THE ARCHITECTS' JOURNAL

Wednesday, February 2, 1927

A SCHEME FOR LAND STERILIZATION

One of the difficulties—perhaps, indeed, the chief difficulty—which will have to be faced by the Council for the Preservation of Rural England is how exactly the rural characteristic of any earmarked district is to be preserved, for there would seem to be no means of land sterilization except by means of purchase by the local authority or by the payment of compensation, both being methods which involve capital outlay. Moreover, it almost invariably happens that the justification for this expenditure arises only when the district in question is threatened, and the price has already become competitive. There are many districts which, for the benefit of mankind at large, should be protected from development, but if the likelihood of such development is remote there seems little justification in a large outlay in purchase; yet a threat may come suddenly from an unexpected quarter and the price advances.

A system, however, has been evolved by private enterprise for the acquisition of land, when and as it is required, without any previous capital expenditure. The method, we understand, is one which has been adopted by a well-known speculative builder. The procedure was this: A survey of the London suburbs was made and properties were selected which it was thought would come under building development within the next few years. The owners of these properties were next approached and the value of the land agreed upon. Thereupon a perpetual option to purchase at the agreed price was obtained upon an annual payment of 2½ per cent. of the agreed value, the owner meanwhile, until such time as the purchase was completed, retained the free and uninterrupted use of the land for purely agricultural purposes. That this method was successful as a speculation is proved by the fact that its originator, so we are given to understand, has made a considerable fortune. He was doubtless careful to select land, the normal annual increment in the value of which exceeded the amount of the annual payment for the option. To do this requires sound judgment. On the other hand, as for payment of a comparatively small sum control is obtained over a large area, unexpected depreciation at one point may be balanced by unexpected appreciation at another. It has been suggested to us by Mr. J. W. Mawson, and not without reason we think, that the principle involved in this ingenious method might be adopted to meet the needs of local authorities and so enable them to control large areas in a way which is at present quite impossible owing to the heavy and unlucrative outlay imposed by purchase or by compensation.

Thus it is suggested that a survey should be made by the local authority, and areas selected, the preservation of which is desirable for the general welfare. The next step would be to approach the owners and agree upon the value of the land which, it may be supposed, would have an agricultural value only. A small percentage of this value would then constitute an annual payment, in exchange for which the local authority would acquire a perpetual option to purchase at the agreed time. The land meantime would be sterilized except for agricultural purposes.

The method here outlined seems to us to merit very serious consideration both by the C.P.R.E. and by town-planning institutions and local authorities. New legislation would, of course, be required to give local authorities the necessary power to act along these lines. It is quite clear that the present position is altogether unsatisfactory and haphazard. Almost every day there is some new threat, followed by protests and appeals; appeals which sometimes succeed and sometimes fail, but if this rural England of ours is to be preserved there must be some more dignified, some more assured method of dealing with these occurrences. Indeed, the occurrences themselves must cease. Not only the local inhabitants, but the nation itself should sleep unhaunted by the fear that the opening of the morning paper may reveal some diabolical scheme for a dye-works on the shores of Lake Windermere; for an arsenal in the Wharfedale; for shipyards in Dead Man's Cove; for a bungalow town on the slopes around Cerne Abbas; and for goodness knows what infernal project in some region of uncontaminated beauty.

The fact that our civilization has arrived at a state that renders it necessary to take conscious and concerted steps to prevent self-contamination is one which it is unpleasant to contemplate, and one that might well provide subject-matter for a philosophic temperament that questions the very value of our civilization. It would seem that whatever we touch to-day we defile; wherever we make our mark, it is a sordid, dirty mark; wherever our civilization spreads, beauty is shattered and the impress of ugliness remains; ugliness and cacophony are the certain accompaniments of our progress. Is it impossible to secure a greater degree of material comfort and welfare without defiling the entire planet on which we live in the attempt? This is a question which will doubtless answer itself in the fullness of time; meanwhile, however, let those who are conscious of the dangers arm themselves to meet it, and we think that legislation on the lines which we have suggested would be by no means the least useful weapon in the armament.

NEWS AND TOPICS

THE INAUGURAL BOSSOM GIFT LECTURE—CUTTING UP LONDON—THE CULT OF THE TEMPORARY BUILDING—THE DIRECTOR OF ANTIQUITIES IN PALESTINE.

THE inaugural Bossom Gift Lecture on "Developments in Building Methods" will be delivered to-morrow night (Thursday) by Professor C. H. Reilly, F.R.I.B.A., of Liverpool University. This will be under the auspices of the Chadwick Trustees, one of whom, Sir Frank Baines, Director of Works at the Office of Works, is to preside. Mr. A. C. Bossom, F.R.I.B.A., the well-known New York commercial architect, suggested this fund last year with the object of encouraging the study of building science. Sir Frank Baines, who probably knows as much as any man in this country of the need to improve the management and methods of the building industry, enthusiastically welcomed the suggestion. Accordingly, the Chadwick Trust, of which Sir William Collins is chairman, decided to undertake to carry out the objects of the Bossom Gift. There are two technical advisers: Dr. R. E. Stradling, the director of the Building Research Station, and Mr. B. S. Townroe. It is hoped to give studentships to builders, who have practical experience of the industry and who have had the necessary education, so that they may devote themselves for six months or a year to research into some aspect of building.

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After all the congratulations that have passed concerning the saving of Waterloo Bridge, it now appears that there is still a large element of doubt whether the London County Council will not drift along on the old programme of demolition, notwithstanding the findings of the Commission on Cross-river Traffic. The recommendations of the Commission are but expressions of opinion, and to members of the demolition party they appear still as obstructionist opinions which it will be difficult to carry into effect, and be more or less futile anyhow. This is a lamentably wrong-headed way of looking at the subject, of course, but it must be realized that it is the way in which it presents itself to the people who have planned for years to obtain a new wide Waterloo Bridge with few arches of large span. There is no sign of change of heart among the demolitionists, and no compulsion has yet been brought to bear upon them to adopt active steps to preserve the bridge on the lines of the Commission's report. As one L.C.C. official said recently, there is every reason why the demolition scheme should go on. The river is doing its bit, preservation and the provision of alternative bridges at Charing Cross and Blackfriars will be admittedly very costly, it is doubtful whether the L.C.C. could raise the money if it would, and it is rather doubtful whether it has any good will to try. Efforts to save the bridge will still be needed, it seems, and, unless something is done to clinch the matter, all the work of the Commission may prove vain.

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In the course of the next few months the Government have to come to a decision with regard to the continuance or modification of their Rent Restrictions Acts at the end of the year. At present the operation of these Acts is considerably adding to the difficulties of clearing slums, for property owners, when suitable property becomes vacant, either re-let at higher rents or sell. Those who have had practical experience of these Acts, although they recognize the harmful effects of such restrictive legislation, make no secret of their fear that their repeal may lead to a demolition of much residential property. In many cases the sites now occupied by cottage property, for which rents are very low, and often irregularly paid, are more valuable than the houses themselves. Many property owners would prefer to sell the sites for industrial use. In that case there will be the destruction of many cottages, and, consequently, a serious increase in the number of persons demanding houses. The suggestion has been placed before the Ministry of Health that, should the Rent Restrictions Acts be abolished, no property owner should be allowed to pull down houses now occupied without permission from the local authority. To carry this out would mean further legislation, and undoubtedly objection would be taken to any attempt to make such a distinction between different classes of property.

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The group system of town-planning has been visualized by the Minister of Health, who has invited 120 local authorities round London to join in a Town-planning Committee for London. The starting-point for a sound new scheme of growth is the recognition of the fact that in the normal course of things a city does not stagnate. "London is constantly being pulled down and rebuilt, but not scientifically." One may be averse to change, love ancient monuments and quaint streets, but these tastes are not gratified by merely hoping for the best. The only way in which old and new can be made to serve the interests of the present day is by conscious arrangement of our resources. If an old building is a thing of beauty or of historical interest it is worthy to be treated as a jewel and given its proper setting in a harmoniously composed scheme, but such results can only be produced thoughtfully; they seldom reward the careless commercial speculator, who is either blind to the real value of the property his ill-instructed "conversions" destroy, or who deals on too small a scale to permit of co-ordinated planning. A greater London town-plan, in which all that is good in each suburban locality will be conserved and suitably framed and linked up with the rest, is a sane ideal to work for. Whether the local nucleus will really save fares and traffic remains to be seen; whim comes into the question, and workpeople always will be liable to pass the local works and find more congenial employment at a distance. It gives them an excuse for having lunch away from home!

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In all places and ages some buildings of a temporary character are erected as well as some of more substantial and enduring type. And where the permanent buildings are permanent indeed, and are provided with heavy masonry walls and vaults, as in Palestine even at the present day, it is economically impossible for all the population to have houses of this expensive nature. Some must live in tents, or caves, or shacks made from opened out packing-cases and tin cans. Our English climate renders the tent and tin-can homestead inadequate and objectionable, and we probably possess a very high standard of average endurance in our architectural works of all

kinds. America takes more kindly to temporary buildings, and a correspondent writes from New York: "The average life of a modern urban building is scarcely twenty years, as things go, but this is because the pressure of land prices compels a higher building every so often." It seems that the buildings do not fail from old age and decay, but suffer from "pecuniary obsolescence."

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Even in England the standard of permanency has been very considerably lowered as a result of experiments conducted during the war and continued since the Armistice in the interests of making good the housing shortage, though the prospect of "pecuniary obsolescence" is hardly a considered factor. English builders now build thinly for cheapness sake, though hoping against hope for a long period of endurance for their works, or, alternatively, to get them safely sold before they fall down. It is only in exceptional circumstances that the provision of definitely temporary buildings is advocated because of the expense of reconstruction in the near future, and the suggestion that schools should be temporary buildings comes as something of a shock. The president of the National Union of Teachers, Miss C. Neal, condemns needless expenditure on buildings of brick and stone that might be out of date in a decade or so and incapable of adaptation or extension to meet newer ideas.

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But, as usual, when a novel course is suggested, one's mind turns to the consideration of the old way and discovers not a few good excuses for it. Substantial buildings with bomb-proof shelters for the children were found eminently desirable some few years ago; protection from fire, too, demands a certain standard of quality which is not to be cheaply attained. Then there is the question of keeping out the weather and maintaining a warm interior in this inclement climate. Brickwork has a high value in these matters, if used with discretion, and its long endurance is thrown in as an extra. Then there is the trouble with cheap temporary buildings that they are also decaying buildings, and the school classes have to be inconvenienced by the execution of patchings and repairs. The thing to do is to design schools on convenient and rational lines in accordance with their special needs, and then erect permanent buildings. Modern design can attend to the scientific side of school arrangement if educationists can determine what this amounts to and instruct their architects accordingly.

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An advertisement in the *Times* gives notice to intending applicants for the post of Director of Antiquities in Palestine to communicate with the Under-Secretary of State for the Colonies, Colonial Office, Downing Street, S.W.1, before March 15 next. "The salary of the post, inclusive of allowances, is £E 1,300 per annum, and in certain circumstances the post is pensionable. The duties of the director include the administration of the Department of Antiquities and the Government Museum, the supervision of excavations conducted by non-official persons and bodies, and the conservation of historical monuments in the territory." How the proffered salary compares with the normal expenses of the office, and why the post is vacant, are two questions which intending candidates are likely to ask, for the cost of living has increased remarkably in Palestine during recent years. To keep track of the non-official excavator is also no sinecure, for the soil of the Holy Land has a fascination for all sorts of fanatics of different sects of three religions, besides the treasure seeker, who assumes the rôle of archæologist to conduct his gold hunt with less interference. Palestine is genuinely rich in historical evidences, so that it is to be hoped that a well-qualified man will be accepted for the post, and that he will find it congenial when he gets it.

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These precepts did Professor Hubert Worthington place before students at the R.I.B.A. on Monday night: "Never tout for jobs. In these days of competition and the difficulty of scraping together a living it is very difficult to be blameless. Above all things, don't let success turn you into a grabbing miser. And if someone is given a job you think you ought to have, the client has a right to employ whom he likes." . . . "Never take a trade commission. Hush! But people do, and thrive on them. Business clients assume you do so, sometimes. Never forget that if you ever fall in this respect you have lost caste, even though you are a sidesman." . . . "Competition morality is one of the proudest boasts of our profession. Our standard has been very high, and it is recognized abroad. But all these things need jealously guarding. If you are ever an assessor, don't abuse a position of great trust. If you are an unsuccessful competitor, play the game and don't write to the papers; write to the R.I.B.A. if you like, but don't wash dirty professional linen in public." . . . "Beware of becoming over-critical. Cynicism, sourness, and soul-destroying jealousy are common faults among artists. It has been said that actors are bad judges of actors, painters bad judges of painters. Are architects bad judges of architects?" Professor Worthington's address was one of the most sincere that have been delivered within the Institute's four walls.

ASTRAGAL

ARRANGEMENTS

FRIDAY, FEBRUARY 4

At the Royal Technical College Architectural Craftsmen's Society, Glasgow. 7.45 p.m. T. C. Campbell Mackie on the Education of a Designer.

SATURDAY, FEBRUARY 5

At the Architectural Association. 7.0 p.m. The first of a series of Dinner Dances. Tickets 6s. 6d.

FRIDAY, FEBRUARY 11

The Town Planning Institute. (At the Caxton Hall.) 6.0 p.m. Major Harry Barnes on The Slum Problem.

At the Royal Institution of Great Britain. 9.0 p.m. Ernest Law, C.B., on Old Hampton Court Palace Revealed.

MONDAY, FEBRUARY 14

At the Royal Institute of British Architects. 8.0 p.m. Business Meeting. Election of Members.

WEDNESDAY, FEBRUARY 16

At the Royal Society of Arts. 8.0 p.m. Professor Ernest George Coker, M.A., D.SC., F.R.S., M.INST.C.E., on Photo-elastic Measurements of Stress Distribution. (Lecture 1.)

LABOUR AND THE CONTRACT

[BY HARLAN THOMAS]

In the early stages of the building contract system the component parts of a building were let in separate contracts, with the architect functioning in the capacity of master builder. In 1888 the first important general contracting firm in America was organized. It was, I believe, a firm in Chicago which came into existence practically on account of the desire of the owner to have a stipulated price for the work, and to make one concern responsible for the carrying out of the entire job, thus avoiding the making of numerous contracts with the inescapable confusion resulting when the various parts are not under one authoritative direction. Thus the transition from master builder to contractor, thence on to the general contractor, was completed. Enormous amounts of capital throughout the United States now began to flow through the medium of the general contractor and the contract system into building construction. The general contractor became the king-pin of the contract system, and so far as the interests of labour were concerned, the tangible representative of capital, and therefore the legitimate target of its antagonism. Labour was quick to detect the joker in the contract system, which was the urge it contained for cheap labour and long hours, to the end that larger profits should accrue to the general contractor, who was now far removed from labour's sphere of activity or influence. The old-time collaboration between employer and craftsman was effectually disappearing, craftsmanship was on the wane, the building trades unions grew enormously and entered the field as national institutions.

Mr. Harlan Thomas, President of the American Institute of Architects.

Look back over the fatalities in the ranks of the general contractors along the trail of devastation left by the contract system the past forty years. If the story could be told of the financial ruin, the hopes, the homes, and the fortunes which have been wiped out, it would indeed be a pitiful one. In early manhood, during a visit to New Orleans, Lincoln, witnessing the public auction of a slave girl, exclaimed to his companions, "Boys, if I ever get a chance to hit that thing, by God, I'll hit it hard!" May we hope for a Lincoln or a St. George to come, buckle on his armour and slay this hydra-headed dragon which, stalking in our midst, has upset our building household, sucked up the milk of human kindness, created division and strife where harmony and collaboration are imperative, until construction has become a whited sepulchre in its relation to design!

[This is the third of a series of articles on the future of the building trades. The articles will be contributed by a distinguished group of architects, builders, politicians, and business men, all of whom have considerable experience of various sides of the subject. The first article, by the Rt. Hon. J. Ramsay MacDonald, M.P., appeared in our issue for January 5, and the second, by Major Harry Barnes, was published on January 19.—Ed., A.J.]

General contractors and architects, recognizing the decadence of the crafts, are making an effort, here and there, to revive interest in craftsmanship. Guilds have been established. One, organized in the city of Portland, Oregon, three years ago, has greatly stimulated good craftsmanship by giving suitable recognition and reward where they belong. In many places schools have been established where young men are taught the handicrafts and prepared to enter the trades. These efforts to restore the guilds and to provide new and skilful workmen among the coming generation are most commendable. However, it certainly seems too bad that the product of all this effort should in turn be fed into the maw of the contract system, where the worst is equal to the best, and where it will inevitably be shorn of every vestige of pride and spirit in its work.

Thus far it must be patent that my remarks have been arrayed against a system and not against individuals. I wish it to be so understood.

I will now consider a panacea for some of the ills of the building contract system. History tells us of the Dark Ages, a period of 400 years of cultural confusion when civilization seemed to hibernate, yet we all know that out of this darkness came the wonderful Renaissance, the revival of letters, art and architecture. There is nothing so bad that it cannot be crowded out by that which is good. May we not hope then for a rebirth of craftsmanship following the confusion of the last fifty years, and a return to the true process of building construction which was one founded upon confidence? Nine-tenths of the world's business is transacted upon confidence. Why shouldn't the building business be conducted on a basis of confidence in the general contractor and the craftsman?

There have always been many of the legitimate and better class of general contractors who, recognizing the injustice of the contract system to all concerned, have striven to promote a more equitable system of building construction. During recent years a great deal of construction work has been carried on, on the actual cost basis plus the general contractor's percentage. If you will excuse a personal reference, I wish to say that for the past ten years our office has put forth every effort to substitute for the contract system this method of actual cost plus a percentage to the general contractor, and we have reason to believe that the results have been satisfactory to our clients.

Under the actual cost system, the owner pays for just what he gets and the gamble is taken out of the building business. Under this system the owner pays only the sum of the paid invoices for material plus the sum of the paid and signed payrolls after they have all been checked on the job, in the contractor's office and the architect's office—to this the contractor's percentage is added. If the actual cost plus a fixed fee to the general contractor system is used, then an additional compensation of an agreed percentage is paid the general contractor on all extras.

In the selection of a general contractor for the work, the following qualifications are exacted. *a*: The contractor must have sufficient capital with which to carry on the

work and have a known reputation for honesty. *b*: The contractor's credit in the material market must be such as to make that market anxious to provide him with material at the most reasonable rates. *c*: The contractor's organization, equipment, and management must be such as will ensure the performance of construction on the most economical basis consistent with good workmanship. *d*: The contractor must be a master builder in the true meaning of the term. He must know good workmanship and of what a day's work consists, in each of the component parts of building construction.

When such a general contractor is selected, he is asked to make a careful estimate of the cost of the work according to the plans, specifications, and scale details. This duty he performs knowing that he is employed to do the work. Hence he is not under the stress of competition and there is no incentive to misrepresent. If there is occasion to revise the plans, his figures are also revised to cover such changes. The contractor's percentage or fixed fee is determined in relation to the character of the building. With a general contractor in charge of the work who measures up to the above-mentioned qualifications, construction will bear its proper relation to design and the owner's best interests are assured. Under this system, the owner, the architect, the master builder, and the craftsmen, employed by the master builder, become—as of old—one family housed under the same roof.

The fear that craftsmen will loaf on a time and material job is a false fear, especially when their employer is of the master builder type described above. Let every man on the job come to know that his is an important integral part of the work, that his efforts to please are going to be suitably recognized and rewarded. Consult with him as to the best manner of executing his part of the work and wisely bestow encouragement and praise when earned. This will quicken his imagination and unshackle his initiative. Then pride in his work and loyalty to his trust will be the result and " loafing on the job " will become an obsolete phrase.

Many times, even in the course of construction, an owner will make fundamental changes in the plans. Under the contract system this is a calamity. Under the actual cost system the most radical changes are made without causing a ripple in the harmony of those concerned. At completion of the work under the actual cost method, much to the satisfaction of the owner, he has a complete file of paid invoices, payrolls, and statements which set forth plainly where every cent of his money was spent, and he can reassure himself that he has had everything he has paid for and that he has paid only what it actually cost.

