

Wednesday, March 14, 1928

THE PHILOSOPHY OF LOCAL GOVERNMENT

The logic of local government would lead to no government at all. Government localized to its limit would reside in the individual, and when a wide compass round is fetched it may so end where it began. That is a far cry, and the immediate interest of local government is its fluidity. It is in the melting-pot.

This country is the political laboratory in which the experiment of settling social relationships is most advanced. Yet even here they are in solution and the precipitate is still to find. A Royal Commission is sitting on the question of local government and its recommendations are already emerging.

In a little book by Mrs. M. I. Cole, entitled Local Government for Beginners, is a question which has started us on a meditative path. The question is: "What in fact is the philosophy of local government?" The answer, of course, is that it is the wisdom that would reduce the State to its smallest dimensions. The problem for the statesman is to centralize what must be centralized and to localize what may be localized. To render unto Whitehall the things that are Whitehall's, and to the parish the things that are the parish's.

The solution will be more clearly seen if it is always borne in mind that government is made for man and not man for government. In the ideal State the individual will need the least regulation, and the aim of all social systems should be the production of such individuals.

The first question that is to be asked in all matters of doubt is: "Can it be done locally?" The second: "Can it be best done locally?" In answering the second question, the term "best" is to be interpreted not only in relation to the thing done, but to the doer of it.

Local government in its fullest sense involves the intelligent participation of the largest possible number of citizens; and any proposal for the withdrawal of such participation is a matter for the closest scrutiny.

It may be a tiresome task to differentiate between those things which may with advantage be given to the parish council to do and those which may not be given, but it is a task worth doing.

In industry it has been found profitable to make the most complete analysis of the industrial process, and to devise plant and machinery that will sequentially and successfully perform it.

In local government it will be found no less profitable, and as a first rough analysis Mrs. Cole's book will be found

both interesting and useful. What it shows is that at present we have little beyond the bony skeleton of local government in those bodies whose names have already been given. Here is but the territorial framework, yet to be overlaid with functional systems that will supply the muscles, sinews, and nervous tissue of the body politic.

In a suggestive series of questions in her last chapter she indicates the kind of developments that may be expected. The main line is that of the return of the *ad hoc* authority, as in the case of the joint electricity authorities and the older authorities administering water supplies and port and harbour services.

Commissioners of sewers, highway boards, and school boards have been abolished; boards of guardians are to go, and yet at one and the same time recommendations come thick and fast for the creation of authorities with particular functions over defined areas.

The truth is that we have still to reconcile the things we have done with those things we ought not to have undone. In the desire to aggrandize the territorial authority whose existence rested on an area, we have swept away many of those bodies whose existence while confined to an area rested on a specific function, and some of these will have to return.

The recent report of the Royal Commission on Drainage indicates the revival of the Commissioners of Sewers in a complete form.

We have to close the gaps between Parliament and the parish council; we have to distinguish between those services the efficient performance of which rests upon great capital expenditure over wide areas and those which begin and end in a single parish. When (to speak figuratively) the doorstep may not be cleaned without seeking permission through a delegate, centralization has run mad.

Mrs. Cole's little book may help to keep us sane, coupled as it is with a certain genius in the nation for minding its own affairs which, if it is not always present in private life, is seldom wholly absent from public administration. While her pages perhaps hardly fulfil the aim set out in the foreword of an appeal to independent students who want not to be told what to think, but to be helped to think for themselves, and while though dated 1927 it shows no acquaintance with the Rating and Valuation Act of 1925, it may well serve as the *hors d'œuvre* or, shall we say, the appetizer to the more solid meal to which she invites her reader in her last chapter on "Some Books."

NEWS AND TOPICS

A New Policy for the Profession—Machinery in the Home—Modern Love of the Sham

HERE is a prospect that the comprehensive policy outlined by the A.A.S.T.A. at the Caxton Hall meeting on February 20 may become a reality. The policy aims at providing a remedy for the problems which have become more acute in recent years and which are of equal interest to the private practitioner and the salaried man. The main point of this policy involves the establishment of a special committee of the R.I.B.A. to deal with matters affecting salaried members. The A.A.S.T.A. contends that such a committee has become necessary owing to the increasing tendency on the part of employers outside the profession to engage the services of architects in a salaried capacity, and frequently at rates of remuneration commensurate with the capabilities of novices instead of those consistent with the services of qualified men. It further contends that such methods are depreciating the finances of the entire profession to an alarming extent, and that the community is obtaining its architectural service much too cheaply, with a consequent lowering of the status of all classes of architects. It is understood that the proposal has already received attention at the R.I.B.A., and that the matter will be fully considered at the next meeting of the Council of the Institute. I hope a favourable verdict will be given, for such a course would revive the interest and support of the salaried members and foster a spirit of co-operation throughout the profession.

At a time when slum clearance problems are under discussion, it is interesting to note certain recommendations made in 1903 by Mr. John Mann, jun., to the Glasgow Municipal Commission for the Housing of the Poor. He urged that something must be done to touch the real crux of the problem-disreputable tenants, and advocated that a few experimental blocks of city homes should be erected. These would act as receptacles for the thriftless residuum who would be displaced by slum clearances. He suggested the erection of a structure which should be severely plain, easily scoured, hosed, fumigated, and disinfected, with a minimum of fittings and a maximum of strength. He advocated that no couples without children should be admitted, as the existence of children was a sufficient indication of an attempt at least towards family life. He pointed out that in Berlin similar shelters were in existence for persons who did not keep themselves and their houses clean. Twenty-five years after, Mr. Mann has become Sir John Mann, the well-known accountant in the City. who was director of Contracts at the Ministry of Munitions during the war. Conditions are still difficult in Glasgow, and a well-known member of the R.I.B.A. told me this week of a tour that he had made round some new houses in that city, where he found that the baths were being used as sanitary conveniences by the rough Irish tenants moved from the slums.

