ins... ..	5,300
	206,475

Cost at 11d. per cu. ft. .. £9,463 9s.

Section C.	cu. ft.
Heating chamber, 18 ft. 6 ins. by 19 ft. 6 ins. by 9 ft.	4,968
Heating chamber, 22 ft. by 8 ft. 6 ins. by 9 ft.	

Cost at 1s. 6d. per cu. ft. .. £372 12s.

Section D.	cu. ft.
Verandah to infant cloaks, 12 ft. 6 ins. by 6 ft. 6 ins. by 9 ft. 6 ins... ..	770
Verandah to junior cloaks, 44 ft. by 6 ft. 6 ins. by 9 ft. 6 ins.	2,720
	3,490

Cost at 6d. per cu. ft. .. £87 10s.

Summary.	£ s. d.
Section A	1,848 16 0
,, B	9,463 9 0
,, C	372 12 0
,, D	87 10 0
	£11,772 7 0

Site Works, Boundaries etc.	£ s. d.
Playgrounds, 2,444½ yds. at 5s. 6d.	671 10 0
Approach road, 280 yds. at 12s. 6d.	175 0 0
Paths, 421 yds. at 5s. 6d. ..	117 14 0
Entrance gates	70 0 0
Extra for road excavation ..	25 0 0
Railings..	347 10 0
Grass margins, etc.	75 0 0
	£1,481 14 0

Total cost :—	£ s. d.
Buildings	11,772 7 0
Site, works, etc.	1,481 14 0
Total	£13,254 1 0

Cost per cu. ft. on total .. 1s.

COMPETITIONS OPEN

JUNE 12—Sending-in Day. Nurses' Home for the President and Governors of the Macclesfield General Infirmary. Assessor: Professor R. A. Cordingley, F.R.I.B.A. Premiums: £100, £50 and £25. Designs to: Mr. J. N. A. Briscoe, Secretary, Macclesfield General Infirmary.

JUNE 20—Sending-in Day. Crematorium in Fen Ditton Lane, Cambridge, for the Cambridge Corporation. (Open to architects who have an office within 150 miles from Cambridge.) Assessor: H. S. Goodhart-Rendel, F.R.I.B.A. Premiums: £100, £60 and £40. The last day for questions was April 30; Applications for conditions should be made to Mr. C. H. Kemp, Town Clerk, the Guildhall, Cambridge. (Deposit £1 1s.)

JUNE 21—Sending-in Day. Municipal buildings, Kirkcaldy, for the Royal Burgh of Kirkcaldy. (Open to architects practising in Scotland.) Assessor: Thomas S. Tait. Premiums: £200, £150 and £100. Conditions, etc., are obtainable from the Town Clerk, Kirkcaldy. (Deposit £1.) Last day for questions: June 21.

Seth Stephens, author of the design placed first in the Broadstairs Competition.

JUNE 21 — Sending-in Day. Municipal Buildings, Friern Barnet, for the Friern Barnet U.D.C. Assessor: C. Cowles-Voysey, F.R.I.B.A. Premiums: 150 guineas, 100 guineas, and 50 guineas. Applications for the conditions and site plan should be made to Mr. G. T. Fletcher, Clerk of the Council, Council Offices, The Priory, Friern Barnet, N.11. (Deposit £1 1s.) The last day for questions was March 22.

JULY 31 — Sending-in Day. Layout of a part of the Kincorth Estate, Aberdeen. Assessor: Dr. Thomas Adams, F.R.I.B.A. Premiums: First, £500; and £300, to be divided between the authors of not more than three designs placed next in order of merit. Conditions of the competition are obtainable from Mr. G. S. Fraser, Town Clerk, Town House, Aberdeen. (Deposit £1 1s.)

JULY 31—Sending-in Day. New offices for the Belfast and District Water Commissioners. (Open to architects resident in Great Britain and Northern Ireland.) Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions of the competition may be obtained on application to Mr. W. T. Quinn, O.B.E., Secretary and Registrar, Water Offices, Belfast. (Deposit £1 1s.) The last day for questions was May 31.

AUGUST 24—Sending-in Day. Secondary school for boys to be erected at Podsmead, Gloucester, for the Governors of the United Schools, Gloucester. (Open to architects domiciled in the United Kingdom.) Assessor: Major H. Stratton Davis, F.R.I.B.A. Premiums: £200, £100 and £50. Conditions of the competition may be obtained on application to Dr. H. J. Larcombe, Clerk to the Governors, Belsize House, Brunswick Square, Gloucester. (Deposit £1 1s.) The last date for questions was June 7.

THE BROADSTAIRS COMPETITION

THE ASSESSOR'S REPORT

The problem to be solved was primarily a question of obtaining a suitable layout for the development of a residential estate in the ownership of the Council and that such layout should be both attractive and reasonably economical in execution.

Nineteen schemes were submitted, the presentation of the designs generally being o a high standard.

No. 16. (By Seth Stephens.) The winner has an attractive and reasonably economical layout for the main estate as well as a comprehensive suggestion for the ultimate development of the sea-front. Of the two alternatives sent in, Scheme A is to be preferred. As drawn, this necessitates the acquisition of a portion of land not in the ownership of the Council, but this can be adjusted if necessary without affecting the merits of the design. Certain road gradients might also be adjusted with advantage. The total number of houses is 490.

The author has provided for a quiet, residential estate, avoiding through roads but providing a central crescent drive with site for public buildings. The aspect provided for the majority of building plots is good, with a view of the sea. The layout of the promenade and pleasure gardens is too ambitious.

No. 4. (By R. J. S. Roberts.) This scheme has a well-considered layout with service roads along North Foreland Hill and Elmwood Avenue.

The layout of the pleasure gardens is good. The provision of a shopping centre in the middle of the estate is good.

No. 17. (By N. H. N. Darby and G. W. Hill.) This is a well-rendered scheme with a good layout. No sites have been reserved for public buildings.

THE WINNER'S REPORT

General

The layout has been planned with a view to preserving (if not enhancing) the amenities of Broadstairs and in compliance with the Council's town-planning scheme.

Special attention has been given to the fact that the scheme is essentially made up in two parts, i.e. residential estate and pleasure gardens, and in order to arrive at a satisfactory solution to the problem of reading the Council's mind in respect of its requirements in regard to the pleasure gardens, the author has submitted an alternative layout for the area hatched black on site plan (forwarded with the conditions), also with regard to the layout of estate forming triangular part of same from road No. 11 and bounded by Elmwood Avenue and Northforeland Hill, the latter being deemed advisable due to the rapid fall of contours at this point. The alternative scheme is shown as scheme "B."

The total number of houses under scheme "A" is 490, as against 501 shown on scheme "B."

In the opinion of the author, the really

important difference between "A" and "B" schemes for the pleasure gardens, is the position of the parking ground and the position of bandstand and enclosure.

Whilst realizing the corner site at the north end of the estate is not owned by the Council, the author would suggest its acquisition for development purposes, for whether used as a parking ground under scheme "B" or the suggested residential hotel site under scheme "A," it would be a distinct acquisition for, in the case of the former, it would be revenue-producing and, in the case of the latter, its rateable value would be an asset to the council.

There appears to be no shopping zone allocated, and the author would suggest the north side, at the corner of Reading Street and Elmwood Avenue as suitable for this purpose.

Residential Estate

Site and Layout.—It will be observed that due regard has been given to the peculiarities of the respective sites, especially as regards levels.

The author has considered the scheme jointly from an economical and æsthetic viewpoint and concluded to separate the estate from the main roads as much as possible, hence there being no thoroughfare through the Northforeland Hill, in scheme "A," it being deemed advisable to gain ingress and egress along Elmwood Avenue only; if, however, it is necessary to provide same, the author would suggest a forked road branching to the right, at the bottom of road No. 14, thus providing an island site, for the suggested residential hotel. It will also be noted a give-and-take line is suggested for this site, as shown dotted on plan.

The feature of the estate layout is the crescent drive in the centre, with suggested church site, occupying an elevated and imposing position having vista from the entrance road No. 8 and ideal setting looking from the centre of road No. 11, and should the road leading to cul-de-sac No. 2 ever run through—as the author would like to imagine—the church would form an admirable culminating point from three roads and would be suitably placed in the quiet and centre of a good class residential estate. In the author's opinion, one-way traffic would be desirable to the crescent drive.

The open space (or area) shown north of road No. 11, serves a dual purpose, inasmuch as it provides a sense of spaciousness—much too infrequent in estate development—and tends to alleviate the monotony of houses in the immediate vicinity and, at the same time, overcomes a somewhat difficult and expensive area for building purposes, despite the fact that road No. 13 would be cut through the contours, as shown on sections of roads, to give a gradient of 1 in 17-23.

The building frontage to Northforeland Hill is drawn in accordance with building line shown on site plan, but the author would suggest a 50-ft. building line to meet any demands which may be made through ribbon development.

In arriving at the density to the middle of estate, it was thought advisable to ensure *not more* than six houses to the acre over the area (not otherwise zoned) rather than to comply rigidly for any particular parcel of land.

It will be appreciated the frontages to plots have been governed by the building depths in the respective zoning areas, except in a few isolated instances where the boundaries are somewhat irregular.

It will also be noted that the compass position of roads, i.e. S.S.E., provides excellent orientation for 90 per cent. of the contemplated houses, if planned according to aspect.

Pleasure Gardens Promenade and Cliffs Site Layout

General Remarks.—In view of the fact that information giving specific requirements for the development of area, hatched black on site plan (forwarded with conditions), being somewhat vague, the author has evolved a scheme which provides for it to be artistically laid out for pleasure and recreation for all tastes, both young and old, and has endeavoured to produce a scheme which will be revenue-producing, as well as enhancing the amenities of Broadstairs, without detracting from its enchanting environs.

The flower-beds fronting roads would be screened by shrubbery, thereby affording adequate protection from any prevailing elements of such an exposed position and, in the opinion of the author, adding tone and colour to the scheme generally.

Cliffs Land.—Beyond the proposed promenade extension, it is suggested to provide the following: (1) open-air bathing or boating pool; (2) 3 blocks of beach chalets; (3) 2 public shelters; (4) putting greens; (5) rock and sunken gardens.

It is not intended to take away the natural beauty of the cliffs, but winding paths are suggested to protect the turf and give a rustic rather than a new appearance.

Scheme "A"

Pleasure Gardens.—The vague data as regards levels make it rather difficult to formulate a scheme to the best advantage, but for the purpose of fixing a position for the café and concert hall, the axis line is taken running N.N.E. to S.S.E.

Due consideration is given to the position of semi-circular colonnade surrounding the amphitheatre, which affords protection to the public during inclement weather, and it is so situated in juxtaposition to the stage of the concert hall, thus enabling the amphitheatre to be used for open-air performances, with dressing-rooms adjoining the stage. The amphitheatre is calculated to seat, approximately, 750 persons, and the colonnade, approximately, 250 persons. The pavilion consists of café, restaurant and concert hall, seating capacity, approximately, 750 persons, with smoke-room and tea-room on each flank. Dressing-rooms would be provided for each sex, on each side of stage. Cloakrooms and service bars to café and concert hall, sun colonnades, etc. Provision is made for 5 tennis courts with room for an additional two, if required.

Parking.—The parking ground is calculated to hold, approximately, 150 cars, but space is available should more parking space be required.

The parking ground is on the main axis and adjacent to the concert hall, etc., and is situate on the main run of traffic, and the author would suggest its screening by trees and shrubs, so as not to interfere with its immediate surroundings. The main factor in deciding to place the car park in this position was the fact that it is centrally situated and its concealment from the view of the promenade.

In comparing the positions of the respective parking sites in "A" and "B" schemes, the author is inclined to think scheme "A" is the better of the two, despite the fact that "B" scheme has certain advantages over scheme "A," and considers "B" site much too valuable a site for the purpose of parking.

Scheme "B"

Layout of Pleasure Gardens.—Scheme "B" does not differ materially from "A" excepting that the bandstand and enclosure is more prominently situated in front of, rather than at the rear of the pavilion, which, in the opinion of the author, has a more dignified appearance and setting.

It will be noticed that scheme "B" has only four tennis courts, but has two bowling greens, which are not included in scheme "A."

The author would suggest enclosing the site with trees and shrubs, in the manner shown, which affords privacy and protection to the flower-beds internally.

The centre pavilion could be used for a similar purpose as scheme "A" or, alternatively, for a museum and art gallery.

Roads and Sewers

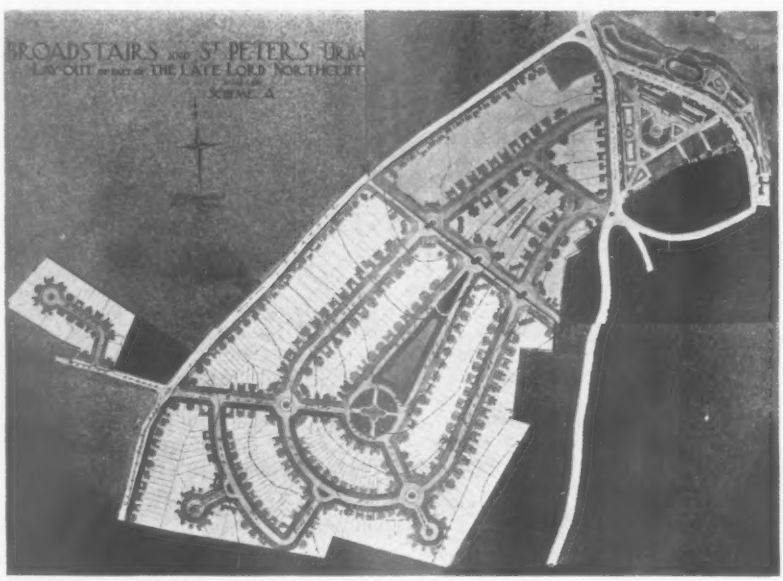
The roads and sewer would be constructed in accordance with by-laws, and the estimate attached hereto includes for same.

Although no specified width of roads has been indicated for the purpose of estimating, a minimum width of 36 ft. has been allowed for, which might be considered sufficient with a building line of 30 ft. throughout the internal layout. If, however, a grass verge is desired, this would not materially affect the estimate, as the carriageway would remain the same, with a slightly less width for footways to compensate for the extra grass verge.

Apart from sewers in No. 6 and 15 roads, all soil drainage is taken through the estate and follows the contours of land.

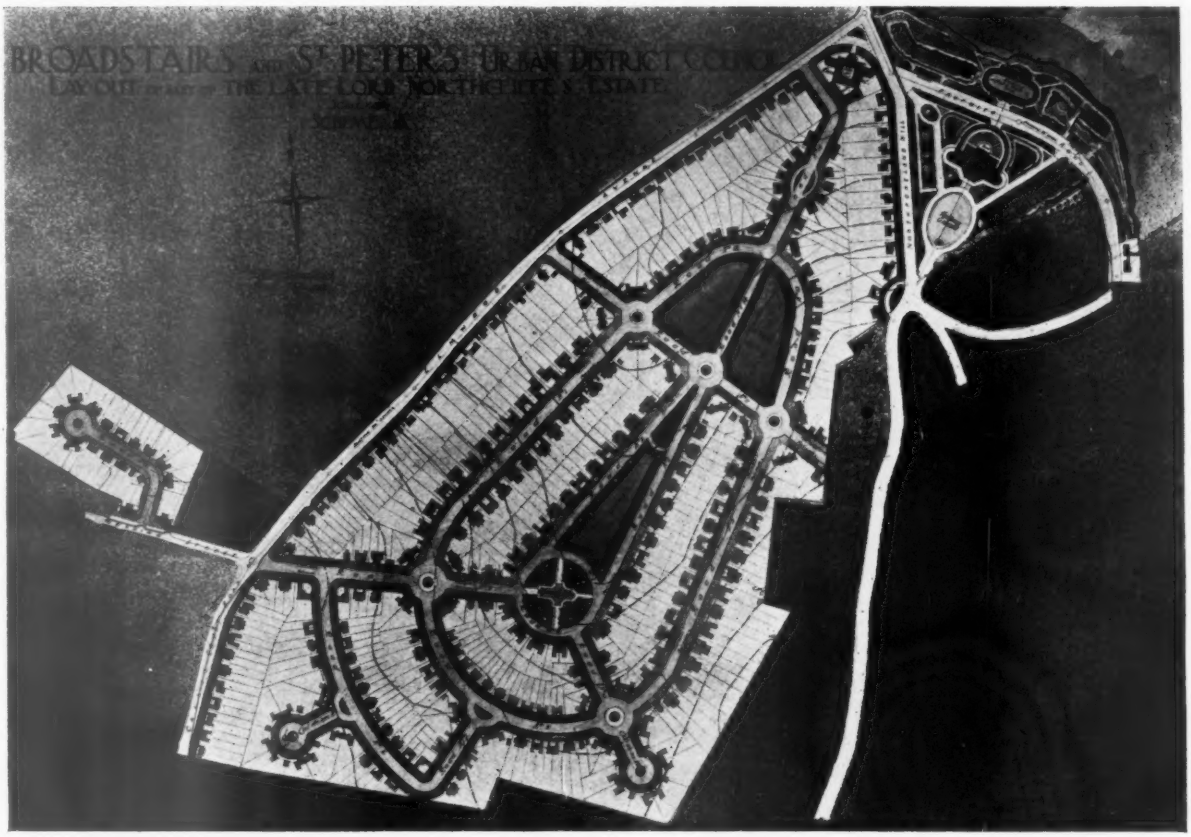
Contours

Note that the estate, being self-contained,



The Broadstairs Competition: Alternative scheme, B (shown on right of the above layout plan) by Seth Stephens. See report on this page. The winning scheme, A, is reproduced on the two following pages.

THE BROADSTAIRS COMPETITION



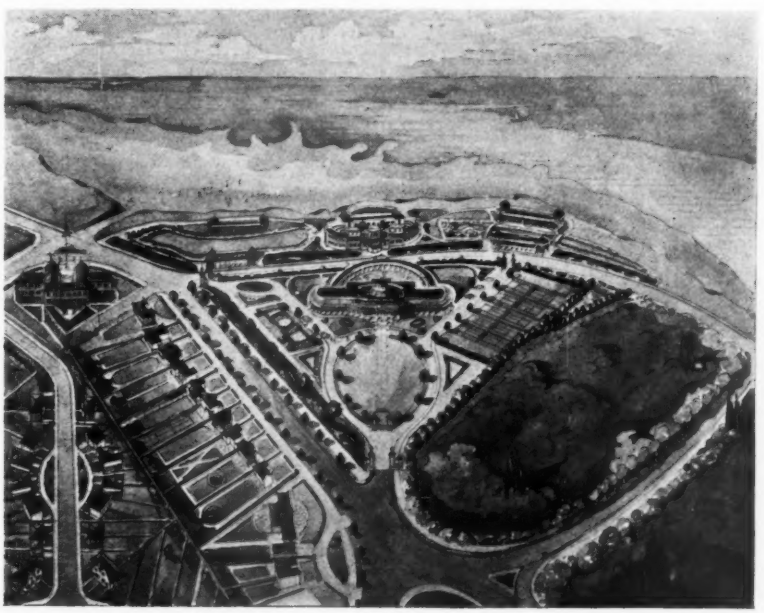
DESIGN PLACED FIRST BY SETH STEPHENS

with contours such as appear to lend themselves admirably to the layout, the roads and sewers following the natural fall of the ground with curved roads giving pleasing relief at the south end of the estate, helps greatly to relieve monotony and, at the same time, coincides with the contours.

Summary of Cost

The author estimates the approximate cost of the proposed schemes as follows :—

	£	s.	d.
Roads and sewers to residential estate (including separate estate)	25,000	0	0
Roads and drainage to pleasure gardens	700	0	0
Approximate estimated cost of pleasure gardens and cliffs lay-out, including levelling, planting shrubs, forming rock gardens, tennis courts and bowling greens, laying turf, forming flower-beds and bedding	12,000	0	0
	37,700	0	0
Approximate estimated cost of open-air bath	30,000	0	0
Ditto No. 18 beach chalets at £2,805 each (per block)	5,610	0	0
Ditto of shelters, £1,140 each	2,280	0	0
Ditto concert hall, café, and sun colonnade ..	30,000	0	0
Ditto amphitheatre ..	10,000	0	0
Total estimated cost of complete scheme	115,590	0	0



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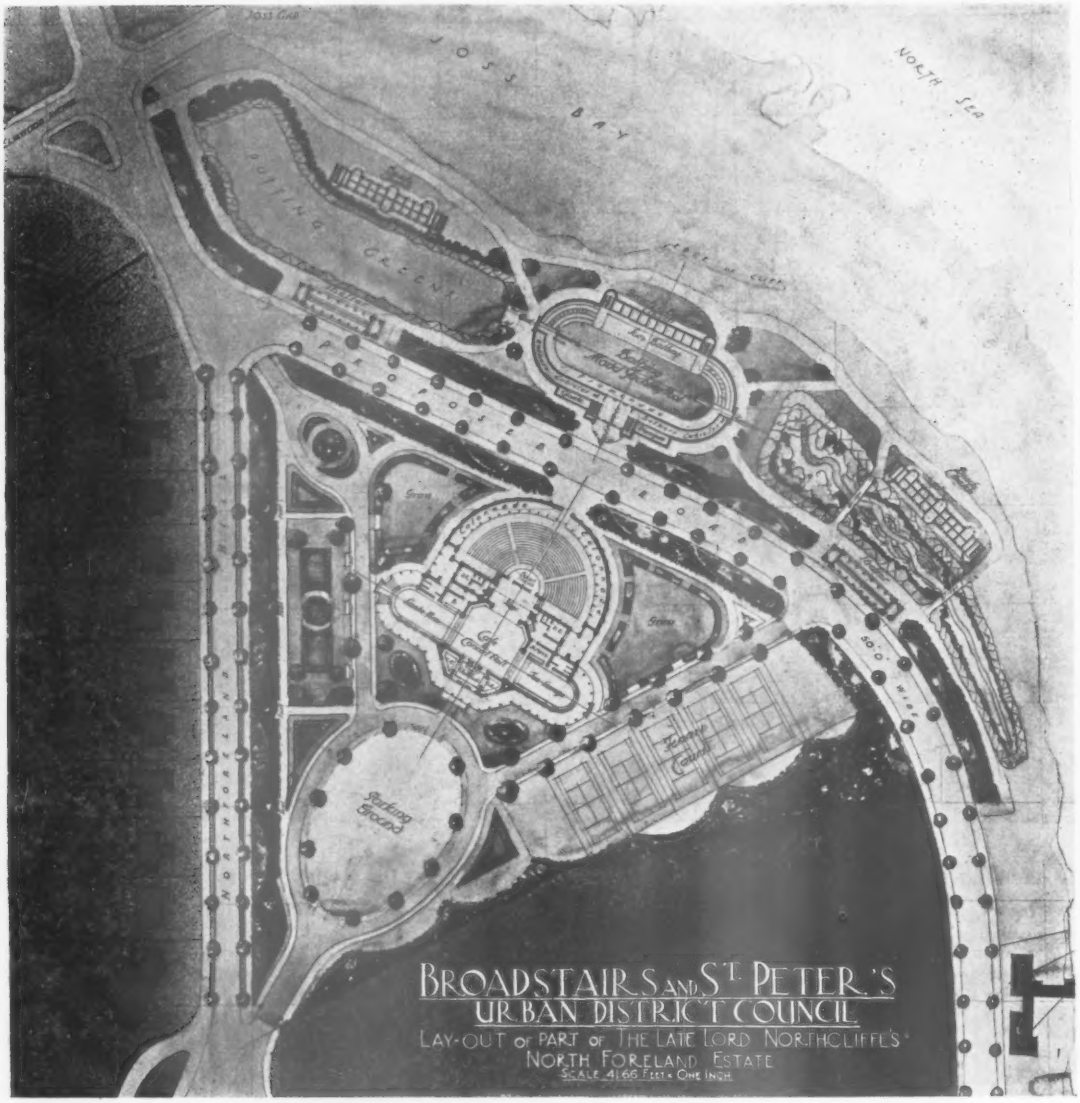
THE BROADSTAIRS COMPETITION



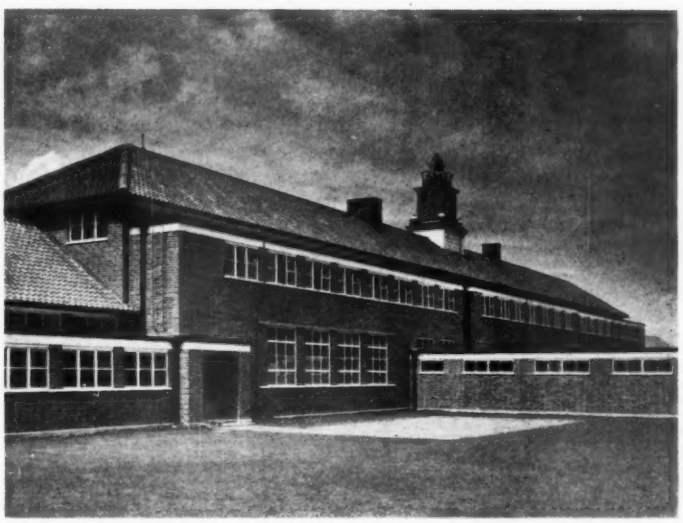
Above: the winning design, by Seth Stephens, in the competition for the layout of part of Lord Northcliffe's North Foreland Estate, Broadstairs.