Again, overlook a personal reference. One year ago our office in Seattle constructed a commercial building under the actual cost system described above at a cost of $150,000. When the work was nearly completed, the owner gave a dinner to all the mechanics who had worked on the building, together with their wives and sweethearts. The dining-room, 40 by 100 feet in size, was seated to capacity. When the dinner was over, speeches were made by the contractor, the architect, and the owner. The owner was generous in his praise of the workmen and commended the fine spirit which they had shown in their work. He remarked that when he built another building he wished to see them all back on the job. We have another case in point to-day, which is nearing completion at a cost of $70,000, under the actual cost system. The day before Christmas, the owner came to the job and presented each workman thereon (approximately thirty men) with a clean, crisp, five-dollar bill and wished them a Merry Christmas. This graceful recognition by the owner in both instances produced a reaction on the men which was indeed good to see and hear. You must admit that, had this work been done under contract, there would have been no incentive on the part of the owner for such recognition of services.

With the increase of this type of general contractor the confidence of the building public will increase and the use of this system of construction will become more general until that day when it is universally accepted.

This consummation, so devoutly to be wished, will not come in its fullness this year or the next, but the goal, through continuity of purpose, will eventually be reached. Each step in the right direction, as Shakespeare says :

> Shall lend a kind of easiness
> To the next. The next more easy;
> For use almost can change the stamp of nature,
> And master thus the devil, or throw him out
> With wondrous potency.

THE INFINITE SANDS: ii

[BY CHARLES HARRIS WHITAKER]

BUT it is not unusual to read in the advertisements that this or that development is committed to this or that style of architecture, Spanish predominating at the moment. Never, it is certain, was the art of architecture so frankly used as a " selling argument " in land speculation. Never have architects been employed as in the Florida boom. The same is not so true of California, where the big building companies have taken over a very large share of the domestic work. This is not yet so in Florida, and between these two States, as I have said, lies the desert, a geographical incident which gives one time for reflection and contemplation.

Truly there is nothing like unto the moveless vastness of the desert, for here is no restless surge of wave, no ceaseless heaving of mountain peaks. Here is only the majesty of quiet. One knows, and deeply, the power of the universe and becomes aware, very humbly, of one's insignificance. Well may the student of architecture pause before the sculptured pinnacles and minarets, towers and domes, columns and pylons, as they are outlined against the evening sky, when the deep shadows steal like an embrace about the bare and beaten breasts of the mountains, while the sun gilds them with colours that mock the palette of every painter.

If architecture is a social mirror, then let it be remembered that America is very far from having found its way towards the " democratic vista." If anything, it may to-day be said to have turned its back upon any such search. Mechanical invention is no substitute for social vision. Organized religion moving to seize the legislative power of the State is no step towards freedom. We are of the earth, we humans, ineluctably of its substance and for ever sucklings at its breast, and by what we do to and with the land so shall we be dealt with. Our architectural achievements measured by invention, skill, daring, scale, are truly remarkable, but in broad planning—in putting architecture as master of our inchoate and obscure social endeavour, we have so much to learn that it takes a stout optimist to look cheerfully at what is ahead of us. Los Angeles and San Francisco, three thousand miles from Megalopolis, have borrowed the worst from it and let it go at that. Their street systems are more spacious, it is true, and their

present building height restrictions more sane, but the latter factor must change as land prices rise, and already Los Angeles is clamouring for subways to relieve the acute congestion of its business district. Every student knows that subways do not decrease congestion, but that they have the contrary effect, but every individualist knows that they do raise land prices, and so the herd bellows for them, and, more's the pity, ends by getting them. But with the East setting the pace and the West following hot afoot, where are we to turn as we seek means to stem the rising flood of congestion ?

The answer is, of course, that as our whole social programme is predicated upon congestion, we do not intend to stem the tide. We are obliged to speed it on, whether we will or no. All talk about relieving congestion is the most arrant nonsense. Those who preach about it generally have no idea of the kind of vested interest with which they are proposing to deal.

But, if California has learned a little in the social use of land, it has exerted a considerable influence on American architecture. Already the bungalow, borrowed from farther East, has crept far to the eastward. The fearful rise in building costs has forced ever smaller houses, and the bungalow thus fits into economic necessity. Adapted, with no consideration for different materials and environment, it is already beginning to blight the outskirts of Megalopolis with hideous rows of single-family hutches. Along with the bungalow have gone the contraptions and gadgets by which the bath-tub becomes he cook-stove, the guest-bed is evolved out of a section of the dining-room wall—the cupboard door (false) yields a couch—while the kitchen is fitted with a " Pullman " dining space, after the manner of a section in an American sleeping-car. Capitalization of increments and credit control have driven Californians into the smallest limits ever conceived as a modern home, in so far as the cities are concerned. Otherwise she has a glorious spaciousness that includes sandy beaches and rugged cliffs, magnificent mountain and fertile valley, farm and ranch, orchard and vineyard, and thousands of miles of hard-surfaced roads. All that is needed to make California a veritable Paradise is to substitute social vision for land speculation and credit exploitation. But what folly even to mention such a prospect!

But California has architecture to show. That the student will very soon discover. The most interesting modern office building in the United States is in San Francisco, although one risks a critical reputation very easily in a land where a new office building is finished every day in the year ! And the building of the Pacific Telephone Company in San Francisco is but just completed. But, architecturally, its exterior sounds quite a new note. In the moulding of the vertical shaft motives and in their flowering at the top, the architects have truly expressed not only towering structure, but purpose and use. Undoubtedly it will attract wide comment and criticism, and I would not hesitate to place it among the few notable buildings erected in 1925.

Two of the most beautiful modern churches in the United States are in Los Angeles. Both are built of reinforced concrete, and while each has a traditional relation, either one of them might well have been designed had there been no tradition to draw upon. Each is a wholesome solution of a problem, both in the respect paid to the material and in meeting the needs laid down. St. John's is to me a little more interesting than St. Paul's, but this I ascribe to a very delightful treatment of the interior, for in the former the shadows above the altar space are exquisite.

In school buildings California stands at the top, because climatic conditions have permitted a plan that cannot be used in more rigorous climates. But the grace and the taste that have been combined with the idea of making sunshine and fresh air a part of the educational equipment have led to a veritable host of the most charming school buildings. Compared with the average of the rest of the United States, California is quite in a class by itself. The University Club in Los Angeles, another reinforced concrete structure, easily vies with any other clubhouse in the United States. It is the first one, so far as I know, to provide ample garage space for the members, and after driving one's car into the storage space, one has quick and easy access to the foyer of the club. The roof of the garage is treated as a garden, which gives out of the library and reading-rooms, and the whole interior is a marvel of scholarly study tempered with the most charming freedom. Not far away is the building of the Woman's Athletic Club, an architectural jewel set amid the jumble and quietly proclaiming the fact that a master has been at work. For here is another piece of exquisite scholarship, yet there is not a bit of pedagogy about it. Fresh, naïve, graceful, balanced, I proclaim its architect a genius.

Once again, at the risk of falling into the dreadful American habit of superlatives, let me say that Grauman's Theatre in Los Angeles is the most interesting cinema in America. Built also of reinforced concrete, with its massive structural members lying bare to the eye, it possesses a scale that is truly magnificent. I know no building in America that at once gives so tremendous an impression of grandness of structure and the mightiness of materials. It has extraordinarily spacious entrances and foyers, and these are decorated in a large symbolism which goes back to the Egyptian and Babylonian. But the method by which the coloured decoration has been applied to the untreated concrete surfaces stamps this as the work of another genius —one that will, I believe, have the greatest influence upon the use of concrete as a building material. One could expatiate on this building at great length, for it is a true architectural creation, as rare a thing as water in the desert !

Los Angeles is discussing a civic centre project that will take precedence over any similar project with which I am acquainted, and it is certain that every student of museum architecture will have to know the new Natural History Museum in Los Angeles, of which the first unit is just coming to completion. The scholar-student will make the journey to California merely to study the private library building that Mr. Clark has caused to be built, adjoining his house, in Los Angeles. As for domestic architecture, it is endless, and as charming as any to be found in the world.

I have mentioned but a few of the more important buildings and no names. Space is too limited, and I would not slight any one of the men whose work has contributed so much to the interesting architecture of California. It is a great pity that the journalistic power of the East and the architectural vanity that has so long looked rather contemptuously on anything very far removed from Eastern purlieus have combined to keep the architectural progress of the Pacific Coast from any better known. Surely, if one be of an open mind and still owns to the faith that architecture is a living art, capable of being moulded beautifully in a present that offers so little incentive, then let him by all means remember that in seeing architectural America he cannot afford to forgo crossing those infinite sands of the desert.

[*Concluded*]

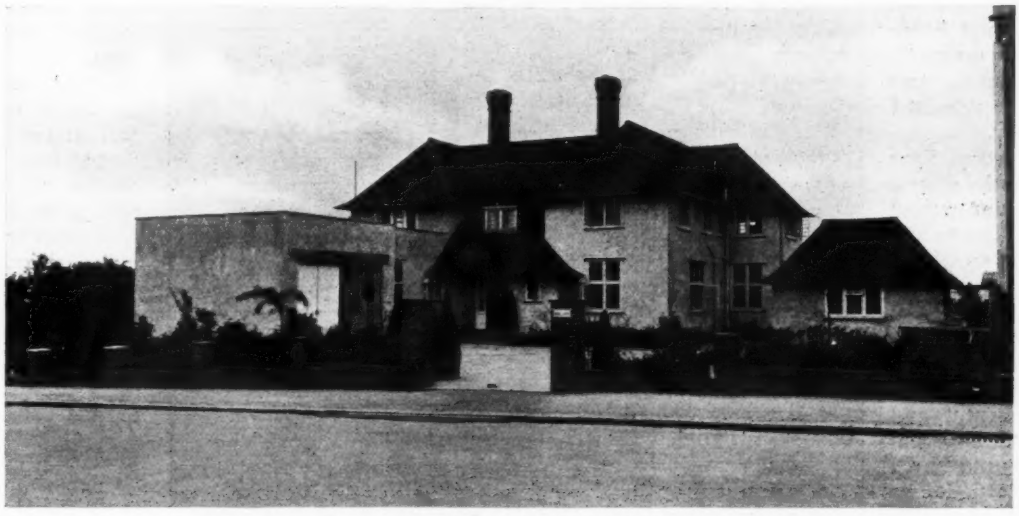
AN OPEN-AIR HOUSE

[BY C. HARRISON TOWNSEND]

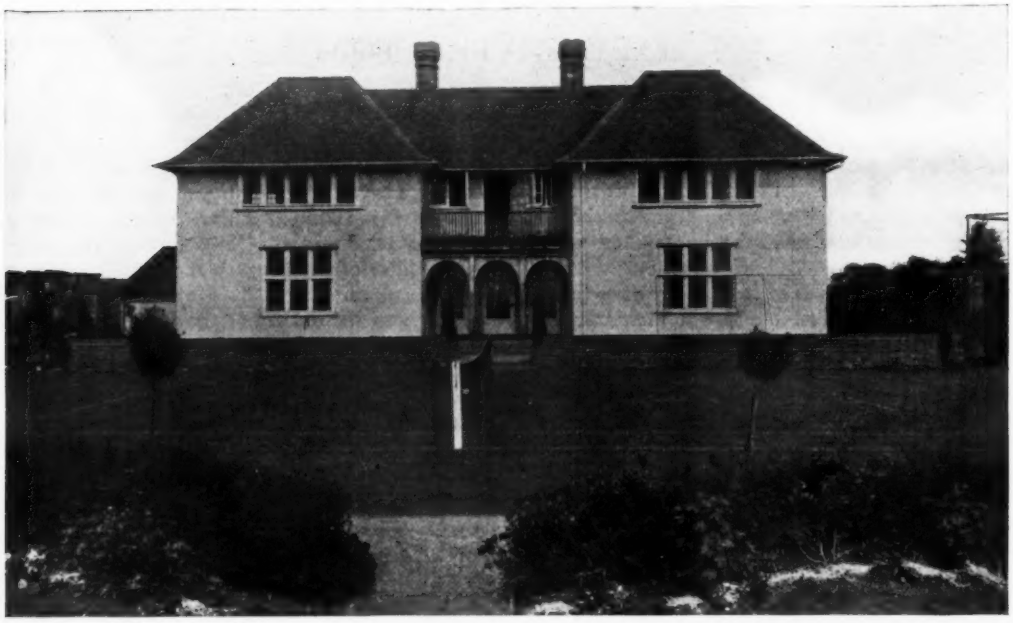
AN architect is at his best when he is largely conditioned by the special circumstances of the building which he is about to undertake, such as its site and the consequent aspect, the material it is most fitting to employ, and, more particularly, by the demands of the client whom he has to satisfy. The interest to himself in his design arises mostly from meeting with problems—difficult, perhaps, but welcomed by him as offering opportunities the satisfactory treatment of which leads to a successful design. Each of these is a friend and not an enemy, a help and not a hindrance, and amongst the conditions that, above all, dominate his work are the individual requirements and wishes of the client. There are, of course, cases where demands are made which go beyond the limits of reasonableness, and become whims and fancies which it is by no means expedient to satisfy, and the architect's non-compliance with which is, as a general rule, in the interests of their suggester himself.

In designing Tree Tops, Northampton, the conditions in front of Mr. Barry Parker gave, as faced and dealt with by him, opportunity of a treatment that has resulted in an interesting and successful piece of work. Situated on the crest of a wooded hill the house is fortunate in its site, commanding, as this does, a very fine view to the south, and another almost as fine, but less extensive, to the north. The object before the architect was how to plan the building so as to take the fullest advantage of not one, but both, of these, and to give the principal rooms, both ground and first floor, this double advantage. This has been obtained by placing the dining-room, and that important room, the nursery, as well as the two chief bedrooms above them, on either side of a wide hall and staircase, and contracting the rest of the building between them so as to obtain, in each of these rooms, windows with a southern aspect, while still commanding the view to the north over the public park. A further advantage of this arrangement will be evident when considering the bedroom plan. The drawing-room—used, as it is, only in the afternoon—from its position in the north-west angle obtains from its large west window the sun during that time, while its other window looks out over the park. Indeed, the question of profiting to the utmost by the views has been the dominant consideration in Mr. Barry Parker's approach to his design, from the time when entering at the front door the three large windows of the hall give a vista on to the fine view to the south. The lighting these windows afford the hall is reinforced by a ceiling-light with a skylight over, which is on the internal face of a valley-roof, and the objectionable effect of the always-too-evident feature, the roof-light, is thus avoided. The portion of the hall above the first floor has, as regards three of its sides, a treatment of semi-circular arches and recesses, the piers between them containing the flues of the ground-floor fireplaces, and that of the boiler of the low-pressure hot-water system in the basement.

In both the dining-room and nursery advantage has been taken of the recessed portion of the room to treat it as an inglenook. In the former the oak of the mantel, as is the case with the ingenious sideboard, is stained with the semi-metallic and lustrous silver-grey Matsine stain employed for the rest of the woodwork, including, by the way, the staircase and the floors generally. The effect of this soft grey and its harmony with the lilac of the walls, and with the richer and deeper tone of the curtains and upholstery, is very pleasantly restful in effect. Throughout the house Mr. Barry Parker has adopted that particular colour, and only that, for the walls, holding that to select a different decorative and colour-scheme for each room of a house cannot but destroy the unity of the interior, and result in a loss of spaciousness and quiet dignity. In place of treating each room as a unit by itself he maintains that when considering its colour-treatment the whole house should be regarded as the unit. Behind the panelling on

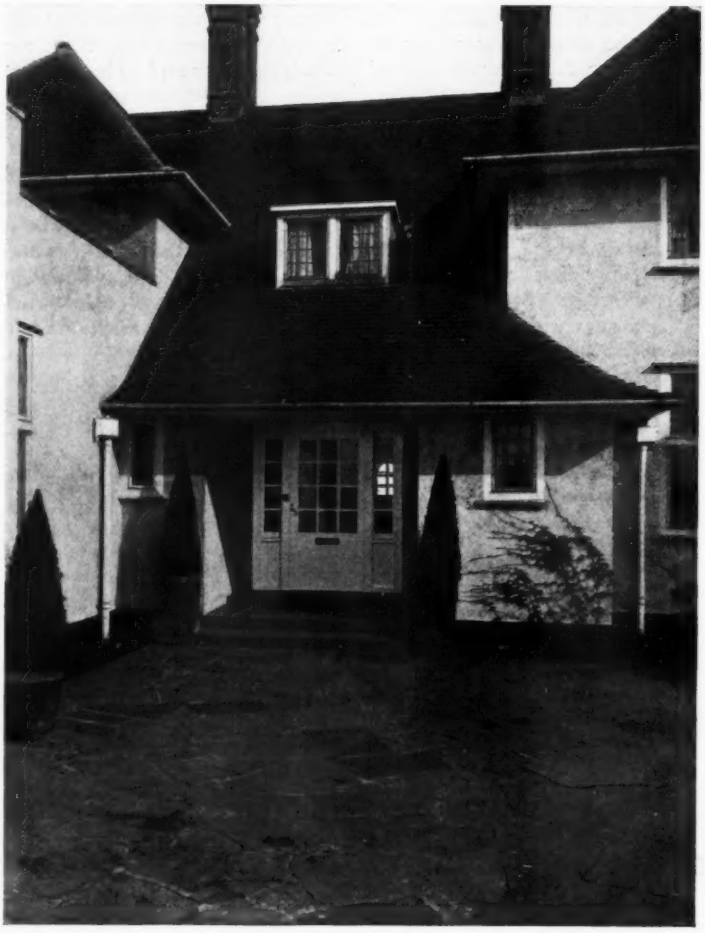


Tree Tops, Northampton. By Barry Parker. A view from the north-west.



one side of the dining-room fireplace a servery-hatch is arranged. The drawing-room fireplace has unglazed white tiles, and the large hearth of the ingle in the nursery is laid in 6 in. red quarries, the arch and jambs of the fireplace opening being of small red bricks. The kitchen is of sufficient size to allow of the omission of a scullery, a room which, after all, is beginning to be looked upon as a not indispensable adjunct to the kitchen, especially when, as here, a servants' hall is provided. This arrangement means that the kitchen is not used as a maids' sitting-room, and hence the rougher work can be done in it, and need not be relegated to a scullery.

The bedroom floor is one with several interesting features and problems. But as Mr. Parker says elsewhere, "the successful designer of a house is essentially the man who seizes the opportunities which all difficulties present," and he quotes the aphorism "the pessimist regards every opportunity as a difficulty: the optimist regards every difficulty as an opportunity." In designing Tree Tops he must have welcomed the difficult point of the treatment of the two principal bedrooms, which has certainly given him "opportunity" for an ingenious solution.



The custom of sleeping in the open air, and the employment of sleeping balconies, or "sleeping porches," as the Americans call them, for the purpose, finds to-day an increasing number of adherents, and the architect of Tree Tops was faced with the demand for such accommodation in connection with the principal bedroom and especially the nursery. This brought with it many considerations. In the first place, it had to be realized that an actual balcony placed against one side of the house can, as a matter of fact, only be open on three sides. Often, indeed, it is the case that it possesses only two open

Tree Tops, Northampton. By Barry Parker. Above, the south front. Below, the main entrance.

sides, or even one. The consequence is that there must be, at least, one side, and sometimes either two or three, from which the wind can never reach the balcony. In the second place, the provision of a balcony means, as a rule, the increase in size of the house, or, alternatively, the diminution of the size of the bedroom. The next objection to the provision of a bedroom with a sleeping balcony adjoining it is that it means that the windows of the bedroom must necessarily give on to a roofed-over balcony, and the room be thus deprived of the possibility of sun on that side. Finally, there is the daily necessity of wheeling or carrying the bed and other furniture from the bedroom to the balcony, and its return to the room.