A visit to the Ideal Home Exhibition leaves me in a very bemused condition. It was such a very mixed grill. As to the question of the coming of machinery into modern houses, there is no doubt. We must accept it as the natural consequence of modern life. But can the average housewife and maid-of-all-work handle it ? Shall we design down to their (assumed) ill-qualifications, or may we expect an intelligent technical understanding of equipment? Personally, I think we must feel our way. Washing machines and vacuum cleaners must be foolproof, and, for the most part, they are. There is still room for fitting safety guards to such plant in some cases. I came across instances in otherwise excellent washing machines wherein machinery could be set in motion and hands or clothing caught by moving parts. In another case-it was in regard to a dishwashing machine-all that was needed was a switch attached to the cover so that the motor could not be switched on until the cover was closed-and the makers had not fitted it. A further case to illustrate my meaningalso a dish-washer. Here dishes were supposed to be placed in a wire mesh container, and spoons in a cupped vessel above them. Beneath the wire container, paddles revolved to agitate the water. Can you see a modern household where a fork or spoon falls from a dirty dish as it is being put into the washer? It falls, perhaps lodging between the plates with one end through the wire tray and in line with the paddles. It will be a fairly common accident, I am afraid. Yet it would probably cause a jam with broken plates, bent wire tray, and twisted forks. Such matters may well arouse a prejudice, when all the while science and engineering are awaiting the call of the housewife. I think that the best way will be for the engineer and the architect to take a course in practical nineteenthcentury housewifery, and not expect the housewife to be a careful technical engineer. Lastly, it is natural that such equipment as vacuum cleaners and washing machines should at present be made as separate portable or semiportable units. There is, however, an ill-met need that the "House of the Future" must surely call attention to-the need for built-in equipment.

A correspondent writes to say how much he has enjoyed my "little joke" in inserting among my notes in the JOURNAL for February 29 the advertisement of a self-styled "builder and architect" who is prepared to erect "oldstyle Tudor Houses" provided that his admission of "Finance required" meets with a favourable response. My correspondent goes on to state that he knows the facts of the case, and that he prefers the advertisers' designs and methods of construction to some he has seen carried out under architects' supervision. He ends his letter with: "Give me Tradition of Old England by a 'builder and architect' rather than the Modern by 'fanatics of the R.I.B.A. !"" i I

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Do the "old-style Tudor Houses" really "keep England beautiful"? Is imitation of a past style likely to be successful? And is it the same thing as tradition? Actually, judging from examples of sham archæological reconstruction that I have seen, I must confess to doubts on all these heads. No past style is likely to fit our present conditions and supply our needs in a material sense, and the attempt to adapt its artistic details to present-day building either means that the style cannot be carried out faithfully, or that convenience has to be sacrificed to it. The rage for mock Tudor, like the rage for Gothic revival, involves a fundamental lack of harmony between modern use and ancient art. In the case of the Gothic revival, now completely out of fashion, the deadly effects of archæological sham are forcibly apparent, and it is only a question of years before the Tudor fraud, which now seems less unpardonable, will be recognized as a horrible misuse of ingenuity, and of good material and opportunity.

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But why this passion for what is false, what is fake, in people who are otherwise straightforward and honest? Educated people, of course, do not care for shams; but whether the choice between good and bad is a question only of education is a very deep question in psychology. It would certainly seem that literature, art, good music can be appreciated only by the educated few.

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I imagine that through the sale-rooms and the museums we are by now pretty well acquainted with the drawings of Alfred Stevens. The collection of scraps now to be seen at the R.I.B.A. is interesting, however, if merely as an indication of the artist's industry in note-making and notetaking. It would not be greatly interesting under any other name. Alfred Stevens was in love with art; the designers of today are in love with nature and reality generally. I breathed again on entering Paterson's Gallery to note nature and human nature in streets, houses, fields, and human bodies straightly seen. Geoffrey Nelson has worked with the Paris painters for ten years and assimilated nothing that is not worth while. He paints better than most of his masters, and his pictures of streets and houses are shapely and accomplished transcripts. And Mrs. Fisher-Prout at the Redfern Gallery shows that she can see a building in her "Cloister of San Gregorio, Venice," and render it well graphically in good colour, if not plastically or architecturally. In the same gallery Wendela Boreel, while she cannot quite escape from her master, Sickert, strikes a new, clear, and simple note in her etchings of a "Fountain at Rome," "Lion of St. Mark's," and "Brighton Front." I was glad to see her aquatints, a medium still too seldom used.

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It is fortunate that Little Wenham Hall, one of the most perfect examples of a house of the thirteenth century now existing in this country, is being carefully preserved by the present owner. This interesting building lies a little away from the main road from Colchester, and is seldom visited, except by those who realize its architectural interest. The plan is a rectangle lying north and south. There are two rooms in the main building, on the ground floor a vaulted undercroft, and above it a hall with a fireplace, four windows, and a timber roof. There is also a square tower on the eastern face. It is believed that the hall was built between the years 1260 and 1300, probably of bricks imported from Flanders by way of Ipswich, for even at There were that date there was foreign competition. certain alterations made in Elizabethan days, but much of the original still remains. The most beautiful part of the

Hall as originally built is the entrance to the chapel. This is itself a fine specimen of decorated architecture.