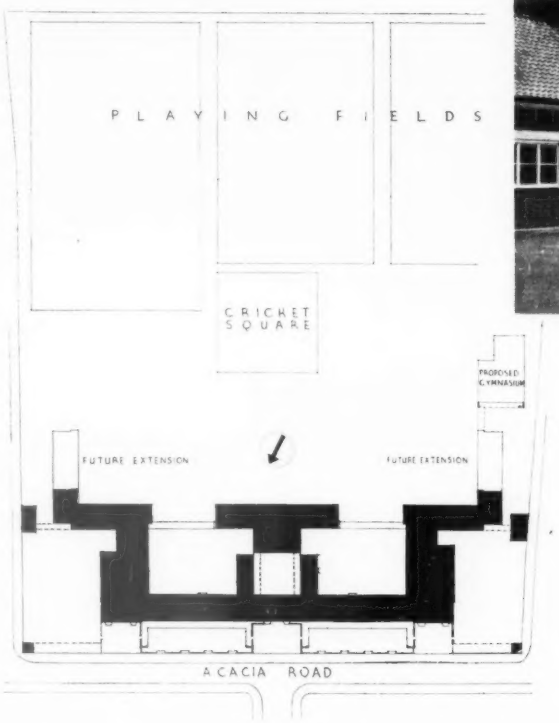
Left: Sketch plan of the design placed second. By R. J. S. Roberts.

SILVER JUBILEE SCHOOL, BEDFORD

DESIGNED BY

LOUIS DE SOISSONS





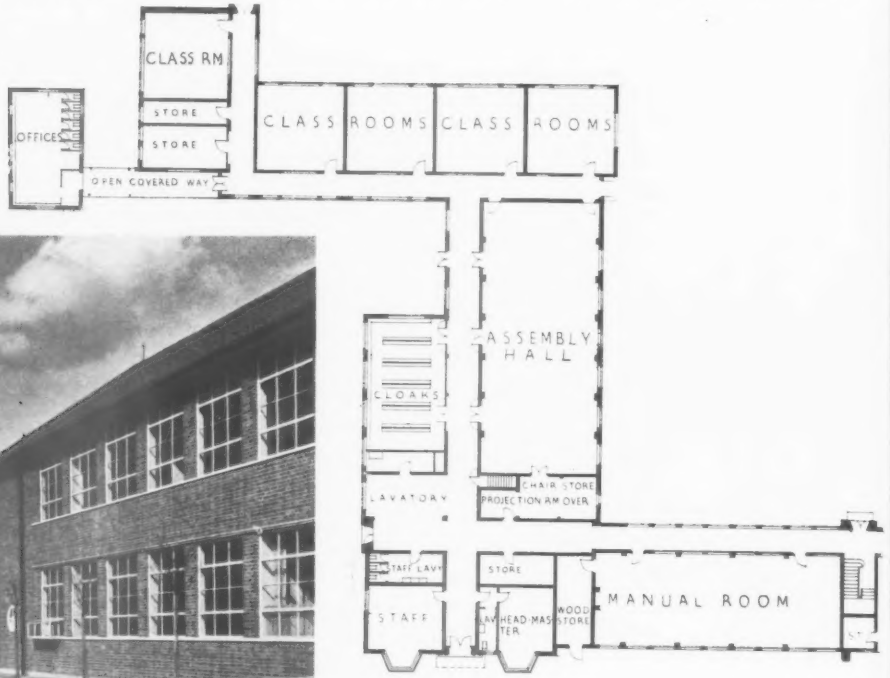
GENERAL—*The school accommodates 360 senior boys, 360 senior girls, and 280 infants. It is planned with the senior building as a symmetrical block axis on the centre line of the approach road. The infants' school, at the rear of the main block, is connected to it by a small open cloister court.*

SITE AND SITE PLAN—*In Acacia Road, Bedford. The buildings are planned with as little depth as possible to provide the maximum area for playing fields and to allow for future extensions of class-rooms and gymnasium.*

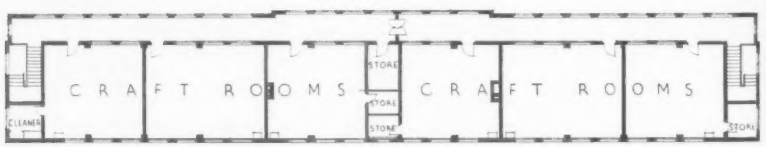
The photographs are : top, the main front ; and the centre block taken from the rear.

SILVER JUBILEE SCHOOL, BEDFORD:

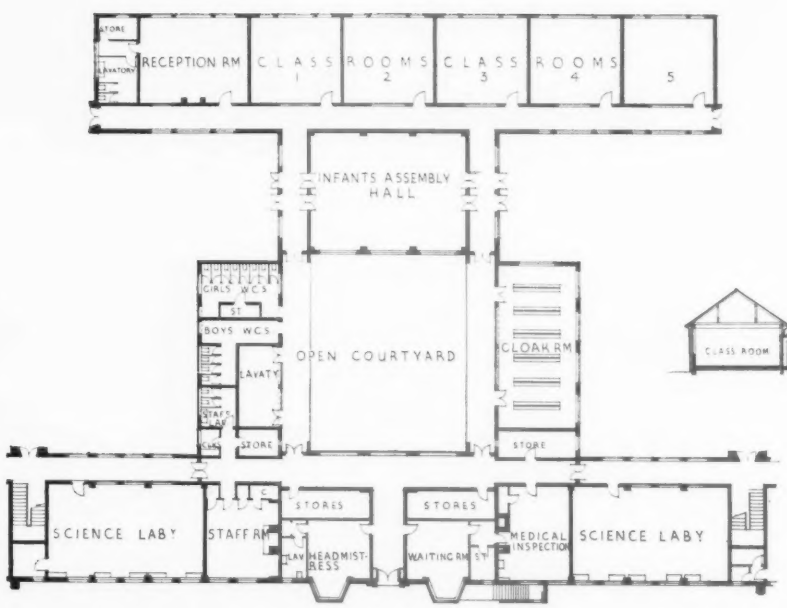
The photograph reproduced below, taken from the entrance court-yard, shows the boys' wing.



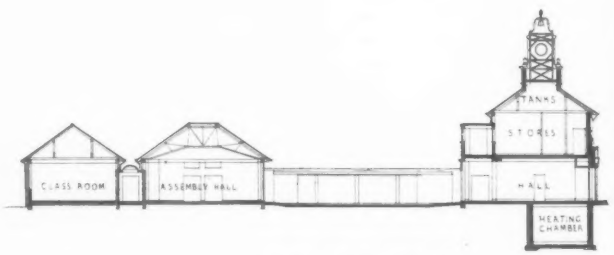
GROUND FLOOR PLAN OF THE BOYS' WING: THE GIRLS' WING IS SIMILAR ON PLAN



FIRST FLOOR PLAN OVER THE CENTRE BLOCK



GROUND FLOOR PLAN OF THE CENTRE BLOCK



CROSS SECTION

DESIGNED BY LOUIS DE SOISSONS

PLAN—*Classrooms all face south-east towards the playing fields, and are planned in three blocks divided by groups of trees to avoid a monotonous elevational line to the playing fields. Special classrooms for manual, domestic science, and other purposes face north-west. The main entrance gives access to the administrative department (head mistress, waiting-rooms, hall, and medical rooms), and to the infants' department, which is approached by covered ways flanking the open courtyard, with lavatory and cloakroom accommodation either side. On the upper floor of the main building are craft rooms for senior boys and girls.*

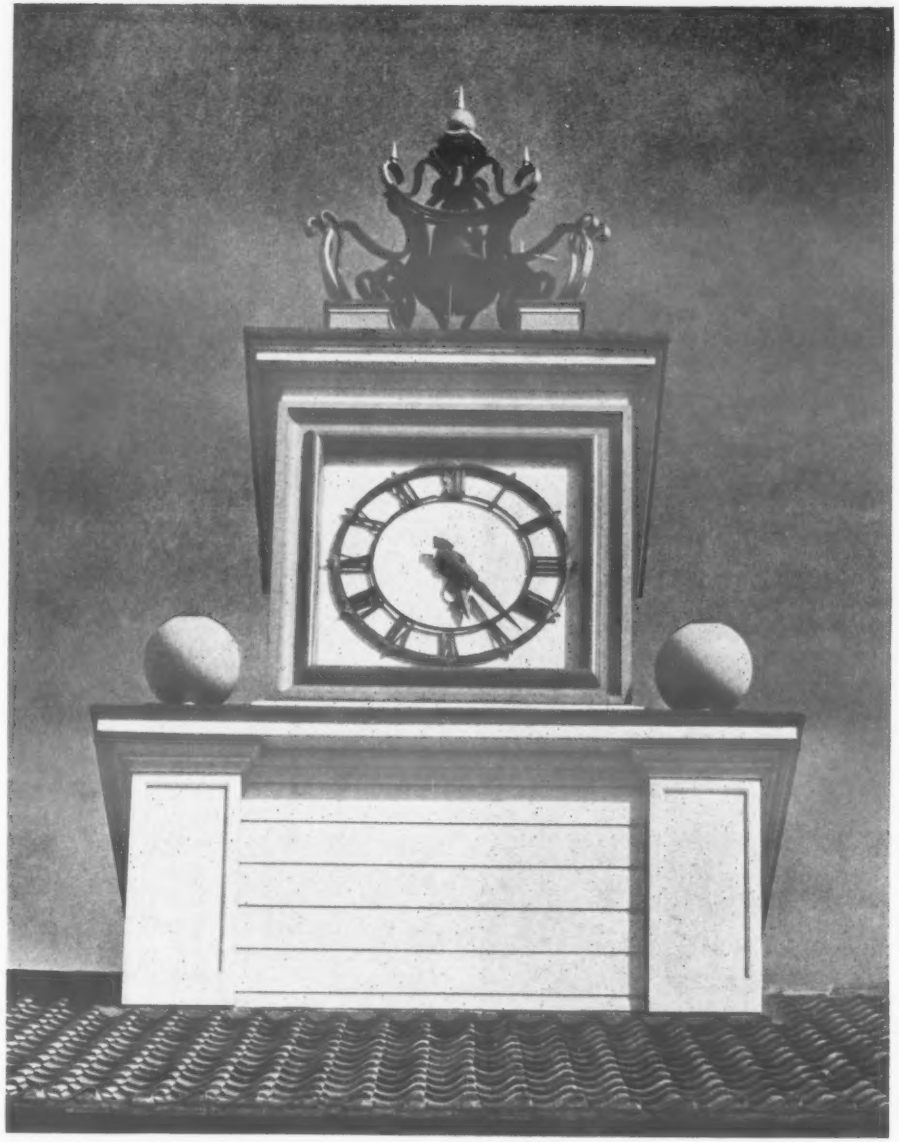
Senior boys and girls are grouped on either side of the central block, with entrances on the main front leading to the headmaster's room, science laboratories, and domestic rooms, and with, in the case of each department, the assembly hall, cloaks and lavatories placed on either side of the main corridors leading to the classrooms.

Boys', girls' and infants' playgrounds are between the blocks of buildings, and the courtyards between the road and the buildings are laid out with shrubs, lawns and stone paving.

Projection rooms are installed in the assembly halls for the provision of cinematograph instruction. Several classrooms have facilities for cinematograph, with reversible blackboard, coloured silver, for use as screens.

Above is the entrance to the senior girls' department.

SILVER JUBILEE SCHOOL, BEDFORD



DESIGNED BY

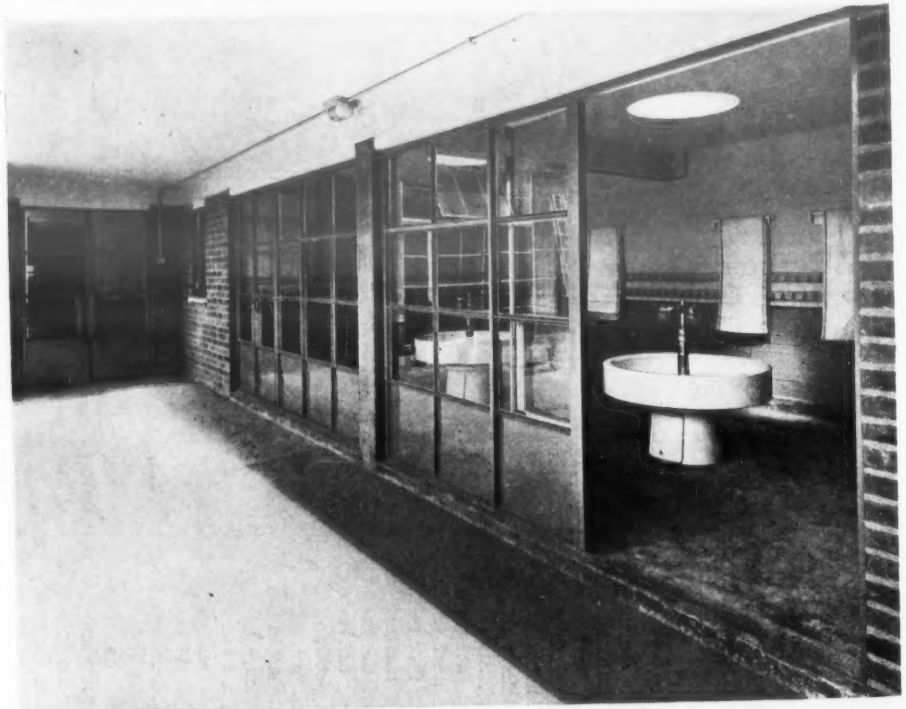
LOUIS DE SOISSONS

CONSTRUCTION AND EXTERNAL FINISHES—*Brick walls, 11 ins. hollow one-storey, 14 ins. two-storeys; reinforced concrete foundations (reinforced concrete piers with reinforced concrete beams between). Roofs: timber construction, covered with pantiles; the flat roofs are laid with asphalt. Windows: metal, set in concrete frames. Bell turret: wood, with metal bell frame. Entrances: artificial stone.*

The photographs show: left, the bell turret over the main entrance; above, the gates leading from the senior girls' playground to the courtyard on the entrance front.

INTERNAL FINISHES—*Walls: fairfaced brickwork, distempered, with the exception*

Looking from the senior girls' playground to the courtyard on the entrance front.

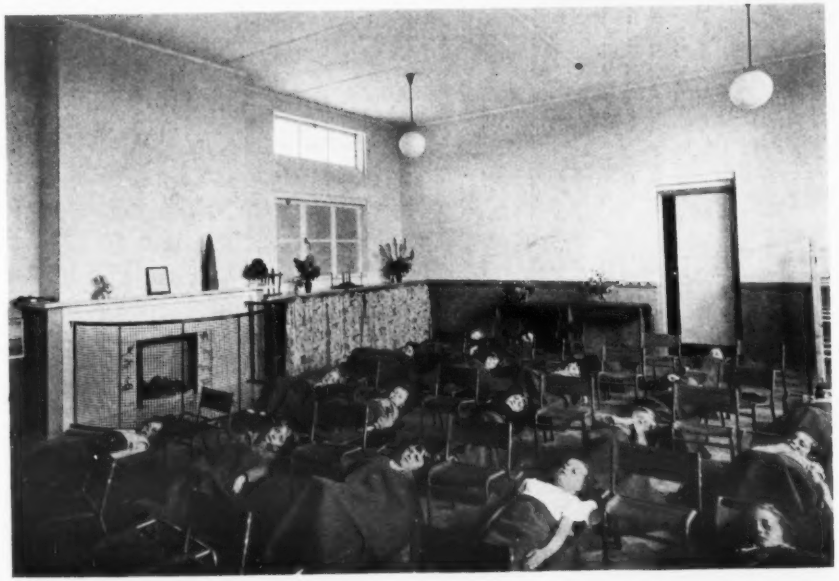


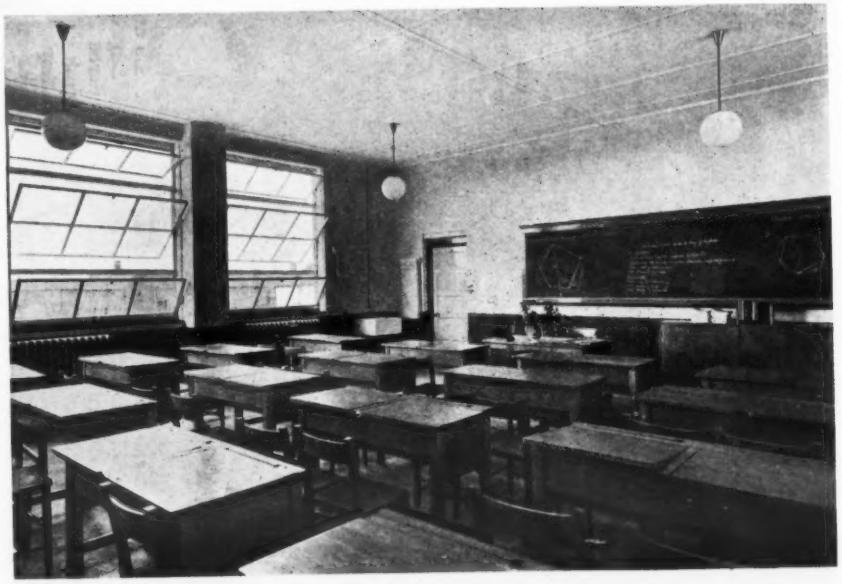
INTERNAL FINISHES—*Walls : fairfaced brickwork, distempered, with the exception of the staff rooms, which are plastered ; floors, wood block, birch wood and granolithic paving.*

EQUIPMENT—*Class period buzzers are installed in the classrooms and assembly halls. The bell can be used as a fire alarm by electrically controlled apparatus. Heating is by accelerated low-pressure hot water ; and the boilers are fed by low-grade coal. Automatic stokers are installed. The domestic hot water is supplied from the boiler and cylinder in the boiler-house. Cloakrooms have heated rails for clothes. There are electrically controlled, synchronized clocks in the assembly halls, head teacher's rooms, and the corridors of every department.*

The photographs show : a view in the internal courtyard showing the boys' washing-room : below, left, the nursery ; right, a typical classroom.

For list of general and sub-contractors see page 1028.





LETTERS FROM READERS

FRANK BENT

JOHN GLOAG

J. JEFFREY WADDELL

PROFESSOR LIONEL B. BUDDEN
(Principal, Liverpool School of Architecture)

Salaried Architects

SIR,—It was indeed good to read in last week's issue that the ARCHITECTS' JOURNAL is taking up the cudgels on behalf of the salaried assistants.

Undoubtedly the great majority of them are scandalously underpaid, thanks largely to the policy of the R.I.B.A.

In the current issue of the Institute's Journal there are details of a golden opportunity for ambitious assistants, in the form of an advertisement by the War Department for draughtsmen "capable of handling expeditiously schemes for large works." The commencing salary is the princely sum of £210 per annum, rising by annual increments of £12 to £320.

There is thus an opportunity for those who continue to handle the large works expeditiously (and satisfactorily) to rise in nine years to the giddy heights of £320 per annum!! This, be it remembered, is advertised in the official journal of the R.I.B.A.

On the other hand, I know of a large firm engaged on aerodrome construction who are paying *bricklayers* 1s. 10d. per hour, plus £2 weekly as "lodgings money." This, with a 44-hour week, means a total income 50 per cent. greater than that offered in the case first quoted.

Again, a contemporary journal for last week contained two advertisements by the borough engineer of Eastbourne. One was for a clerk of works at £6 6s. per week and the other offered £5 per week for an experienced assistant, "preferably having passed the examinations of the R.I.B.A."