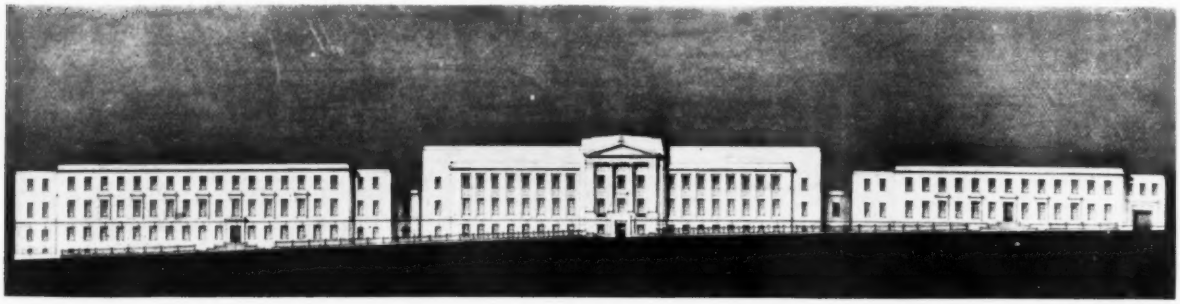
Faced with these considerations Mr. Barry Parker realized that a bedroom capable of being converted into a sleeping balcony at will would possess many advantages over the ordinary arrangements of a bedroom with a sleeping balcony attached to it, and would be free from all the above disadvantages. He has accordingly arranged that there are windows on each of the four sides of the two principal bedrooms, thus giving these rooms every possible aspect, and has designed for the larger openings special casements which slide and fold on the same principle as the folding wooden partitions so often used in school buildings. These openings, thus unobstructed, give the bedroom the effect and advantages of a large open-air sleeping balcony. It is an ingenious way of meeting a problem of difficulty and importance, and has proved a highly satisfactory solution. Altogether Mr. Barry Parker's Tree Tops shows much ingenious thought in planning and arrangement, and in the elevations, no less than the interior, a quiet restraint in design.

Tree Tops, Northampton. By Barry Parker. Above, a view from the south-west. Below, the plans.

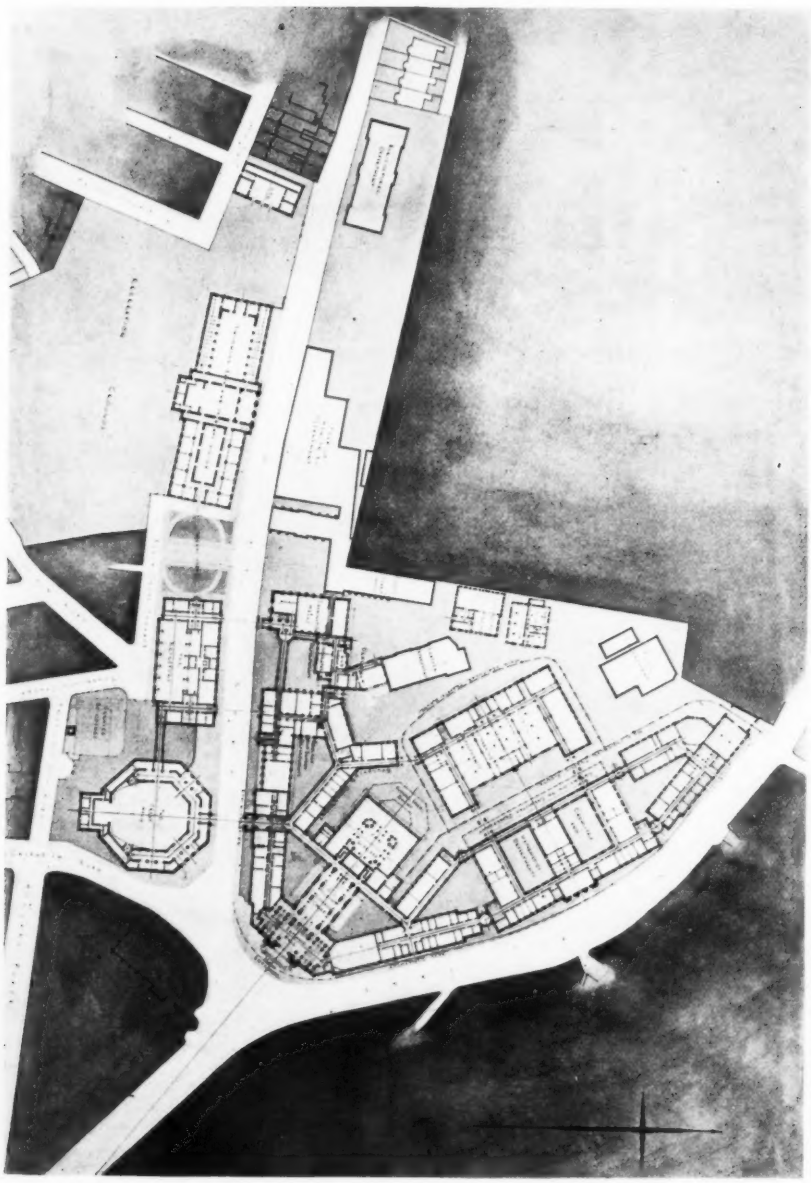
Tree Tops, Northampton. By Barry Parker. Above, the dining-room. Below, a sideboard in the dining-room.

Tree Tops, Northampton. By Barry Parker. Above, the drawing-room. Below, the hall.

Tree Tops, Northampton. By Barry Parker. Above, a bedroom. Below, one of the open-air sleeping rooms.



The Woodhouse Lane Elevation.



Leeds University Reconstruction Competition. The second premiated design. By J. C. Procter and J. Addison.

SOANE'S BANK OF ENGLAND

iii: THE CONSOLS OFFICE

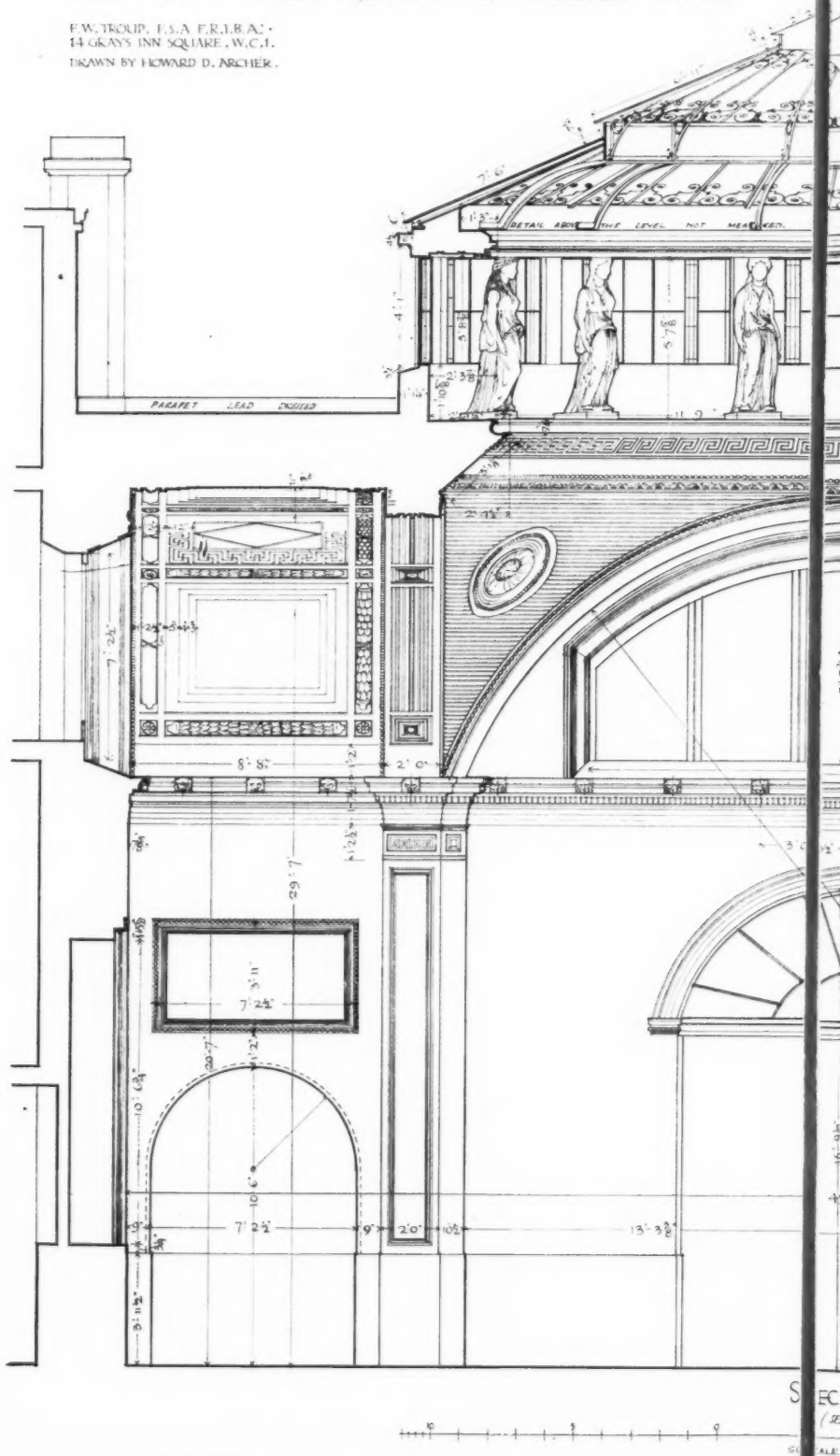
c : Cross Section

The Caryatides—twelve in number—standing round the eye of the dome, were cast by Coade in his "Patent Stone." Similar figures, apparently from the same mould, were used in the lantern of the Rotunda which was built a few years before the Consols Office. The vertical windows behind the figures were of bronze—the sloping glazing in the top of the lantern, together with the ventilating "sunburner," were mid-nineteenth-century alterations to the original opaque ceiling. The external stone cornice, seen in section on the right-hand of the drawing, was supported by a brick-on-edge-and-end frieze, a favourite device of Soane's.—[H. ROOKSBY STEELE.]

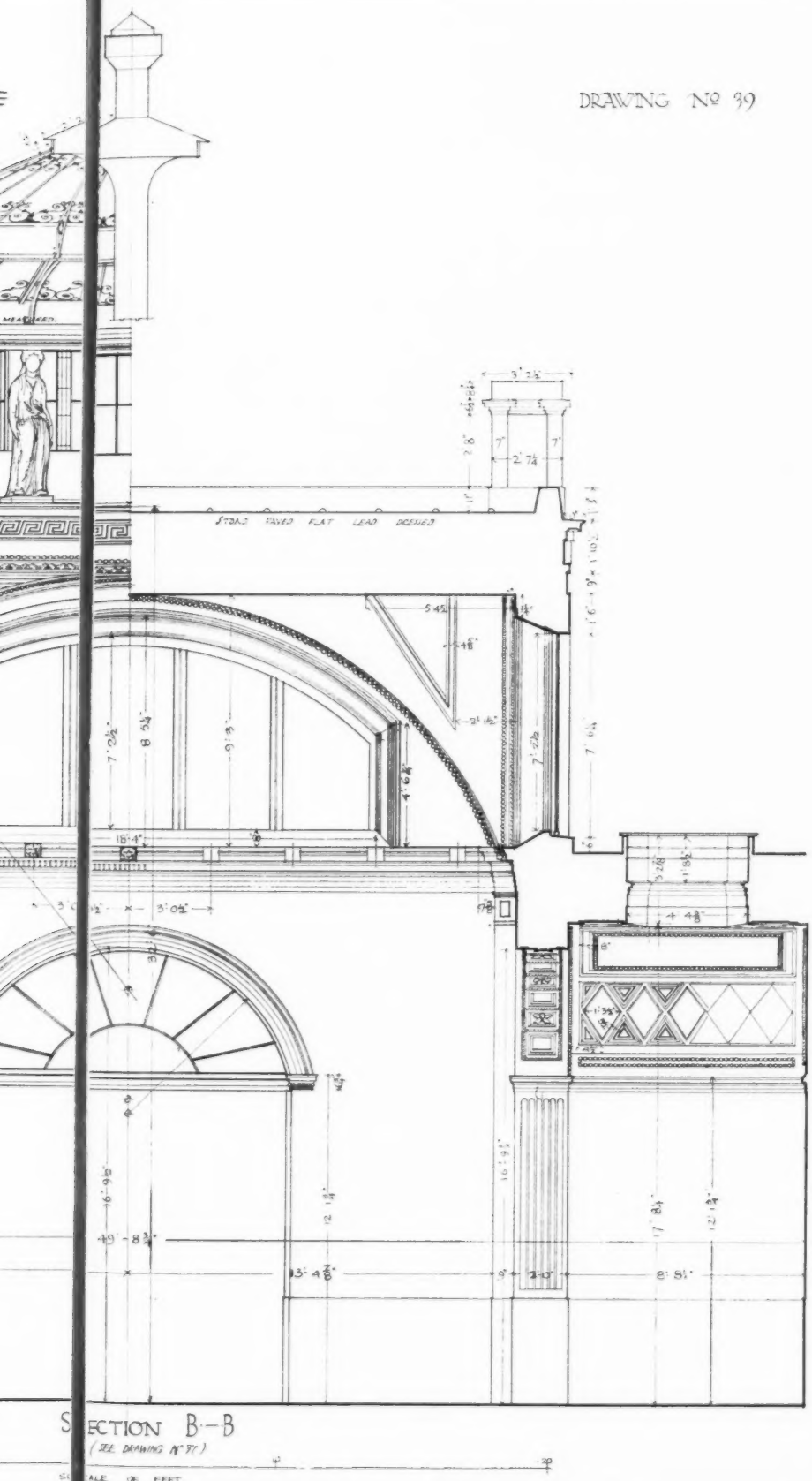
THE BANK OF ENGLAND

HALF INCH SCALE SECTION OF CONSOLS OFFICE

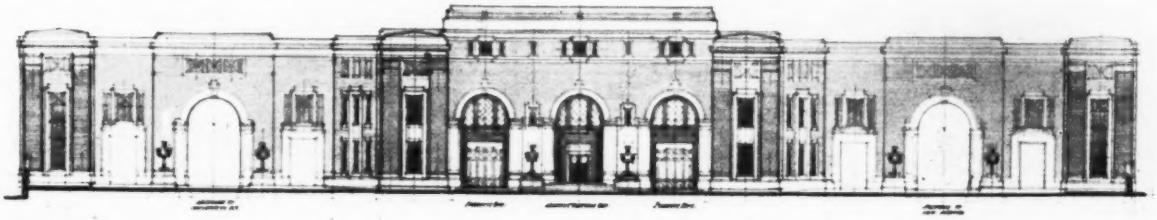
F.W. TROUP, F.S.A. F.R.I.B.A.
14 GRAYS INN SQUARE, W.C.1.
DRAWN BY HOWARD D. ARCHER.



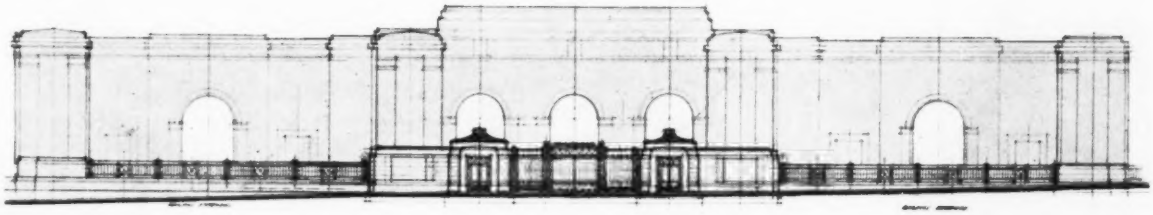
DRAWING Nº 39



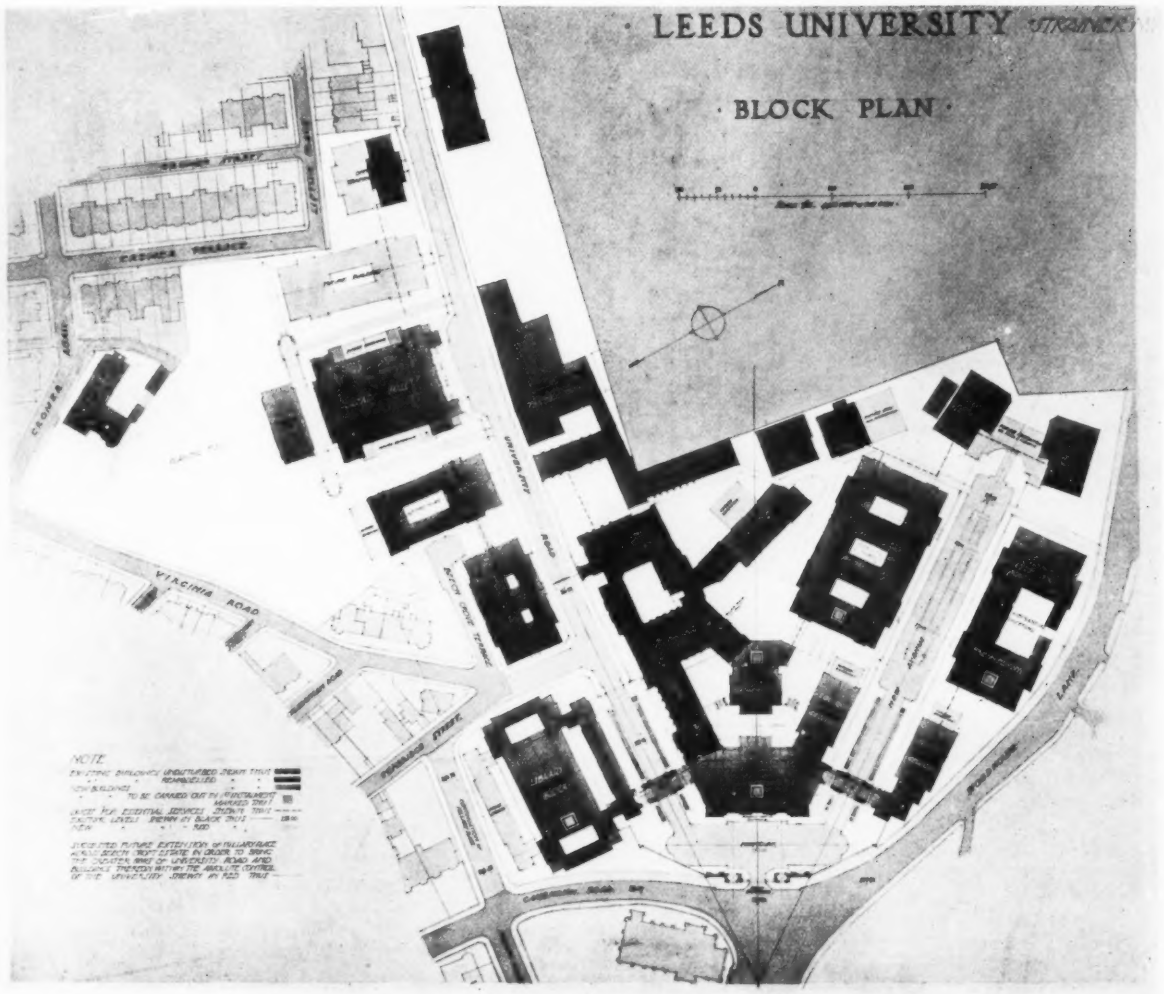
SOANE'S BANK OF ENGLAND. MEASURED DRAWINGS OF THE INTERIORS. (*iii*) THE CONSULS OFFICE. (*c* CROSS SECTION



ELEVATION TO FORECOURT.



ELEVATION OF MAIN ENTRANCE GATES & BOUNDARY WALLS TO FORECOURT.



Leeds University Reconstruction Competition. The third premiated design. By Ashley and Winton Newman.

AMERICAN BUILDING METHODS

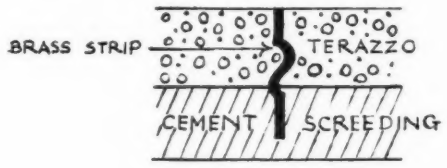
[BY T. S. TAIT]

IV: POINTS IN CONSTRUCTION

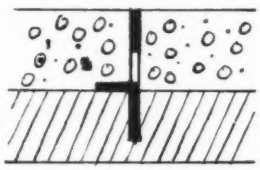
OUTSIDE hanging scaffolding is similar to that used recently in Devonshire House. The walls are finished as each floor height is completed, thus obviating the necessity of cleaning down or repointing afterwards. An interesting and, what seemed to me, efficient method for internal scaffolding was the use of metal ladders for uprights, bracing, and cross-pieces, inserted at whatever level was desired.