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I love the jocund house-agent. I have found him a fellow of infinite jest and remarkably quick in the uptake. What is more, he is disposed to be generously appreciative of the architect's work and, indeed, prodigal in praise of the building up for sale. Often he has a happy knack of setting about his business in a charmingly diverting way. A characteristic example of his inextinguishable passion for praising (or ought I rather to say appraising?) has just been sent me by an obliging correspondent. Our ingenuous friend, Mr. Smarterley, would probably smile indulgently, though I fear that "Karshish" would frown portentously, on the crisp colloquialism with which our house-agent's advertisement opens, to wit: "Catch the next train to this really phenomenal Bargain." You see, the gentleman is not arguing with us, he is telling us; advising us for our soul's welfare. I feel sure that those who, unlike myself, were so fortunate as to have seen the advertisement in time to act on its imperative enjoinder would " catch the next train " in congested crowds. For that catch-phrase is dynamic, hypnotic. It makes up the mind, willy-nilly. of the weak wobbler who is constitutionally unable to perform that function for himself. How joyously would I " catch the next train," even though it were what Miss Rose Macaulay so subtly designates the "Crewe Train," if at the end of my journey I should be rewarded with the beatific vision of what the advertisement describes as "a lovely old character house dating from the IVth century." For a house of that date would have been a-building at about the same time as the Arch of Constantine ! But we are daunted by the intrusive reflection that several great printers of the past, and possibly several sculptors also, have made or marred history by incontinently omitting an X from a vital date.

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Congratulations to Mr. E. Berry Webber in winning the Peterborough Town Hall competition. Sir Reginald Blomfield was the assessor.

ASTRAGAL

ARRANGEMENTS

THURSDAY, MARCH 15

The Architectural Association. 8 p.m. Conversazione.

SATURDAY, MARCH 24

The Royal Sanitary Institute. 10.30 a.m. In the Council Chamber of the Municipal Buildings, Taunton. Discussion on "House Refuse Collection."

MONDAY, MARCH 26

The Institution of Structural Engineers. 6.30 for 7 p.m. Annual Dinner at the Park Lane Hotel.

The Architectural Association. 7 p.m. "Acoustics of Opera Houses and Concert Halls." By Hope Bagenal.

"CONQUESTS" IN CONCRETE

[BY JOHN GLOAG]

OPTIMISTS and pessimists alike have been saying for some years that "the concrete house is bound to come." The statement and the belief in an inescapable type of architectural future which it illustrates may perhaps undergo some healthy modifications when a few more concrete houses have been built. The two prize-winning designs in the competition promoted by the Portland Cement Selling and Distributing Company, Ltd., which are to be seen at

the Ideal Home Exhibition, may even suggest that the concrete house, so far as its form is concerned, is still in process of "arriving."

Mr. Thomas S. Tait, F.R.I.B.A., has designed the $\pounds 1,750$ concrete house, and the $\pounds 750$ design is by Messrs. Frank J. Brown and J. H. Peek.

The first impression one gets of the $\pounds_{1,750}$ house is that it resembles some vast, overwhelming exhibit of Empire



The £1,750 concrete house at Olympia. By Thomas S. Tait.

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produce—Australian butter in bulk, for example. The surface, too, seems to have had the attention of those flat, wooden implements with which the grocer slices up his slabs of butter and pats them into neat $\frac{1}{2}$ lb. or I b. bricks; only here the implements have not been handled with the precision that governs the grocer's butter-craft. The house

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> is in shape like a brick, save that in front a long balcony projects from the first floor like a lonely tenon yearning for a friendly mortise. The windows send a stream of horizontal lines across the front, and these lines are emphasized by the balcony, which overshadows any vertical relief the front door might conceivably afford. This horizontality



The £750 concrete house at Olympia. By Frank J. Brown and J. H. Peek.

of elevation brings down the height and makes the whole house look needlessly squat.

The roof is flat. The chimneys make one regret that Tenniel never illustrated the house of the March Hare in *Alice in Wonderland*, where "the chimneys were shaped like ears and the roof thatched with fur." He would perhaps have made those odd chimneys look rather like the alert pair which flank the flat roof of this concrete house.

The exterior is of a uniform buff hue; the doors are orange dusted with gold; and the metal frames of the windows are painted green. The windows are really much bigger than they look, but the long horizontal glazing-bars give them a cage-like appearance.

The interior is lined with an insulating material which provides an agreeable broken surface when painted or distempered. The decoration is fairly simple, plain walls and clean colours being the rule, although in the sittingroom some respect has been paid to the great god, Stunt, who came down to earth for a few months nearly three years ago in the Paris Exhibition, and who still attracts occasional worshippers. The sitting-room has a vast fireplace surround of an aggressively rich material, and in the midst of this marble halo the fire becomes a lone star instead of a focal point of comfort.

There is no fireplace in the dining-room, but a lowpressure water-heating system keeps the house at a comfortable temperature.

The hall, which is tiled in rubber, is rather large, and there is a suspicion of wasted space about it—especially about the pedestal that juts up between the first flight of stairs and the wall of the lavatory. Entering the hall, you are faced by the lavatory door on the left; then comes this pedestal, which may be intended to carry a statue of the owner, architect or builder, as fancy pleases. It is certainly too low for a bust, and it is shown to the public at Olympia as a base for a pot with some shrub in it that resembles an aspidistra on stilts. The stairs have a solid balustrade, surmounted by a handrail of dull crimson. A tall window towers up from the half landing, and it gives height to the stairway, and has a gracious slenderness of line.

The kitchen is admirably planned, and is a real workshop. Labour-saving has not been an afterthought that expresses itself in gadgets; it is expressed by the sensible arrangement of this room, which seems larger than it really is (it is actually 14 ft. by 11 ft.) owing to the intelligent disposition of the cooking apparatus, the sink, drainingboards, and fitted shelves. A little more labour would have been saved had the fitments been carried straight up to the ceiling instead of leaving an assortment of dust-traps; but then no kitchen is perfect.

The doors throughout the house are designed in the labour-saving spirit, for they have perfectly plain tonedwood surfaces, broken only by their handles.

The bedrooms are small and compact. There is no wasted space, and from the French windows of the largest bedroom on the first floor one may step on to the long balcony. It is narrow, and provides standing room only, but it is an excuse for a fringe of flowers.