Such examples occur almost every week and seem likely do so until the salaried members of the R.I.B.A. throw off their apathy and assert themselves.

The total membership of the R.I.B.A. Council is 81. Of these there are only two salaried members, one of whom is the representative of the A.A.S.T.A. Moreover, there are no less than 14 allied societies in England of which full membership is restricted to those in practice on their own account or, in a few cases, to salaried architects who are principals.

Is it any wonder, therefore, that the R.I.B.A. has been dubbed an employers' federation?

It is high time it was realized that at least 75 per cent. of the R.I.B.A. membership consists of salaried members (who incidentally provide the bulk of the income) and matters should be arranged to suit their convenience. How many assistants can attend a meeting at 5.15 p.m.? Yet that was the time at which the recent Special General Meeting commenced, as you rightly pointed out.

The Council MAY have the welfare of the salaried members at heart, but I have seen no evidence of it as yet and I earnestly hope the ARCHITECTS' JOURNAL will continue to emphasize the injustice of the present state of affairs.

FRANK BENT

So What?

SIR,—In my article which you published last week, the statement "We like also at appropriate times the good old English custom of a fug," was rendered by your printer as "good old English custom of a fog."

Perhaps you would not mind inserting this correction, because, not for the first time, a printer has succeeded in making a perfectly sane statement read like a burst of maniacal laughter.

JOHN GLOAG

Trading Estates

SIR,—I must compliment you on your issue for May 27 and the idea of planning the industry of this island of Great Britain. Your maps are excellent. I would like to go further and stress the importance of canals, and particularly of a ship canal, as wide and deep as the Kiel Canal, from the Clyde to the Forth. The formation of the country suggests it. There are no difficulties, except the £25 million. But what is that when we are spending £1,500 million in the next five years? It is only the cost of four battleships, and it remains a permanent asset in the development of the country. I write as a Scotsman, but this canal would help not only Scotland but the whole Island, and in war would be worth more than four battleships to the Navy. That is admitted, yet for years now nothing has been done, because, mainly, we have no local government in Scotland who could take on this debt. But it could, and in my opinion should, be done now.

I think that this canal would do more good to the development of this island than any other single scheme that has been undertaken for many years.

When we read of what is being done in the United States to develop it and cure unemployment just now, this scheme is a comparatively small one, yet what a difference it would make, not only to the entire Lowlands of Scotland, but towards the building of a still greater Britain.

J. JEFFREY WADDELL

The Liverpool School

SIR,—I should like to add my own thanks to those of Professor Reilly for the very appreciative review of the exhibition of the work of former students of the Liverpool School, contributed by Mr. Myles Wright to your issue of May 20.

In doing so may I add that Professor Reilly has in his letter given me a disproportionate amount of whatever credit may be due for the design of the buildings in which this school is housed. My colleague, Mr. J. E. Marshall, was associated with Professor Reilly and myself in the work and his part in the planning, construction and elevational expression of the whole scheme was throughout vitally important.

LIONEL B. BUDDEN

•

"Leeds Medal" for Competition in Yorkshire

A provision in the will of the late Mr. William Hoffman Wood, of Addingham, is of interest to Yorkshire architects. The Trustees of the will are empowered to award every year a gold medal, known as the "Leeds Medal," for (in their opinion) the best painting, sculptural or architectural work submitted by a person born of a Yorkshire parent, and resident within 60 miles of Leeds Town Hall. For the year 1936 architectural drawings only are to be considered.

Those who intend to compete for this Medal should forward their drawings for exhibition in a room at the Leeds City Art Gallery before June 30, 1937.

The buildings for which the drawings are exhibited must have been completed during the year 1936.

The Medal is one that has been specially designed and struck at a cost of £25.

Further information is obtainable from W. H. Clarke & Co., 12 South Parade, Leeds, Solicitors for the Trustees.

Bodleian Library

Queen Mary will, on June 25, lay the foundation stone of the Bodleian Library extension at Oxford, which is to cost £1,000,000.

Appointment

Mr. A. Morgan, M.INST.M. & CY.E., Deputy City Surveyor and Waterworks Engineer, Gloucester, has been appointed to the position of city architect and estates manager, Gloucester.

FILING REFERENCE:

WORKING DETAILS : 551

BALCONY CONSTRUCTION • PULLMAN COURT, STREATHAM • FREDERICK GIBBERD

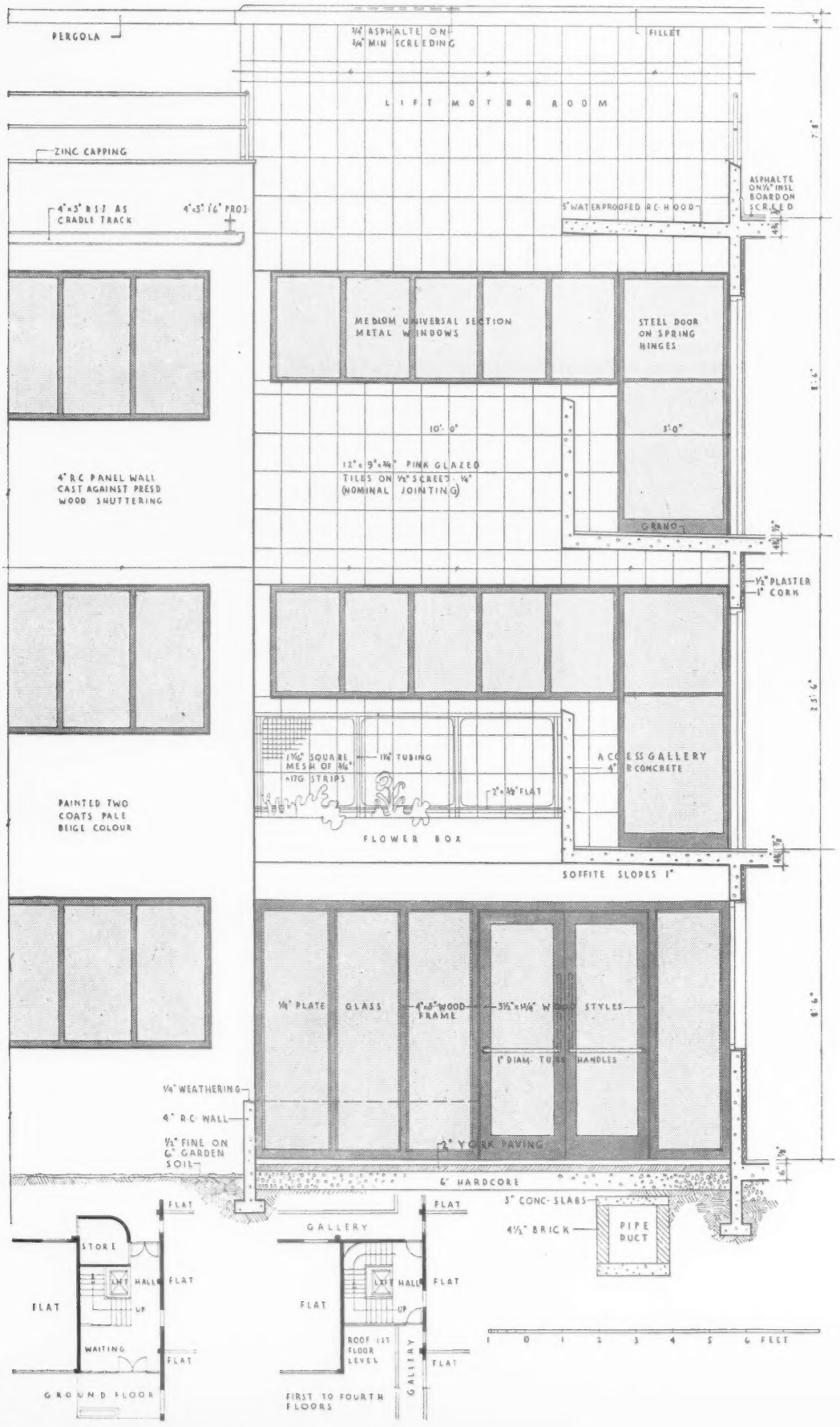
Wall construction consists of a reinforced concrete frame with panel wall, 4 ins. thick, lined with 1 in. of cork for insulation. Floors are of hollow tiles of a total thickness of 5½ ins.; balcony and gallery floor slabs are in reinforced concrete.

The walls are painted in different bright colours, and some are faced with faience tiles. A permanent steel cradle rail, at roof level, makes it possible to repaint the walls without scaffolding.

Construction details are given overleaf.

WORKING DETAILS : 552

BALCONY CONSTRUCTION • PULLMAN COURT, STREATHAM • FREDERICK GIBBERD



Construction details of the balconies illustrated overleaf.

1010

WORKING DETAILS : 553

SHOPFRONT • SOUTH AUDLEY STREET, W. • LASZLO HOENIG

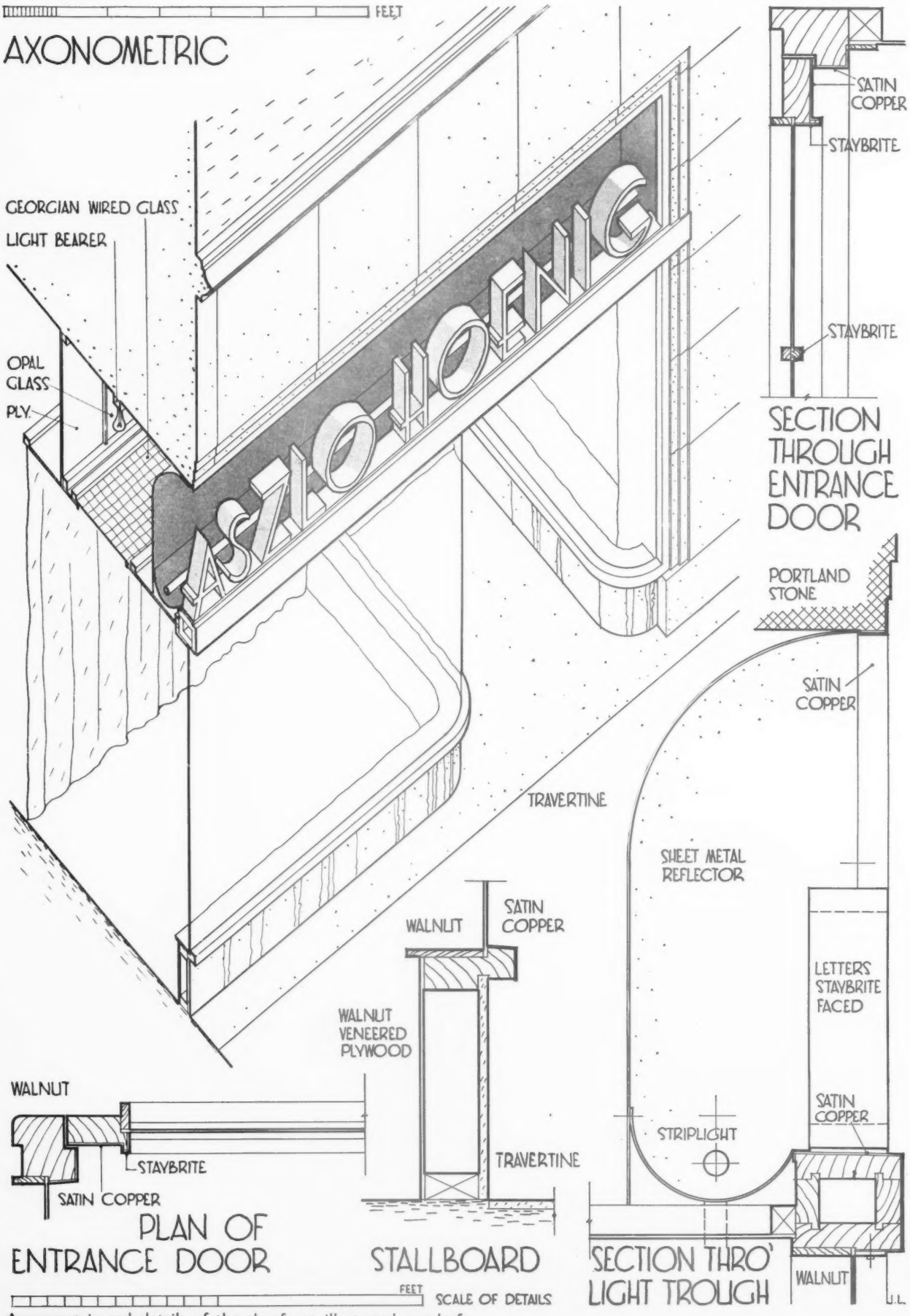
The shopfront is set in a Portland stone surround, with stallboard and threshold in travertine marble. The window and door frames, and all other surrounds, have a satin copper finish and the glazing bars to the entrance door are in stainless steel.

The lettering is in stainless steel with the sides of the letters sprayed blue. The background to the lettering is in sheet metal, sprayed blue.

Axonometric and details are illustrated overleaf.

WORKING DETAILS : 554

SHOPFRONT • SOUTH AUDLEY STREET, W. • LASZLO HOENIG



Axonometric and details of the shopfront illustrated overleaf.

The Architects' Journal Library of Planned Information

INFORMATION SHEET

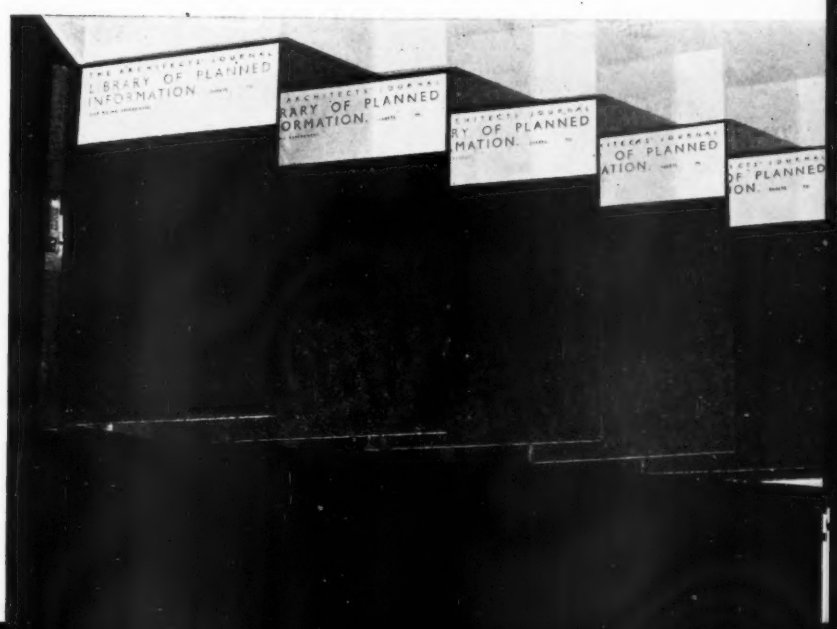
SUPPLEMENT

SHEETS IN THIS ISSUE

520 Roofing—Flashings

521 Motor Cycle Parks

522 Reinforced Asbestos-Cement Roofing Tiles



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401 : Plumbing to Baths
402 : Waterproofing
403 : Asbestos-aluminium Foil—I
404 : Roofing
405 : Joinery
406 : Asbestos-aluminium Foil—II
407 : Roofing
408 : Joinery
409 : Rubber-faced Building Slabs
410 : Places of Public Entertainment—II
411 : Electric Switchgear
412 : Lead Soakers to Valleys
413 : Plumbing in Welded Copper Pipe
414 : Electric Switchgear
415 : Electric Switchgear
416 : Insulating Board
417 : Work on Glass
418 : Plumbing in Welded Copper Pipe
419 : Places of Public Entertainment—III
420 : Tentest Metal Cover Strip
421 : Wood Preservatives
422 : Welding Sheet Copper Work
423 : Garages and Drives—II
424 : Roof Glazing
425 : Places of Public Entertainment—IV
426 : Asbestos-cement Roofing Tiles
427 : Asbestos-cement Roofing Tiles
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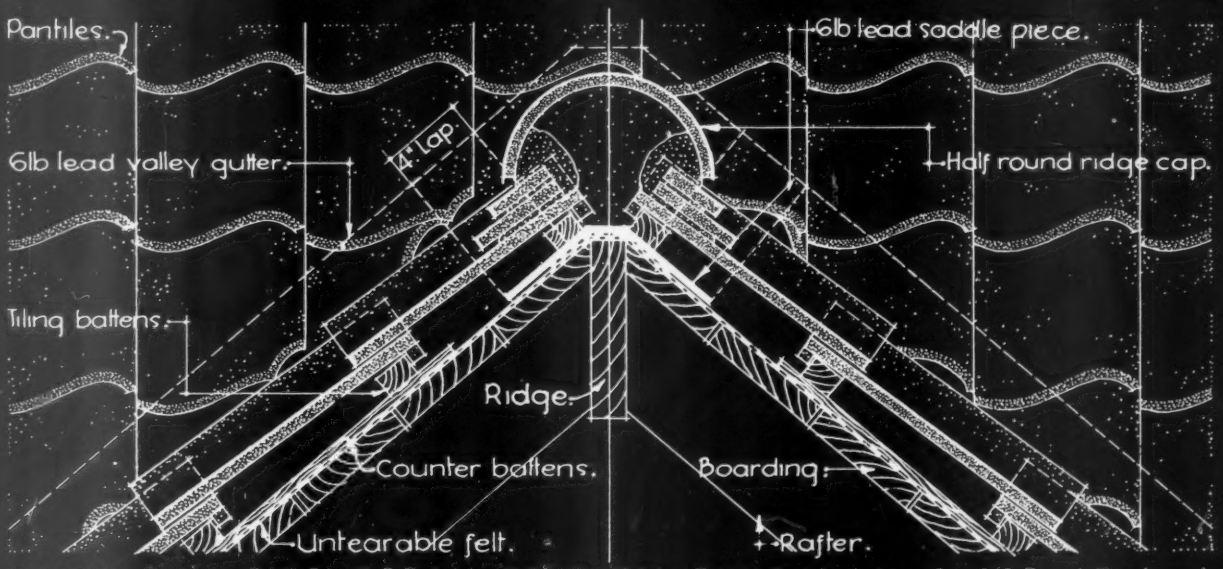
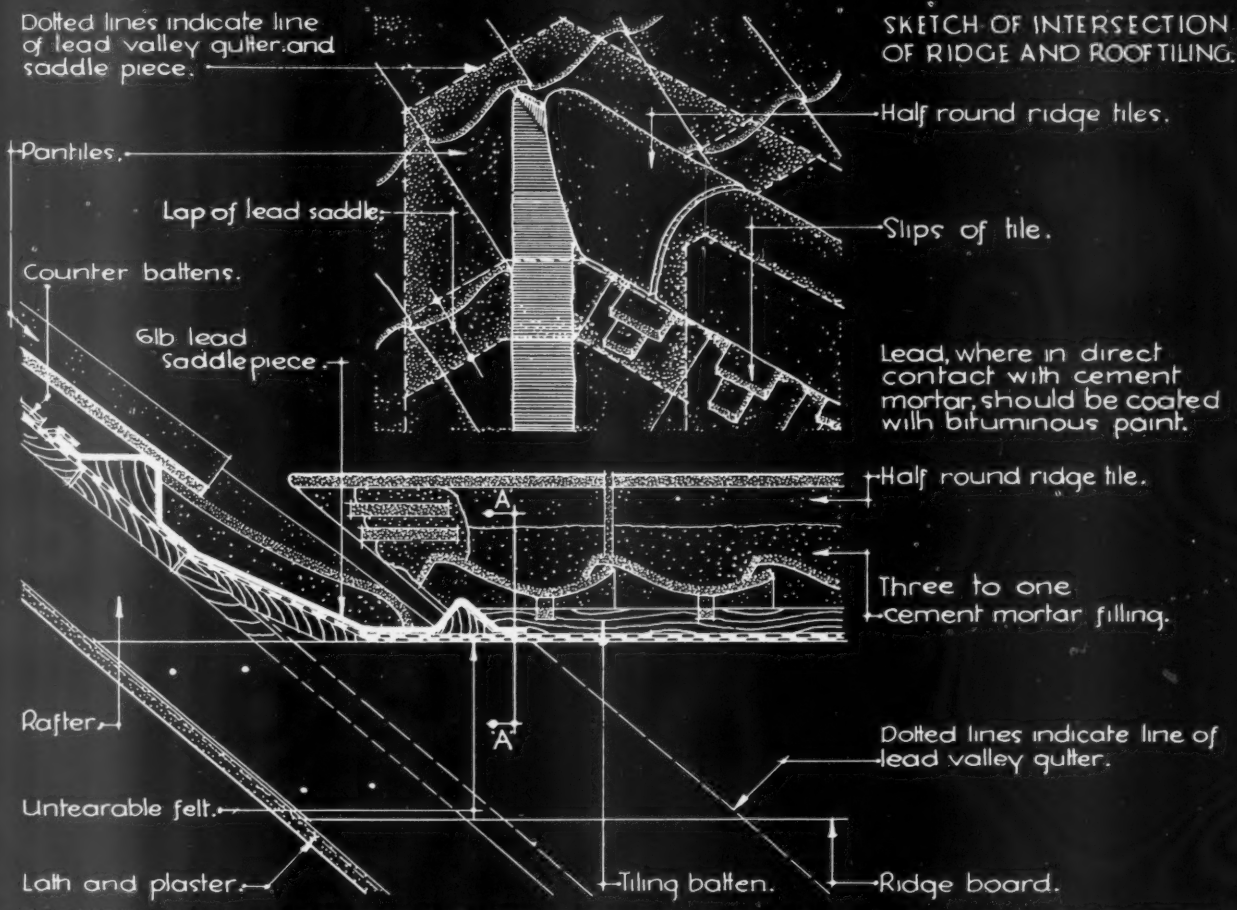
623. THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

LEAD FLASHING TO INTERSECTION OF RIDGE & ROOF WHEN PANTILES OR INTERLOCKING TILES ARE USED.



EIGHTH FULL SIZE DETAIL SECTION THROUGH RIDGE AT A–A.



EIGHTH FULL SIZE DETAIL SECTION THROUGH INTERSECTION OF RIDGE & ROOF.

Information from Lead Industries Development Council.

INFORMATION SHEET: LEAD FLASHINGS TO INTERSECTION OF RIDGE & ROOF TILING: No 35.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1.

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 520 •

ROOFING—FLASHINGS

Subject: Lead Flashing to Intersection of Roof and Ridge when Pantiles and Interlocking Tiles are used.