Double hung sash windows in metal to a similar design to wood sashes are the type of window used in all office buildings. These are considered by the real estate authorities to be the most useful form of window sash, as they do not interfere with the hanging of blinds, nor do they open into the room and so disturb papers on desks and tables. This type of window is also necessary where mosquito net blinds and louvered shutters are used. Moreover, in buildings of such height, where the upper stories are exposed to very strong wind, casement windows would be dangerous. I nervously watched a window cleaner at work on a twenty-third-story window in New York one day, and expressed my anxiety to the architect. He said the man was insured! No doubt he felt he would be as dead after a fall from the third floor as from the twenty-third.

Terrazzo is used to a great extent on the floors of hotels and public halls. To prevent and localize cracks, which must inevitably appear when this material is used in steel frame buildings, a brass strip is introduced to divide the floor into panels. This strip is pressed into the undercoating of cement screeding before it has hardened. This supports the thin vertical strip while the terrazzo is being laid. The strips can be laid to any design, usually about 2 ft. 6 in. square panels, and is very effective, particularly when black terrazzo is used.



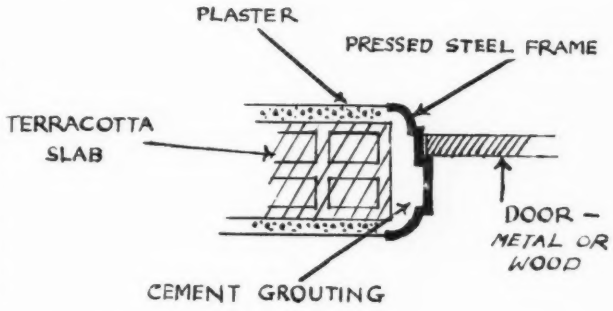
Section showing strip.



Another design.

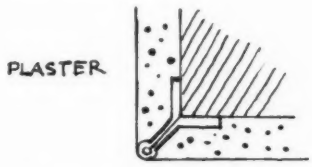
Metal door frames are also being used extensively in office buildings and hospitals, etc., where rapid construction and practical simplicity are essential. The frame consists in a pressed steel head and jambs with a stiffening piece under the floor finish. Pieces of corrugated metal project from the sides which can be moved up or down a few inches, so that they may be placed between the joints of the hollow block partitions and grouted in with cement to make them secure. No architraves are required, as the frames are complete when fixed and only require painting.

Metal corner beads are used almost exclusively instead of Keen's cement angles to plasterwork. This expedites the work, as these beads can be fixed at all angles and the plaster can be worked to them without the usual delay in making good with



Keen's cement. These beads are also used for finishing plasterwork at skirtings, picture mouldings, and wood dadoes, so as to enable the plasterwork to be finished before the woodwork is erected.

Hollow terra-cotta blocks are used for all partitions and for the making of walls. Hollow outside walls are always used because of the extreme change of temperature; 4-in. blocks are used for partitions, and 6-in. for staircases.



METAL ANGLE BEAD

Plumbing is of a very high order, particularly for bathrooms. No piping is ever exposed on the surface but is taken, as in the case of lavatories and w.c.'s, directly through the wall into a special pipe chamber about 2 ft. 6 in. wide, where washhand basins are placed back to back, or 1 ft. 6 in., where there is only a single row of washhand basins. This method is very desirable and should be adopted in this country, as it is most absurd to go to the expense of lining the walls of a bathroom with marble, terrazzo, or tiles, and then interrupt these walls with pipes at once unsightly and unsanitary. The built-in bath, the sides of which are carried to the floor, is the only type employed, and is far more hygienic than the type almost universally used here which stands on feet with a space between it and the floor, a space extremely difficult to keep clean. Vertical pipe chases are used throughout, mostly in the interior of the building, as the winters there are too severe to allow the piping to be exposed without fear of damage. In residential flats, heating and hot-water pipes are usually run up the building inside linen cupboards, where, concealed from view, they serve a useful purpose. There is no greater bugbear to the architect than having to deal with exposed piping. Aesthetically, it is absolutely imperative that all piping be concealed.

Plasterwork is being treated in a great variety of ways to give texture to well-designed rooms. In one building they were finishing the plasterwork to the rooms by putting on the last coat with a wood float, and going over this with a wet whitewash brush before it had set. This softened down the rough marking left by the wood float. Afterwards the plaster surface was treated with a wash of burnt umber and buttermilk which produced a warm and charming effect.

There is no general contractor in the sense that we know him here, as the contractor only carries out a portion of the work and is usually called the mason. His work lies in brick, stone, joinery,

glass, and general construction and finishings, but the foundations are always under a separate contract—so also is the steel, elevators, heating, lighting, etc., more on the lines of the system adopted in Scotland. This method of construction is more economical, as the client does not require to pay commission to the contractor for each of these sub-contracts, but it necessitates a very efficient type of clerk of works, who will not only police the job and see that the contractor puts in the specified quality of cement, etc., but who will be able to organize the various trades and see that the work is carried out to time schedule.

In New York the by-laws insist on hard coal only being used, but, while I was there in the beginning of the year, owing to the anthracite coal strike soft coal was being consumed. No great ill-effects were evident from the use of this soft coal however, as each building necessarily provides for the consumption of its own smoke. This simplifies the smoke question considerably, and it would be a great blessing from the hygienic, as well as from the æsthetic point of view, if this could be enforced in our own large cities.

[Concluded]

A SUGGESTED REFORM IN SPECIFICATIONS

[BY A. SEYMOUR REEVES]

THE present form of specification had its origin with the separate letting of the various trades, and in such circumstances a separate description for each trade was almost inevitable. But in these days when many contracts are let to a general contractor, who undertakes the whole of the work, the suitability of a separate statement for each trade may well be questioned. There are signs that the present course is proving unequal to modern demands, and that its continued and indiscriminate use causes loss of time with general inconvenience.

The writing of a specification for a large building with all necessary information under every separate trade, is a task more difficult than it appears, and the difficulty is increased by the separation of items which are essentially allied, in order that each clause may appear under its respective trade. The specification writer frequently takes a similar document for another contract as a guide or basis. Upon this he models the new specification, adapting the various clauses to meet the requirements with which he is dealing. But he has to visualize each trade separately, and this, especially in the case of a large building, is a difficult process. In consequence, the writer often finds, when he thinks he is nearing completion, that many items have been overlooked, and time is then spent in revising various portions. Months later, other omissions may come to light, and these sometimes involve extras which every one is anxious to avoid.

If the writer could visualize his subject in a more comprehensive review, his task would be easier and less time would be expended. Such an arrangement would also enable the seeker for information to find what he wants more readily. In the primary sense, a specification has to fulfil two purposes. First, to define the materials and methods to be employed, and, secondly, to indicate their location. The bills of quantities provide definition for the materials and workmanship, but do not indicate location. Under this latter head the specification must operate, and provide all information. The present form does not quite meet this demand in a satisfactory way, and an inquirer loses much time in searching many trades for items of description which, although closely allied in operation, are widely separated in the specification. If the inquirer does not know what material is to be employed in certain work, he does not know what trade he must examine in order to find the required directions, and a general search must ensue.

To meet these demands more completely the following order is suggested:

Preliminaries and conditions in the same form as at present.

Preamble to each trade under its respective heading. This would contain directions as to quality of materials, proportions for mixing, and any general clauses as to execution, but without touching the question of location.

Structural Work: 1. Foundations and other work below ground floor. Here would appear all directions for concrete, brick, or other foundations with concrete beds, basement dampcourses, etc. 2. Work at ground-floor level and above same. *a:* Walls. All directions for walls or piers and for beams or lintels over openings other than openings for doors and windows. Dampcourses. *b:* Floors. Timbers (only) for timber floors. Concrete and reinforcement for solid floors, or information upon patent floor construction. *c:* Roofs. Flat roofs of timber or concrete with the coverings, flashings, gutters, and rainwater pipes completely described, but without reference to ceilings or internal finishings. Pitched roofs, timber framings, trusses in timber or steel, ceiling joists, templates. Roof coverings with flashings, gutters, rainwater pipes, and eaves cornices.

FINISHINGS. *a:* External. All facings and external finishings in brick, stone or plaster, etc., to be defined here. Similar finishings would be in groups. *b:* Internal. Floor surfaces and skirtings. Wall surfaces, dado rails, and frieze rails. Ceiling surfaces with cornices and finishings to beams. Fireplaces and chimney-pieces with hearths, etc. Staircases with constructional and finishing items. Windows, with joinery, ironmongery, glazing, plaster reveals (or otherwise), arches, and lintels. Doors, as for windows. Partitions, with all items in all trades for each partition or similar group. Fittings and sundries, on the usual lines, but including any attendant work in all trades, but not including casings to cisterns or draining-boards to sinks (which will appear in sanitary service), nor similar items which are really attendant upon other services and will appear therewith.

Heating, electrical, lift, and hot-water services would be dealt with under their respective headings, but would include all attendant work in other trades. Thus, shelves in hot closet would appear under hot-water service, and brick or concrete channels for heating-pipes would appear under heating.

Sanitary Service. *a:* Internal. In addition to plumbers' work all adjacent items would be specified. The description for sinks would also define the piers or supports, draining-boards, glazed tiles at back, etc. Information upon cisterns would include deal or other casings. *b:* External. Soil pipes and bath or sink wastes. Drains in stoneware or iron pipes with manholes and all work therewith.

Decoration. This might be dealt with under a separate heading or it could be included with "Finishings," whichever seemed most convenient.

The foregoing remarks can only outline the general principles or basic idea. To be successful, this method would have to be followed on elastic lines. In some cases it might be better to deal with masonry under a separate heading, and similar treatment might be advisable for reinforced concrete or other special lines. With the many and various methods employed in modern buildings, an arbitrary form of specification is frequently unsuitable, and modifications become necessary. One other point is worthy of remark. If all specifications for large contracts were provided with a detailed index or table of contents, it would much facilitate the work of reference.

ANNOUNCEMENTS

Messrs. George Hollins, A.R.I.B.A., and Reginald L. Jones, of Lloyd's Bank Chambers, Newcastle, Staffs, have opened a branch office at St. John's Chambers, Longton, Staffs, and would therefore be pleased to receive catalogues, samples, etc.

The partnership between Mr. P. J. Westwood, F.R.I.B.A., and Mr. J. Emberton, A.R.I.B.A., under the style of "P. J. Westwood and Emberton," has been dissolved by mutual consent as from December 1. Mr. Westwood will continue the practice at 7 Adam Street, Adelphi, W.C.2, and Mr. Emberton has taken offices and will practise at Chesham House, 150 Regent Street, W.1.

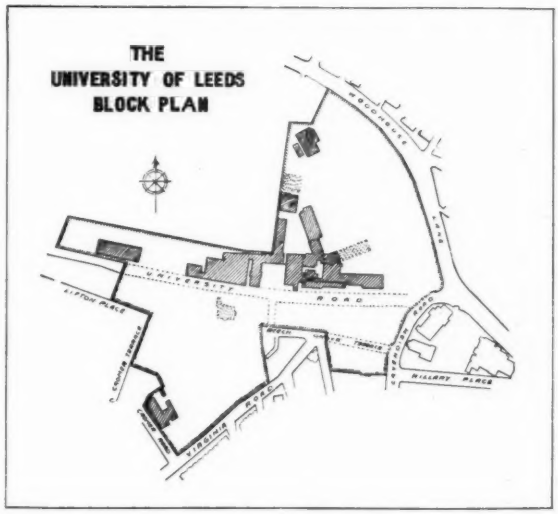
THE LEEDS UNIVERSITY COMPETITION

[BY PERCY ROBINSON]

THE seven sets of plans submitted in the competition for the extension and reconstruction of the Leeds University are now on view in the university hall. They form an unusually interesting collection of designs, especially in view of the difficult problem with which the competitors were faced. The competitors were: Ivor Jones and Percy Thomas, Cardiff; J. C. Procter and J. Addison, Leeds; Lanchester, Lucas, and Lodge, London; Ashley and Winton Newman, London; Alan Munby, London; Michael Waterhouse, London; W. Alban Jones, Leeds. The site, as may be seen from the accompanying block plan, is extremely irregular in shape, while the existing buildings—most of which have to be retained and embodied in the new scheme—are so awkardly scattered over the site that considerable ingenuity was required to weld them into a cohesive scheme. The principal frontage, to Woodhouse Lane, has a very decided curve and, as this road is the principal traffic outlet of the city to the north-west, there was the further difficulty of noise and vibration to contend with.

The design placed first, by Messrs. Lanchester, Lucas, and Lodge, undoubtedly merits the award, and is distinctly outstanding, not only on account of the size of the drawings—which are larger than antiquarian, so that the winner is the only competitor who gets a complete plan on one sheet—but also by reason of the boldness of the conception; the general grasp of the problem; the directness and rectangularity of the plan, and the clever way in which the various conflicting factors have been dealt with. The conditions and instructions asked for "the finest possible conception of a modern university." This design, as the assessor says, "comes nearer to attaining the object of this competition than might have been expected, and certainly nearer than any of the other competitors." The only doubtful point appears to be whether the scheme can be carried out, in a manner befitting such a fine design, for the amount available. As the competitor's reports with the cubical contents and estimates are not available this is a difficult matter to judge, but the design generally is on a much more generous scale than any other submitted.

The principal range of buildings, with a frontage to the east of over 600 ft., which will form the first stage of the scheme, is symmetrical, cleverly planned, and fitted to the curved line of Woodhouse Lane in such a manner that it is at right angles with the existing buildings. The principal entrance which faces Woodhouse Lane, and the elevations of the central block, will be seen on approaching from the city. The central tower, which is the dominating feature of the elevations, is on the direct axial lines of Woodhouse Lane, Cavendish Road, and Virginia Road, and will be visible from all approaches. The circular library, 150 ft. in diameter, is the focal point, or hub, of the plan and, when completed, will be one of the finest libraries in the country. Around this are grouped the various departments for education, mathematics, physics, chemistry, geology, botany, zoology, geography, and arts, all linked together by direct and well-lighted corridors, forming a perfect system of inter-communication. The central projecting block, which forms the principal feature in the elevations, is chiefly occupied by a spacious and lofty students' court which will form an imposing internal feature. From this, access is obtained direct to the library and to the various other departments. The administration block forms the south wing, with arts over, fronting to Beech Grove Terrace. Beyond this, and in line with it, are the great hall and refectory, the students' union, and the officers' training corps buildings. It is proposed to close University Road as a public thoroughfare and transform it into a series of quadrangles between the new and the old buildings. Traffic would then be diverted along Beech Grove Terrace, which may be extended to Lifton Place. This arrangement has the effect of cramping the sites of the buildings along this frontage, especially the great hall, which is brought up to the building line without any open space in front. As a provision for the diversion of traffic it is also unsatisfactory. If, by the acquisition of a little more property, Hilary Place could be continued in a direct line to Moorland Road, a fine thoroughfare would be obtained with a vista terminating at the Grammar School. The fine range of buildings which form the south elevation would then have ample space and a much finer setting. The elevations are a logical outward expression of the plan, well balanced, properly emphasized, without any forcing of motives. In style they are an adaptation of classic suggestive of the character of the building. The drawings, both plans, elevations and sections, are fine examples of the possibilities of architectural rendering.



In the second premiated design, by Messrs. J. C. Procter and J. Addison, the authors have taken the lower portion of Woodhouse Lane as a central axial line upon which the principal entrance block is placed near the end of University Road. From this pivotal feature the ranges of buildings branch to right and left at rather acute angles, those on the east following, more or less, the curve of Woodhouse Lane. The result of this disposition is that the blocks being at varying angles, awkward shaped courts, or areas for light, are formed. In spite of this, however, the accommodation is very compactly and cleverly arranged, the interrelationship and accessibility of the various departments being all that could be desired. It is evident that very careful thought has been given to the requirements and details of the scheme. The great hall is a well-designed octagonal building, placed within the curve formed by the junction of University Road with Cavendish Road. The disposition of the various sections which form the principal block along the Woodhouse Lane frontage is somewhat similar to that in the design placed first, but lacks the same coherency and unity. The elevations are simple and dignified, depending upon fenestration and mass for effect, with very little punctuation. The drawings are well rendered, but suffer from being executed upon such small sheets that thirty-six are required to illustrate the design.

The design placed third, by Messrs. H. V. Ashley and Winton Newman, has many merits and deserves its position. In its planning it follows generally the lines of the second premiated design, but in a more irregular fashion. The individual buildings are excellently planned, but the block plan almost suggests the idea that they had been planned separately, and afterwards fitted to the site. The most striking feature about this design is the principal entrance, facing directly down Woodhouse Lane, with a large open forecourt and imposing entrance gates. The elevations are upon sound and pleasing lines, well suited to their purpose.

The remaining four designs all reach a high standard of excellence in regard to both planning and elevations. While there is considerable variety and ingenuity displayed in the disposition

and grouping of the buildings on the site, most competitors have adopted the junction of Woodhouse Lane and University Road as a focal point, with the result that the general lay-out falls more or less into the formation of a truncated V, which inevitably entails many awkward angles. This is a point upon which the winner has scored heavily.

The preparation of the designs must have entailed an immense amount of work on the part of the competitors. The extent of this may be realized, to some extent, from the fact that the "Conditions and Instructions to Architects" extended to twenty foolscap pages of closely printed matter, exclusive of replies to questions raised by the competitors. Altogether the competition has been most satisfactory, and the University Senate are to be congratulated upon obtaining such an excellent result.

[The winning design was illustrated in our last issue. The second and third premiated designs appear in our competition supplement.]

LITERATURE

THE LATE EIGHTEENTH CENTURY

The eighteenth century has for us a particular significance, it is, as it were, the key which supplies the answer to the crossword puzzle of the century which followed and our own times. For many it was, and is, the end of the world, time for them stopped at 1800, or, perhaps, a little earlier with the fatal year of 1792, which saw the beginnings of the French Revolution. It has been called the "Age of Reason," and within the limits of the ancient world, with its accepted barriers and lines of demarcation, this was a fair definition. If you accepted the premises, the rest followed in logical sequence. But it was also a period of unrest and questioning; in France, Voltaire's *History of Louis XIV* (with appropriate comments) was followed by the work of the encyclopædists and that of Jean Jacques Rousseau, works which very much questioned the premises of the established order! In England, Horace Walpole, aided and abetted by that queer Mr. Bentley, was introducing Gothic improvements into English architecture, to be followed by those enterprising brothers, the Adams, who were to give their Scotch rendering of ancient Rome, a very neat and proficient entertainment rendered with due regard for both splendour and thrift. Against these innovating architects, Sir William Chambers and his followers maintained a stout fight—he, and they represented the more English tradition of the direct Renaissance, they were the lineal descendants of Wren and Inigo Jones.

Crichel, Dorsetshire. The east, or screen, end of the vestibule. [*From* English Homes.]

There is an air of determination and purpose about the buildings of the earlier years of the century, they are very downright and English, and stand four-square to the world. If they have a fault it is that the least accomplished of them have a suggestion of complacency, an air as if they wanted to strut—there is almost an excuse for the contention that they are suffering from an overdose of big-whigishness! By contrast these later houses, so admirably illustrated and described in the last volume on English homes produced by *Country Life*, appears a little thin and attenuated. They still have the aristocratic air, perhaps to a greater extent than their predecessors, but they are a little bloodless; what they lack in force they make up for in precision and perfection of finish—they are at times almost over-refined.

As one turns the pages of this sumptuous book and reads Mr. Avray Tipping's delightful prose, it is gradually borne in upon one, to be admitted with an air of constraint, unwillingly, that these larger houses with which the book almost exclusively deals, are, for the most part, a little too large to be really effective. Their very size creates a feeling of tenuity, of detail stretched to the utmost limits of design. That fine and exquisitely modelled ornament is almost too delicate for the purposes of parade. Palatial architecture demands sterner stuff with more body in it, a coarser strain than the fairy-like quality of these slight reliefs. The effects depend so much on constant repetition, that in the end these vast apartments begin to bore us with a feeling of their immense futility. Even such a fine piece of design as the dining-room at Syon House, by Robert Adam (p. 357), gives one this same feeling, as of a chill weariness. What is so admirable on a small scale can become so tiresome when the setting is too large.