There are no cornices anywhere in the house, but the texture of the material used for walls and ceilings eliminates any hint of harshness. Also the architect has realized the need of curves in his rooms. It is a human house inside, and the wisdom of its designer has protected it from the angular brutality that continental architects so often impose upon their concrete creations. The £750 house may have started out to be something faintly Georgian, but the flat roof came down hard on those ambitions, and literally put the lid on them, an overhanging lid pierced only by a pair of chimneys which, owing to gas-fires and other modern forms of heating, are merely vestigial. The exterior walls are given a "dragged" effect, presumably to enhance the interest of their texture. The result is a series of broken vertical corrugations which look like a half-hearted attempt at fluting, abandoned at an early stage of the building as altogether too unpromising for completion. Immediately below the projecting concrete gutters is a fluted frieze, into which the lintels of the bedroom windows break.

The metal casements and the front door are painted a deep blue, and the colour of the concrete walls is very pale buff, far fainter than the warm hue that adorns Mr. Tait's design.

Not an inch of space is squandered inside this very small house, and only in the combined kitchen and scullery is space misused. The kitchen is little more than a narrow passage, with no room for a table. If a table was used there would only be a few inches of space between it and the cooking range, so that the unfortunate woman using the place would have to climb over or under the table unless he was prepared to burn herself. No sequence of tasks has been visualized in this kitchen, and although it is well equipped, its plan destroys its claim to be labour-saving.

On the ground floor there are in addition to the kitchen a fairly large living-room and a smaller dining-room. The first floor contains one large bedroom, two small bedrooms, and a bathroom. The interior walls are covered with the same insulating material employed in the larger concrete house. The fireplaces are commendably simple in design, and there is a refreshing freedom from consciously decorative "features." The woodwork is stained to the tone that the furniture trade describes as "Jaco," being short for Jacobean, which, so far as it means anything today, usually stands for a dull, lifeless brown.

Both houses have been furnished . .

Both houses, considered apart from their internal decoration and equipment and trimmings, illustrate different possibilities of a material that is strong and docile.

A few years ago Mr. H. G. Wells gave us, perhaps, the best of his series of Utopian visions, and in the eighth chapter of *Men Like Gods* he wrote of a world in which "the forms of everything were different, simpler and more graceful." It was pointed out that on earth "art was largely wit. The artist had a certain limited selection of obdurate materials and certain needs, and his work was a clever reconciliation of the obduracy and the necessity and of the idiosyncrasy of the substance to the æsthetic preconceptions of the human mind. How delightful, for example, was the earthly carpenter dealing cleverly with the grain and character of this wood or that. But here the artist had a limitless control of material, and that element of witty adaptation had gone out of his work."

The designer has a vast control of his material with concrete. The concrete house in its present stage of development may lack inspiration because that new power over material is not fully realized or boldly exploited. Certainly the "element of witty adaptation" has gone, and few of the experiments in concrete house design are enriched with the happy inventiveness fostered by less tractable materials.

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THREE HOUSES IN BUCKINGHAMSHIRE [BY ELEANOR K. D. HUGHES]

THESE three pleasant houses exhibit many of the best characteristics of house design; particularly of small house design. They are refined and simple and gracious. The plans are well arranged and straightforward, and the elevations are well expressed, and they have that touch of rightness which comes inevitably out of a good plan. To design small houses well is a public service which deserves grateful appreciation. These houses are different in character, and embody different requirements. The largest, the one at Chesham Bois, has to deal with a more

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complex problem than the others. It includes, in addition to the usual accommodation, a garage and a sun-porch, all under the same roof. The service end of the house is slightly different in expression, the slope of the roof being brought down to cover the garage. The service windows and back door, though they appear on the front elevation, are kept to one side, and the front door and window above it form the chief feature in an almost plain stretch of brickwork. The door itself is emphasized yet more by an ample hood. The same combination of door and window



CROUND FLOOR PLAN

House at Chesham Bois. By Adams, Holden and Pearson. Above, the main front. Below, the ground-floor plan.

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By Adams, Holden and Pearson. Two views of the garden side.







House at Chesham Bois. By Adams, Holden and Pearson. Above, the sittingroom. Below, the staircase.

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above it, to mark the main entrance, appears in the other two houses, though differently treated. It is a happy method of stressing the chief entrance as a focal point, while keeping the whole arrangement perfectly simple, as is suitable for a small house. Here, in this house, though the eaves are at different levels, and the windows are not symmetrical, the design is stabilized and bound together by the unity of the roof itself, with its evenly-placed chimney-stacks, and by the level line of upper windows. The lower windows, which have more important treatment, mark out the chief rooms, which are linked together by the sun-porch. block have become common features of the present-day plan. This is a more compact alternative to their treatment as detached buildings, as variations of the loggia and the stable. The appreciation of sunlight is not, of course, modern only—though it has received a strong medical and semi-scientific stimulus and is likely to influence planning even more in the future. It is curious to note how many old houses were built apparently without regard to aspect, as if that did not matter; some even seem to have faced north quite deliberately. Shelter was provided carefully—by judicious planting of trees and thick hedges, or by building the house on the lee-side of a hill. In this damp, uncertain climate the sun-porch has great

The sun-porch and the garage incorporated in the main

Cottage at Berkhamsted. By Adams, Holden and Pearson. Above, the entrance front. Below, the plans.

advantages over the open garden on many days of the year. It has fine architectural possibilities. The garage is a problem of a very different kind, and produces interesting variations in planning. It is more of a newcomer, but it is firmly establishing itself as an essential part of the service quarters of a house.

The interior of the house at Chesham Bois shows the same simplicity and breadth of handling. The panelling under the staircase gives an effect of solidity and support. The fireplace, with its simple masses, has restfulness and breadth. The solid mullions give a sense of strength and scale.