Generally :

It will be seen from the details on the reverse side of this Sheet that the method of flashing the intersection of ridge and roof in this case is by means of a lead saddle.

As the pantiles or interlocking tiles are large, as compared with other tiles, the valley will of necessity be open. The width usually left between the tiles is 4 in. and should not be smaller as the filling and pointing up of the ends of the tiles would become difficult.

Construction :

The valley boards, which are carried up the valley, should be continued and mitred together at the intersection. The top of the lead saddle should then be tacked along a short fillet placed just above the intersection to keep the tiles in the proper line. The lead saddle is then dressed across the top of the valley boards and over the fillets which are continued up the valley and mitred at the top, this forming a water cheek. Both sides of the saddle are carried down and dressed 4 in. over the top end of the lead valley gutter. The sarking should be carried down the roof, under the lead and across the intersection in one piece, there being a lap over the intersecting ridge.

The ends of all tiles and ridge tiles finishing into the valley, should be filled with cement mortar and slips of tile as in the valley gutter itself.

Size :

The size of the lead saddle piece varies but should not be less in width than the leadwork to the valley gutter.

Lapping :

The saddle piece should be lapped at least 4 in. over the lead of the valley gutter beneath it.

Fixing :

The lead saddle piece should be secured at the top, to the fillet before mentioned and the sides with copper nails. The top of the valley gutter under the saddle piece should also be secured with copper nails.

Weight:

It is recommended that the lead saddle piece be out of 6 lb. lead similar to the valley gutter.

Protection :

It is generally recommended that lead be protected by a bituminous coating where it comes in contact with mortar.

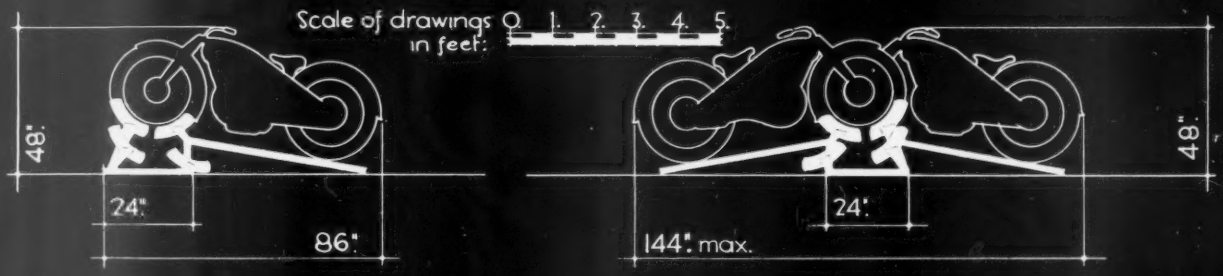
Issued by : The Lead Industries Development Council

Address : Rex House, 38 King William Street, E.C.4

Telephone : Mansion House, 2855

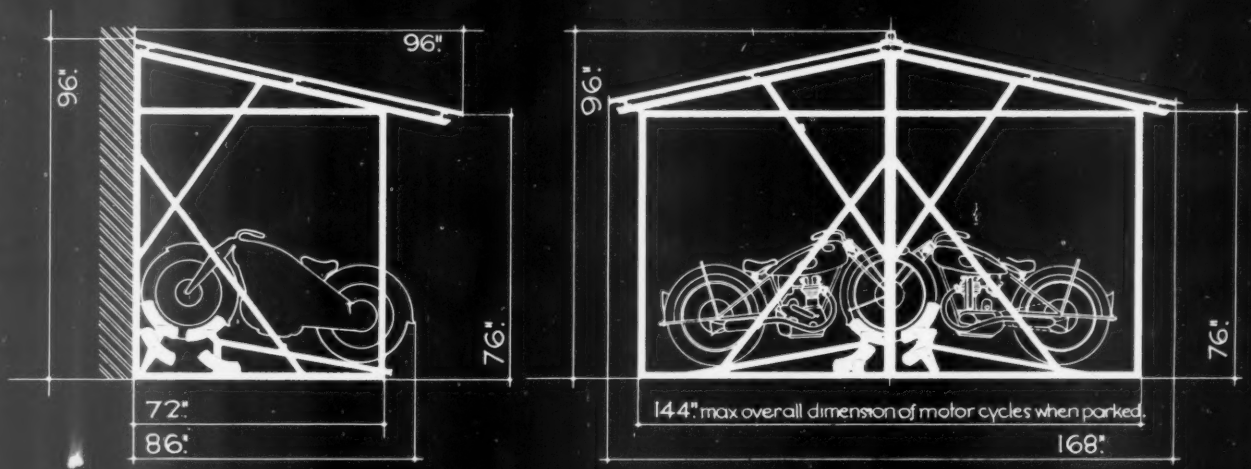
THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION.

PATENT STEEL MOTOR CYCLE PARKS FOR EXTERIOR AND INTERIOR USE.



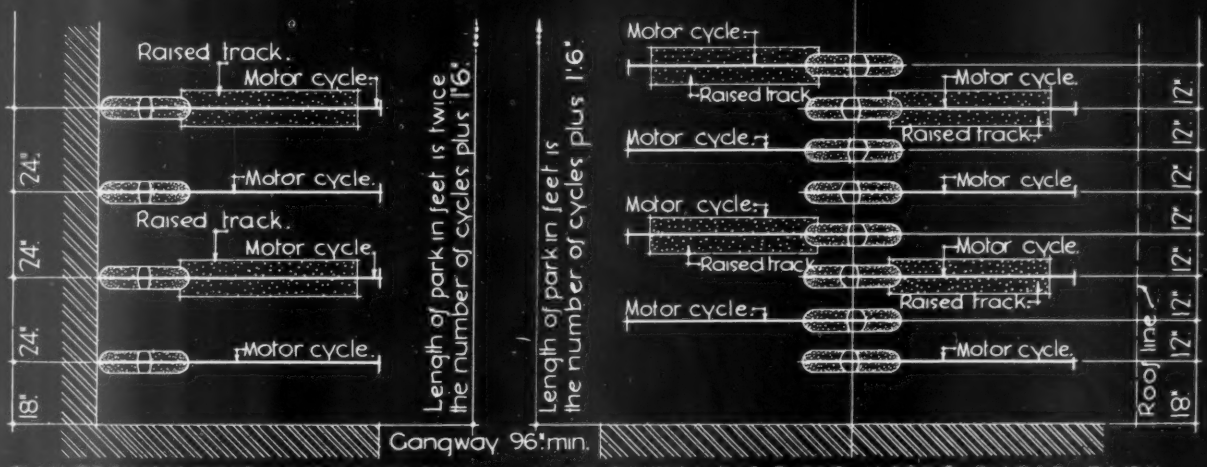
MODEL MCP.
Motor cycle park, single-sided, and self-supporting

MODEL DMCP
Similar to model MCP, but being double-sided.



MODEL MCP/F.
Similar to model MCP but fitted with a roof which inclines to the front.

MODEL DMCP/F.
Similar to model MCP/F but double-sided with roof sloping to both sides.



PLAN OF SINGLE-SIDED MOTOR CYCLE PARK. PLAN OF DOUBLE SIDED MOTOR CYCLE PARK.

Information from Constructors Ltd.

INFORMATION SHEET: PATENT STEEL MOTOR CYCLE PARKS FOR EXTERIOR & INTERIOR USE. No. 3.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1. Oran A. Bayne

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 521 •

MOTOR CYCLE PARKS

Product : Patent Steel Motor Cycle Parks for Indoor and Outdoor Use

General :

This Sheet, the third of a series of four, deals with Constructors' Patent Steel Motor Cycle Parks for indoor and outdoor use. There are four models, all built on the same principle, single and double sided, with or without roof. In all cases, motor cycles are parked alternately high and low, giving complete handle-bar clearance, and considerably reducing the overall area required for parking.

Construction :

The channels in which the motor cycles are parked are constructed from 12 gauge mild steel, mounted on sleepers of 3 ins. by 1½ ins. channel. Roofs are of galvanized corrugated sheets supported on angle purlins. Arc-welded roof trusses adequately braced are spaced at approximately 10 ft. centres.

Erection :

The parks are despatched unassembled, necessary members being marked to facilitate erection. This, together with the instructions and drawings supplied, makes erection by the customer a simple matter. The manufacturers will erect if required.

Foundations (Method of Anchorage) :

For concrete or other solid sites, the parks are secured by means of coach screws and "Rawlplugs." Where the site is composed of gravel or any other loose material, the parks are secured by anchor plates on long bolts buried to a depth of 12 ins. It is essential that details of foundation should be given when ordering so that suitable fixings can be supplied.

Spacing :

Full details for the spacing of parks, minimum gangways, etc., are shown in the plans and sections on the front of the Sheet.

Parking Principle :

Motor cycles are supported in the specially designed channels only through the medium of the tyres, thereby eliminating all possibility of damage to the motor cycle. The entrance end is splayed to allow easy ingress of the wheel.

To park the motor cycle, it is only necessary to run the front wheel into the pivoting shoe to park automatically without lifting.

Finish :

All steelwork is thoroughly cleaned before stoving one coat rust preventative and one coat grey enamel.

Prices :

Motor Cycle Parks. Indoor and Outdoor.

Model.	Price per Motor cycle.
MCP	35/-
DMCP	35/-
MCP/F	65/-
DMCP/F	65/-

Extras :

Special roof coverings of Asbestos, Robertsons' Protected Metal, Cellactite, etc., will be quoted on request. Gutters and rainwater pipes, ivorine number plates, security chains, and padlocks will also be quoted on request.

Previous Sheets :

The first two Sheets in this series dealing with cycle parks are Nos. 516 and 517.

(*Note :* The telephone number of the London Office printed on this Sheet, and any subsequent Sheets, is now in order. Unfortunately, it was not available in time to print on the first two Sheets.)

Issued by : Constructors, Ltd.

Registered Office and Works : Nickel Works, Tyburn Road, Erdington, Birmingham

Telephone : Erdington 1616 (5 lines)

London Office and Showrooms : 7 Sunbeam Road, Park Royal, N.W.10.

Telephone : Willesden 0132

Manchester Office : 122 Corn Exchange Buildings, Manchester 4

Telephone : Blackfriars 2765

Glasgow Office : 58 Bath Street, Glasgow

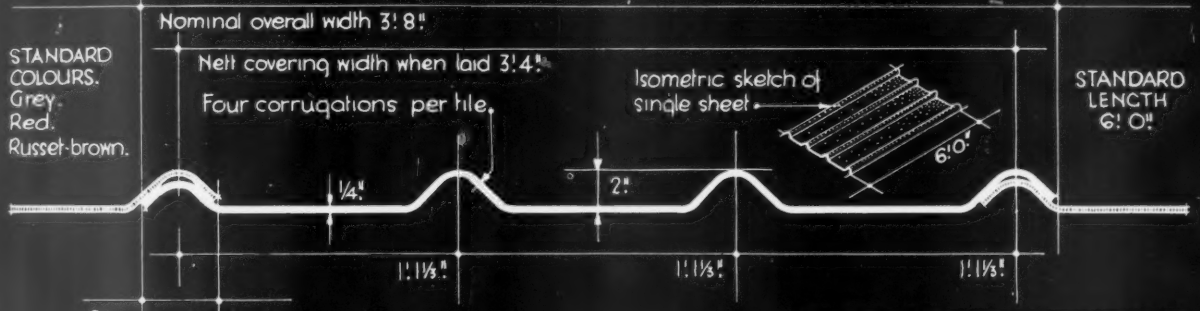
Telephone : Douglas 5885

THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

"TURNALL" ASBESTOS-CEMENT TRAFFORD ROOF TILES, METAL REINFORCED:

FITTINGS: Details of the various unreinforced roofing accessories for use in conjunction with these tiles are shown & described on previous Information Sheets Nos. 397, 400, 426, and 427.

1/8. FULL-SIZE SECTION THROUGH TYPICAL STRAIGHT TILE.

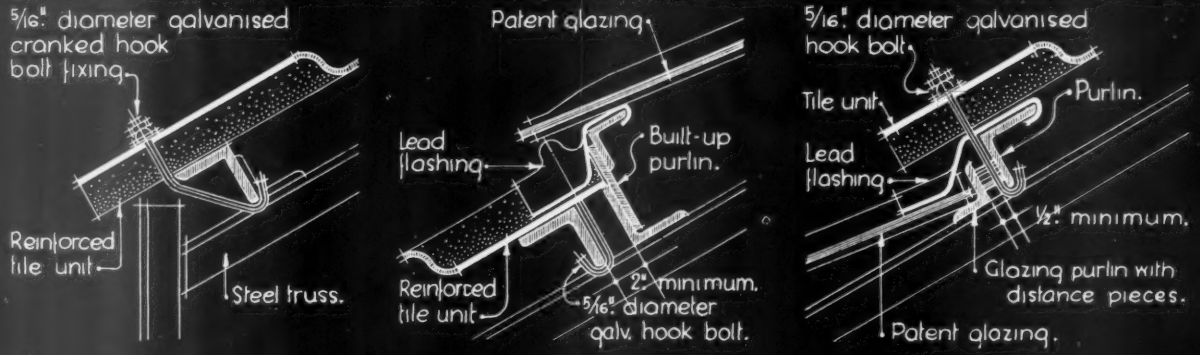


Standard vertical lap, 4". Standard end lap 6".

Curved end, or wholly curved tiles (min. rad. 4'6") are also available.

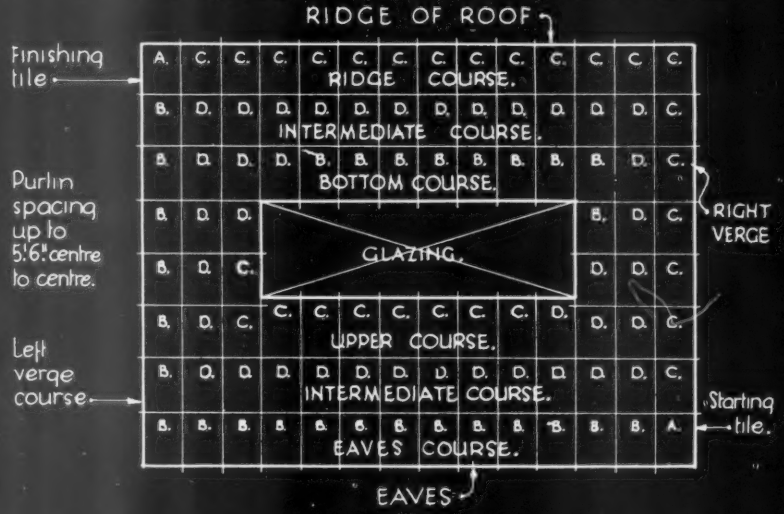
The shape of the corrugations permits close & solid bearing along both outer edges, with clearance space at the crown.

DETAILS SHOWING FASTENINGS AT EAVES, & ABOVE & BELOW GLAZING IN STEEL PURLINED ROOFS:

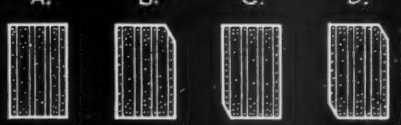


LAYING DIAGRAM SHOWING ARRANGEMENT OF THE UNITS ON A TYPICAL ROOF SLOPE.

MITRES: Tiles are supplied in 4 unit types, with correct mitres, which give three thicknesses only where the four units meet. Corner cuts are all covered, & invisible when units are in position.



PLANS OF TILE UNIT TYPES: Diagrams of tiles A, B, C & D, shown in situ on adjoining laying diagram.



MITRES.
In each case the mitre is from 6" along the vertical edge to a point 4" along the horizontal edge.

PLACING.

TYPE A. Starting, finishing and single courses.

TYPE B. Eaves, left verge, & bottom courses.

TYPE C. Ridges, right verge, & upper courses.

TYPE D. For all intermediate courses, top left & bottom right corners of roof openings.

Information from Turners Asbestos Cement Co., branch of Turner & Newall Ltd.

INFORMATION SHEET: REINFORCED ASBESTOS-CEMENT ROOFING TILES:
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1. Olive A. Boyne.

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 522 •

REINFORCED ASBESTOS-CEMENT ROOFING TILES

Product : " Turnall " Trafford Tiles (Metal reinforced)

General :

Turnall reinforced asbestos-cement Trafford roofing tiles are composed of a main body of asbestos-cement, in which is embedded during the process of manufacture an ungalvanized, hexagonal $\frac{1}{2}$ in. wire mesh of No. 19 gauge. The metal and asbestos-cement form a homogeneous structure in which the free lime of the cement is utilized to preserve the reinforcement. As with other forms of asbestos-cement sheet products, the body is not moulded but built up in rolling mills in the form of layers or films of asbestos and cement, regularly distributed and interlaced to constitute a kind of tough woven fabric.

Purlin Spacing :

The purlins supporting this form of roofing should be spaced at 5 ft. 6 ins. centre to centre, and this figure may be used also for the side or gable rail spacing on side-cladding work.

Size, Lap and Weight :

The reinforced tiles are made in a standard size of 6 ft. long by 3 ft. 8 ins. nominal width, and $\frac{1}{4}$ in. thickness. The number, pitch and depth of the corrugations are the same as for the unreinforced Trafford tile, while the horizontal and vertical laps are also similar, viz. 6 ins. and 4 ins., respectively.

The weight of 100 sq. ft. of laid roofing is approximately 331 lb., and 13.33 sq. yards of tiling are required to cover 100 sq. ft. of the roof.

Curved tiles are made to a minimum radius of 4 ft. 6 ins., and curved-end tiles for abutment work are made to a minimum radius of 12 ins.

Fixing :

Fixing to steel is by means of the usual hook bolts previously described, except that at eaves and above roof glazing the bolts are fitted on the lower edge of the purlins, as shown. This is to ensure that the hook bolts are not torn away from the purlin when the reinforcement comes into action in the event of fracture of the tile. The length of the bolts will be 3 ins. or $3\frac{1}{2}$ ins. over the depth of the purlin, according to the number of thicknesses of tile at the point of fixing.

To timber framing, galvanized driving screws $4\frac{1}{2}$ ins. long by $\frac{5}{16}$ in. diameter, are used with the standard lead-cupped and " Serval " felt washers above the roof.

If the structure is near the sea, a manufacturing town, railway, or works giving off acid fumes, all galvanized fastenings should have a coating of bituminous solution before and after erection.

Method of Application :

The tiles are laid from right to left, as shown on the diagram overleaf, commencing with eaves tile and working upwards in a tier to the ridge.

Reinforced tiles are supplied already mitred, and hence are marked in accordance with a standardized system of lettering. There are four types of unit tile, A, B, C and D, as illustrated, and these each have their individual positions on the roof. Thus, an A unit is applied first to the right-hand bottom corner of the structure, this unit having all four corners square. Unit B is then laid next to unit A, the right-hand roll of B overlapping the left-hand roll of A. Unit C tile is then placed above the A unit, with the bottom left-hand corner cut butting against the top right-hand corner cut of B. D is then placed overlapping the left-hand roll of C and the top of B.

Drilling :

In fixing, the distance from the bottom edge of the first purlin or rail is marked off on the tile, and the fixing holes drilled on the ground, leaving the left-hand roll to be drilled *in situ*. When units A and B are laid on the framing, the fastenings at the bottom are put in, and the left-hand roll of A drilled through the hole in the right-hand roll of B. In fixing C and D units the bottom holes may be marked off on the ground, and simply the top holes in A and B units drilled *in situ*.

A joiner's hand brace and gouge bit are used for drilling the tiles, and this is always done through the crown of the corrugations. The holes are never punched. If it is necessary to cut a unit in order to make up a length on a section, a " shetack " saw or a hacksaw is used. The unit should be cut to leave a roll at the verge.

Roofing Accessories :

Unreinforced ridge and hip cappings, ridge finials, expansion joints, eaves filler, apron and bottom glazing flashing pieces, corner pieces, barge boards, louvre blades, etc., may be fitted to the reinforced tiles in positions where they are required, see previous Information Sheets dealing with " Turnall " Trafford roof tiles, Nos. 397, 400, 426, and 427.

Information from : Turners Asbestos Cement Co. Branch of Turner and Newall, Ltd.

Head Office and Works : Trafford Park, Manchester, 17

Telephone : Trafford Park 2181 (8 lines)

London Office : Asbestos House, Southwark Street, S.E.1

Telephone : Waterloo 4041

Nearing completion: the Empress Stadium, Earls Court.

LITERATURE

ENCYCLOPÆDIA

[*By GEORGE FAIRWEATHER*]

The Building Encyclopædia. Vols. 1 and 2. Edited by S. G. Blaxland Stubbs. London: The Waverley Book Company. Price £1 1s. a volume.

THE first two volumes of this encyclopædia, which will be completed in five volumes, deals with references between A and HON. The work is described, "A Handbook of Modern Building Practice for the Working Builder," and aims at presenting to the working builder a comprehensive but concise account of and guide to all his activities.

A special feature is claimed for the encyclopædia in that it is designed as a permanent work of reference, and for this reason items and matters of passing interest, materials, methods and designs in which the element of fashion, or "Taste of the Moment" appears, are rigidly excluded. Accordingly, it is seriously claimed that, as a whole and in detail, it will not fall out of date.

Despite the Editor's explanation of the aims of this encyclopædia, I find it a little difficult to understand exactly what form of reference or guide the work is intended to be. It sets out to guide the working builder in all his activities, and he is described as being "many and various, from the jobber doing most of his own work to the old-established builder and contractor." I feel, however, that it would have been possible to make a clear statement of what the working builder's activities are, and I think this would have proved a most useful guide to the contributors of the special articles in setting up a framework for them that would have excluded fashionable elements by its own existence.

I find that the guidance offered to the working builder is to a very large extent concerned with the selection of suitable materials, methods and designs for particular works that he may be commissioned to carry out.

The conversion of barns into private residences, village halls, clubs and tea houses appear to play an important part in the working builder's practice. In an article dealing with "Barns," covering fully seven pages, twelve out of fourteen illustrations to the text show how such conversions have been achieved.

The balcony is explained and illustrated by what are described "Seven Representative Types," and it is claimed for these designs that they enhance the principal methods and combinations of materials suitable for domestic architecture, and that the builder should be able to carry out balcony work in an effective and satisfactory manner from the information given and the clear practical drawings in text and plate.

Doors and doorways are explained by a number of modern designs, and five of these have been described "Distinctive Types for Speculative Building."

A most vulgar range of modern designs are selected to illustrate fireplaces, and the construction of these is explained in the text. Surely, the Editor has not been rigorous enough in applying the rule that matters of passing interest, and designs in which an element of fashion appears, should be excluded.