It seems to me that properly to enjoy the best work of the late-eighteenth century, one should seek it in the small or smaller houses. Here the delicate and refined work of the Adams and their school, comes with the freshness of a delightful surprise. The severely simple apartment, set off with the elegantly carved mantelpiece, the small unpretentious brick elevation enhanced by the frail beauty of the doorway with the charm of its spider-web-like fanlight, those slight but wonderful affairs of little bits of punched lead and thin wire-drawn ironwork, to my mind, exemplify late-eighteenth-century art in a way it is impossible with the larger buildings. And yet, we should be grateful for these larger houses, and more grateful still to Mr. Tipping for his labour of love in thus gathering them together for our enjoyment. If, in themselves, they are disappointing, it is a comparative disappointment only—their promise had been too great for any possible fulfilment, but they still remain rich storehouses of architectural treasures which will repay our study and afford a more than compensating consolation for our, perhaps, too easily allowed disenchantment.

For the architect and serious student of the eighteenth century, the book contains an invaluable introduction with a series of notes on all the better-known architects of the period. In this introduction Mr. Tipping rehabilitates the memory of James Wyatt, the successful rival of Robert Adam in the latter's declining years. We are so apt to think of Wyatt as only a vandal who played havoc with our cathedrals and churches, as "The Destroyer,"

the name given him by a witty contemporary, that we are apt to overlook his very sound, and at times brilliant, achievements in the classic field. Heveningham Hall, in addition to the magnificent entrance hall and saloon, contains an exquisite dining-room (see pp.368-369). This room is, to my mind, one of the most beautiful rooms of the period; rivalling the work of Robert Adam in the refinement of its detail it yet has an air of solidity, of completeness of conception, so often absent from the work of that great architect. The test of greatness, however, is not the comparison of one or other works, but by the appreciation of the sustained effort of the whole of a man's work, and here Adam is infinitely the superior. There was a restlessness in James Wyatt, a contempt for boundaries, which in the end betrayed him into almost nightmarish effect of unreality. The whole group with the little, low, simple bridge of flint makes a very striking picture, but it is not the late eighteenth-century work which is seen to the best advantage. But, if the atmosphere of Hitchin Priory is somewhat chilly, what are we to think of the exaggerated absurdity of Ickworth? Mr. Tipping calls it the "most remarkable and most eccentric of great Suffolk houses." This is by no means an over-statement, for in spite of some quite satisfactory detail for which no doubt Tatham, the follower of Henry Holland was responsible, though the house seems to have been designed by a Mr. Francis Sandys, it must be reckoned as one of those architectural failures which were too commonly characteristic of so many of these great late eighteenth-century creations. Their whole

Heveningham Hall, Suffolk. View from the stable court to the back yard. [*From* English Homes.]

those disastrous Gothic adventures, but which is at times also to be discerned in his classical essays. In Heaton Park, Lancashire, the principal elevation on the south side contains too much, compared with such a house as, say, Kenwood, it lacks balance and restraint, whilst the other side, the north front, contains too little and has in its forbidding starkness an air of vacuity, which is singularly depressing.

I have said that so many of these later Georgian houses attempt too much, and I do not think I can better justify my remarks than by reference to the illustration of Hitchin Priory, shown on page 263. Here, for my purpose, is in admirable contrast the earlier modest brick and tile buildings with the late eighteenth-century mansion wing, a bare, bleak, rather cold, and clumsy addition, in which the scale has by the heightened sense of difference an excuse was that of a sudden and dramatic effect, sought for by queerness of plan and largeness of structure. But the dramatic quality was absent and that thin correct architecture becomes very wearisome.

It is a relief to turn from the eccentricity of Ickworth and the pompous dullness of Bafordbury to the earlier and more satisfying work of Brocket Hall in Hertfordshire, by James Paine, and Tabley House, Cheshire, by Carr, of York. The west or Chinese bedroom at Brocket is a charming apartment and worth a good many of the more elaborate rooms. Tabley House, Cheshire, is a most satisfying building, it has a very beautiful plan and the elevations though a little crude and heavy in places, particularly on the entrance front, are restrained and capable. It is not too far removed from the simple manor houses that were its predecessors

—there is both exteriorly and interiorly something of the vernacular about it, it is distinguished without being too elegant, and has, therefore, an air of homeliness which is lacking from some of its more ambitious rivals. I have said enough to show the range of subjects that is covered, nearly all of the most famous architects of the latter half of the eighteenth century are represented in the houses shown, and it says much for Mr. Avray Tipping's gifts as a writer, that he is as entertaining to read at the finish as he is at the commencement.

STANLEY C. RAMSEY

English Homes. Period vi, vol. 1. Late Georgian, 1760-1820. By H. Avray Tipping, M.A., F.S.A. "Country Life." Price £3 3 0.

CORRESPONDENCE

AUTHORITY AND LIBERTY IN ARCHITECTURE

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—Mr. Trystan Edwards does not reply to my arguments or seek to disprove my facts, but separates some sentence I have used from the context; proceeds to put a construction upon it which it cannot bear, and then sets about to answer it. Thus he defends himself against my assertion that the assumption behind his remarks about civic architecture is that nobody ever gave any attention to the subject until the school he represents came along by pleading that the qualities he extols were present in the architecture of the past and especially in the period between 1750 and 1820. I might reply to this argument by saying the qualities I extol were present in varying degree and with exceptions in the architecture of the past from the dawn of history until 1750. But I do not admit the validity of Mr. Edwards's defence, which I consider an evasion, for when I said that the assumption behind Mr. Edwards's remarks about civic architecture was that nobody ever paid any attention to the subject until the school he represents came along, I was manifestly referring to our day and generation, to the revival of interest in the subject during this last twenty-five years. In a similar manner he sidetracks the question I raised when I mentioned the Stockholm Town Hall. When I said that some idea of what I mean by civic architecture is to be gathered from the Stockholm Town Hall which suggests the direction in which architecture might have gone in this country had we not abandoned our traditions, I meant that city buildings would have been built in a style more domestic in character. I should have thought that any reader would have put that construction upon my words. But Mr. Edwards replies: "Civic architecture cannot be represented in a single building like a town hall, but depends for its existence upon the establishment of a convention regulating the relationship between the town hall and the other buildings in the vicinity."

Mr. Edwards must know that the term "civic architecture" can be used in two senses. It can be used in the sense he describes and it can also be used in the sense in which I used it, that is, as descriptive of the type of design considered suitable for city work. It is used in that sense by all writers who divide architecture into domestic, civic and ecclesiastical. It is only in recent years that civic architecture has been used in the special sense in which Mr. Edwards defines it. It is only since the classic school began to take an interest in town planning that it has acquired this special connotation. When this school got the upper hand, they justified their attitude on the grounds that the revival of architecture which had taken place was entirely domestic, and that a style based upon a study of vernacular traditions was not applicable to city work. Stockholm Town Hall gives the lie to that theory, as does much of the recent city work in America, especially in New York. These recent developments of architecture have shown that the ideas of Norman Shaw, George Devey, Philip Webb had great potentialities, inasmuch as experience has proved they were capable of serving as the basis of a general revival of architecture. But the ultra-classical school were entirely blind to this fact. They turned their backs upon ideas that have become a source of inspiration in other countries. Yet these are the people who claim the right to lead us.

Mr. Edwards says: "Mr. Penty talks about a return to native tradition. On that point we are at least agreed. I am in favour of a return to the great English tradition of civic architecture. It strikes me as rather amusing, however, that Mr. Penty thinks that this native tradition can best be rediscovered if we run with our sketch books to America, France, Germany and Sweden." Now what am I to make of that? As I read it I keep asking myself the question, Does Mr. Edwards really misunderstand my meaning to the extent it appears? Thus, when he says that we are agreed about the desirability of a return to native tradition he surely has his tongue in his cheek, for he must know that we are not agreed. When I speak of native tradition I refer to the vernacular tradition. Mr. Edwards says: "It strikes me as rather amusing that Mr. Penty thinks that this native tradition can best be rediscovered if we run with our sketch books to America, France, Germany and Sweden." It sounds plausible; but substitute "vernacular" for "native" and it is no longer amusing in the case of Sweden and America, particularly because the modern architecture in these countries is as much the spiritual descendant of our own revived tradition as the academic Renaissance in which Mr. Edwards believes is a spiritual descendant of Rome, and just as Swedish and American architects were not above learning from us when we had something to teach, so I would contend we should be willing to learn from them nowadays when they have something to teach. The ultra-classical school were, before the war, insistent that we should follow the lead of America because in our ignorance of the exact facts they could use the example of America to justifying their own activities. But this is no longer the case. The current of American architecture has since then moved backwards towards a renewal of belief in vernacular and medieval traditions, so Mr. Edwards and his friends do all they can to deprecate it, though the best work turned out in America twenty years ago is not comparable to that turned out to-day. Mr. Edwards now professes to take his stand on native tradition, presumably because the study of American and Swedish architecture would raise too many awkward questions. People begin to ask if the Philip Webb, Norman Shaw traditions have led to such wonderful results elsewhere why is it not officially taught in our schools? Are we going to give Royal Gold Medals to architects who have been loyal to that tradition abroad and leave students in the schools ignorant of its nature?

A. J. PENTY

SHAKESPEARE NATIONAL MEMORIAL THEATRE

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—The announcement, in your current issue, of a Competition for a Shakespeare National Memorial Theatre, will doubtless be received with great interest by the architectural profession. It would, however, appear pertinent to ask why entry into the competition is restricted to architects of the British Isles and America. Most of us are fully aware of the debt we owe to America —in modern architecture as in other spheres—and of the enthusiasm which the citizens of the United States have always shown in all matters Shakespearean, but it will surely be admitted that intelligent admiration for the works of our greatest poet may also be found throughout the British Empire, in Europe, and even in remote foreign lands, and that architectural genius may conceivably be discovered in any of these countries. May I submit that, as the subject is a National Theatre for England, it would be more reasonable for the promoters to limit the competition to architects in the British Isles or the British Empire, or —if the aim is to secure the widest possible response—to make it open to architects throughout the world.

E. PLURIBUS UNUM

THE U.S. ARMY SUPPLY BASE

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—In your issue for January 19 I was much interested to see the illustration (on page 140) of the U.S. Army Supply Base at South Brooklyn. This building is one of the most modern examples of American architecture. When studying the illustration I was immediately aware of the very great similarity in appearance between this building and the large Norman castle keeps such as can be seen at the Tower of London, Newcastle-on-Tyne, Guildford, and many other places in this country.

The projecting corner towers are there, also the vertical rows of windows between the pilaster buttresses.

It is a far cry from A.D. 1100 to 1927, but "plus ça change, plus c'est la même chose."

D. GORDON DENOON

THE NATURE OF ELASTICITY

SIR,—Surely if, as Professor Adams says, the result of a blow—or the imposition of a live load, which I take it is roughly the same thing—"depends inversely upon the distance in which the effect is taken up," then there must be some virtue in the yielding plank after all. For if the effect is "taken up in an extremely short distance owing to the incompressibility" of the plank, then the blow will be more acute and will bear less resemblance to "a simple pressure" than it will where yielding takes place. No doubt the yielding also increases the stress on the material. I should be interested if Professor Adams would give some idea of the comparative value of this increased stress on the one hand, and the "diminished result" on the other. I take it that in certain circumstances the second of these may conceivably outweigh the first.

CHRISTIAN BARMAN

ARCHITECTURE AND WEALTH

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—Your leader makes me wonder how the Soviet Governments, at least in their first transports of communistical logic, coped with the architectural inequalities that were bequeathed to them by their predecessors. I noticed a suggestion in Henry Nevinson's book, *More Changes and Chances*, that the manual workers were awarded the palaces and the "intelligentsia" the pigsties.

CLIFFORD BAX

R.I.B.A. PRIZE AWARDS

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—With reference to your note on the R.I.B.A. prizes, etc., on page 177 of your JOURNAL, it seems to me that as there are so very few successes in the provincial schools it is unfortunate that one of them has been omitted from your list—perhaps you could insert a note next week to put it right.

The case is that of the R.I.B.A. (Alfred Bossom) competition, in which four silver medals were awarded (not two). From these four silver medallists, Mr. Warnsley-Lewis, of London, was selected and awarded the gold medal, and Mr. B. W. R. Thomas, a past student of the school of architecture at the Cardiff Technical College, was placed second and awarded a certificate of hon. men., in addition to the silver medal.

W. PURCHON

[We went to a great deal of trouble to collect the information given in the list to which Mr. Purchon refers, but we are not surprised to hear that it is incomplete. Nobody will ever know from what schools all the various candidates have come until the candidates themselves can be persuaded to tell the R.I.B.A. as they enter. Perhaps some teacher will make a start by circularizing his old students at the appropriate time, and urging them not to withhold this interesting information.—EDITOR, A.J.]

THE NEW B.B.C. STUDIO

[BY FREDERICK CHATTERTON]

There is probably no scientific discovery which develops so rapidly as broadcasting. Whichever aspect of it we care to examine—whether it be our knowledge of the natural laws which govern the phenomena of transmission and reception, or the equipment by means of which these are brought within the range of human perception—the story is ever one of perpetual change and advance. Nothing seems to remain fixed or constant, and what appears efficient to-day may well be obsolete to-morrow.

These considerations were very forcibly brought to mind during a recent visit to the new studio which the British Broadcasting Corporation has built at its Savoy Hill headquarters from the designs of Mr. M. T. Tudsbury, A.M.I.C.E.

The principles which have been adopted in its construction have yielded such marked improvements over anything hitherto attained, that they will without doubt constitute a most valuable indication of the direction in which still greater perfection may be looked for in the future.

Measuring 40 ft. in length and 21 ft. in width, the new studio—which has been skilfully contrived within the walls of an existing structure—is 22 ft. 6 in. high. This height is equal to two stories of the original building, and was made possible only by the removal of an intermediate floor. It is considered that these proportions contribute very appreciably to the good results which have been secured, and for the moment, at any rate, they may be regarded as a standard working ratio.

In order to cut off external sound the original window openings at the lower level have been filled in with brickwork, while those above are blocked out by means of hinged panels. An apartment thus sealed requires to be exceptionally well ventilated, and this has been accomplished by pumping fresh air into the room through inlet panels situated at the level of the removed floor, while extraction takes place through gratings in the skirting. This reversal of ordinary methods of introducing fresh air and extracting vitiated air is in the nature of an innovation, but it has completely justified itself by the event.

The problem presented by the necessity for deadening sound in broadcasting studios was one of the first which had to be solved. Heavily-curtained walls and festooned ceiling hangings were early expedients, while completer insulation was later obtained by covering the walls with several thicknesses—sometimes as many as six—of Hessian cloth attached to light wood battens.

It has been found, however, that the sense of confinement produced by such hangings was dispiriting to the artists who used the studio, and in order to overcome this objection, Captain West—the B.B.C.'s research engineer—resolved to adopt a decorative treatment which should combine the highest possible degree of sound-absorption with definitely architectural effects. To this end, a heavy felt ($\frac{1}{2}$ in. in thickness) was glued to the walls and afterwards covered with a metallic-surfaced paper disposed in large panels, set out in harmony with the grained satin-wood pilasters and horizontal mouldings that form part of the design.

The ceiling is draped with orange-tinted woollen fabric, and is divided into six bays. Within each of these the fabric forms a horizontal blind, which can be drawn from the centre to the walls for regulating sound effects.

With regard to the floor—which is an important matter acoustically—the boards are covered with Celotex, and between this and the carpet there is an underfelt.

Speaking generally, the effect of the finished studio is very pleasing indeed, and the distinct suggestion of a concert-hall which it imparts should be of great assistance to the artists in their interpretative work.

Acoustically, it is interesting to record that when the walls were bare, the room had a period of seven seconds, while in the completed studio the period can be made to vary from ·8 of a second to two seconds, to suit any type of music.

COMPETITION CALENDAR

The conditions of the following competitions have been received by the R.I.B.A.

April 30. Town Hall and Library, Leith. Assessor, Sir George Washington Browne, R.S.A. Four premiums are offered. Particulars and a plan of the site will be supplied to competitors after January 22, on payment of a fee of Two Guineas, which will be returned on receipt of a design in accordance with the conditions. Should architects on receipt of the particulars not desire to compete, the deposit will be refunded provided the papers are returned within four weeks. Inquiries to be addressed to Mr. A. Grierson, Town Clerk, City Chambers, Edinburgh.

June 15. Shakespeare National Memorial Theatre, Stratford-upon-Avon. The Competition is open to architects of the British Isles and America. It will be in two sections—a preliminary competition for sketch design only, from which six designs will be selected by the assessors; each of the selected competitors will be paid £100 premium towards the cost of preparing a further more detailed design, which will form the second half of the competition. The selected architect will be paid in accordance with the Schedule of Charges sanctioned by the R.I.B.A. Assessors, Mr. E. Guy Dawber, P.R.R.I.B.A., and Mr. Cass Gilbert (who will both act in an honorary capacity), and Mr. Robert Atkinson, F.R.I.B.A. Particulars, with site plan, etc., from the Secretary, Shakespeare Memorial Theatre, Stratford-upon-Avon. Deposit £1 1s. (which will be refunded should the Conditions be returned within one month).

June 30. Designs for the planning of the Civic Centre, Birmingham. Assessor, Mr. H. V. Lanchester, F.R.I.B.A. Premium of £1,000 to the design placed first, and a further sum not exceeding £1,000 divided between the authors of other approved designs. Particulars from Mr. Herbert H. Humphries, M.INST.C.E., City Engineer and Surveyor. Deposit £1 1s., which will be returned after the receipt of a design or the return of the documents supplied.

No date. Incorporated Architects in Scotland: 1: Rowand Anderson Medal and £100; City Art Gallery and Museum; 2: Rutland Prize (£50) for Study of Materials and Construction; 3: Prize (£10 to £15) for 3rd-year Students in Scotland; 4: Maintenance Scholarship. £50 per annum for 3 years. Particulars from Secretary of the Incorporation, 15 Rutland Square, Edinburgh.

The conditions of the following competition have not as yet been brought to the notice of the R.I.B.A.

February 15. The Dun Laoghaire Urban District Council invite applications from qualified architects to design and supervise the construction of a proposed large swimming tank on the site selected on the western side of the present Dun Laoghaire bathing establishment. Applications, stating qualifications and experience, if any, in the construction of swimming tanks, should be sent to Mr. James J. Triston, Acting Town Clerk, Town Hall, Dun Laoghaire, Co. Dublin, addressed to the Chairman of the Council and marked "Architect."

No date. New offices at Trowbridge for the Wiltshire Working Men's Conservative Benefit Society. Assessors, Cyril A. Farey, A.R.I.B.A., and Robert Lowry, F.R.I.B.A. Premiums amounting to £250. Particulars from the Chief Secretary, Mr. Henry H. Dyer, Stallard Street, Trowbridge, Wilts, and depositing one guinea, which will be returned on receipt of a bona fide design or if the conditions are returned two weeks before the closing date of the competition.

TRADE NOTES

The Great Southern Railway of Ireland, the principal railway company in the Free State, have decided to equip their main line depots at Inchicore, Ballybrophy, Limerick and Cork with water softening installations, and have placed the entire order for this work with a British firm, the United Water Softeners, Limited, of London. It is stated that the provision of softened and purified water for the locomotives throughout the system will effect substantial economies in respect of fuel consumption and repair bills, and render possible a great increase in engine mileage between cleanings. The Sudan Government Railways and the Great Indian Peninsular Railway have also placed orders for softening installations with United Water Softeners, Limited. The water softener adopted in all three cases is the Lassen-Hjort lime-soda system, already used on British railways.

Particularly interesting features of the new joinery catalogue of Messrs. Bryce, White & Co., Ltd., are the new designs of interior and exterior doors and a much wider range of mouldings now available. The doors include the "Castle" and the "Red Cone" brands, and they are shown in the catalogue in a big variety of designs. The "Castle" brand, Swedish doors, are well made of thoroughly seasoned timber, mortised, tenoned, and wedged. The firm are the sole importers of these doors and carry large stocks in their London and Southampton warehouses. "Red Cone" brand doors are made of Western pine specially selected for the beauty of its grain and freedom from knots. These doors are not intended for painting or enamelling, but for staining or polishing. They are made of thoroughly well-seasoned timber with solid frames, and panels of rotary-cut figured three-ply. Particular care is taken with every door in the selection of the wood so as to ensure that the finest possible effect is obtained from the natural figuring. One of the most popular designs is that having eight equal panels, which give a very fine effect when the door is stained and hung. The mouldings, skirtings, etc., illustrated in the catalogue, represent a most comprehensive range. Not only are the more usually employed patterns illustrated, but a number of new designs have been standardized and are now available. The mouldings are extensively used for all classes of buildings and are employed in a large number of housing schemes. They are all made in the firm's own mills by up-to-date machinery from White Sea and first-class Swedish timber.