These houses have an appearance of solidity which is produced by the best old work. It is all the more welcome amongst so much that is flimsy and unsubstantial in building. Good use has been made of plain wall-surfaces, and the windows are carefully and suitably placed, and do not detract, as in so many instances, from the appearance at any rate of solid substance in the walls. In a word, the rooms seem to be adequately lighted, but not over-windowed. There is a good deal of difference in the shapes and sizes of the windows; this gives variety without sacrificing symmetry.

Again, in these two smaller examples, variety is introduced in a pleasing manner in the treatment of the eaves line—in the slight tilting of the eaves and the carrying through of the gutter. This serves more than a practical reason, and produce a sequence of shadow shapes, as the sunlight moves across the surface of the wall. The fillingin of the gable with a different material adds another touch of variety. The roof and wall-surfaces are very skilfully treated. In time, no doubt, the tiles will acquire a wealth of colour, to which the wall will act as a foil, while it will provide its own severer patterns of light and

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nd se, cal ace ote ard ve ed es, In shade. On the entrance side there is the simple door in a wide space of wall, as before, with an emphatic window above it, and well behind the central chimney as a final point. Here the gutter is stopped against the window, perhaps because on this colder side there is less chance of light and shadow. The window frames are well treated, and with refinement, in both these small houses. The broad, black plinth binds the design together below, and throws up the colour and the whiteness into relief. The plan is compact and regular, with no waste of space.

The house stands amongst well-grown trees, whose shadows may fall upon it, and whose progression of colour frames it in. No regard almost is too much to pay to surroundings, already there, or which could suitably be made. The plain wall-surfaces, which we are learning to appreciate, are invaluable, not only as part of the design, but in relation to the general impression, and as a background for foliage, for endless variations of colour and shadow.

The Lodge, Haresfoot, is at once a house in itself, and, which is its main object, an introduction to a larger house. It stands four-square, as a lodge should, facing equally inwards and outwards, to announce and to challenge. It must have a miniature dignity, a feeling of scale. This lodge fulfils these requirements. While its windows chiefly face the road, its door gives on to the drive. There is the same entrance motive, varied yet again, and the play of shadow under the eaves on the sunny side, accentuated by the band of white which is carried round below the roof. The pyramidal roof and central massive chimney (with its slight shadow lines) give dignity and unity to the block. There is again variety of window treatment, without irregularity of effect. It is an exceedingly expressive piece of work.

Cottage at Berkhamsted. By Adams, Holden and Pearson. A back view.

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SCALL

CORRESPONDENCE

DEFECTS IN BRICKS AND MORTAR

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—Professor Van der Kloes's article in your issue of January 4 deserves the earnest attention of us all. Having at that date just issued a specification in which I had added 1 part Totternhoe lime to 2 of Portland cement, and 8 sand, for mortar, I got the wind up on reading the professor's article, and hastily countermanded the lime. I have since corresponded with the Professor and with Mr. A. B. Searle, the consulting technologist of Sheffield, and have studied Professor Van der Kloes's Manual for Masons—and after this I feel that we English architects know very little about the properties of limes, cement, and the mortars we make out of them.

The great fact, as a somewhat hasty perusal of the *Manual* leads me to believe, that Professor Van der Kloes has, by his lengthy study of mortar in brick and stonework, discovered is the danger lurking in "free," that is unstable, uncombined, lime in mortars. Even Portland cement apparently, as soon as it is wetted, evolves a quantity of this free lime—and when water gets at it the free lime it seems washes out and leaves the mortar porous, or may even destroy the cohesion of it. The remedy is said to be the addition of trass or of finely ground-up bricks or brickdust.

If my reading of the professor is right, we ought never to use Portland cement, either for mortar or concrete, without the addition of trass or ground brick or pozzuolanic materials of some kind, none of which can be easily obtained in this country.

Well, this is a pretty state of things. What is to be done about it?

Will the Portland cement manufacturers oblige with Portland cement ground with trass, which the professor considers the safest way of providing the necessary agent for fixing the lime set free whenever Portland cement is wetted for mortar or concretemaking?

Has the Council for Building Research published any information on this subject? It seems to be highly desirable the whole thing should be investigated and authoritatively pronounced upon by such a body.

To read Professor Van der Kloes's account, in the Manual for Masons, of the defects resulting from the neglect to fix the free lime and from the use of too little sand in mortars, producing shrinkage and osmosis, a horrible disease in walls, is enough to make any architect insure with the A.B.S. twice over for fear of actions for damages arising out of this unwedded lime. This being so, possibly the ventilating of the subject in your columns might be beneficial. W. B. HOPKINS

OLD STEINE HOUSE, BRIGHTON

To the Editor of THE ARCHITECTS' JOURNAL

SIR,-I read your recent illustrated article on Steine House, Brighton, with considerable interest, and greatly appreciate the fact that a local antiquarian has gone to the trouble of delineating the fine old staircase-hall, which forms part of a scheme of remodelling this property upon which I am at present engaged. As the article might give a wrong impression regarding the present remodelling by the National Council of Y.M.C.A.'s, whose property it is, I may say that no pains have been spared to preserve the amenities of this historic building. Indeed, in quite a number of instances the vandalism which has from time to time been perpetrated by the thoughtless has been corrected, and much of the old construction has been restored where it had been ruthlessly disturbed and was in danger of collapse. The centre of this building is hung together by means of a cast-iron box girder of very substantial dimensions, which is carried from the basement floor level to the top floor. The old timbers are hung to it by means of wrought-iron straps.

Only one return flight of the main staircase has been removed, and sections of this were carefully preserved as of local interest. I have no doubt that it was while this was being done, under my instructions, that your correspondent made the isometric measured drawings of it, which are so clear that I need add nothing to describe it, except to say that in my experience it is unique as a piece of construction.