A work of reference dealing solely with the materials available for use in building, and discussing the principles underlying their proper use, would surely have proved a sufficiently comprehensive guide to the working builder in his practice, and would, at the same time, have interested all who are concerned with building. There are many features in present-day building practice that could have been explained in a reference work of this sort. Modern practice in building is not exclusively concerned with the use of new materials and methods, but is still very largely concerned with the use of materials and methods that have been used for a long time. Changes in building requirements, and the introduction of new materials, etc., have tended to alter the method of using many of the older materials. Brick building has altered in many quite important respects in recent years. Concrete and steel very largely account for this, and speculative building may have done the rest. It is clearly obvious, however, that an analysis of brick building practice based on first principles would prove that many of the things we do now are inappropriate.

To go over a building estate of today is to discover how useful a work explaining the stern facts of materials and their use could be to the builder. What support must be provided by the soil to such parts as rest on it; what brick walls of different thicknesses and construction will do under the normal conditions of use; and what stresses are introduced by the separate constructional components of a building where they come together, are only a few questions that can be answered usefully.

In this encyclopædia, the cavity wall is treated as though every builder should be well aware of the fundamental constructional principles behind its use, and some observations are made concerning the bond in an 11 ins. and 15½ ins. hollow wall. Advice is given as how to keep the cavity clean while building, the placing of ties in the wall and matters of craftsmanship. Two illustrations show how to close the cavity against a door frame, both equally ludicrous in conception, but the hundred and one other important considerations are completely ignored.

An excellent article, under the title "Carcass and Carcassing in House Construction," explains the progress of carcassing through fifteen clearly-defined operations. This is a most interesting and well illustrated contribution, but by the procedure adopted, I imagine that the writer is placing standards of economy and speed of building before sound method. He says that in accordance with recognized good principles of procedure, before plastering may begin, all floorings should be laid and stairs fixed, etc.,

ignoring the fact that these will be damaged by the plasterer and his plant. I would have thought the reverse procedure better practice, though maybe more tedious in execution.

TOWN AND VILLAGE

The Old Towns of England. By Clive Rouse. Illustrated from photographs. *English Village Homes.* By Sydney R. Jones. With a foreword by Sir William Beach Thomas. Illustrated from drawings by the author, and from photographs. London: B. T. Batsford. British Heritage Series. Price 7s. 6d. each.

BOTH of these authors are concerned to discuss, and even—to judge from the amount of detail to which they get down—to enumerate the beauties of our towns and villages which are in danger, under modern standards of accommodation and general convenience, of being improved out of existence. With neither of them is there any question that what is beautiful, specially characteristic, or historically valuable, should be preserved. They are, moreover, practical on the why and how of preservation. The illustrations to both books are very adequate, and Mr. Jones's especially are notably well chosen. He adds drawings of his own, and his frontispiece is a reproduction of a very engaging watercolour.

Mr. Rouse's judgment is generally sound, although, to take one point, there are many who have a higher opinion than his of the architectural worth of the "tall, many-windowed mills" that are the most imposing and characterful buildings of many Lancashire and other towns. It may seem a somewhat arbitrary thing to divide English towns, as Mr. Rouse does, into four classes—cathedral cities, market and country towns, ports and harbours, and resorts and spas—since there is so much overlapping between the types, but the division does at any rate give him the opportunity to get the principal aspects of his background clear. He is to be commended, indeed, on the way in which he has picked on the main lines of growth and shown the contribution of each to the living town of today.

The text is a difficulty in books like these; for if it is to keep pace with the numerous illustrations in drawing attention to a multitude, it can far too easily look like a census return. Mr. Rouse packs perhaps a little too much detail into his book, but he knows a good deal more of his towns than the stock sights, and his aim of persuading the "rubber-neck" out of his motor-car and into the intimate byways should be realized. The student will probably find the book a rather lightweight production, although if he wants, as he should, to gain an appreciation of the historical background which this land provides for him to work against, it will be very helpful to him; but it is more particularly the kind of thing into which one dips with the certainty of coming across on any page some curious and often significant fragment of history.

Mr. Jones's somewhat more specialized subject, on which he has written with equal interest for the idle moment and the studious hour, gives him more useful opportunities for getting down to the valuable fact. On materials, methods and styles of construction, he is encyclopædic. He is informed and, in his turn, informative on recent research—Mr. Sidney O. Addy's, for instance, on the evolution of the English house—and he has a discerning eye for the special characteristics belonging to particular neighbourhoods. He has a special and enlightened enthusiasm for the village architecture of the sixteenth century, and his argument that it was essentially a democratic art is well based. English village architecture gives a continuing local habitation and a name to much of the essential stuff of English history. Mr. Jones, with a fund of scholarship to draw upon, has made a good book about it all. And especially one is grateful for his illustrations.

E. H. W. A.

DOING WITHOUT US

Without Benefit of Architect. By F. F. Peters. Putnam. Price 7s. 6d.

IN these days when almost any registered reader can have a complete scheme of decoration prepared by a hack on the Home Editress's page, when sets of blue prints for complete houses are available at anything upwards of five shillings a time, it would seem that Mr. Peters has given the rest of the game away and that there is now no need for anyone to go anywhere near an architect for any reason at all. For he deals quite fully with the technique of building a house without an architect, starting with the very necessary question of how to raise the money and progressing (*via* a consideration of various materials, finishes and equipment) to a final note on upkeep and on what should and should not be made good by the contractor after the house is occupied.

Yet Mr. Peters, who is himself an architect, has not necessarily cut his own and his colleagues' throats: his excuse for writing his book is that "about two per cent. of our American people acquire their homes with the assistance of an architect—the other ninety-eight per cent. acquire them either as antiquated 'hand-me-downs,' or as speculative houses, or by building for themselves from stock plans with a contractor or hired help." No reliable statistics seem to be available for the percentage of architect-designed houses in this country, but the figures would probably not be very different from America and seem likely to remain at a regrettably low level. Remembering, too, that the average speculative builder trusts largely to tiled bathrooms, refrigerators, kitchen cabinets and the like to sell his houses, and cares less for durability and low upkeep costs, it seems difficult to disapprove of a book which sets out to explain to the unsuspecting buyer exactly what he should insist upon if he wants a weatherproof house and which draws a clear line between the essentials and the things which are nice to have but which don't really matter.

Based, rather naturally, on current American small house practice, this book should be interesting to the English architect, who is not accustomed to look upon automatic oil-burners, steam heat and septic tanks as standard arrangements. At the other end of the scale it is encouraging to find that natural laws in America are just as inevitable as they are here. "Undoubtedly your terrace floor will crack. That is merely nature's method of providing expansion joints." Charming as this rather naïve statement may be, one could wish that Mr. Peters had added a few hints on explaining to the client why the job of providing expansion joints was not given to the contractor in the first place. Nor would the English architect dare to say—to a client with an incurably leaky cellar—"install a sump pump, and remember that you should have done that in the first place."

None the less, Mr. Peters, in spite of his irritating semi-facetious style of writing, has plenty of good advice to give and shirks nothing, not even the writing of a specification. Every architect may well read this book for curiosity's sake; it will come in useful afterwards to lend to any client who thinks that six per cent. is too much.

H. P. B. S.

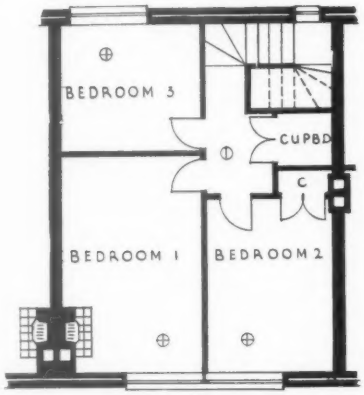
ENGLISH HOMES

[*By J. A. GOTCH*]

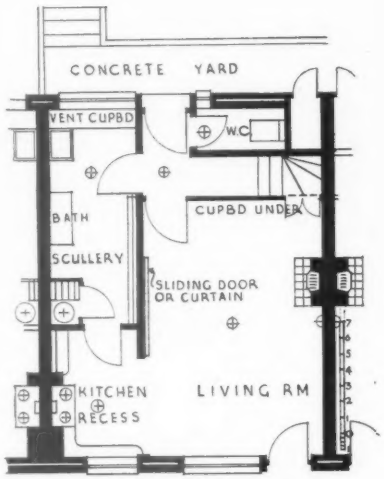
English Homes: Periods I and II., Vol. II. Medieval and Tudor, 1066-1558. By H. Avray Tipping, M.A., F.S.A. London: "Country Life."

THIS is one of the fine volumes published by "Country Life," illustrating the development of the English Home from the Conquest onwards. It deals in detail with some seven-and-twenty houses, large and small, scattered over the whole country, from Northumberland and Lancashire in the north, Lincoln in the east, Gloucester in the west, and Kent and Cornwall in the south. There are also references to others in the Introduction. The work is almost entirely that of the late

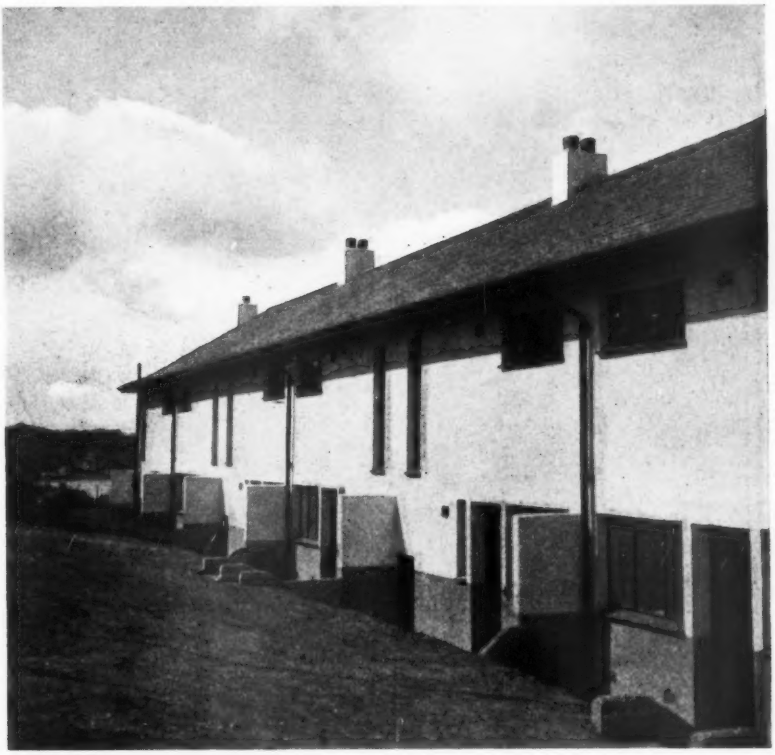
QUARRYMEN'S COTTAGES IN NORTH WALES

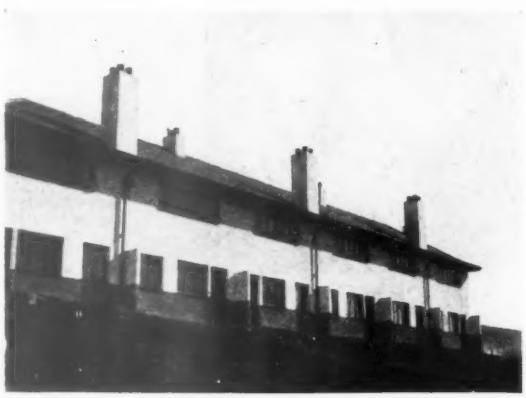


FIRST FLOOR PLAN



GROUND FLOOR PLAN





ARCHITECT:
D. PLEYDELL-BOUVERIE
ASSISTANT: R. D. KNOTT

PROBLEM—*Trial block of six cottages on the estate of Sir Michael Assheton-Smith. Some opposition to the plan form was encountered in the early stages, preference being expressed for the "middle-class" plan with corridor running from back to front and small kitchen and parlour. These objections were eventually overcome.*

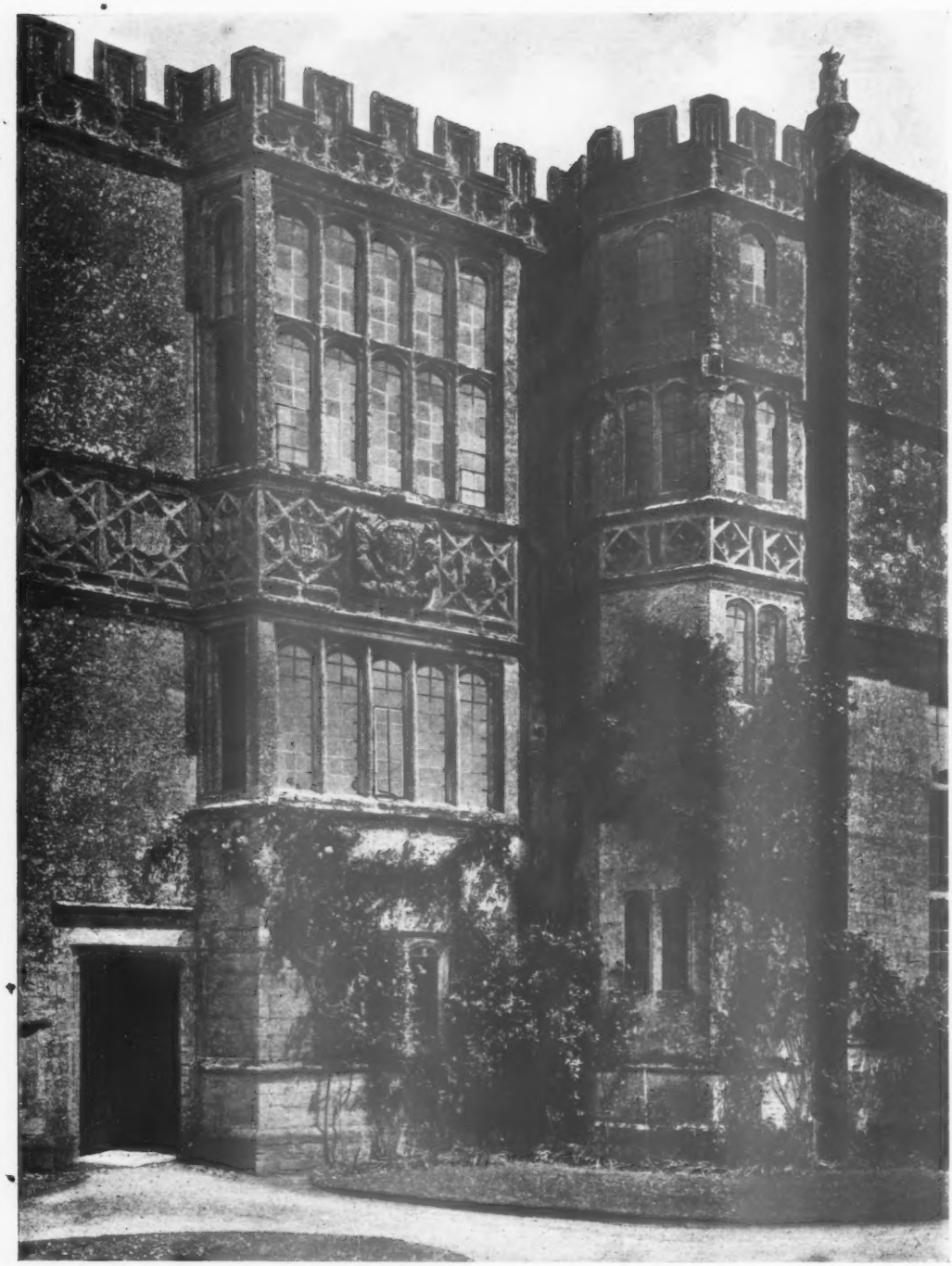
PLAN—*The plan, as executed, gives a working area running right through the house from kitchen recess to scullery cupboards and adjoins a large living-room from which it can be screened off. The covered bath in the scullery adjoins a hot cupboard and is supplied from the combined cooker and boiler. The plan has been found very satisfactory, both by tenants and landlord.*

CONSTRUCTION AND FINISH—*Brick walls, slated roofs, white cement rendering and base of granite chippings. Eaves are painted light yellow, and steel windows and doors, green. Ground floor finish is of grano, and first floor, deal.*

COST—*9¾d. a foot cube, showing a net return of 3 per cent. to estate. Rent and rates are 6s. 6d. per house.*

Mr. Avray Tipping, whose death in 1933 removed one of the most learned and painstaking antiquaries who have devoted themselves to the study of our domestic architecture. The book was almost complete when he died, but there were a few gaps which have been excellently filled by Mr. Christopher Hussey and Mr. Arthur Oswald, the latter of whom saw the volume through the press.

It would be impossible to review in any detail so large a number of subjects, minutely described, and profusely illustrated. But some idea of the scope of the work can be obtained from the mere statement that there are over 550 photographic illustrations, 49 in the Introduction and 507 in the text, all of which maintain the high reputation which "Country Life" has established. Besides these, there are many plans and a few drawings of particular features. Every subject is exhaustively portrayed

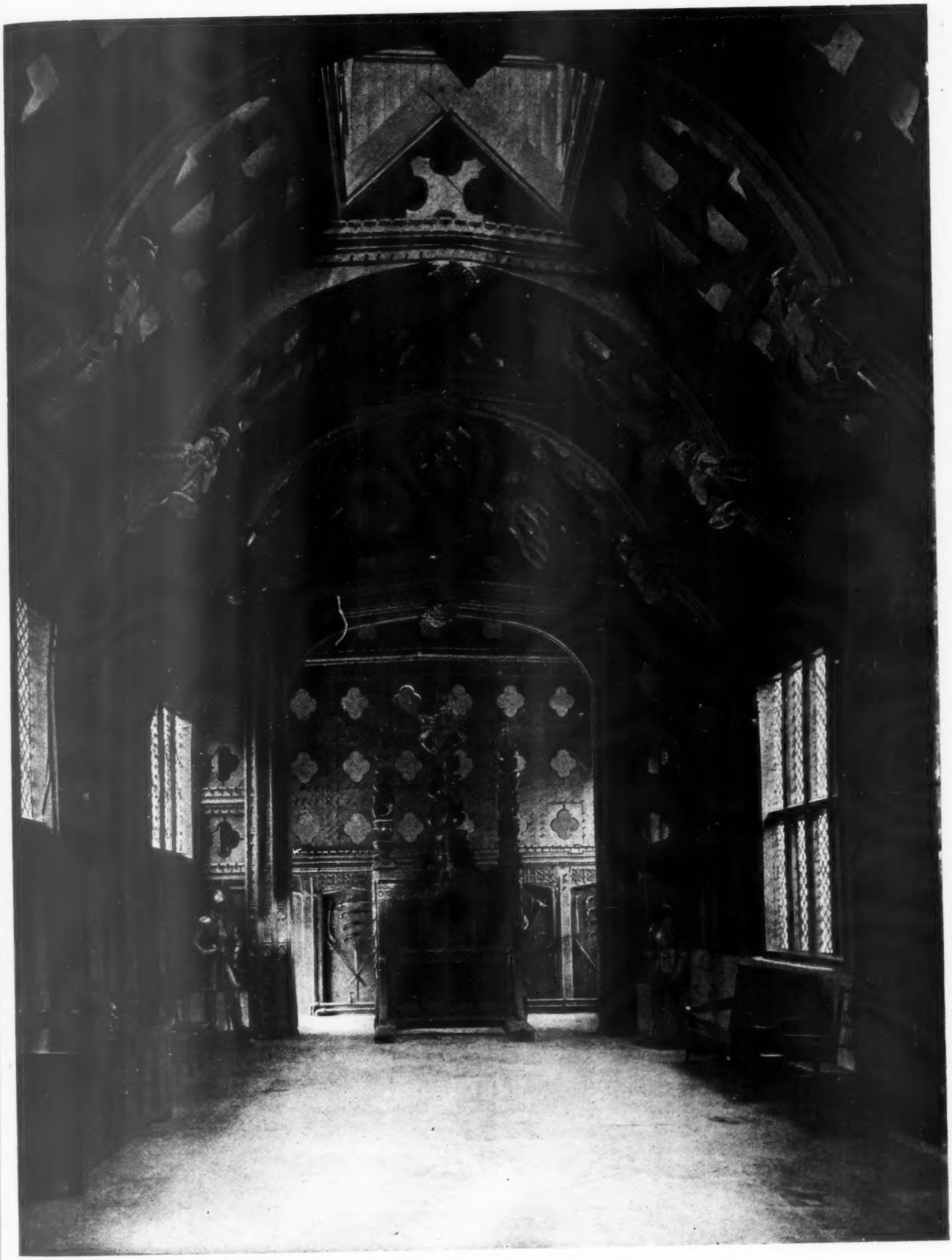


The north end of the west door, Brympton D'Everay, Somerset. From "English Homes."

both as to the exterior and interior ; and the innumerable little bits of detail which add so much to the charm of a house, especially to those who take more than a general interest in old work, are illustrated with lavish care. Some of the houses have already been dealt with, but more briefly, in former volumes of the same series, but it is a well-deserved compliment to the Editor (or Editors) to say that even the querulous eye can only detect in one or two cases that the same negative has been used again.

This particular volume deals with the period extending from the early Middle Ages to the time when the Italian influence began to affect English architecture, and it gives an admirable idea of the extraordinary wealth of England in fine old houses, whether they be of stone, brick or half-timber. Examples of the last named material are given from Surrey, Kent, Berkshire, Gloucestershire and the Eastern Counties, not to mention the wonderful examples to be found in Lancashire and Cheshire. One of these, Agecroft in Lancashire, has unfortunately been removed to America where, even if carefully re-erected, it must inevitably lose its real charm, divorced as it is from its old associations, not only those personal to its original occupants, but those connected with its native setting.

When it is mentioned that the detailed photographs include stonework, brickwork, timber construction, the setting of houses in their gardens, their panelling, ancient wall paintings, tapestry and pictures, it will be realised what a



The Hall, Rufford Old Hall, Lancashire. *From "English Homes."*

wide variety of subjects the illustrations cover.

It is a book which will delight not only architects well versed in the subject, but also the general public who share the increasing interest which English architecture, especially domestic architecture, is happily arousing.

H O U S I N G

RURAL HOUSING

Mr. Elliot presented to Parliament last week the report on Rural Housing of the Scottish Housing Advisory Committee. (H.M. Stationery Office, price 1s. 6d.)