AN OPEN-AIR HOUSE

Following are the names of the contractors and sub-contractors of Tree Tops, Northampton, illustrated on pages 189 to 194: General contractors, E. Green and Son, Northampton; Booth Horrocks, Northampton, heating plant; G. Tucker and Son, Loughborough, tiles; Osler and Faraday, electric light fixtures; Henry Hope and Sons, door furniture; Crittall Manufacturing Company, Braintree, steel casements; special folding casements to architect's design were supplied by the Educational Supply Association, London.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office, by our own patent expert. All inquiries concerning inventions, patents and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

466. Atholl, J. G. S. Murray, Duke of. Building construction. January 7.
361. Booth, C. C., and Booth, P. M. Window sills. January 5.
304. Coveney, A. W. Moulding concrete products. January 5.
419. Heffernan, E. Stays for casement windows, etc. January 6.
112. Howard, C. T. Chimney cowls. January 3.

SPECIFICATIONS PUBLISHED

263509. Moir-Buchanan Centrifugal Processes, Ltd., and Ure, C. M. Manufacture, centrifugally, of pipes, columns, and the like.
263571. Rice, J. A. Porous or cellular cements and methods of making the same.
263572. Jones, D. Palmer, and Scaffolding (Great Britain), Ltd. Coupling or clamping devices for scaffolding and other framework structures.
263629. Thain, J. O. Method of copying documents, drawings, and the like.
263677. Reintjes, G. P. Corner wall construction.

ABSTRACT PUBLISHED

261574. Turner, R. Ladders.

THE COMPETITORS' CLUB

SHAKESPEARE MEMORIAL THEATRE COMPETITION

FOLLOWING the destruction by fire of the Shakespeare Memorial Theatre at Stratford-on-Avon in March, 1926, the governors have issued an invitation for designs for a new building.

Assessors: Guy Dawber, P.R.I.B.A.; Cass Gilbert, of the U.S.A.; Robert Atkinson, F.R.I.B.A.

Particulars of competition may be obtained from the Secretary, Shakespeare Memorial Theatre, Stratford-on-Avon. The deposit of £1 1s. will be refunded should the conditions be returned within one month. Date for questions, March 1, 1927. Date for delivery of preliminary designs, June 15, 1927.

The competition will be in two sections, the first for sketch designs only, followed by a second or final competition limited to six designs, to be selected from amongst the preliminary competitors. Each of the selected competitors will be paid £100 by way of premium towards the cost of preparing a further more detailed design, the conditions for which will be forwarded to them in due course. This competition is open to architects of the British Isles and America.

The promoters desire a building simple, beautiful, convenient —a monument worthy of its purpose. The aim of the assessors is to allow all competitors in the preliminary competition as free a hand as possible.

The site plan shows the proposed improvements to the public roads and new approaches to the site. Competitors are at liberty to suggest these approaches as part of their scheme, but any such suggestions must be looked upon as tentative only. The canal basin must be retained, and may be treated as an ornamental pool. As the general ground level is liable to be flooded occasionally care should be taken that all essential approaches, doorways, and openings in the new building shall not be lower than those of the existing building. The memorial statue to the south of the old theatre may be removed to a new site, if thought desirable.

Adequate space outside the theatre for exit and approach purposes should be provided, also suitable carriage approaches to the various entrances, and parking space for cars is desirable.

The style of the theatre may be any style which will harmonize with the spirit of the buildings and the architecture of the town of Stratford.

SCHEDULE OF ACCOMMODATION

Auditorium.—The auditorium should be simple, and with a capacity of 1,000. Each seat should have a clear view of the stage. A two-tier house is preferred to a three-tier house, and it should have either a glazed sliding roof or other means to illuminate with sunlight and aerate the interior.

The proscenium opening is to be approximately 30 ft. wide and not less than 20 ft. in height.

The building is to be entirely fire-resisting in construction.

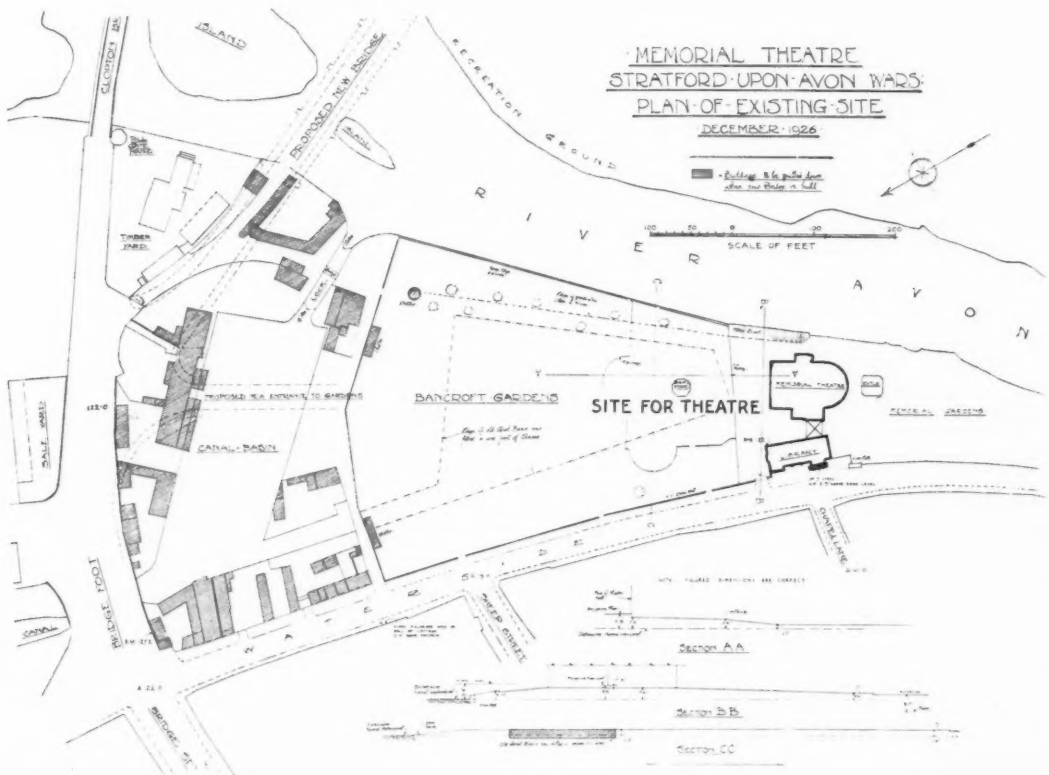
The stage is to be adequate for handling any production with ease and rapidity. While a wide proscenium is not desirable, a wide stage is, and it should be 50 ft. in depth with as much width as possible. The stage is to be flat, not raked, and must be capable of extension as an Elizabethan stage or as a Greek stage. The floor of the centre portion of the stage is to be built in sections so as to be entirely removable. A fireproof curtain is to be provided between the stage and the auditorium.

An office should be provided for the stage manager and a small quick-change room on the stage. The following store and other rooms will be required. A property room and a carpenter's shop, directly accessible to the stage, and a paint shop, preferably at fly-floor level. In addition to eighteen dressing-rooms, a green room, a wardrobe mistress's room and workroom, a musicians' room, an electricians' room, a wardrobe and storerooms are required.

A large rehearsal room would be an advantage if it can be conveniently obtained without much additional cost.

There should be ample foyers on each level to give access to the auditorium, the entrances, the cloak-rooms, etc., and to form a promenade during the "entr'actes."

In a convenient position there should be a suite comprising box office, general manager's office, assistant manager's office, secretary's office, and director's room. Then other minor rooms are scheduled.



THE WEEK'S BUILDING NEWS

Eighty Houses for Newbury

The Corporation is to embark on another scheme for the erection of eighty houses.

Sixty Houses for Amesbury

The R.D.C. is to erect sixty houses at Durrington and Amesbury.

A New Police Station for Armthorpe

The West Riding Standing Joint Committee has obtained a site in Mere Road for the erection of a police station.

Stockton Isolation Hospital Improvements

The Borough Engineer has prepared plans for an isolation hospital extension scheme. The cost is £13,000.

Dispensary for Purley

The Surrey C.C. has obtained a site at Purley for the erection of a clinic and dispensary.

A New School for Eastleigh

An elementary school for 400 children is to be provided at Eastleigh by the Hampshire Education Committee.

New Buildings for Shoreditch

Plans have been passed for buildings on the site of 227 City Road, abutting on Windsor Terrace and Wellesley Street.

A New Factory for Bermondsey

Messrs. Joseph are to erect a factory for Messrs. Crosse and Blackwell, Ltd., in Crimscott Street.

Kensington Road Scheme

The L.C.C. has prepared a scheme for widening Kensington High Street, at a cost of £451,000.

New Schools for Hendon

The Hendon U.D.C. is acquiring two sites on the L.C.C. Watling housing estate for the erection of elementary schools.

A New School for Cove

The Hampshire Education Committee has acquired a site at Cove for the erection of an elementary school.

A New School for Hatfield

The West Riding Education Committee has decided to erect a new elementary school in Doncaster Road at an estimated cost of £18,000.

A School for North Elmsall

A site in Harewood Lane has been acquired by the West Riding Education Committee for the erection of an elementary school.

A Secondary School for Purley

Land on the Coulsdon Court estate, Purley, has been obtained by the Surrey Education Committee for the erection of a secondary school.

A New School for Kingston

Amended plans have been prepared for the erection of a new school on the Elmfield site, Kingston, for the governors of Tiffin Boys' School.

Secondary School for Huddersfield

A site has been obtained by the West Riding Education Committee at Honley, Huddersfield, for the erection of a secondary school.

New Grandstand for Halton Racecourse

The Devon and Exeter Steeplechase Committee is to erect a new grandstand at Halton racecourse. Plans have been prepared by Mr. J. A. Lucas, of Exeter.

New Buildings for Trowbridge

The Wiltshire Working Men's Conservative Benefit Society is to erect buildings on the site of the old police station in Stallard Street, Trowbridge.

A New School for Merton

The Surrey Education Committee is to acquire a site near Motspur Park station, Merton, for the erection of an elementary school for about 1,000 children.

Technical School for Brighouse

Approval has been given by the West Riding Education Committee for the provision of a technical school and a secondary school at Brighouse at an estimated cost of £64,000.

Mining Institute for Whitwood

By arrangement with the Miners' Welfare Committee, the West Riding Education Committee is to erect a mining institute at Whitwood at an estimated cost of £40,000.

Cinema for Canterbury

Commencement is now to be made with the erection of a picture palace, for which plans have been prepared by Messrs. Dore and Anderson, architects, of Canterbury.

Housing at Penrith

The Penrith U.D.C. is seeking sanction for a loan of £8,600 for the erection of eighteen additional houses on Fair Hill. The Market Hall is to be improved at a cost of £2,500.

Coventry Building Developments

The Corporation is to erect an electricity sub-station in Abercorn Road. The "Wine Lodge" public house is to be rebuilt. A scheme has been prepared for rehousing tenants displaced by improvement schemes.

A New School for Mitcham

A site of ten acres at Mitcham is being acquired by the Surrey Education Committee for the erection of an elementary school, and the enlargement of the Lonesome school is under consideration.

New County School for Sutton

The Board of Education has approved the plans of the Surrey Education Committee for the erection of a county school for boys at Sutton. Accommodation is to be provided for 410 pupils.

New Schools for Barnes

In view of the development of the Castlenau estate by the L.C.C. the Surrey Education Committee has decided to erect an elementary school for 400 scholars, and also acquire land for enlarging the sites of the two central schools.

Another Super Cinema for London

Mr. Clifford Aish has now prepared the plans for the super cinema which is to be erected on the site at the corner of Oxford Street and Edgware Road. Accommodation will be provided for 2,000, and the cost is estimated at nearly £250,000.

Doncaster Police Court Improvements

The West Riding Standing Joint Committee has approved sketch plans for alterations to office accommodation, additional cells, new court room, magistrates' rooms, and parade room at a total estimated cost of £20,000.

Weymouth Improvements

The Corporation has decided to construct a reinforced concrete wall from North Quay to Backwater at a cost of £22,500. On behalf of Lady Honeywood Mr. C. S. Miller is to carry out alterations at the Gloucester Hotel, Gloucester Street.

Public Landing Stage for Northfleet

The U.D.C. has submitted plans for a public landing stage to the Port of London Authority. Land is being obtained for a further housing scheme. Plan passed: Garage and workshop, Watling Street, for Messrs. G. E. Wallis, Ltd.

The Mersey Tunnel

A report has been received by the Mersey Tunnel Joint Committee from the engineers on the proposal of the Birkenhead Corporation to alter their entrance from Woodside to Pool Street, stating that this would involve an extra cost of £446,000.

Bournemouth Improvements

The Corporation is to commence the drainage scheme for which purpose sanction has been obtained for a loan of £101,000. The Southern Railway is obtaining land for works at Boscombe. The borough engineer is to prepare plans for chapels at the cemetery. A telephone exchange is to be erected at Winton. The borough engineer is to prepare plans for baths on the Northwood estate. Plans passed: Nine houses, Ensbury Park Road, for Mr. W. A. Boulton; alterations and additions, 62-66 Old Christchurch Road, for Messrs. Wilsons; four houses, Kilmarnock Road, for Mr. S. G. Ward.

Bexhill Improvements

The Office of Works is erecting new post office buildings in Devonshire Square. The borough engineer is to prepare plans for extending the Marina conveniences. Plans for a practical subjects' centre are being prepared. Plans passed: Two houses, St. Mary's Terrace, for Mr. W. Ramsay; three houses, Woodville Road, for Mr. J. E. Maynard.

Westminster Building Schemes

The Westminster City Council has appointed Messrs. Drower & Brighton as quantity surveyors for the Willow Street Housing Scheme. A proposal for the erection of dwellings on the Pulford Street site is not now recommended in view of the cost. Plans passed include the rebuilding of 68–76 Old Compton Street and 54–58 Wardour Street, and the rebuilding of 29 Great Marlborough Street.

Grant for New Hull Bridge

The building of a new North Bridge, linking East and West Hull over the river, is practically assured by a promised contribution from the Road Fund of £50,000. The Corporation obtained last year power to build a new bridge, estimated to cost £275,000, the approaches to which on both sides of the river form a broad, straight highway from Charlotte Street to Witham.

Plymouth Hospital Extension Scheme

The Plymouth Town Council has given approval to the carrying out of the first instalment, to cost £142,600, of an extension scheme at Blackadon Mental Hospital. The estimated cost of the whole scheme is between £300,000 and £350,000; the first portion will include an admission hospital to cost £60,000, infirmary and nurses' home costing £50,000 and £25,000 respectively.

Housing at Mansfield Woodhouse

Sanction has been received by the Mansfield Woodhouse Urban District Council, Notts, from the Ministry of Health to erect thirty-eight houses by direct labour on the Slant Lane site, and thirty houses by contract on the Clipstone Road site. The Council has therefore decided to apply for sanction to borrow £20,075 for the erection of the houses, roads, and sewers on the Slant Lane site.

Bradford Cathedral Extension Scheme

The Bishop of Bradford (Dr. Perowne) is to appoint a commission to consider the question of extending Bradford Cathedral. The principal scheme which the commission will have to consider is one for which designs have been submitted by Sir Charles Nicholson, involving an expenditure of £150,000 to £200,000. In this scheme the present church would become the southern aisle of the cathedral.

£10,000,000 New York Bridge

It is announced that the construction will begin immediately of a New York bridge across the North River. The War Department has notified its final approval. The New York end of the bridge will be at Washington Heights, Manhattan Island, and it will span the Hudson to Fort Lee, on the Jersey side. It will take about five years to build, will cost £10,000,000, and, it is claimed, will be the longest suspension bridge in the world.

Marylebone Improvement Schemes

The Marylebone Borough Council proposes to proceed with a portion of the Carlisle Street improvement scheme, and will make provision for a forty-foot road in Carlisle Street. The total cost will be £1,250,000. A scheme is to be prepared for enlarging the town hall library. Mr. John Murray, of 11 Suffolk Street, W., has prepared plans for building a large block of flats on the site of Abbey Lodge, Park Road, St. John's Wood.

Housing at Swansea

Mr. Sidney Davies is to erect forty-six houses at Cocket Road and Gorse Road, and the Corporation is to construct a sewer on the estate at a cost of £10,000. Drainage work is to be undertaken at Landore at a cost of £4,500. Land at Plough Road is being acquired for a children's playground. Mr. J. W. Thomas is to convert the old "Britannia" public house, Martin Street, into three dwelling houses. Six bungalows are to be built in Goitre Fach Road, Killay, by Mr. G. R. Thomas.

Hastings Improvements

Messrs. Adams and Jarrett are to erect additions to the Maids' Refectory, Magdalen Road, for the Rev. Mother Superior. Mr. H. M. Jeffery, architect, has prepared plans for a new road at Amhurst Gardens for Mr. A. D. Thorpe. The Corporation is to widen Sedlescombe Road, at a cost of £30,000. Plans passed: Eight houses, Ore Valley, for Mr. H. M. Jeffery, architect; ten houses, Bexhill Road, for Messrs. H. Ward and Son, architects; alterations, 81 and 83 Bohemia Road, for Mr. J. Hunt, architect; four houses, Beaufort Road, for Mr. J. Harvey.

Sheffield Improvement Schemes

The Corporation is to duplicate trunk water mains at a cost of £160,000. Another 250 housing subsidies are to be granted. Dr. F. S. Hardy has obtained a site in Herries Road for the erection of a house and surgery. The Libraries Committee has revived a scheme for the erection of a new central library. A maternity centre is to be erected in Orchard Place. Sanction is to be obtained for a loan of £42,000 for the erection of a fire station in Rockingham Street. Plans passed: Eighteen houses, Patmore Road, for Mr. T. Pye; ten houses, Dalewood Road, for Mr. A. J. Belton; ten houses, Charles Ashmore Road, for Mr. J. H. Dyson.

Improvements at Merthyr

The Corporation is asking the Ministry of Health to allow further housing schemes to be proceeded with. Approval is also being sought for further clearance schemes. Plans have been passed for extensions at the General Hospital. The Museum Committee is considering a plan prepared by the deputy borough architect for extending the museum.

MODERN FURNITURE COMPETITION AWARDS

The following awards have been made by the assessors in the preliminary part of the competition for modern furniture designs. The competition was promoted by *The Furnishing Trades Organiser.*

Section A. Designs for the complete furniture for a double bedroom: Prize of 25 guineas to "Triangle" (Thomas S. Tait, F.R.I.B.A., 48 Rothewick Road, Golders Green, N.W.11); prize of 25 guineas to "Michael Dawn" (L. Scott-Cooper, Rest Harrow, Biddenham, Beds.); prize of 25 guineas to "Renyats" (Albert Stayner, 5 Humphery Street, Higher Crumpsall, Manchester); prize of 25 guineas to "Arts Decoratifs" (Joseph Emberton, A.R.I.B.A., Chesham House, 150 Regent Street, W.1).

Section D. Designs for the complete furniture for a dining-room: Prize of 25 guineas to "Gorenflot" (A. Leslie Osborne, 63 Barmouth Road, Wandsworth, S.W.18); prize of 25 guineas to "Michael Dawn" (L. Scott-Cooper, Rest Harrow, Biddenham, Beds.).

No prizes were awarded in Sections B (designs for the complete furniture for a drawing-room) and C (designs for the complete furniture for a sitting-hall.)

WESTMINSTER BANK

The annual general meeting of the shareholders of the above bank was held at the head office, Lothbury, E.C. Mr. Walter Leaf (the chairman) said that there had been an increase in the deposits, from £271 millions to £285 millions, which was evidence of the accumulations of savings in spite of all adverse conditions, and a good omen for growth of trade. On the other hand, there was a considerable fall in the bank's acceptances, amounting to £2,019,000, due in large measure to depression in the cotton industry and the fall in the price of raw materials. As to the appropriation of profits, the £200,000 put to the Officers' Pension Fund must be regarded as a standing charge necessary to help the fund on to a sound actuarial basis. As to their rebuilding scheme, this was now proceeding rapidly, and they had put aside another £250,000 out of profits to replace the drafts already put upon it, but the directors hoped this amount would go a long way towards completing the whole scheme. The chairman then referred to the board's loss by the death of Col. Batten, and to the appointment of Mr. John Rae, the chief general manager, as a director. The report was unanimously adopted and other formal business was transacted.