Regarding the old chapel, I found this broken up by a corridor into a bedroom and a housemaid's closet. It is now restored to its original shape, that of an oblong with apsidal ends, the radii of which are slightly less than half the width of the chamber. The shape is not oval, as stated. The original carved mahogany panelling and doors had disappeared almost entirely, and it was impossible, for financial reasons, to replace them. The dignity of the chamber is, however, somewhat restored by the simple modern treatment in oak, with a small communion table standing under a new, leaded memorial window to the members who fell in the war, executed by Mr. E. Showell Trickett, of Birmingham. It is to be hoped that it will be possible to furnish this chapel with appropriate furniture and fittings, and to do away with the mediocre mantel and replace it with a similar fixture, possibly containing some few relics of the lady for whose use it was constructed. Many souvenirs of her are, I believe, now being distributed by the Parmoor family.

The general decorative treatment of the building was of necessity carried out more for the present-day requirements of the building, as an institute, and it was hardly possible for the original style to be restored—a matter which is somewhat to be regretted. The exterior has for very many years entirely lost its original pretensions, but it is hoped that a future effort will enlarge and improve the front of the building, and that the original style and lines may largely be restored. S. PHILLIPS DALES

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PLYWOOD

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—May we reply to the letter of "Iota" in your issue for February 15, criticizing certain claims made in regard to plywood, and mentioned in your columns? Whilst we do not contest your correspondent's arithmetic, we do not agree with his conclusions. As he rightly infers, the contraction was registered on the reduction of the atmospheric humidity from 100 per cent. to 50 per cent., but he overlooks the statement that at the expiration of twentyfour days no further movement whatever was recordable. The cessation of movement is explained by the fact that the board had given up its moisture and had reached a state of dryness when further movement, if present at all, was so infinitesimal as to denote a condition of inertia. If there is moisture in a board, a humidity of 50 per cent, will make its presence demonstrable.

We would also point out that the behaviour of "material of a timber character" is no criterion of the behaviour under similar conditions of plywood, which is real timber constructed scientifically to resist movement. Can it be that "Iota" has pulp compositions in mind, and has based his deductions on the performance of this class of material? If so, we agree that his warning about butt-jointing is justified, but we can give instances of plywood being butt-jointed and papered over with entirely satisfactory results.

W. PIERCY Pharaoh, Gane & Comisany, Ltd.

NEW BUILDING CONTRACT FORM

To the Editor of THE ARCH!TECTS' JOURNAL

SIR,—Now that a new form of building contract is being drawn up with a view of bringing general conditions more up to date, and removing debatable and other points which might lead to controversy between the building contractor on the one side and the building proprietor and architects on the other, this seems a most favourable opportunity for such conditions to be introduced as will protect the specialist sub-contractor for anything he may supply.

We understand that specialist sub-contractors have been badly hit during the last few years through builders defaulting, and in many cases it has happened that the sub-contractor has tendered for his particular work directly to the architect before the general building contract is let, and has quoted the lowest possible prices on account of the proprietors being of first-class standing.

Quite apart from the question of these estimates being put in at an early date, it happens so often that the specialist has prepared a considerable number of drawings and designs which have been embodied in the contract drawings, and for this reason is entitled to claim that he shall be paid for his goods on completion of the work, and it is a bounden duty of the architect to see that whatever happens this payment shall be forthcoming. It is only reasonable and just that this should be so.

This letter is to appeal to architects as a body, particularly to those who make use of the services of specialists, to take care that there are such clauses in this new form of contract to put the sub-contractor at ease on the question of payment, and to insist upon such conditions being inserted to give him (the architect) full power of control of payment to the sub-contractor.

We feel assured that all architects will see the fairness and equity of this appeal. W. DORRINGTON, Director, E. C. and J. Keay (1925), Ltd.

LAW REPORTS

ALLEGED BREACH OF AGREEMENT

Griffith v. Fowler, Abercromby, Simpson and Croome. Chancery Division. Before Mr. Justice Romer

This case raised an interesting point on an agreement entered into by a firm of architects to supervise works in course of construction as an amenity of a certain estate. The judge found that there was no foundation for any allegations against the architects and that they had fully carried out the terms of their agreement, and he dismissed the action of the plaintiff and gave judgment for the architects, with costs.

The plaintiff in the action was Mr. J. L. Griffith, the owner of the Mote Mount estate at Edgware, Mill Hill, and Hendon, and he brought an action against the defendants, Messrs. Fowler, Abercromby, Simpson and Croome, the golf architects, of Addington, Surrey, to recover damages for alleged breach of an agreement to supervise regularly the work of a certain firm of golf constructors, Messrs. Franks, Harris Bros., Ltd.

Plaintiff's case was that he employed Messrs. Franks, Harris Bros., Ltd., to construct a golf course as one of the amenities of his property, which consisted of 750 acres of undulating, wellwooded land, which he desired to develop as a high-class residential estate. Plaintiff complained that owing, as he alleged, to the negligent supervision of defendants, unnecessary labour at a high rate of wage was employed, obsolete methods were used with the results that a large amount of bad and worthless work was done, considerable extra cost incurred, the opening of the links delayed, and the development of the estate retarded. Particular complaint was made of the laying of the turf on the putting-greens without any top soil on the foundations, with the result that the turf perished and many of the greens had to be reconstructed. The estimated cost of constructing the golf course was £8,500, whilst the actual cost was £12,000. Plaintiff alleged that £3,000 had been expended on bad or unnecessary work.

The defence was that no more men than were needed were engaged, that the recognized local rate of wages was paid, and that the methods employed were those best suited to the land.