The committee was set up in terms of the Housing (Scotland) Act, 1935, and this, its first report, is based on the enquiry which the rural sub-committee carried out under the following terms of reference :—

> To consider the application of the Housing (Scotland) Acts and the Housing (Rural Workers) Acts to housing conditions in rural areas and to advise what action should be taken to facilitate in such areas the provision of new houses and the improvement of existing houses for the working classes, with special reference to the position of farm servants, small landholders and persons of like economic condition.

General Administration

The committee finds that the rural areas have failed to make use of the subsidies which were available from 1919 to 1933 for building to meet general housing needs and that the rural areas therefore have been deprived of the benefits conferred by these subsidies on the rest of Scotland. Some striking figures are given. In rural counties the houses built with these subsidies represent only 4·7 per cent. of all the working-class houses in the counties ; whereas in industrial counties the houses built with these subsidies represent 17·9 per cent., and in burghs 14·9 per cent. The number of houses built in rural counties is only 12·4 per 1,000 of the population, while in industrial counties and burghs the corresponding figures are 41 and 37·3 per 1,000.

With few exceptions, the committee reports, county councils are not carrying out adequately the duty of inspecting the working-class houses in their area. The report recommends that all county councils should have to inspect one-fifth of the houses in their areas annually. Many county councils also, according to the report, do not apply a reasonably uniform standard in determining whether a house is defective. In one county 95 per cent. of the farm servants' houses inspected by the local authority were found to be defective, whereas in another county, where conditions were not likely to be any better, only 15 per cent. were found to be defective. The conclusion drawn is that many county councils apply too low a standard, and the report recommends the department to take steps to ensure the application of a reasonably uniform standard.

Other points from this part of the report are as follows :—

Defective Houses.—Neither the provisions of the Housing Acts dealing with ordinary repairs nor those dealing with the introduction of water and of sanitary conveniences are being adequately enforced in rural areas. A number of minor alterations of the law designed to facilitate the enforcement of these provisions are recommended by the committee, but the main point which it brings out is that county councils in deciding whether it is reasonably practicable for an owner to repair or improve his property are neither required nor entitled to have regard to the general financial circumstances of the owner.

Condemned Houses.—In 1935 less than 1 per cent. of the working-class houses in rural counties were condemned, whereas, judging from the survey of typical parishes carried out at the request of the committee, the average percentage of condemnable working-class houses should be 17. County councils of rural counties have grossly understated the number of new houses needed to replace unfit houses. The committee finds it impossible to believe that in four counties no new houses are required, and it feels that in other areas the estimate has so little relation to real requirements as to be useless.

Overcrowding.—Pressure should be put on the one or two laggard authorities who have not yet carried out the special survey for overcrowding. To remedy overcrowding among rural workers who are able to pay only a comparatively low rent the existing subsidy of £6 15s., in the committee's view, is inadequate in most counties, and in order to deal with overcrowding among the rural worker class the overcrowding subsidy ought to be augmented.

Housing Staffs.—Unless adequate staffs are employed money spent on housing may be largely wasted. The housing staffs of some local authorities are inadequate in numbers and in qualifications.

Public Inquiries.—The department should exercise more freely their power to hold public local inquiries into the failure of rural authorities to carry out the provisions of the Housing Acts.

Housing (Rural Workers) Acts

Dealing with the Housing (Rural Workers) Acts, which enable local authorities to give grants or loans to private owners for the reconstruction or improvement of dwellings occupied by agricultural workers or persons of a similar economic condition the committee points out that according to the survey which it made of typical parishes only slightly more than half of the dwellings dealt with under the Acts have been satisfactorily reconstructed. It states that if the conditions revealed by the survey are applicable to the rest of Scotland there has been a grave waste of public money in the administration of the Acts. For this reason, the committee has had some hesitation in recommending any extension of the Housing (Rural Workers) Acts, but in view of the very large number of dwellings in rural Scotland which still require to be improved it recommends that the Acts should be extended for two years subject to stringent conditions which will ensure that no assistance is given for any dwelling unless it is to be properly reconstructed.

Among other recommendations regarding the Housing (Rural Workers) Acts are the following :—

(i) Broadly, assistance under the Acts should be confined to cases in which the reconstructed dwelling will contain at least three rooms.

(ii) County councils should be empowered to give an additional grant not exceeding £50 for the addition of the necessary accommodation to put an end to overcrowding in a dwelling which, before the passing of the Act of 1935, which dealt with overcrowding, had already received the maximum assistance under the Housing (Rural Workers) Acts.

The committee states that the Housing (Rural Workers) Acts impose a heavy burden on certain counties, but they are unable to agree that all counties have proved a need for additional Exchequer assistance or that the need of a county can be measured solely by their expenditure under the Housing (Rural Workers) Acts.

SLUM CLEARANCE AND REHOUSING

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

Clearance Areas and Orders

During April local authorities declared areas comprising 4,251 houses representing the displacement of 16,393 persons, as compared with 7,015 houses and a displacement of 29,462 persons in March.

The Orders submitted during April covered 4,561 houses and the displacement of 18,532 persons, as compared with 4,197 houses and the displacement of 17,852 persons in March.

The Orders confirmed during April covered 4,559 houses and 17,312 persons as compared with 3,388 houses and 13,762 persons in March. The total number of houses in confirmed Orders is now 138,947, involving the displacement of 597,222 persons.

Rehousing Progress

The latest available figures are those for March. At the end of that month there were 58,908 houses under construction as compared with 58,276 at the end of February and 58,140 at the end of January. 6,257 houses were completed during March as compared with 5,553 during February and 5,761 during January.

The great majority of these houses are being provided for rehousing persons displaced in connection with slum clearance schemes.

New houses approved during April numbered 7,605 as compared with 6,805 in March and 7,798 in February.

HOUSING PROGRESS IN SCOTLAND

The Department of Health for Scotland announces that, at the end of March, houses under construction by local authorities reached the unprecedented figure of 21,978, but that the houses completed numbered only 847 in March, as compared with 1,111 in the previous month.

The total number of houses built in Scotland since 1919 is 270,852. Of these, 265,743 are of five apartments or less.

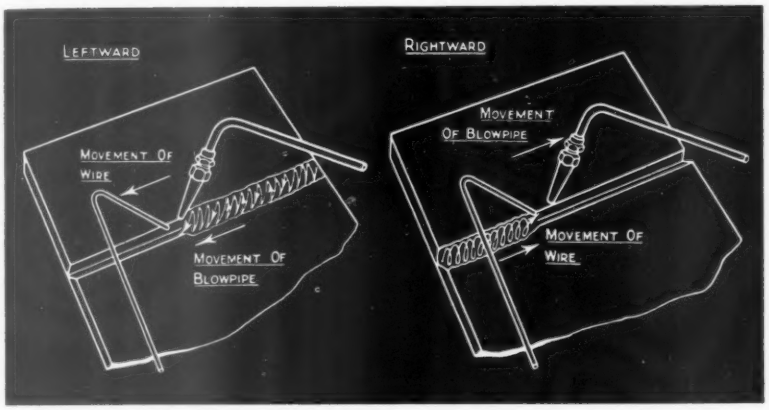
SLUM CLEARANCE AND DECROWDING

During March, Scottish local authorities operating the Housing Acts displaced 4,157 persons from 926 unfit houses which have been closed against human habitation and will, in due course, be demolished. In addition, 535 families were transferred from overcrowded conditions in fit houses to larger houses, 458 of which belong to local authorities and 77 to private landlords. The houses thus vacated become available for smaller families.

SCOTTISH COMMITTEE FOR ART AND INDUSTRY

The Scottish Committee for Art and Industry, which was set up some time ago by the Board of Trade to improve the standard of design in Scotland, has turned its attention to the provision of well-designed, soundly constructed furniture suited to limited incomes. A sub-committee has been set up to deal with this question and is at present making the final preparations for an exhibition of such furniture to be held in a bungalow in Edinburgh soon. The date of opening will be announced shortly. It is hoped to hold similar exhibitions in other parts of Scotland.

Hitherto, the committee in its exhibitions has frequently found that good design went with high price, and on this occasion it is determined to show only articles which are well within the reach of the average purchaser. It has succeeded in providing furniture, crockery, cutlery, kitchen equipment, and all necessaries for a house consisting of living-room, two bedrooms, and kitchenette for the sum of slightly over £60.



Left, the usual method of oxy-acetylene welding ; right, a new method recently evolved by the British Oxygen Company. *(See note on this page.)*

TRADE NOTES

[*EDITED BY PHILIP SCHOLBERG*]

Two Desk Lamps

IT must be a good deal more than five years now since Best and Lloyd introduced what is still, to quite a lot of people, the best of all desk lamps. But other manufacturers have had the sense to profit by the lesson of its popularity and now quite a number of firms have various models which are quite original in design but have the same swift mechanical look which makes them spiritually of the same stock as the earlier Bestlite. The one shown below on the right, by Oswald Hollmann, seems to me to belong to this group : it looks efficient, the base is good and solid so that it won't topple over and there is a ball joint on the arm which allows a fair degree of movement in any direction, an elbow at the top giving an extra adjustment for the angle of the reflector. 27s. 6d. in black : 2s. 6d. extra for a red, brown, cream or green finish.

•

The lamp in the other illustration seems to me to be an equally good example of a slightly different school of thought. More expensive (67s. 6d.), it seems to belong on the desk of the lantern-jawed executive, but it is none the worse for that, a great improvement, in fact, on the stencilled windmills bespattered over conical parchment shades which big business used to affect only a few years ago. Both the designs shown are arranged to take 60-watt lamps. The same firm also makes a range of pleasant fittings in majolica : simple spheres with a circular collar where they meet the ceiling. Sizes are from $5\frac{1}{8}$ to $8\frac{1}{4}$ in. diameter, taking 40- to 150-watt lamps, prices 8s. to 14s. 6d. (*Oswald Hollmann, 19 Brackley Road, Beckenham.*)

A New Technique for Welding

The British Oxygen Company have recently evolved a new technique for oxy-acetylene welding, and this they have christened Rightward welding, since it is carried out from left to right along the seam instead of the normal direction from right to left. The advantages of this method, which is sometimes known as backhanded welding, are not immediately obvious, and cannot readily be understood without reference to the diagram at the head of these notes. On the left is shown the normal method, in which the blowpipe is moved from side to side of the seam and the wire drawn gradually away as the weld advances : in the newer method, shown on the right, the cone of the welding flame is kept at the bottom of the groove and drawn slowly from left to right while the circular movement is given to the welding rod.

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So far the difference may seem to be of academic interest only, but it has been found that a bevel of 60 degrees at the sides of the seam is enough with Rightward welding, whereas, with the ordinary leftward technique, the best angle is 90 degrees. From this two important advantages follow : first of all, the volume of filling rod required to fill the seam is reduced by about 30 per cent. and the amount of gas used per foot run of weld is decreased in proportion, or, as an alternative, with the same amount of gas the speed of welding can be increased, this being helped by the fact that the flame is directed continuously towards the bottom of the seam and the available heat is better used.

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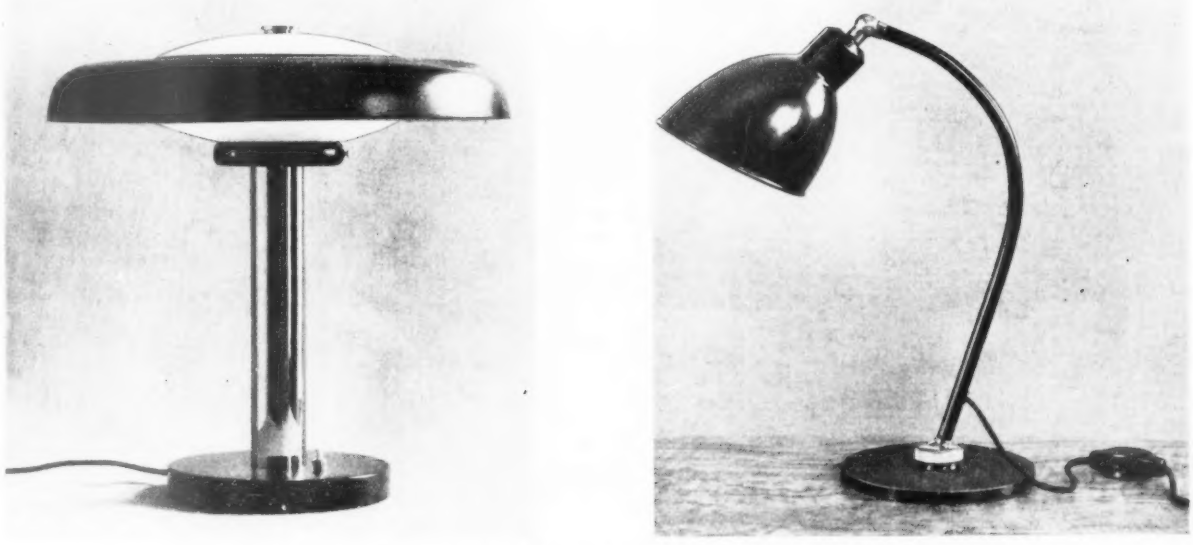
Hence there is a certain measure of economy to be gained. Some years ago the idea was firmly established that oxy-acetylene welding was uneconomical for butt-welding steel plates more than $\frac{3}{16}$-in.



Lamp standards described in notes on this page.

thick, and it is certainly true that costs increase disproportionately as the metal gets thicker. With the Rightward method, however, the costs, above ¼ inch, increase almost in a straight line as opposed to the strong upward kick in the curve of leftward costs.

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In the mechanical properties of the finished joint, the Rightward method shows several advantages, for the progress of the weld is at all times visible to the operator, whereas with the leftward method the operator occasionally withdraws the hot end of the welding rod from the flame to see how things are getting on, and scale may thus be deposited in the middle of the weld when the rod is put back again. An additional advantage is that, since the flame is concentrated at the bottom of the vee and is not waved about, there is less heating of the surrounding metal of the plate itself, and consequently less likelihood of distortion, and also, as the deposited metal remains for some time in the envelope of the flame before it reaches the air, there is less liability to sudden cooling and the consequent danger of brittleness.

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From the point of view of the operative, there is naturally a certain amount of strangeness about the technique, and reading between the lines I gather the impression that the older type of welder does not take kindly to it, probably regarding the whole thing as a pack of new-fangled nonsense, as any other craftsman would if he were told to do the same thing the other way round. The British Oxygen people maintain that it is just as easy to teach a novice to weld by either method, and, as they run a welding school as part of their works, they are in a position to know what they are talking about.

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One may also take off one's hat to a firm who, finding that their method is not as good as it might be, take the trouble to do some research work by way of improving it. The alternative method of casting doubts on the reliability of competing methods is all too popular. (*The British Oxygen Co., Ltd., Thames House, Millbank, London, S.W.1.*)

Silent Switches

During the last year or so the simple household switch has undergone some radical changes in design, for the Q.M.B. types were all very well for preventing excessive arcing on direct current supplies, but, apart altogether from the difficulty of excessive noise, it has now been realized that a slow break is definitely *better* for A.C. supplies than the more usual quick-break type. Several manufacturers are now marketing these types, the latest sample to reach me being the Silomac. This is, I think, the quietest I have come across so far: maltreatment will produce the faintest of flicks, just audible, but nothing that could possibly worry anybody. A little care makes the movement noiseless, and by noiseless I mean that it is really impossible to hear anything at all. This is largely due to the fact that a positive hand-controlled action is used without the usual toggle linkage which allows the spring to take charge as soon as the dolly passes the mid-position; there are also rubber buffers mounted underneath the bridge-piece to damp out the noise from careless use, so that the old metallic snap of the Q.M.B. types simply cannot happen.

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Prices are reasonable, 16s. 8d. a dozen for the all-white shock-proof surface type, 16s. for the same thing arranged to flush mounting, though to this last figure must be added the cost of plates, rings and boxes. The makers' catalogue, of some 300-odd pages, describes the rest of their large range and gives all the necessary information, and is arranged so that you can find what you want with a minimum of trouble. (*C. H. Parsons, Ltd., Britannia Works, Wharfdale Road, Tyseley, Birmingham, 2.*)

LAW REPORT

RIGHT TO ENFORCE RESTRICTIONS

White v. *Bijou Mansions, Ltd.—Chancery Division.—Before Mr. Justice Simonds*

THIS was an action by Mr. Noel Blanco White, of 16 Palace Court, Bayswater, against Bijou Mansions, Ltd., claiming an injunction to restrain the defendants from converting the premises No. 18 Palace Court into a guest house or apartment house or flatlets and from using the premises for any purpose other than that of a private dwelling-house in breach of restrictive covenants to that effect.

The defendants, who held the premises on a twenty-eight years' lease, had converted the house into twelve self-contained flatlets—single rooms with an annexe containing bath and lavatory accommodation.

Defendants, by their defence, pleaded that they were purchasers for value without notice of the restriction which the plaintiff claimed to enforce, and that the plaintiff was not a person entitled to enforce it. In the alternative, the defendants said that if plaintiff was entitled to enforce it, the neighbourhood had, since the date when the original covenants were entered into, undergone such a change in character that it would be inequitable to enforce them against the defendants.

Mr. A. Grant, K.C., and Mr. Roger Turnbull represented the plaintiff, and Mr. Roxburgh, K.C., and Mr. W. F. Waite, the defendants.

His lordship, after hearing legal arguments, dismissed the action, with costs.

Giving judgment, his lordship said the plaintiff derived his title under two deeds of 1886 and 1887, under which a Mr. Fellows covenanted to build a house costing £4,000 and to use it as a private dwelling-house only. Mr. Fellows' vendors covenanted that every building lease to be granted on the Shaftesbury House estate, on which the property was situated, should contain similar covenants by the purchasers. The present defendants were lessees of the adjoining property and their title began with a conveyance by the freeholder in 1890 to a predecessor of their lessor, containing a covenant to build a house on the land conveyed and to use it as a private residence only. Ultimately the land passed to a Miss Plumbly, who was duly registered at the Land Registry as owner with an absolute title, subject to the above covenant. In 1935 she granted a lease of the house to two ladies, and that lease contained a covenant by the lessees to use the house only as a private residence or for the purpose of private suites or flats. The terms in the covenant in that lease did not agree with the terms of the restriction on the freeholder. That lease was the lease assigned to the present defendants, and they had done what their lease permitted them to do and converted the house into a set of small private suites or flats.

Proceeding, his lordship said the first question was whether the lessees, having had no actual notice of the restriction sought to be enforced, were bound by the notice entered on the register. In view of decided authority and the Land Registration Act, sections 20, 50 and 52, his lordship held that the defendants took subject to the obligations imposed by the covenant, of which they had notice from its being entered on the register. But if they took subject to that encumbrance, they took subject to that alone. His lordship could not accept the argument, based on the doctrine of derogation from grant, that they were subject to another but different obligation of a similar nature.

The second question was whether, assuming that the lessees were so liable, the plaintiff was a person entitled to enforce those restrictions. This covenant was entered into with the freeholders in 1890, and apart from any building scheme or statutory obligation, the plaintiff could not possibly enforce it. There was no question of any building scheme, but he claimed to enforce it under the Real Property Amendment Act, 1845, or the Law of Property Act, 1925. According to his lordship's interpretation of these points the plaintiff was not a person who could point to any grant or covenant made in his favour in the conveyance of 1890 to defendants' lessors. Holding that the plaintiff was not entitled to enforce the restriction, it was unnecessary for him to consider the further questions raised by the defence.

His lordship added that, in his view, though there were some changes in the character of the neighbourhood, they were changes for which the plaintiff was not responsible. The plaintiff had satisfied his lordship on the evidence that the conversion of No. 18 Palace Court into flatlets was depreciatory of his own property. But, taking the view he did on the second point, he dismissed the action, with costs.

THE BUILDINGS ILLUSTRATED

SILVER JUBILEE SCHOOL, BEDFORD (pages 1003-1007). The general contractors were Welwyn Builder, Ltd., and the principal sub-contractors and suppliers included: Limmer and Trinidad Lake Asphalt Co., Ltd., asphalt; Indented Bar and Concrete Engineering Co., Ltd., reinforced concrete; A. H. Herbert & Co., Ltd., bricks and courtyard paving; Pearson Bros. and Campbell (Liverpool), Ltd., artificial stone; Dawnays, Ltd., structural steel; John Williams & Co. (Rotherhithe), Ltd., tiles; British Plaster Boards, Ltd., special roofings; Sussex Brick and Tile Co., Ltd., partition bricks; Pilkington Brothers, Ltd.,

glass and glass domes; Joseph F. Ebner, Ltd., wood-block flooring; James Combe and Son, Ltd., central heating, hot-water installation, automatic stokers, and boilers; Bedford District Gas Co., gasfitting; G. W. Franklin and Son, electric wiring and electric bells; Winskell and Son, plumbing; Shanks & Co., Ltd., and Joseph Chater and Sons, Ltd., sanitary fittings; Nettlefold and Sons, Ltd., door furniture; James Couper & Co., Ltd., metal casements and window furniture; Hill and Smith, Ltd., iron gates and railings; Burn Brothers, Ltd., special drainage fittings, etc.; Bath and Portland Stone Firms, stone; Eric Munday and Wm. Pickford, Ltd., metal-work; J. P. White and Sons, Ltd., flush doors; Malcolm McLeod & Co., Ltd., stonework; Brace and Fisher, Dunsmore glazed tiles; Laxton Brothers, Ltd., shrubs and trees; Alfred Brown & Co., cloakroom fittings; Smith's English Clocks, Ltd., clocks; Girlings Ferro-Concrete Co., Ltd., concrete staircase; W. T. Furse & Co., Ltd., lightning conductor; Pilchers, Ltd., C. and T. Painters, and T. Parsons and Sons, paint. The stone carving was executed by James Woodford.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICT (15 MILES RADIUS)

CARSHALTON. *School.* The Surrey Education Committee has approved plans for the erection of an elementary school in Green Wrythe Lane, Carshalton, at a cost of £20,571.

CROYDON. *Flats, etc.* Plans passed by the Croydon Corporation: Flats, Fernham Road, Mr. G. F. Wilson; 12 houses, Waddington Way, and flats, Warwick Road, Wates, Ltd.; nursing and rest home, Pampisford Road, E. Bates and Sinning; 10 flats, St. Peter's Road, Ashburton Builders, Ltd.; 12 flats, Selhurst Road, Fox and Champion, Ltd.; eight houses, Tower View estate, Woodmere Avenue, Mr. Chas. Barker; 10 houses, Worcester Close, Burcote, Ltd.; shops, offices, etc., Crown Hill, Saxone Shoe Co.; offices and workshop, Purley Way, Market Transport Co.; factory, Purley Way, Croydon Factory Estate, Ltd.; factory, Empire Works, Mitcham Road, London Capsule Co.; showroom, workshop, etc., High Street South, London Motors, Ltd.