RATES OF WAGES

			I	II
			s. d.	s. d.
A	ABERDARE	S. Wales & M.	1 8	1 3½
A1	Abergavenny	S. Wales & M.	1 7½	1 2½
B	Abingdon ..	S. Counties	1 6	1 1½
A	Accrington	N.W. Counties	1 8	1 3½
A3	Addlestone	S. Counties	1 6½	1 2
A	Adlington	N.W. Counties	1 8	1 3½
A	Airdrie ..	Scotland	*1 8	1 3½
C1	Aldeburgh	E. Counties	1 4	1 0½
A	Altrincham	N.W. Counties	1 8	1 3½
B3	Appleby ..	N.W. Counties	1 4½	1 0½
A	Ashton-under-Lyne	N.W. Counties	1 8	1 3½
A3	Atherstone	Mid. Counties	1 6½	1 2
B2	Aylesbury ..	S. Counties	1 4½	1 0½
B3	BANBURY	S. Counties	1 4½	1 0½
B2	Bangor ..	N.W. Counties	1 5	1 1
A	BarnardCastle	N.E. Coast	1 8	1 3½
A	Barnsley ..	Yorkshire	1 8	1 3½
B1	Barnstaple	S.W. Counties	1 5½	1 1½
A	Barrow ..	N.W. Counties	1 8	1 3½
A	Barry ..	S. Wales & M.	1 8	1 3½
B1	Basingstoke	S.W. Counties	1 4½	1 0½
B	Bath ..	S.W. Counties	1 6	1 1½
A	Batley ..	Yorkshire	1 8	1 3½
B	Bedford ..	E. Counties	1 6	1 1½
A2	Berwick-on-Tweed	N.E. Coast	1 7	1 2½
A2	Bewdley ..	Mid. Counties	1 7	1 2½
B2	Bicester ..	Mid. Counties	1 4½	1 0½
A	Birkenhead	N.W. Counties	†1 9	1 3½
A	Birmingham	Mid. Counties	1 8	1 3½
A	Bishop Auckland	N.E. Coast	1 8	1 3½
A	Blackburn	N.W. Counties	1 8	1 3½
A	Blackpool	N.W. Counties	1 8	1 3½
A	Blyth ..	N.E. Coast	1 8	1 3½
B1	Bognor ..	S. Counties	1 4½	1 0½
A	Bolton ..	N.W. Counties	1 8	1 3½
A3	Boston ..	Mid. Counties	1 6½	1 2
B1	Bournemouth	S. Counties	1 6	1 1½
B2	Bovey Tracey	S.W. Counties	1 5	1 1
A	Bradford ..	Yorkshire	1 8	1 3½
A1	Brentwood	E. Counties	1 6½	1 2
A	Bridgend ..	S. Wales & M.	1 8	1 3½
B2	Bridgwater	S.W. Counties	1 5	1 1
A1	Bridlington	Yorkshire	1 7½	1 2½
A	Brighouse	Yorkshire	1 8	1 3½
B1	Brighton ..	S. Counties	1 6	1 1½
A	Bristol ..	S.W. Counties	1 8	1 3½
B3	Brixham ..	S.W. Counties	1 4½	1 0½
A2	Bromsgrove	Mid. Counties	1 7	1 2½
C	Bromyard ..	Mid. Counties	1 4	1 0½
A	Burnley ..	N.W. Counties	1 8	1 3½
A	Burslem ..	Mid. Counties	1 8	1 3½
A3	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury ..	N.W. Counties	1 8	1 3½
A1	Buxton ..	N.W. Counties	1 7½	1 2½
B	CAMBRIDGE	E. Counties	1 6	1 1½
B3	Canterbury	S. Counties	1 4½	1 0½
A	Cardiff ..	S. Wales & M.	1 8	1 3½
A	Carlisle ..	N.W. Counties	1 8	1 3½
B	Carmarthen	S. Wales & M.	1 6	1 1½
B2	Carnarvon	N.W. Counties	1 5	1 1
A1	Carnforth ..	N.W. Counties	1 7½	1 2½
A	Castleford	Yorkshire	1 8	1 3½
B1	Chatham ..	S. Counties	1 5½	1 1½
B1	Chelmsford	E. Counties	1 5½	1 1½
B	Cheltenham	S.W. Counties	1 6	1 1½
A	Chester ..	N.W. Counties	1 8	1 3½
A	Chesterfield	Mid. Counties	‡1 8	1 3½
B3	Chichester	S. Counties	1 4½	1 0½
A	Chorley ..	N.W. Counties	1 8	1 3½
B2	Cirencester	S. Counties	1 5	1 1
A	Clitheroe ..	N.W. Counties	1 8	1 3½
A	Clydebank	Scotland	1 8	1 3½
A	Coalville ..	Mid. Counties	1 8	1 3½
B1	Colchester ..	E. Counties	1 5½	1 1½
A	Colne ..	N.W. Counties	1 8	1 3½
B1	Colwyn Bay	N.W. Counties	1 5½	1 1½
A	Consett ..	N.E. Coast	1 8	1 3½
B1	Conway ..	N.W. Counties	1 5½	1 1½
A	Coventry ..	Mid. Counties	1 8	1 3½
A3	Crewe ..	N.W. Counties	1 6½	1 2
A3	Cumberland	.....	1 6½	1 2
A	DARLINGTON	N.E. Coast	1 8	1 3½
A	Darwen ..	N.W. Counties	1 8	1 3½
B3	Deal ..	S. Counties	1 4½	1 0½
B1	Denbigh ..	N.W. Counties	1 5½	1 1½
A	Derby ..	Mid. Counties	1 8	1 3½
A	Dewsbury	Yorkshire	1 8	1 3½
B	Didcot ..	S. Counties	1 6	1 1½
A	Doncaster	Yorkshire	1 8	1 3½
C1	Dorchester	S.W. Counties	1 4	1 0½
A3	Driffield ..	Yorks	1 6½	1 2
A3	Droitwich	Mid. Counties	1 6½	1 2
A1	Dudley ..	Mid. Counties	1 7½	1 2½
A	Dundee ..	Scotland	1 8	1 3½
A	Durham ..	N.E. Coast	1 8	1 3½
B1	EASTBOURNE	S. Counties	1 6	1 1½
A	Ebbw Vale	S. Wales & M.	1 8	1 3½
A	Edinburgh	Scotland	1 8	1 3½
A	E. Glamorganshire & Monmouthshire	S. Wales & M.	1 8	1 3½
B	Exeter ..	S.W. Counties	§1 7	1 2½
B2	Exmouth ..	S.W. Counties	1 5	1 1
B	FELIXSTOWE	E. Counties	1 6	1 1½
A3	Filey ..	Yorks	1 6½	1 2
A	Fleetwood ..	N.W. Counties	1 8	1 3½
B3	Folkestone	S. Counties	1 4½	1 0½
A	Frodsham	N.W. Counties	1 8	1 3½
B3	Frome ..	S.W. Counties	1 4½	1 0½
A	GATESHEAD	N.E. Coast	1 8	1 3½
B1	Gillingham	S. Counties	1 5½	1 1½
B	Gloucester	S.W. Counties	1 6	1 1½
A2	Goole ..	Yorkshire	1 7	1 2½
B	Gosport ..	S. Counties	1 6	1 1½
A3	Grantham	Mid. Counties	1 6½	1 2
A1	Gravesend	S. Counties	1 7½	1 2½
A	Greenock ..	Scotland	*1 8	1 3½
A	Grimsby ..	Yorkshire	1 8	1 3½
B1	Guildford ..	S. Counties	1 5½	1 1½
A	HALIFAX ..	Yorkshire	1 8	1 3½
A	Hanley ..	Mid. Counties	1 8	1 3½
A	Harrogate	Yorkshire	1 8	1 3½
A	Hartlepools	N.E. Coast	1 8	1 3½
B2	Harwich ..	E. Counties	1 5	1 1
B3	Hastings ..	S. Counties	1 4½	1 0½
B1	Hatfield ..	S. Counties	1 5½	1 1½
B	Hereford ..	S. W. Counties	1 6	1 1½
B	Hertford ..	E. Counties	1 5½	1 1½
A1	Heysham	N.W. Counties	1 7½	1 2½
A	Howden ..	N.E. Coast	1 8	1 3½
A	Huddersfield	Yorkshire	1 8	1 3½
A	Hull ..	Yorkshire	1 8	1 3½

The initial letter opposite each 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	II
			s. d.	s. d.
A	ILKLEY ..	Yorkshire	1 8	1 3½
A	Immingham	Mid. Counties	1 8	1 3½
B	Ipswich ..	E. Counties	1 6	1 1½
C1	Isle of Wight	S. Counties	1 4	1 0½
A	JARROW ..	N.E. Coast	1 8	1 3½
A	KEIGHLEY	Yorkshire	1 8	1 3½
B2	Kendal ..	N.W. Counties	1 5	1 1
B2	Keswick ..	N.W. Counties	1 5	1 1
B	Kettering ..	Mid. Counties	1 6	1 1½
A2	Kidderminster	Mid. Counties	1 7	1 2½
B2	King's Lynn	E. Counties	1 5	1 1
A	LANCASTER	N.W. Counties	1 8	1 3½
A2	Leamington	Mid. Counties	1 7	1 2½
A	Leeds ..	Yorkshire	1 8	1 3½
A	Leek ..	Mid. Counties	1 8	1 3½
A	Leicester ..	Mid. Counties	1 8	1 3½
A	Leigh ..	N.W. Counties	1 8	1 3½
B3	Lewes ..	S. Counties	1 4½	1 0½
A3	Lichfield ..	Mid. Counties	1 6½	1 2
A	Lincoln ..	Mid. Counties	1 8	1 3½
A	Liverpool ..	N.W. Counties	‖1 10	1 4½
B	Llandudno	N.W. Counties	1 5½	1 1½
A	Llanelly ..	S. Wales & M.	1 8	1 3½
	London (12 miles radius)		1 9½	1 4½
	Do. (12-15 miles radius)		1 9	1 4
A	Long Eaton	Mid. Counties	1 8	1 3½
A	Loughborough	Mid. Counties	1 8	1 3½
B	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 8	1 3½
A1	MACCLESFIELD	N.W. Counties	1 7½	1 2½
B	Maidstone	S. Counties	1 5½	1 1½
A3	Malvern ..	Mid. Counties	1 6½	1 2
A	Manchester	N.W. Counties	1 8	1 3½
A	Mansfield ..	Mid. Counties	1 8	1 3½
B3	Margate ..	S. Counties	1 4½	1 0½
A3	Matlock ..	Mid. Counties	1 6½	1 2
A	Merthyr ..	S. Wales & M.	1 8	1 3½
A	Middlesbrough	N.E. Coast	1 8	1 3½
A3	Middlewich	N.W. Counties	1 6½	1 2
B2	Minehead ..	S.W. Counties	1 5	1 1
A	Monmouth	S. Wales & M.	1 8	1 3½
	S. and E. Glamorganshire			
A1	Morecambe	N.W. Counties	1 7½	1 2½
A3	NANTWICH	N.W. Counties	1 6½	1 2
A	Neath ..	S. Wales & M.	1 8	1 3½
A	Nelson ..	N.W. Counties	1 8	1 3½
A	Newcastle	N.E. Coast	1 8	1 3½
A	Newport ..	S. Wales & M.	1 8	1 3½
A	Normanton	Yorkshire	1 8	1 3½
A2	Northampton	Mid. Counties	1 7	1 2½
A	North Staffs.	Mid. Counties	1 8	1 3½
A	North Shields	N.E. Coast	1 8	1 3½
B	Norwich ..	E. Counties	1 6	1 1½
A	Nottingham	Mid. Counties	1 8	1 3½
A	Nuneaton ..	Mid. Counties	1 8	1 3½
B	OAKHAM ..	Mid. Counties	1 5½	1 1½
A	Oldham ..	N.W. Counties	1 8	1 3½
A3	Oswestry ..	Mid. Counties	1 6½	1 2
B	Oxford ..	S. Counties	1 6	1 1½
A	PAISLEY ..	Scotland	*1 8	1 3½
C	Pembroke ..	S. Wales & M.	1 4½	1 0½
A	Perth ..	Scotland	*1 8	1 3½
A3	Peterborough	Mid. Counties	1 6½	1 2
A	Plymouth	S.W. Counties	¶1 8	1 3½
A	Pontefract	Yorkshire	1 8	1 3½
A	Pontypridd	S. Wales & M.	1 8	1 3½
B	Portsmouth	S. Counties	1 6	1 1½
A	Preston ..	N.W. Counties	1 8	1 3½
A	QUEENSFERRY	N.W. Counties	1 8	1 3½
B	READING ..	S. Counties	1 6	1 1½
B	Reigate ..	S. Counties	1 5½	1 1½
A3	Retford ..	Mid. Counties	1 6½	1 2
A	Rhondda Valley	S. Wales & M.	1 8	1 3½
A3	Ripon ..	Yorkshire	1 6½	1 2
A	Rochdale ..	N.W. Counties	1 8	1 3½
B	Rochester	S. Counties	1 5½	1 1½
A1	Ruabon ..	N.W. Counties	1 7½	1 2½
A2	Rugby ..	Mid. Counties	1 8	1 3½
A3	Rugeley ..	Mid. Counties	1 6½	1 2
A	Runcorn ..	N.W. Counties	1 8	1 3½
A3	ST. ALBANS	E. Counties	1 6½	1 2
A	St. Helens	N.W. Counties	1 8	1 3½
B3	Salisbury	S.W. Counties	1 4½	1 0½
A1	Scarborough	Yorkshire	1 7½	1 2½
A	Scunthorpe	Mid. Counties	1 8	1 3½
A	Sheffield ..	Yorkshire	1 8	1 3½
A	Shipley ..	Yorkshire	1 8	1 3½
A3	Shrewsbury	Mid. Counties	1 6½	1 2
A2	Skipton ..	Yorkshire	1 7	1 2½
B	Slough ..	S. Counties	1 5½	1 1½
A2	Solihull ..	Mid. Counties	1 7	1 2½
B	South'pton	S. Counties	1 6	1 1½
B1	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport	N.W. Counties	1 8	1 3½
A	S. Shields ..	N.E. Coast	1 8	1 3½
A2	Stafford ..	Mid. Counties	1 7	1 2½
A	Stockport ..	N.W. Counties	1 8	1 3½
A	Stockton-on-Tees	N.E. Coast	1 8	1 3½
A	Stoke-on-Trent	Mid. Counties	1 8	1 3½
B	Stroud ..	S.W. Counties	1 5½	1 1½
A	Sunderland	N.E. Coast	1 8	1 3½
A	Swadlincote	Mid. Counties	1 8	1 3½
A	Swansea ..	S. Wales & M.	1 8	1 3½
B	Swindon ..	S.W. Counties	1 6	1 1½
A1	TAMWORTH	N.W. Counties	1 7½	1 2½
B1	Taunton ..	S.W. Counties	1 5½	1 1½
A	Teeside Dist.	N.E. Counties	1 8	1 3½
B	Teignmouth	S.W. Coast	1 6	1 1½
A	Todmorden	Yorkshire	1 8	1 3½
A2	Torquay ..	S.W. Counties	1 7	1 2½
C	Truro ..	S.W. Counties	1 4	1 0½
B1	Tunbridge Wells	S. Counties	1 5½	1 1½
A	Tunstall ..	Mid. Counties	1 8	1 3½
A	Tyne District	N.E. Coast	1 8	1 3½
A	WAKEFIELD	Yorkshire	1 8	1 3½
A1	Walsall ..	Mid. Counties	1 7½	1 2½
A	Warrington	N.W. Counties	1 8	1 3½
A2	Warwick ..	Mid. Counties	1 7	1 2½
B	Wellingborough	Mid. Counties	1 6	1 1½
A	West Bromwich	Mid. Counties	1 8	1 3½
B	Weston-s-Mare	S.W. Counties	1 6	1 1½
A2	Whitby ..	Yorkshire	1 7	1 2½
A	Widnes ..	N.W. Counties	1 8	1 3½
A	Wigan ..	N.W. Counties	1 8	1 3½
B2	Winchester	S. Counties	1 5	1 1
B	Windsor ..	S. Counties	1 6	1 1½
A	Wolverhampton ..	Mid. Counties	1 8	1 3½
A3	Worcester	Mid. Counties	1 6½	1 2
A3	Worksop ..	Yorkshire	1 6½	1 2
A1	Wrexham ..	N.W. Counties	1 7½	1 2½
B	Wycombe ..	S. Counties	1 6	1 1½
B1	YARMOUTH	E. Counties	1 5½	1 1½
B2	Yeovil ..	S.W. Counties	1 5	1 1
A	York ..	Yorkshire	1 8	1 3½

* Plasterers, 1s. 9d.

† Carpenters and Painters, 1s. 8½d.

‡ Plumbers, 1s. 9d.

§ Painters, 1s. 6d.

‖ Carpenters and Plasterers, 1s. 8½d.

¶ Painters, 1s. 7d.

PRICES CURRENT

EXCAVATOR AND CONCRETOR

EXCAVATOR, 1*s.* 4½*d. per hour*; LABOURER, 1*s.* 4½*d. per hour*; NAVVY, 1*s.* 4½*d. per hour*; TIMBERMAN, 1*s.* 6*d. per hour*; SCAFFOLDER, 1*s.* 5½*d. per hour*; WATCHMAN. 7*s.* 6*d. per shift.*

Broken brick or stone, 2 in., per yd.	£0	11	6
Thames ballast, per yd.	0	13	0
Pit gravel, per yd.	0	18	0
Pit sand, per yd.	0	14	6
Washed sand	0	15	6
Screened ballast or gravel, add 10 per cent. per yd.			
Clinker, breeze, etc., prices according to locality.			
Portland cement, per ton	£2	19	0
Lias lime, per ton	2	10	0
Sacks charged extra at 1s. 9d. each and credited when returned at 1s. 6d.			

Transport hire per day :

Cart and horse	£1	3	0	*Trailer*	£0	15	0
3-ton motor lorry	3	15	0	*Steam roller*	4	5	0
Steam lorry, 5-ton	4	0	0	*Water cart*	1	5	0

EXCAVATING and throwing out in ordinary earth not exceeding 6 ft. deep, basis price, per yd. cube	0	3	0

Exceeding 6 ft., but under 12 ft., add 30 per cent.
In stiff clay, add 30 per cent.
In underpinning, add 100 per cent.
In rock, including blasting, add 225 per cent.
If basketed out, add 80 per cent. to 150 per cent.
Headings, including timbering, add 400 per cent.

RETURN, fill, and ram, ordinary earth, per yd.	£0	2	4
SPREAD and level, including wheeling, per yd.	0	2	4
PLANKING, per ft. sup.	0	0	5
DO. over 10 ft. deep, add for each 5 ft. depth 30 per cent.			
HARDCORE, 2 in. ring, filled and rammed, 4 in. thick, per yd. sup.	£0	2	1
DO. 6 in. thick, per yd. sup.	0	2	10
PUDDLING, per yd. cube	1	10	0
CEMENT CONCRETE, 4-2-1, per yd. cube	2	3	0
DO. 6-2-1, per yd. cube	1	18	0
DO. in upper floors, add 15 per cent.			
DO. in reinforced-concrete work, add 20 per cent.			
DO. in underpinning, add 60 per cent.			
LIAS LIME CONCRETE, per yd. cube	£1	16	0
BREEZE CONCRETE, per yd. cube	1	7	0
DO. in lintels, etc., per ft. cube	0	1	6

DRAINER

LABOURER, 1*s.* 4½*d. per hour*; TIMBERMAN, 1*s.* 6*d. per hour*; BRICKLAYER, 1*s.* 9½*d. per hour*; PLUMBER, 1*s.* 9½*d. per hou*; WATCHMAN, 7*s.* 6*d. per shift.*

Stoneware pipes, tested quality, 4 in., per yd.	£0	1	3
DO. 6 *in., per yd.*	0	2	8
DO. 9 *in., per yd.*	0	3	6
Cast-iron pipes, coated, 9 ft. lengths, 4 in., per yd.	0	6	9
DO. 6 *in., per yd.*	0	9	2
Portland cement and sand, see "Excavator" above.			
Lead for caulking, per cwt.	£2	5	6
Gaskin, per lb.	0	0	5½

STONEWARE DRAINS, jointed in cement, tested pipes, 4 in., per ft.	0	4	3
DO. 6 in., per ft.	0	5	0
DO. 9 in., per ft.	0	7	9
CAST-IRON DRAINS, jointed in lead, 4 in., per ft.	0	9	0
DO. 6 in., per ft.	0	11	0

Note.—These prices include digging and filling for normal depths, and are average prices.
Fittings in Stoneware and Iron according to type. *See* Trade Lists.