Mr. J. F. Abercromby, one of the partners in the defendant firm, said he supervised the work. This was the first complaint of negligence that had ever been made against him, and he had supervised the construction of numerous golf courses. He emphatically denied that he advised the turf for the putting-greens being laid without the foundation material being covered with top soil. It was elementary knowledge that there must be a top layer of soil, and he never had any intention of directing that the turf should be laid on screened material from a refuse dump. This was done by the plaintiff's men without instructions from him after the contractor had left the work. His lordship, after hearing counsel, said he came to the conclusion that there was no foundation for any of the allegations of negligence against the defendants, neither could he see that they had in any way failed to carry out their agreement. Under those circumstances he dismissed the plaintiff's action, with costs.

ROAD CONSTRUCTION: GRANT OF RIGHT OF WAY

Wallrock v. Clare. Court of Appeal. Before the Master of the Rolls and Lords Justices Sargant and Lawrence

In this case, the defendant, Mr. H. J. Clare, of the Estate Office, Old Church Lane, Stanmore, Middlesex, appealed from a judgment of Mr. Justice Clausen, in the Chancery Division, holding that the plaintiff, Mr. S. Wallrock, of The Croft, Stanmore, was entitled to a declaration that by a conveyance of August 1926, plaintiff held an immediate right of way over certain land in dispute at Stanmore.

The dispute concerned the construction of a conveyance of a piece of land by the defendant, the appellant, to the plaintiff, under which the defendant undertook to construct a road over an adjoining piece of land. Appellant granted a right of way for all purposes over the road to be constructed. The road was constructed within one year, as provided in the agreement. While the road was in course of construction the appellant took steps to prevent the public going over it, but respondent objected and claimed to exercise his right of way before the road was completed.

The Court allowed the appeal, with costs, and entered judgment in the action for defendant, with costs.

The Master of the Rolls said that until the new road had been constructed the grant of the right of way did not arise, and as the road was constructed within the twelve months, as provided by the agreement, there was no need for the steps Mr. Wallrock took to preserve his so-called rights.

The Lords Justices concurred.

HIGHWAY RUNNING THROUGH TUNNEL

Reigate Corporation v. Surrey Council. Chancery Division. Before Mr. Justice Russell

This case raised a new point as to who is liable for the repair of the roof, walls, and parapet of a tunnel through which a highway passed. The roadway in dispute is nearly 300 yards long, and for 56 yards passed through a tunnel at Reigate, from the London Road to the market place. It appeared that the road was in a cutting, and the road and tunnel were constructed in 1823 by Earl Somers, who then owned the land. The Surrey County Council, in later years, made a voluntary contribution to the Corporation in respect of the repair of the road. Tunnel Road became a main road in January 1923, and the County Council then became liable for an annual payment to the Corporation towards its maintenance. The Corporation claimed for the work on the tunnel under section 11 sub-section 2 of the Local Government Act, 1888. They owned the land round about. In the walls of the tunnel were doors and gates leading to vaults owned by the Corporation, which the Corporation said were part of the road or else works whose maintenance was necessary to the maintenance of the road. The County Council contended that the walls and roof could be neither part of the road nor works erected for the protection of the road, but were merely supports for the land above.

His lordship in giving judgment said: Tunnel Road was a highway created with an inconvenience attached, and the authorities said that the repairs of the inconvenience in those circumstances must be accepted by the owner of the adjacent land which the erection supported. He found that the tunnel was not an inconvenience but a work necessary to keep the surface of the road clear from falls of earth and improper obstruction. There was no authority, so far as he could find, relating to a case of this kind. though it had been recorded that a wall road on the slope of a hill to keep it off a road was part of the highway. He felt he must follow that decision, and that being so, he came to the conclusion that the tunnel which held the land above it from the road was part of the highway, and therefore its repair was the concern of the County Council, and they must pay.

THE ARCHITECTS' JOURNAL for March 14, 1928

ENGLISH PRECEDENT

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ill ist on as he Doorway, Ormeley Lodge, Ham, Surrey. Wooden doorways design was developed further in England than on the Continent, and one charm of country houses, villages, and towns is the eighteenth-century houses, often severely plain in other respects, which are furnished with beautiful entrance doorways. The garden entrance at Tyttenhanger Park (c. 1654) is an early instance. The Wren school produced many whitepainted wood doorways in one or other of the orders, carved with detail of the period. That of Lady Sudeley's house, Ormeley Lodge, is characteristic and has the additional charm conferred by well-designed stone steps and good ironwork. Unfortunately, the fanlight and original door have been replaced by poor and unsuitable substitutes. Even these would have been less unpleasing had they been painted dark green instead of white.— [NATHANIEL LLOYD.]

LITERATURE

GARDEN ORNAMENT

THIS volume is published by *Country Life*. The Prologue announces it as a picture-book, and goes on to say that from photographs of gardens the possessor of one can derive ideas, patterns or warnings. This has been the object in the selection of the pictures, out of the accumulation of thirty years' *Country Life* photography, and in the writing of the Introductions to each section. In neither has it been attempted to give a connected history of gardening.

"Garden ornament is a secondary part of the art of gardening.... We would therefore make clear this volume's purpose. It is not to encourage the promiscuous employment of ornament, nor the production of 'period' gardens.... This book deals with garden design in relation to architecture, and, to some extent, with architectural design in relation to gardening.... The nature of the house should suggest the main lines which frame its garden. This book's object is to indicate methods of thus framing gardens by means of examples already in existence."

The owner of an old house is given sound advice: "To insist on the reproduction of precisely the kind of garden in fashion when the house was built would not only be pedantry—but waste of opportunity. The art and scope of gardening have grown immeasurably since our manor houses and Palladian 'seats' were built."

Also, "this book is intended to help those who have to employ the builder for utilitarian purposes—as steps, walls, bridges, shelters, paths, etc." The sections deal with the various forms of garden ornament in turn, and provide not only a short historical survey, but skilled guidance and criticism of the photographs, pointing out excellences here, and there how the design might have been improved upon.

The first section contains seventy photographs of gates and gateways, beginning with the seventeenth century, and ending on a modern note. The modern gate should express the idea of welcome and anticipation. There is good advice, too, on the painting of gates themselves.