CROYDON. *Extensions.* The Croydon Education Committee has approved plans for extensions at Norbury Manor junior school, at a cost of £10,900.

ENFIELD. *Houses, etc.* Plans passed by the Enfield U.D.C.: 123 houses, Phipps Hatch Lane and Medcalf Road, Hamilton, Son and Campion; factory, Alma Road, Clark and Smith; nine houses, Elmhurst Road, Mr. B. H. Stock; 150 houses, Addison Road, Mr. W. M. Edwards; 38 houses, Arbour Road, Farebrother, Ellis & Co.; shops with flats over, Hertford Road, Bowyer and Bowyer; 149 houses, 20 shops, and 45 garages, Bullsmoor Way, Mr. James Neilson; 22 flats, Myddelton Avenue, Mr. G. W. Newman; two houses, Mayfield Road, Mr. A. E. Wright; 10 houses, Vera Avenue, New Ideal Homesteads; 78 houses, Addison Estate, Swannell and Sly; 67 garages, Princess Avenue, McManus & Co.; 120 maisonettes, off Green Street, Bunting Construction Co.

ILFORD. *Houses, etc.* Plans passed by the Ilford Corporation: 41 houses, Inverness Drive, Mr. G. F. Siegerts; 34 houses, Marlborough Drive, Mr. L. E. Ansell; 66 houses, Somerville Road, Mr. J. H. Mason; 18 houses, South Park Drive, Mr. H. E. Bebington; 49 houses, Marlands Road, Mr. A. C. S. Wheeler; eight houses, Mannin Road, Messrs. P. Triplete, Ltd.; shop and four flats over, Clayhill Avenue, Messrs. Marrable Bros.; factory, Vicarage Lane, Plessey & Co., Ltd.; 12 shops and flats, High Street, Barkingside, between Waverley and Westminster Gardens, Murrell and Piggott; 21 houses, Eastern Avenue, Newbury Park, Mr. S. L. Robinson; seven shops and flats over, Cranbrook Road, Anns and Haigh.

ILFORD. *Public Baths.* The Ilford Corporation proposes to purchase a site in Clayhall Avenue, for the erection of public baths.

ILFORD. *Houses, etc.* Plans passed by the Ilford Corporation: 32 houses, Katherine Gardens, Mr. J. R. Crewes; 66 houses, Wensleydale Avenue, Mr. A. C. S. Wheeler; 24 houses, Hanover Gardens and Brunswick Gardens, Davis Estates, Ltd.; bus depôt, Ley Street, London Passenger Transport Board; nine houses, Lord Avenue, Lord and Mellodew, Ltd.; baptist church, Ashurst Drive, Mr. G. R. H. Payne; 13 houses, Marlborough Drive, Theydon Bois Construction Co., Ltd.; 10 houses, Ewellhurst Road, G. W. Ansell and Sons; 12 shops and flats, Kingsway, High Street, Barkingside, Suburban Real Estates; flats over 671 and 673 Green Lane, Marshall and Tweedy; 35 houses, Goodmayes Lane and Coronation Close, Mr. J. T. Perrin.

MARYLEBONE. *Public Library, etc.* The Marylebone B.C. is to proceed with the development of the site adjoining the town hall, by the provision of a new public library, at a cost of £59,620, and maternity and child welfare clinic, at a cost of £25,893.

MITCHAM. *Enlargement of School.* The Surrey Education Committee is to enlarge the county boys' school, Mitcham, at a cost of £12,730.

SOUTHALL. *Factory, etc.* Plans passed by the Southall Corporation: Seven houses, Thorncliffe Road, General Housing Co., Ltd.; factory, Inverness Road, General Industrial Bitumens, Ltd.

SOUTHERN COUNTIES

GLOUCESTERSHIRE. *Enlargement of School.* The Gloucestershire Education Committee is to enlarge the elementary school at Filton, at a cost of £17,605.

KENT. *School.* The Kent Education Committee has purchased a site at Hoo for the erection of a central school.

KENT. *Schools.* The Kent Education Committee has made provision in estimates for the erection of schools at Elmstead Lane, Chislehurst, Iron Mill Lane, Crayford, Oakfield, Dartford, Dymchurch, Lydden and Sheldwich.

PURLEY. *School.* The Surrey Education Committee is to proceed with the erection of a county school for girls at Purley, at a cost of £53,085.

SURREY. *Central School.* The Surrey Education Committee has approved plans for the erection of a central school for 480 at Northcroft Road, West Ewell.

SURREY. *Hospital Enlargement.* The Surrey C.C. is to enlarge and equip the Surrey County Hospital, Dorking, at an estimated cost of £35,314.

WALLINGTON. *Flats.* Mr. G. E. Cook is to erect a block of flats in Parkgate Road, Wallington.

SOUTH-WESTERN COUNTIES

EXETER. *Swimming Baths.* The Exeter Corporation recommends that the proposed new swimming baths be erected on the site of Gould's garage in Heavytree Road.

EXETER. *Flats.* The Exeter Corporation has approved plans by the city architect for the erection of four blocks of two-storey flats at Prospect Place area. The layout provides an alternative site for the erection of a parish hall at the corner of Rack Street and West Street, to which position the Ecclesiastical Commissioners have agreed.

PLYMOUTH. *Offices, etc.* The Plymouth Corporation has instructed the city architect to prepare plans for the erection of new offices and stores in view of the present inadequate and obsolete accommodation for the gas department.

PLYMOUTH. *Houses, etc.* Plans passed by the Plymouth Corporation: 196 houses, Taylor Woodrow Estate, St. Budeaux, Taylor Woodrow, Ltd.; warehouse, stores, etc., Prospect Row, Devonport, Navy, Army and Air Force Institute; 12 houses, Coombe Park Estate, Miss L. Cohen; 14 houses, Church Hill, Mr. M. Solomon; eight houses, Broom Park Estate, Mr. A. H. Hayter; 56 houses, Ashburnham Road, Mr. T. Mitchell; 12 bungalows, Pemros Road, Mr. W. Williams; new buildings, Frankfort Street, Western Morning News, Ltd.; 16 flats, Coleridge Road, Trustees of the late W. T. Jinkin; new licensed premises, South Western Hotel, York Street, Mr. L. James.

PLYMOUTH. *Building Sites, etc.* Plans passed by the Plymouth Corporation: Eight houses, Lower Crest Hill Estate, Mr. F. Westcott; 14 houses, Vicarage Road, Mr. W. Andrews; 47 building sites, Saltburn Building Estate, St. Budeaux, Mr. C. Jope; 120 building sites, Broom Park Estate, Compton, The Rowland Trustees; 38 building sites, Beacon Castle Estate, Western Builders; six building sites, Thorn Park, Mr. J. Joseph.

PLYMOUTH. *Pumping Station.* The Plymouth Corporation has acquired land at Camel's Head for the erection of a pumping station and for sludge-drying beds.

MIDLAND COUNTIES

BIRMINGHAM. *Fire Station Reconstruction.* The Birmingham Corporation has obtained sanction to borrow £14,397 for the reconstruction of the fire station in Hollyhead Road.

BRIDGNORTH. *School.* The Blue Coat School Trustees, of Bridgnorth, are to erect a senior school at Stourbridge Road, Bridgnorth.

COVENTRY. *Houses.* The Coventry Corporation has prepared a scheme for the erection of 1,000 houses at Canley, and is seeking sanction to borrow £444,682 for the purpose.

HANLEY. *Houses.* Plans passed at Hanley: 60 houses, Abbey Road, for Messrs. Tideswell Bros.

LEAMINGTON. *Bus Garage.* A bus garage is to be erected in Warwick Old Road, Leamington, by the Birmingham and Midland Motor Omnibus Co., Ltd.

NORTHERN COUNTIES

BOLTON. *Houses, etc.* Plans passed by the Bolton Corporation: 12 houses, Hampton Road, R. G. Hirst and Son; 10 houses, Breightmet Drive, W. Gornall and Sons, Ltd.; 18 houses, Orwell Road, Leigh Bros., Ltd.

BOLTON. *School.* The Bolton Education Committee has obtained a site at High Lawn for a senior school.

BOLTON. *Reconstruction.* The Bolton Corporation is to reconstruct the market hall roof, at a cost of £6,000.

BOLTON. *School.* The Board of Education has approved plans of the proposed junior and infants' school for 190 scholars to be erected by the Rev. C. Sheahan, the priest in charge of the parish of St. Columbas, Bolton.

CHEETHAM. *Flats.* The Manchester Corporation is to erect 32 flats at Temple Estate, Cheetham, at a cost of £19,358.

HARROGATE. *Extension of Baths.* The Harrogate Corporation has obtained sanction to borrow £66,000 for the extension and reconstruction of the Royal baths.

LANCASHIRE. *School Extension.* The Lancashire Education Committee is to provide additional accommodation for about 150 children in Poplar Street Council School, Audenshaw.

SCOTLAND

GLASGOW. *Tenements.* The Glasgow Corporation is to erect tenements in Westwood Road, Pollokshaws.

GLASGOW. *Shelters, etc.* The Glasgow Corporation is to erect shelters in various parks at a cost of £2,000, and a pavilion in Tollcross Park at a cost of £1,800.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I. s.	I. d.	II. s.	II. d.
A	ABERDARE ...	S. Wales & M.	1	7	1	2½
A	Aberdeen ...	Scotland	1	7	1	2½
A_1	Abergavenny ...	S. Wales & M.	1	6½	1	2
A_2	Abingdon ...	S. Counties	1	5½	1	1½
A	Accrington ...	N.W. Counties	1	7	1	2½
A_2	Addlestone ...	S. Counties	1	6	1	1½
A	Adlington ...	N.W. Counties	1	7	1	2½
A	Airdrie ...	Scotland	*1	7	1	2½
C	Aldeburgh ...	E. Counties	1	3	0	11½
A	Altrincham ...	N.W. Counties	1	7	1	2½
B_2	Appleby ...	N.W. Counties	1	3½	0	11½
A	Ashton-under-Lyne	N.W. Counties	1	7	1	2½
B	Aylesbury ...	S. Counties	1	5	1	0½
B	BANBURY ...	S. Counties	1	5	1	0½
B_1	Bangor ...	N.W. Counties	1	4½	1	0½
A_2	Barnard Castle	N.E. Coast	1	5½	1	1½
A	Barnsley ...	Yorkshire	1	7	1	2½
B	Barnstaple ...	S.W. Counties	1	5	1	0½
A	Barrow ...	N.W. Counties	1	7	1	2½
A	Barry ...	S. Wales & M.	1	7	1	2½
B	Basingstoke ...	S.W. Counties	1	5	1	0½
A_2	Bath	S.W. Counties	1	6	1	1½
A	Batley ...	Yorkshire	1	7	1	2½
A_2	Bedford ...	E. Counties	1	6	1	1½
A_2	Berwick-on-Tweed	N.E. Coast	1	6	1	1½
A_2	Bewdley ...	Mid. Counties	1	6	1	1½
B	Bicester ...	S. Counties	1	5	1	0½
	Birkenhead ...	N.W. Counties	*1	8	1	3
A	Birmingham ...	Mid. Counties	1	7	1	2½
A_1	Bishop Auckland	N.E. Coast	1	6½	1	2
A	Blackburn ...	N.W. Counties	1	7	1	2½
A	Blackpool ...	N.W. Counties	1	7	1	2½
A	Blyth	N.E. Coast	1	7	1	2½
B	Bognor ...	S. Counties	1	5	1	0½
A	Bolton ...	N.W. Counties	1	7	1	2½
A_2	Boston ...	Mid. Counties	1	5½	1	1½
A_2	Bournemouth ...	S. Counties	1	6	1	1½
B_2	Bovey Tracey	S.W. Counties	1	4	1	0
A	Bradford ...	Yorkshire	1	7	1	2½
A_1	Brentwood ...	E. Counties	1	6½	1	2
A	Bridgend ...	S. Wales & M.	1	7	1	2½
B	Bridgwater ...	S.W. Counties	1	5	1	0½
A_1	Bridlington ...	Yorkshire	1	6½	1	2
A	Brighouse ...	Yorkshire	1	7	1	2½
A	Brighton ...	S. Counties	1	6	1	1½
A	Bristol ...	S.W. Counties	1	7	1	2½
B	Brixham ...	S.W. Counties	1	5	1	0½
A	Bromsgrove ...	Mid. Counties	1	7	1	2½
B	Bromyard ...	Mid. Counties	1	5	1	0½
A	Burnley ...	N.W. Counties	1	7	1	2½
A	Burslem ...	Mid. Counties	1	7	1	2½
A	Burton-on-Trent	Mid. Counties	1	7	1	2½
A	Bury	N.W. Counties	1	7	1	2½
A_1	Buxton ...	N.W. Counties	1	6½	1	2
A_1	CAMBRIDGE	E. Counties	1	6½	1	2
B_1	Canterbury ...	S. Counties	1	4½	1	0½
A	Cardiff ...	S. Wales & M.	1	7	1	2½
A	Carlisle ...	N.W. Counties	1	7	1	2½
B	Carmarthen ...	S. Wales & M.	1	5	1	0½
B	Carnarvon ...	N.W. Counties	1	5	1	0½
A_1	Carnforth ...	N.W. Counties	1	7	1	2½
A	Castleford ...	Yorkshire	1	7	1	2½
A_2	Chatham ...	S. Counties	1	5½	1	1½
A_2	Chelmsford ...	E. Counties	1	5½	1	1½
A_2	Cheltenham ...	S.W. Counties	1	5½	1	1½
A	Chester ...	N.W. Counties	1	7	1	2½
A	Chesterfield ...	Mid. Counties	1	7	1	2½
B	Chichester ...	S. Counties	1	5	1	0½
A	Chorley ...	N.W. Counties	1	7	1	2½
B_1	Cirencester ...	S. Counties	1	4½	1	0½
A	Clitheroe ...	N.W. Counties	1	7	1	2½
A	Clydebank ...	Scotland	1	7	1	2½
A	Coalville ...	Mid. Counties	1	7	1	2½
A_2	Colchester ...	E. Counties	1	6	1	1½
A_1	Colne	N.W. Counties	1	6½	1	2
A_2	Colwyn Bay ...	N.W. Counties	1	6	1	1½
A_1	Consett ...	N.E. Coast	1	6½	1	2
A_2	Conway ...	N.W. Counties	1	6	1	1½
A	Coventry ...	Mid. Counties	1	7	1	2½
A_2	Crewe	N.W. Counties	1	6	1	1½
A_2	Cumberland ...	N.W. Counties	1	5½	1	1½
A	DARLINGTON	N.E. Coast	1	7	1	2½
A	Darwen ...	N.W. Counties	1	7	1	2½
B_1	Deal	S. Counties	1	4½	1	0½
A_2	Denbigh ...	N.W. Counties	1	5½	1	1½
A	Derby	Mid. Counties	1	7	1	2½
A	Dewsbury ...	Yorkshire	1	7	1	2½
B	Didcot ...	S. Counties	1	5	1	0½
A	Doncaster ...	Yorkshire	1	7	1	2½
B_1	Dorchester ...	S.W. Counties	1	4½	1	0½
A_2	Driffield ...	Yorkshire	1	5½	1	1½
A_2	Droitwich ...	Mid. Counties	1	6	1	1½
A	Dudley ...	Mid. Counties	1	7	1	2½
A_2	Dumfries ...	Scotland	1	6	1	1½
A	Dundee ...	Scotland	1	7	1	2½
A	Durham ...	N.E. Coast	1	7	1	2½
A_2	EASTBOURNE	S. Counties	1	6	1	1½
A_1	Ebbw Vale ...	S. Wales & M.	1	6½	1	2
A	Edinburgh ...	Scotland	1	7	1	2½
A_2	Exeter ...	S.W. Counties	*1	6	1	1½
B	Exmouth ...	S.W. Counties	1	5	1	0½
A_2	FELIXSTOWE	E. Counties	1	5½	1	1½
A_2	Filey	Yorkshire	1	5½	1	1½
A	Fleetwood ...	N.W. Counties	1	7	1	2½
B_1	Folkestone ...	S. Counties	1	4½	1	0½
A	Frodsham ...	N.W. Counties	1	7	1	2
B_2	Frome ...	S.W. Counties	1	4	1	0
A	GATESHEAD	N.E. Coast	1	7	1	2½
B	Gillingham ...	S. Counties	1	5	1	0½
A_1	Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1	6½	1	2
A	Glasgow ...	Scotland	1	7	1	2½
A_2	Gloucester ...	S.W. Counties	1	6	1	1½
A_2	Goole	Yorkshire	1	6	1	1½
A_2	Gosport ...	S. Counties	1	6	1	1½
A_2	Grantham ..	Mid. Counties	1	5½	1	1
A_1	Gravesend ...	S. Counties	1	6½	1	2
A	Greenock ...	Scotland	*1	7	1	2
A	Grimsby ...	Mid. Counties	1	7	1	2
B	Guildford ...	S. Counties	1	5	1	0
A	HALIFAX ...	Yorkshire	1	7	1	2½
A	Hanley ...	Mid. Counties	1	7	1	2½
A	Harrogate ...	Yorkshire	1	7	1	2½
A	Hartlepools ...	N.E. Coast	1	7	1	2½
B	Harwich ...	E. Counties	1	5	1	0½
B	Hastings ...	S. Counties	1	5	1	0½
A_2	Hatfield ...	S. Counties	1	6	1	1½
B	Hereford ...	S.W. Counties	1	5	1	0½
A_2	Hertford ...	E. Counties	1	6	1	1½
A	Heysham ...	N.W. Counties	1	7	1	2½
A	Howden ...	N.E. Coast	1	7	1	2½
A	Huddersfield ...	Yorkshire	1	7	1	2½
A	Hull	Yorkshire	1	7	1	2½
A	ILKLEY ...	Yorkshire	1	7	1	2½
A	Immingham ...	Mid. Counties	1	7	1	2½
A_2	Ipswich ...	E. Counties	1	6	1	1½
B_2	Isle of Wight ...	S. Counties	1	4	1	0
A	JARROW ...	N.E. Coast	1	7	1	2½
A	KEIGHLEY ...	Yorkshire	1	7	1	2½
A_2	Kendal ...	N.W. Counties	1	5½	1	1½
A_2	Keswick ...	N.W. Counties	1	5½	1	1½
A_1	Kettering ...	Mid. Counties	1	6½	1	2
A_2	Kidderminster	Mid. Counties	1	6	1	1½
B_1	King's Lynn ...	E. Counties	1	4½	1	0½
A	LANCASTER ...	N.W. Counties	1	7	1	2½
A_1	Leamington ...	Mid. Counties	1	6½	1	2
A	Leeds	Yorkshire	1	7	1	2½
A	Leek	Mid. Counties	1	7	1	2½
A	Leicester ...	Mid. Counties	1	7	1	2½
A	Leigh	N.W. Counties	1	7	1	2½
B	Lewes	S. Counties	1	5	1	0½
A	Lichfield ...	Mid. Counties	1	6	1	1½
A	Lincoln ...	Mid. Counties	1	7	1	2½
	Liverpool ...	N.W. Counties	*1	8½	1	3½
A_2	Llandudno ...	N.W. Counties	1	6	1	1½
A	Llanelly ...	S. Wales & M.	1	7	1	2½
	London (12-miles radius)		1	8½	1	3½
	Do. (12-15 miles radius)		1	8	1	3
A	Long Eaton ...	Mid. Counties	1	7	1	2½
A	Loughborough ...	Mid. Counties	1	7	1	2½
A_1	Luton	E. Counties	1	6½	1	2
A	Lytham ...	N.W. Counties	1	7	1	2½
A_1	MACCLESFIELD	N.W. Counties	1	6½	1	2
A_2	Maidstone ...	S. Counties	1	5½	1	1½
A_2	Malvern ...	Mid. Counties	1	5½	1	1½
A	Manchester ...	N.W. Counties	1	7	1	2½
A	Mansfield ...	Mid. Counties	1	7	1	2½
B_1	Margate ...	S. Counties	1	4½	1	0½
A_2	Matlock ...	Mid. Counties	1	5½	1	1½
A_1	Merthyr ...	S. Wales & M.	1	6½	1	2
A	Middlesbrough	N.E. Coast	1	7	1	2½
A_2	Middlewich ...	N.W. Counties	1	6	1	1½
B_2	Minehead ...	S.W. Counties	1	4	1	0
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1	4	1	0
A	Morecambe ...	N.W. Counties	1	7	1	2½
A_2	NANTWICH ...	N.W. Counties	1	6	1	1½
A	Neath	S. Wales & M.	1	7	1	2½
A	Nelson ...	N.W. Counties	1	7	1	2½
A	Newcastle ...	N.E. Coast	1	7	1	2½
A	Newport ...	S. Wales & M.	1	7	1	2½
A	Normanton ...	Yorkshire	1	7	1	2½
A	Northampton	Mid. Counties	1	7	1	2½
A	North Shields ...	N.E. Coast	1	7	1	2½
A	North Staffs ...	Mid. Counties	1	7	1	2½
A_1	Norwich ...	E. Counties	1	6½	1	2
A	Nottingham ...	Mid. Counties	1	7	1	2½
A	Nuneaton ...	Mid. Counties	1	7	1	2½
A	OAKHAM ...	Mid. Counties	1	5½	1	1½
A	Oldham ...	N.W. Counties	1	7	1	2½
A_2	Oswestry ...	N.W. Counties	1	5½	1	1½
A_1	Oxford ...	S. Counties	1	6½	1	2
A	PAISLEY ...	Scotland	*1	7	1	2½
B_2	Pembroke ...	S. Wales & M.	1	3½	0	11½
A	Perth	Scotland	*1	7	1	2½
A_1	Peterborough ...	E. Counties	1	6½	1	2
A	Plymouth ...	S.W. Counties	*1	7	1	2½
A	Pontefract ...	Yorkshire	1	7	1	2½
A_1	Pontypridd ...	S. Wales & M.	1	6½	1	2
A_2	Portsmouth ...	S. Counties	1	6	1	1½
A	Preston ...	N.W. Counties	1	7	1	2½
A	QUEENSFERRY	N.W. Counties	1	7	1	2½
A_2	READING ...	S. Counties	1	6½	1	2
B	Reigate ...	S. Counties	1	5½	1	1½
A_2	Retford ...	Mid. Counties	1	5½	1	1½
A_1	Rhondda Valley	S. Wales & M.	1	6½	1	2
A_2	Ripon	Yorkshire	1	5½	1	1½
A	Rochdale ...	N.W. Counties	1	7	1	2½
B	Rochester ...	S. Counties	1	5	1	0½
A_1	Ruabon ...	N.W. Counties	1	6½	1	2
A	Rugby ...	Mid. Counties	1	7	1	2½
A_2	Rugeley ...	Mid. Counties	1	6	1	1½
A	Runcorn ...	N.W. Counties	1	7	1	2½
A_1	ST. ALBANS ...	E. Counties	1	6½	1	2
A	St. Helens ...	N.W. Counties	1	7	1	2½
B_2	Salisbury ...	S.W. Counties	1	3½	0	11½
A_1	Scarborough ...	Yorkshire	1	6½	1	2
A	Scunthorpe ...	Mid. Counties	1	7	1	2½
A	Sheffield ...	Yorkshire	1	7	1	2½
A	Shipley ...	Yorkshire	1	7	1	2½
A_2	Shrewsbury ...	Mid. Counties	1	6	1	1½
A_2	Skipton ...	Yorkshire	1	6	1	1½
A_2	Slough ...	S. Counties	1	6	1	1½
A_1	Solihull ...	Mid. Counties	1	6½	1	2
A_2	Southampton	S. Counties	1	6	1	1½
A_1	Southend-on-Sea	E. Counties	1	6½	1	2
A	Southport ...	N.W. Counties	1	7	1	2½
A	S. Shields ...	N.E. Coast	1	7	1	2½
A_1	Stafford ...	Mid. Counties	1	6½	1	2
A	Stirling ...	Scotland	1	7½	1	2½
A	Stockport ...	N.W. Counties	1	7	1	2½
A	Stockton-on-Tees	N.E. Coast	1	7	1	2½
A	Stoke-on-Trent	Mid. Counties	1	7	1	2½
B	Stroud ...	S.W. Counties	1	5	1	0½
A	Sunderland ...	N.E. Coast	1	7	1	2½
A	Swansea ...	S. Wales & M.	1	7	1	2½
A_2	Swindon ...	S.W. Counties	1	5½	1	1½
A_1	TAMWORTH ...	N.W. Counties	1	6½	1	2
B	Taunton ...	S.W. Counties	1	5	1	0½
A	Teesside Dist. ...	N.E. Counties	1	7	1	2½
A_2	Teignmouth ...	S.W. Coast	1	6	1	1½
A	Todmorden ...	Yorkshire	1	7	1	2½
A_1	Torquay ...	S.W. Counties	1	6½	1	2
B_2	Truro	S.W. Counties	1	4	1	0
A_2	Tunbridge Wells	S. Counties	1	5½	1	1½
A	Tunstall ...	Mid. Counties	1	7	1	2½
A	Tyne District ...	N.E. Coast	1	7	1	2½
A	WAKEFIELD	Yorkshire	1	7	1	2½
A	Walsall ...	Mid. Counties	1	7	1	2½
A	Warrington ...	N.W. Counties	1	7	1	2½
A_1	Warwick ...	Mid. Counties	1	6½	1	2
A_1	Wellingborough	Mid. Counties	1	6½	1	2
A	West Bromwich	Mid. Counties	1	7	1	2½
A_2	Weston-s.-Mare	S.W. Counties	1	6	1	1½
A_2	Whitby ...	Yorkshire	1	6	1	1½
A	Widnes ...	N.W. Counties	1	7	1	2½
A	Wigan ...	N.W. Counties	1	7	1	2½
B	Winchester ...	S. Counties	1	5	1	0½
A_2	Windsor ...	S. Counties	1	6	1	1½
A	Wolverhampton	Mid. Counties	1	7	1	2½
A_2	Worcester ...	Mid. Counties	1	6	1	1½
A_2	Worksop ...	Yorkshire	1	5½	1	1½
A_1	Wrexham ...	N.W. Counties	1	6½	1	2
A_2	Wycombe ...	S. Counties	1	5½	1	1½
B	YARMOUTH ...	E. Counties	1	5	1	0½
B	Yeovil ...	S.W. Counties	1	5	1	0½
A	York	Yorkshire	1	7	1	2½