BRICKLAYER

BRICKLAYER, 1*s.* 9½*d. per hour*; LABOURER, 1*s.* 4½*d. per hour*; SCAFFOLDER 1*s.* 5½*d. per hour.*

London stocks, per M.	£4	15	0
Flettons, per M.	2	18	0
Staffordshire blue, per M.	9	10	0
Firebricks, 2½ in., per M.	11	3	0
Glazed salt, white, and ivory stretchers, per M.	24	10	0
DO. *headers, per M.*	24	0	0
Colours, extra, per M.	£5	10	0
Seconds, less, per M.	1	0	0
Cement and sand, see "Excavator" above.			
Lime, grey stone, per ton	£2	17	0
Mixed lime mortar, per yd.	1	6	0
Damp course, in rolls of 4½ in., per roll	0	2	6
DO. 9 *in. per roll*	0	4	9
DO. 14 *in. per roll*	0	7	6
DO. 18 *in. per roll*	0	9	6

BRICKWORK in stone lime mortar, Flettons or equal, per rod	33	0	0
DO. in cement do., per rod	36	0	0
DO. in stocks, add 25 per cent. per rod.			
DO. in blues, add 100 per cent. per rod.			
DO. circular on plan, add 12½ per cent. per rod.			
FACINGS, FAIR, per ft. sup. extra	£0	0	2
DO. Red Rubbers, gauged and set in putty, per ft. extra	0	4	6
DO. salt, white or ivory glazed, per ft. sup. extra	0	5	6
TUCK POINTING, per ft. sup. extra	0	0	10
WEATHER POINTING, per ft. sup. extra	0	0	3
GRANOLITHIC PAVING, 1 in., per yd. sup.	0	5	0
DO. 1½ in., per yd. sup.	0	6	0
DO. 2 in., per yd. sup.	0	7	0
BITUMINOUS DAMP COURSE, ex rolls, per ft. sup.	0	0	7
ASPHALT (MASTIC) DAMP COURSE, ½in., per yd. sup.	0	8	0
DO. vertical, per yd. sup.	0	11	0
SLATE DAMP COURSE, per ft. sup.	0	0	10
ASPHALT ROOFING (MASTIC) in two thicknesses, ¾ in., per yd.	0	8	6
DO. SKIRTING, 6 in.	0	0	11
BREEZE PARTITION BLOCKS, set in Cement, 1½ in. per yd. sup.	0	5	3
DO. DO. 3 in..	0	6	6

THE wages are the Union rates current in London at the time of publication. The prices are for good quality material, and are intended to cover delivery at works, wharf, station, or yard as customary, but will vary according to quality and quantity. The measured prices are based upon the foregoing, and include usual builders' profits. 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.

MASON

MASON, 1*s.* 9½*d. per hour*; DO. *fixer*, 1*s.* 10½*d. per hour*; LABOURER, 1*s.* 4½*d. per hour*; SCAFFOLDER, 1*s.* 5½*d. per hour.*

Portland Stone :			
Whitbed, per ft. cube	£0	4	6
Basebed, per ft. cube	0	4	7
Bath stone, per ft. cube	0	3	0
Usual trade extras for large blocks.			
York paving, av. 2½ in., per yd. sup.	0	6	6
York templates sawn, per ft. cube	0	6	9
Slate shelves, rubbed, 1 in., per ft. sup.	0	2	6
Cement and sand, see "Excavator," etc., above.			

HOISTING and setting stone, per ft. cube	£0	2	2
DO. for every 10 ft. above 30 ft., add 15 per cent.			
PLAIN face Portland basis, per ft. sup.	£0	2	8
DO. circular, per ft. sup.	0	4	0
SUNK FACE, per ft. sup.	0	3	9
DO. circular, per ft. sup.	0	4	10
JOINTS, arch, per ft. sup.	0	2	6
DO. sunk, per ft. sup.	0	2	7
DO. DO. circular, per ft. sup.	0	4	6
CIRCULAR-CIRCULAR work, per ft. sup.	1	2	0
PLAIN MOULDING, straight, per inch of girth, per ft. run	0	1	1
DO. circular, do. per ft. run	0	1	4
HALF SAWING, per ft. sup.	£0	1	0

Add to the foregoing prices if in York stone 35 per cent.
DO. Mansfield, 12½ per cent.
Deduct for Bath, 33⅓ per cent.
DO. for Chilmark, 5 per cent.

SETTING 1 in. slate shelving in cement, per ft. sup.	£0	0	6
RUBBED round nosing to do., per ft. lin.	0	0	6
YORK STEPS, rubbed T. & R., ft. cub. fixed	1	9	0
YORK SILLS, W. & T., ft. cub. fixed	1	13	0

SLATER AND TILER

SLATER, 1*s.* 9½*d. per hour*; TILER, 1*s.* 9½*d. per hour*; SCAFFOLDER, 1*s.* 5½*d. per hour*; LABOURER, 1*s.* 4½*d. per hour.*
N.B.—Tiling is often executed as piecework.

Slates, 1st quality, per M :			
Portmadoc Ladies	£14	0	0
Countess	27	0	0
Duchess	32	0	0
Clips, lead, per lb.	0	0	4
Clips, copper, per lb.	0	2	0
Nails, compo, per cwt.	1	6	0
Nails, copper, per lb.	0	1	10
Cement and sand, see "Excavator," etc., above.			
Hand-made tiles, per M.	£5	18	0
Machine-made tiles, per M.	5	8	0
Westmorland slates, large, per ton	9	0	0
DO. *Peggies, per ton*	7	5	0

SLATING, 3 in. lap, compo nails, Portmadoc or equal :			
Ladies, per square	£4	0	0
Countess, per square	4	5	0
Duchess, per square	4	10	0
WESTMORLAND, in diminishing courses, per square	6	5	0
CORNISH DO., per square	6	3	0
Add, if vertical, per square approx.	0	13	0
Add, if with copper nails, per square approx.	0	2	6
Double course at eaves, per ft. approx.	0	1	0
TILING, 4 in. gauge, every 4th course nailed, in hand-made tiles, average per square	5	6	0
DO., machine-made DO., per square	4	17	0
Vertical Tiling, including pointing, add 18*s.* 0*d.* per square.			
FIXING lead soakers, per dozen	£0	0	10
STRIPPING old slates and stacking for re-use, and clearing away surplus and rubbish, per square	0	10	0
LABOUR only in laying slates, but including nails, per square	1	0	0

See "Sundries for Asbestos Tiling."

CARPENTER AND JOINER

CARPENTER, 1*s.* 9½*d. per hour*; JOINER, 1*s.* 9½*d. per hour*; LABOURER, 1*s.* 4½*d. per hour.*

Timber, average prices at Docks, London Standard, Scandinavian, etc. (equal to 2nds) :			
7×3, per std.	£20	0	0
11×4, per std.	30	0	0
Memel or Equal. Slightly less than foregoing.			
Flooring, P.E., 1 in., per sq.	£1	5	0
DO. *T. and G., 1 in., per sq.*	1	5	0
Planed Boards, 1 in. × 11 in., per std.	30	0	0
Wainscot oak, per ft. sup. of 1 in.	0	2	0
Mahogany, per ft. sup. of 1 in.	0	2	0
DO. *Cuba, per ft. sup. of 1 in.*	0	3	0
Teak, per ft. sup. of 1 in.	0	3	0
DO., *ft. cube*	0	15	0

FIR fixed in wall plates, lintels, sleepers, etc., per ft. cube	0	5	9
DO. framed in floors, roofs, etc., per ft. cube	0	6	3
DO., framed in trusses, etc., including ironwork, per ft. cube	0	7	3
PITCH PINE, add 33⅓ per cent.			
FIXING only boarding in floors, roofs, etc., per sq.	0	13	6
SARKING FELT laid, 1-ply, per yd.	0	1	6
DO., 3-ply, per yd.	0	1	9
CENTERING for concrete, etc., including horsing and striking, per sq.	3	10	0
SLATE BATTENING, per sq.	0	18	6

PRICES CURRENT; *continued.*

CARPENTER AND JOINER: *continued.*

DEAL BOARDING to flats, 1 in., on firrings, per sq.	£2	10	0
MOULDED CASEMENTS, 1¼ in., in 4 sqs., glazing beads and hung, per ft. sup.	0	2	9
DO., DO. 2 in., per ft. sup.	0	3	0
DEAL cased frames, oak sills, 2 in. d.h. sashes, brass-faced pulleys, etc., per ft. sup.	0	4	0
DOORS, 4 pan. sq. b.s., 2 in., per ft. sup.	0	2	9
DO., DO., DO. 1¼ in., per ft. sup.	0	2	6
DO., DO. moulded b.s., 2 in., per ft. sup.	0	3	0
DO., DO., DO. 1¼ in., per ft. sup.	0	2	9
If in oak multiply 3 times.			
If in mahogany multiply 3 times.			
If in teak multiply 3 times.			
WOOD BLOCK FLOORING, standard blocks, laid in mastic herringbone:			
Deal, 1 in., per yd. sup., average	0	10	0
DO. 1¼ in., per yd. sup., average	0	12	0
DO., DO. 1¼ in. maple blocks	0	15	0
STAIRCASE WORK, DEAL:			
1 in. riser, 1¼ in. tread, fixed, per ft. sup.	0	3	6
2 in. deal strings, fixed, per ft. sup.	0	3	9

PLUMBER

PLUMBER, 1*s.* 9½*d. per hour*; MATE OR LABOURER, 1*s.* 4½*d. per hour.*

Lead, milled sheet, per cwt.	£2	4	6
DO. *drawn pipes, per cwt.*	2	6	0
DO. *soil pipe, per cwt.*	2	8	0
DO. *scrap, per cwt.*	1	9	6
Copper, sheet, per lb.	0	1	0
Solder, plumber's, per lb.	0	1	2
DO. *fine, per lb.*	0	1	5
Cast-iron pipes, etc.:			
L.C.C. soil, 3 in., per yd.	0	4	1
DO. *4 in. per yd.*	0	5	0
R.W.P., 2½ in., per yd.	0	2	0
DO. *3 in., per yd.*	0	2	5
DO. *4 in., per yd.*	0	3	3
Gutter, 4 in. H.R., per yd.	0	1	5
DO. *4 in. O.G., per yd.*	0	1	9
MILLED LEAD and labour in gutters, flashings, etc.	3	12	6
LEAD PIPE, fixed, including running joints, bends, and tacks, ½ in., per ft.	0	2	1
DO. ¾ in., per ft.	0	2	5
DO. 1 in., per ft.	0	3	3
DO. 1¼ in., per ft.	0	4	6
LEAD WASTE or soil, fixed as above, complete, 2½ in., per ft.	0	6	0
DO. 3 in., per ft.	0	7	0
DO. 4 in., per ft.	0	9	9
CAST-IRON R.W. PIPE, at 24 lb. per length, jointed in red lead, 2½ in., per ft.	0	2	5
DO. 3 in., per ft.	0	2	10
DO. 4 in., per ft.	0	3	3
CAST-IRON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft.	0	2	7
DO. O.G., 4 in., per ft.	0	2	10
CAST-IRON SOIL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.	0	7	0
DO. 3 in., per ft.	0	6	0
Fixing only:			
W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each	2	5	0
BATHS only, with all joints	1	18	0
LAVATORY BASINS only, with all joints, on brackets, each	1	10	0

PLASTERER

PLASTERER, 1*s.* 9½*d. per hour (plus allowances in London only)*; LABOURER, 1*s.* 4½*d. per hour.*

Chalk lime, per ton	£2	17	0
Hair, per cwt.	0	18	0
Sand and cement see "Excavator," etc., above.			
Lime putty, per cwt.	£0	2	9
Hair mortar, per yd.	1	7	0
Fine stuff, per yd.	1	14	0
Sawn laths, per bdl.	0	2	9
Keene's cement, per ton	5	15	0
Sirapite, per ton	3	10	0
DO. *fine, per ton*	3	18	0
Plaster, per ton	3	0	0
DO. *per ton*	3	12	6
DO. *fine per ton*	5	12	0
Thistle plaster, per ton	£3	9	0
Lath nails, per lb.	0	0	4
LATHING with sawn laths, per yd.	0	1	7
METAL LATHING, per yd.	0	2	3
FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, ¾ in., per yd.	0	2	4
DO. vertical, per yd.	0	2	7
RENDER, on brickwork, 1 to 3, per yd.	0	2	7
RENDER in Portland and set in fine stuff, per yd.	0	3	3
RENDER, float, and set, trowelled, per yd.	0	2	9
RENDER and set in Sirapite, per yd.	0	2	5
DO. in Thistle plaster, per yd.	0	2	5
EXTRA, if on but not including lathing, any of foregoing, per yd.	0	0	5
EXTRA, if on ceilings, per yd.	0	0	5
ANGLES, rounded Keene's on Portland, per ft. lin.	0	0	6
PLAIN CORNICES, in plaster, per inch girth, including dubbing out, etc., per ft. lin.	0	0	5
WHITE glazed tiling set in Portland and jointed in Parian, per yd., from	1	11	6
FIBROUS PLASTER SLABS, per yd.	0	1	10

GLAZIER

GLAZIER, 1*s.* 8½*d. per hour.*

Glass: 4ths in crates:			
Clear, 21 oz.	£0	0	5
DO. 26 oz.	0	0	5½
Cathedral white, per ft.	0	0	7½
Polished plate, British ¼ in., up to 2 ft. sup.	0	1	8
DO. *4 ft. sup.*	0	3	2
DO. *6 ft. sup.*	0	3	4
DO. *20 ft. sup.*	0	3	11
DO. *100 ft. sup.*	0	4	8
Rough plate, $\frac{3}{16}$ in.	0	0	6½
DO. ¼ *in., per ft.*	0	0	7
Linseed oil putty, per cwt.	0	17	6
GLAZING in putty, clear sheet, 21 oz.	£0	0	11
DO. 26 oz.	0	1	0
GLAZING in beads, 21 oz., per ft.	0	1	1
DO. 26 oz., per ft.	0	1	4

Small sizes slightly less (under 3 ft. sup.).
Patent glazing in rough plate, normal span 1*s.* 6*d.* to 2*s.* per ft.

LEAD LIGHTS, plain, med. sqs. 21 oz., usual domestic sizes, fixed, per ft. sup. and up	£0	3	6

Glazing only, polished plate, 6½*d.* to 8*d.* per ft. according to size.

DECORATOR

PAINTER, 1*s.* 8½*d. per hour*; LABOURER. 1*s.* 4½*d. per hour*; FRENCH POLISHER, 1*s.* 9*d. per hour*; PAPERHANGER, 1*s.* 8½*d. per hour.*

Genuine white lead, per cwt.	£3	11	0
Linseed oil, raw, per gall.	0	3	7
DO., *boiled, per gall.*	0	3	10
Turpentine, per gall.	0	6	2
Liquid driers, per gall.	0	9	6
Knotting, per gall.	1	4	0
Distemper, washable, in ordinary colours, per cwt., and up	2	0	0
Double size, per firkin	0	3	6
Pumice stone, per lb.	0	0	4
Single gold leaf (transferable), per book	0	1	11
Varnish, copal, per gall. and up	0	18	0
DO., *flat, per gall.*	1	2	0
DO., *paper, per gall.*	1	0	0
French polish, per gall.	0	19	0
Ready mixed paints, per gall. and up	0	10	6
LIME WHITING, per yd. sup.	0	0	3
WASH, stop, and whiten, per yd. sup.	0	0	6
DO., and 2 coats distemper with proprietary distemper, per yd. sup.	0	0	9
KNOT, stop, and prime, per yd. sup.	0	0	7
PLAIN PAINTING, including mouldings, and on plaster or joinery, 1st coat, per yd. sup.	0	0	10
DO., subsequent coats, per yd. sup.	0	0	9
DO., enamel coat, per yd. sup.	0	1	2½
BRUSH-GRAIN, and 2 coats varnish, per yd. sup.	0	3	8
FIGURED DO., DO., per yd. sup.	£0	5	6
FRENCH POLISHING, per ft. sup.	0	1	2
STRIPPING old paper and preparing, per piece	0	1	7
HANGING PAPER, ordinary, per piece	0	1	10
DO., fine, per piece, and upwards	0	2	4
VARNISHING PAPER, 1 coat, per piece	0	9	0
CANVAS, strained and fixed, per yd. sup.	0	3	0
VARNISHING, hard oak, 1st coat, per yd. sup.	0	1	2
DO., each subsequent coat, per yd. sup.	0	0	11

SMITH

SMITH, *weekly rate equals* 1*s.* 9½*d. per hour*; MATE, *do.* 1*s.* 4*d. per hour*; ERECTOR, 1*s.* 9½*d. per hour*; FITTER, 1*s.* 9½*d. per hour*; LABOURER, 1*s.* 4*d. per hour.*

Mild steel in British standard sections, per ton	£12	10	0
Sheet steel:			
Flat sheets, black, per ton	19	0	0
Do., galvd., per ton	23	0	0
Corrugated sheets, galvd., per ton	23	0	0
Driving screws, galvd., per grs.	0	1	10
Washers, galvd., per grs.	0	1	1
Bolts and nuts, per cwt. and up	1	18	0
MILD STEEL in trusses, etc., erected, per ton	25	10	0
DO. in small sections as reinforcement, per ton	16	10	0
DO. in compounds, per ton	17	0	0
DO. in bar or rod reinforcement, per ton	20	0	0
WROT IRON in chimney bars, etc., including building in, per cwt.	2	0	0
DO. in light railings and balusters, per cwt.	2	5	0
FIXING only corrugated sheeting, including washers and driving screws, per yd.	0	2	0

SUNDRIES

Fibre or wood pulp boardings, according to quality and quantity. The measured work price is on the same basis . . . per ft. sup.	£0	0	2½
FIBRE BOARDINGS, including cutting and waste, fixed on, but not including studs or grounds, per ft. sup. . . . from 3*d.* to	0	0	6
Plaster board, per yd. sup. . from	0	1	7
PLASTER BOARD, fixed as last, per yd. sup. . . . from	0	2	8
Asbestos sheeting, $\frac{1}{16}$ in., grey flat, per yd. sup.	0	2	3
DO. *corrugated, per yd. sup.*	0	3	3
ASBESTOS SHEETING, fixed as last, flat, per yd. sup.	0	4	0
DO. corrugated, per yd. sup.	0	5	0
ASBESTOS slating or tiling on, but not including battens, or boards, plain "diamond" per square, grey	2	15	0
DO., red	3	0	0
Asbestos cement slates or tiles, $\frac{3}{16}$ in. punched per M., grey	16	0	0
DO. *red*	18	0	0
ASBESTOS COMPOSITION FLOORING: Laid in two coats, average ¾ in. thick, in plain colour, per yd. sup.	0	7	0
DO. ½ in. thick, suitable for domestic work, unpolished, per yd.	0	6	6
Metal casements for wood frames, domestic sizes, per ft. sup.	0	1	6
DO. *in metal frames, per ft. sup.*	0	1	9
HANGING only metal casement in, but not including wood frames, each	0	2	10
BUILDING in metal casement frames, per ft. sup.	0	0	7
Waterproofing compounds for cement. Add about 75 per cent. to 100 per cent. to the cost of cement used.			
Plywood:			
3 m/m alder, per ft. sup.	0	0	2
4½ m/m amer. white, per ft. sup.	0	0	3¾
¼ m/m figured ash, per ft. sup.	0	0	5
4½ m/m 3rd quality, composite birch, per ft. sup.	0	0	1½