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request. The rates of wages have been revised consequent upon the increase in wages which came into operation on February 1, together with all revisions following authorized annual regradings.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality and include delivery to site in Central London area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . . per hour	1 8½
Carpenter . . . . . ,,	1 8½
Joiner . . . . . ,,	1 8½
Machinist . . . . . ,,	1 9½
Mason (Banker) . . . . . ,,	1 8½
,, (Fixer) . . . . . ,,	1 9½
Plumber . . . . . ,,	1 8½
Painter . . . . . ,,	1 7½
Paperhanger . . . . . ,,	1 7½
Glazier . . . . . ,,	1 8½
Slater . . . . . ,,	1 8½
Scaffolder . . . . . ,,	1 4½
Timberman . . . . . ,,	1 4½
Navvy . . . . . ,,	1 3½
General Labourer . . . . . ,,	1 3½
Lorryman . . . . . ,,	1 6½
Crane Driver . . . . . ,,	1 7½
Watchman . . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . . . per ton	2 2 0
Blue Lias Lime . . . . . ,,	1 18 6
Hydrated Lime . . . . . ,,	2 5 0
Portland Cement, in 4-ton lots (d/d site, including Paper Bags) . . ,,	1 19 0
Rapid Hardening Cement, in 4-ton lots (d/d site, including Paper Bags) . ,,	2 5 0
White Portland Cement, in 1-ton lots ,,	8 15 0
Thames Ballast . . . . per Y.C.	6 6
¾" Crushed Ballast . . . . ,,	7 0
Building Sand . . . . ,,	7 6
Washed Sand . . . . ,,	8 6
2" Broken Brick . . . . ,,	8 0
¾" ,, ... ,,	10 3
Pan Breeze . . . . ,,	6 6
Coke Breeze . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

	4" s. d.	6" s. d.
Straight Pipes . . . per F.R.	0 9	1 1
Bends . . . . each	1 9	2 6
Taper Bends . . . ,,	3 6	5 3
Rest Bends . . . ,,	4 3	6 3
Single Junctions . . ,,	3 6	5 2
Double . . . . ,,	4 9	6 6
Straight channels . . per F.R.	1 6	2 6
¾" Channel bends . . each	2 9	4 0
Channel junctions . . ,,	4 6	6 6
Channel tapers . . ,,	2 9	4 0
Yard gullies . . ,,	6 9	8 9
Interceptors . . ,,	16 0	19 6
IRON DRAINS:		
Iron drain pipe . . per F.R.	2 3	3 8
Bends . . . . each	5 10½	12 1
Inspection bends . ,,	10 7½	13 3½
Single junctions . ,,	10 4	21 3
Double junctions . ,,	16 0	28 8
Lead Wool . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . . per M.	2 12 0
Grooved do. . . . . ,,	2 14 0
Phorpres bricks . . . ,,	2 15 0
,, Cellular bricks . . ,,	2 15 0
Stocks, 1st quality . . . ,,	4 11 0
,, 2nd ,, . . . ,,	4 2 6
Blue Bricks, Pressed . . ,,	8 14 0
,, Wirecuts . . ,,	7 12 6
,, Bridles . . ,,	7 0 0
,, Bullnose . . ,,	9 0 0
Red Sand-faced Facings . ,,	6 18 6
Red Rubbers for Arches . ,,	12 0 0
Multicoloured Facings . ,,	7 10 0
Luton Facings . . . ,,	7 10 0
Phorpres White Facings . ,,	3 17 3
,, Rustic Facings . ,,	3 12 3
Midhurst White Facings . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:	
Stretchers . . . . ,,	21 0 0
Headers . . . . ,,	20 10 0
Bullnose . . . . ,,	27 10 0
Double Stretchers . . ,,	29 10 0
Double Headers . . ,,	26 10 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, *Add* . ,,	2 0 0
,, Other Colours . . ,,	5 10 0
2" Breeze Partition Blocks . per Y.S.	1 7
2½" ,, ,, ,, . . ,,	1 10
3" ,, ,, ,, . . ,,	2 1
4" ,, ,, ,, . . ,,	2 6

MASON

The following d/d F.O.R. at Nine Elms:	s. d.
Portland stone, Whitbed . . F.C.	4 4½
,, ,, Basebed . . ,,	4 7½
Bath stone . . . . ,,	2 10
York stone . . . . ,,	6 6
,, ,, Sawn templates . ,,	7 6
,, ,, Paving, 2" . . F.S.	1 8
,, ,, ,, 3" . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	28 17 6
22" × 12" Marchionesses . ,,	24 10 0
20" × 10" Countesses . . ,,	19 5 0
18" × 10" Viscountesses . ,,	15 10 0
18" × 9" Ladies . . . ,,	13 17 6
Westmorland green (random sizes) . per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20" × 10" medium grey . per 1,000 (actual)	21 11 6
,, ,, green ,, ,,	24 7 4
Best machine roofing tiles . ,, ,,	4 5 0
Best hand-made do. . . ,, ,,	4 17 6
Hips and valleys . . . each	9
,, hand-made . . . ,,	9½
Nails, compo . . . . ,,	1 4
,, copper . . . . ,,	1 6

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 2
Birch . . . . . as 1" F.S.	9
Deal, Joiner's . . . . ,, ,,	5
,, ,, 2nds . . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 8
,, Figured ,, . . ,, ,,	1 3
,, plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English . . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . ,, ,,	1 1
Deal floorings, ¾" . . Sq.	18 6
,, 1" . . . ,,	1 1 6
,, 1¼" . . . ,,	1 2 0
,, 1½" . . . ,,	1 5 0
,, 1¾" . . . ,,	1 10 0
Deal matchings, ¾" . . ,,	14 0
,, 1" . . . ,,	15 6
,, 1¼" . . . ,,	1 4 0
Rough boarding, ¾" . . ,,	16 0
,, 1" . . . ,,	18 0
,, 1½" . . . ,,	1 6 0

Plywood, per ft. sup.:

Thickness	⅛" A	B	BB	¼" A	B	BB	⅜" A	B	BB	½" A	B	BB
Qualities	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch 60 × 48	4	2½	2	5	3	2½	7	5	4	8	6	5
Cheap Alder .	–	2	1½	–	3½	2	–	–	–	–	–	–
Oregon Pine .	–	2½	–	3	2½	–	4	3½	–	5	4½	–
Gaboon Mahogany	4	3½	–	5	4½	–	7	6½	–	8	7	–
Figured Oak .	6½	5	–	7½	5½	–	10	8	–	11–	9	–

Scotch glue . . . . . lb. 8d.

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices from which should be deducted the various percentages as set forth below.)

	¼"	⅜"	½"	¾"	1"
Tubes 2'–14' long per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23" long . each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long . ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3" M–½" long ,,	8	10	1/5	1/11	3/6
Bends . . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed . ,,	5	7	1/1½	1/11½	3/11
Socket unions . . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . . ,,	10	1/1	1/6	2/2	4/3
Tees . . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets . ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . . ,,	3½	5	8	1/–	2/–
Backnuts . . . ,,	2	3	5	6	1/1
Iron main cocks . . ,,	1/6	2/3	4/2	5/4	11/6
,, with brass plugs . ,,	—	4/–	7/6	10/–	21/–

Discounts	TUBES Per cent.		Per cent.
Gas . . .	68½	Galvanized gas .	61½
Water . . .	66½	,, water .	55
Steam . . .	63½	,, steam .	50
	FITTINGS		
Gas . . .	61½	Galvanized gas .	55½
Water . . .	58½	,, water .	50
Steam . . .	53½	,, steam .	46½

	s. d.
Rolled steel joists cut to length . . cwt.	14 6
Mild steel reinforcing rods, ⅜" . . . ,,	10 6
,, ,, ,, ½" . . . ,,	10 3
,, ,, ,, ⅝" . . . ,,	10 0

SMITH AND FOUNDER—*continued*

	s. d.
Mild steel reinforcing rods, ¾" . . cwt.	9 6
,, ,, ,, ⅞" . . ,,	9 6
,, ,, ,, 1" . . ,,	9 6
,, ,, ,, 1¼" . . ,,	9 6
,, ,, ,, 1½" . . ,,	9 6

Cast-iron rain-water pipes of ordinary thickness metal	¾" s. d.	4" s. d.
	F.R. 8	10
Shoes . . . . each	2 0	3 0
Anti-splash shoes . . ,,	4 6	8 0
Boots . . . . ,,	3 0	4 0
Bends . . . . ,,	2 7	3 9
,, with access door . ,,	—	6 3
Heads . . . . ,,	4 0	5 8
Swan-necks up to 9" offsets . ,,	3 9	6 0
Plinth bends, 4½" to 6" . ,,	3 9	5 3
Half-round rain-water gutters of ordinary thickness metal .	F.R. 5	6
Stop ends . . . . each	6	6
Angles . . . . ,,	1 7	1 11
Obtuse angles . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheets . . . cwt.	32 6
,, drawn pipes . . . ,,	32 0
,, soil pipes . . . ,,	35 0
,, scrap . . . . ,,	19 0
Solder, plumbers' . . . lb.	1 1½
,, fine do. . . . ,,	1 4
Copper, sheet . . . ,,	1 0½
,, tubes . . . ,,	1 2½

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . . per ton	2 0 0
Plaster, coarse . . . ,,	2 15 0
,, fine . . . ,,	4 7 6
Hydrated lime . . . ,,	3 0 9
Sirapite . . . . ,,	3 6 0
Keene's cement . . . ,,	5 0 0
Gothite plaster . . . ,,	3 6 0
Pioneer plaster . . . ,,	3 6 0
Thistle plaster . . . ,,	3 6 0
Sand, washed . . . Y.C.	11 6
Hair . . . . . lb.	6
Laths, sawn . . . . bundle	2 4
,, rent . . . . ,,	3 9
Lath nails . . . . lb.	3

GLAZIER

	s. d.	s. d.
Sheet glass, 24 oz., squares n/e 2 ft. s. F.S.		2½
,, ,, 26 oz. ,, ,, ,,		3½
Flemish, Arctic, Figures (white)* . ,,		7½
Blazoned glasses . . . ,,		2 6
Reeded: Cross Reeded . . ,,		11
Cathedral glass, white, double-rolled, plain, hammered, rimpled, waterwite ,,		6
Crown sheet glass (n/e 12" × 10") . ,,		2 0
Flashed opals (white and coloured) . ,,	1 0 and	2 0
¼" rough cast; rolled plate . ,,		6
¼" wired cast; wired rolled . ,,		10½
¼" Georgian wired cast . . ,,		11½
¼" Polished plate, n/e 1 ft. ,,	†10 to ‡1	1
,, ,, 2 ,,	†1 2 ,, ‡1	4
,, ,, 4 ,,	†2 3 ,, ‡2	6
,, ,, 8 ,,	†2 9 ,, ‡3	2
,, ,, 20 ,,	†3 1 ,, ‡3	9
,, ,, 45 ,,	†3 3 ,, ‡4	0
,, ,, 100 ,,	†4 0 ,, ‡4	10
Vita glass, sheet, n/e 1 ft. ,,		1 0
,, ,, 2 ft. ,,		1 3
,, ,, over 2 ft. ,,		1 9
,, ,, plate, n/e 1 ft. ,,		1 6
,, ,, 2 ft. ,,		3 0
,, ,, 5 ft. ,,		4 0
,, ,, 7 ft. ,,		5 0
,, ,, 15 ft. ,,		6 0
,, ,, over 15 ft. ,,		7 6
"Calorex" sheet 21 oz., and 32 oz. ,,	2 6 and	3 6
,, rough cast ¼" and ½" . ,,	8½ ,,	1 0
Putty, linseed oil . . . lb.		3

* *Colours, 1d. F.S. extra.*

† *Ordinary glazing quality.* ‡ *Selected glazing quality.*

PAINTER

	£ s. d.
White lead in 1-cwt. casks . . cwt.	2 19 9
Linseed oil . . . . gall.	3 2
Boiled oil . . . . ,,	3 5
Turpentine . . . . ,,	3 9
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	2 6 0
,, ordinary . . ,,	2 0 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready mixed paint . . ,,	13 6
Brunswick black . . ,,	7 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.	2	9
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	8	6
" to form basement n/e 5' 0" and cart away	"	9	0
" " 10' 0" deep and cart away	"	9	6
" " 15' 0" deep and cart away	"	10	0
If in stiff clay	add "		5
If in underpinning	"	4	0
Planking and strutting to sides of excavation	F.S.	1	0
" " to pier holes	"		5
" " to trenches	"		5
" " extra, only if left in	"		3
Hardcore, filled in and rammed	Y.C.	10	0
Portland cement concrete in foundations (6-1)	"	1 6	0
" " (4-2-1)	"	1 12	6
" " underpinning	"	1 16	0
Finishing surface of concrete, space face	Y.S.		7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
" junctions	"	3	9	4	6
Gullies and gratings	"	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	5	0	8	3
Extra, only for bends	Each	11	9	17	3

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	26	10	0
" " in cement	"	27	12	6
" Stocks in cement	"	34	0	0
" Blues in cement	"	50	0	0
Extra only for circular on plan	"	2	0	0
" backing to masonry	"	1	10	0
" rising on old walls	"	2	0	0
" underpinning	"	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	"			8
" " " red brick facings and pointing	"			11
" " " blue brick facings and pointing	"		1	4
" " " glazed brick facings and pointing	"		3	6
Tuck pointing	"			7½
Weather pointing in cement	"			3
Slate dampcourse	"			10
Vertical dampcourse	"		1	1

ASPHALTER

		s.	d.
½" Horizontal dampcourse	Y.S.	4	9
½" Vertical dampcourse	"	7	9
½" paving or flat	"	6	3
1" paving or flat	"	7	6
1" × 6" skirting	F.R.	1	0
Angle fillet	"		2½
Rounded angle	"		2½
Cesspools	Each	5	6

MASON

		£	s.	d.
Portland stone, including all labour, hoisting, fixing and cleaning down, complete	F.C.	17	9	
Bath stone and do., all as last	"	13	6	
Artificial stone and do.	"	13	0	
York stone templates, fixed complete	"	10	6	
" thresholds	"	13	6	
" sills	"	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	"	3	7	0
Do., 24" × 12"	"	3	17	0
Westmorland slating, laid with diminished courses	"	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	3	0	0
Do., all as last, but of machine-made tiles	"	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	"	2	16	0
" " " " " " " (green)	"	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	2	6
Shuttering to sides and soffits of beams	F.S.			7
" to stanchions	"			7
" to staircases	"		1	6
Fir and fixing in wall plates, lintols, etc.	F.C.	3	9	
Fir framed in floors	"	4	6	
" " roofs	"	6	6	
" " trusses	"	7	6	
" " partitions	"	6	6	
⅞" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" " " " "	"	1	17	6
1½" " " " "	"	2	3	0
3" × 2" fir battening for Countess slating	"		9	6
Do., for 4" gauge tiling	"		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
" " " 2 "	"		2	9
" " " 3 "	"		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1½" " " " "	"		1	6
2" deal wrought rounded roll	F.R.			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	1	0
1¼" do.	"	2	10	0
1½" do.	"	2	17	0
1" deal moulded skirting fixed on, and including grounds plugged to wall	F.S.		1	6
1½" do.	"		1	9

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	9½
2" " " " "	"	1	11½
1½" deal cased frames double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅝" parting beads, and with brass faced axle pulleys, etc., fixed complete	"	3	7
2" " " " " "	"	3	10
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" " " " " "	"	2	8
1½" " but moulded both sides	"	2	4
2" " " " " "	"	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	0
4½" × 3½" " " " "	"	1	4
1¼" deal tongued and moulded window board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	2	6
1¼" deal moulded wall strings	"	2	1
1⅛" " " outer strings	"	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1¼" × 1¼" " " " "	"	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	"	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		16	6
Riveted plate or compound girders, and hoisting and fixing in position	"	1	0	6
Do., stanchions with riveted caps and bases and do.	"		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats	cwt.	2	3	0
Do. in flashings	"	2	6	8
Do. in covering to turrets	"	2	12	0
Do. in soakers	"	1	17	9
Labour to welted edge	F.R.			3½
Open copper nailing	"			3
Close " "	"			4

		½" s.	½" d.	¾" s.	¾" d.	1" s.	1" d.	1¼" s.	1¼" d.	2" s.	2" d.	4" s.	4" d.
Lead service pipe and fixing with pipe hooks	F.R.	1	2	1	4	1	8½	2	7	3	6	—	
Do. soil pipe and fixing with cast lead tacks		—		—		—		—		—		7	3
Extra, only to bends	Each	—		—		—		—		2	3	7	8
Do. to stop ends	"	6½		8		9		11		1	0	—	
Boiler screws and unions		3	3	3	9	5	0	8	0	—		—	
Lead traps		—		—		—		8	0	11	6	—	
Screw down bib valves	"	6	9	9	6	11	0	—		—		—	
Do. stop cocks	"	7	0	9	6	12	6	—		—		—	

		£	s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.		1	0
Extra, only stop ends	Each		1	0
Do. angles	"		1	6
Do. outlets	"		2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.		1	2
Extra, only for shoes	Each		1	3
Do. for plain heads	"		5	6

PLASTERER AND TILING

		s.	d.
Expanded metal lathing, small mesh	Y.S.	2	0
Do. in nw to beams, stanchions, etc.	"	2	9
Lathing with sawn laths to ceilings	"	1	3
½" screeding in Portland cement and sand or tiling, wood block floor, etc.	"	1	5
Do. vertical	"	1	7
Rough under on walls	"	1	2½
Render, refloat and set in lime and hair	"	1	9
Render and set in Sirapite	"	1	11
Render backing in cement and sand, and set in Keene's cement	"	2	9
Extra, only if on lathing	"		4
Keene's cement angle and arris	F.R.		6
Arris	"		1½
Rounded angle, small	"		3
Plain cornices in plaster, including dubbing out, per 1" girth	"		1½
1" gr'anolithic pavings	Y.S.	3	6
1½" " " " "	"	4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	"	17	6
9" × 3" " " " " "	"	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		6½
26 oz. do. and do.	"		7½
Flemish, Arctic Figured (white) and glazing with putty	"	1	1
Cathedral glass and do.	"	1	2
Glazing only, British polished plate	"		7
Extra, only if in beds	"		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6
Do. and distemper walls	"		9
Do. with washable distemper	"	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper	from "	2	9