The twenty sections proceed to describe and explain paved courts, steps, balustrades, urns, vases and sculpture, topiary work, busts and parterres, loggias, garden houses and orangeries, canals, lakes and water gardens, fountains and wells, bridges, pergolas, treillage, garden-seats and sundials, dovecots and farm buildings; and include a chapter on overgrowth, showing how creepers should be wisely restrained, and how to use them with full effect; and containing also a list of wall plants which are of great value to the inexperienced. The book finally contains a section on Hispano-Moorish gardens, with very beautiful examples of the use of coloured tiles, and suggestions to be derived from them.

The examples depicted range from the old seventeenth-century gardens, through the eighteenth century, giving the names of the designers where possible, such as Adam or Humphrey Repton, down to modern gardens by Sir Edwin Lutyens, Mr. Harold Peto, Messrs. Forbes and Tait, Sir Herbert Baker, and others, including modern garden designs of extreme beauty.

The sections dealing with pergolas and loggias are, perhaps, those showing the most prevalent garden ornaments of the present time. It is curious to note that flowering creepers are only of comparatively recent introduction into English gardens. It is suggested that the pergola might be more used as a

Folly Farm, Berks. Entrance to forecourt. By Sir Educin Lutyens. [From Garden Ornament.]

"semi-utilitarian object," partly for communication and partly as a screen. Slightly curved beams forming the roof of a pergola are preferable to horizontal ones. There are illustrations of the way in which treillage might well be used in town gardens and areas.

There is much to be learnt from these prefaces.

E. K. D. H.

Garden Ornament. By Gertrude Jekyll and Christopher Hussey. Country Life.

SPECIFICATION

Mr. Frederick Chatterton, F.R.I.B.A., once again presents the ever-welcome hardy annual *Specification*. The edition for 1928 fully upholds past traditions, retains all the best features of previous issues, and is augmented by many new and important innovations. The new frontispiece, a photographic reproduction of the central feature of Mr. Hubert Lidbetter's new building for the Society of Friends in the Euston Road, gives us an example of the work of the recipient of the London Street Architecture Medal awarded by the R.I.B.A. in November last. It is suggested that similar illustrations be repeated each year with the object of forming an interesting record of designs by architects so honoured by the Royal Institute.

A series of six special articles form the opening chapters of the book, and the subjects selected are both varied and interesting.

"The Planning of Flats," by Percy B. Tubbs, F.R.I.B.A., and Grahame B. Tubbs, A.R.I.B.A., is an article on a subject dealt with in a manner as only to be expected when in such expert hands. The chapter covers a range of all types of flat dwellings from those suitable to the requirements of the artisan to more elaborate designs intended for tenants in the neighbourhood of Park Lane. Typical sets of plans illustrate the subject-matter, and provide solutions to most of the difficulties likely to be met with when designing buildings of this character.

Mr. Melville Seth Ward, F.R.I.B.A., deals with the planning of licensed premises. With the modernization and improvement of the present-day public-house the relation of serving space to the floor area for occupation by the consumer is analysed for all types of planning, both town and country, and restrictions in this direction are more often met with in licensed property than in any other. Cellarage, lavatory accommodation, and similar considerations having a very important bearing on the design of such buildings, receive the special attention due to them.

"Flood Lighting," by "A Specialist," gives us much valuable information. In these days of advertising, which is continued during the hours when in past years very little was thought of, flood lighting has become an accepted necessity. This article is illustrated by some exceedingly clever photographs of exteriors and interiors, and the reproductions do great credit to the originals. The difficulties likely to be encountered in connection with this new "art" are elucidated by an expert, and the examples show different treatments under a great variety of conditions.

"Refrigeration and Cold Storage," by Mr. Hal Williams, M.I.M.E., M.I.E.E., etc., is another article on a subject which is anything but widely known, and the inclusion of this chapter, with the constructional details reproduced and so aptly described, constitutes a very acceptable addition to our concentrated work of reference.

"A Fuel Specialist" contributes a treatise on "Gas Coke as Domestic and Central Heating Fuel," and refers to every possible question as to grades of coke, storage, types of open and closed fires, etc. Results of various tests in connection with the use of this fuel are summarized, and prospective users will find many useful hints as to its various applications.

Mr. G. W. Glover, A.M.I.C.E., brings us right up to date by literally taking us "to the dogs" when describing everything in connection with the popular sport of greyhound racing. He does not in this article deal with the merits of the dogs themselves, but compensates us by showing how to "spot" winners in other directions closely connected with the science. We are enlightened on statistics showing the percentage of "doggy" persons likely to be found per thousand of population in various areas; he tells us of the points to be observed in the selection of sites, the laying, maintenance, and protection of the course, why the dogs run, and how the hare should avoid being caught. He gives us useful data on the "site line" of the more opulent members of the grand stand, and the requisite accommodation for their comforts. Lighting arrangements, kennel construction, and the dog hospital are not forgotten, and we receive a good insight into the necessities should we be suddenly called upon to produce a lay-out as may be demanded by the increasing requirements of this popular sport of the people.

In the standard trade sections of the book we are favoured with three new plates of constructive detail by Mr. W. R. Jaggard, F.R.I.B.A., and no further words of commendation are necessary. His new subjects are brickwork and steel roof trusses (further details) and plumbing joints and fittings. May we hope that ere long we shall be able to purchase these plates concentrated in the form of a portfolio, which could be kept in the office for constant use as a reference, or could be used by the architectural student, to whom they would undoubtedly be of very great assistance.

Three coloured plates are included in the issue concerning the different appearances of brickwork, marbles, and joinery timbers, and are examples of the highest class of modern colour reproduction. They are very true to natural colourings, and have a considerable value as a guide to the selection of the various materials in connection with design generally.

Many of the best of modern patents in connection with building and allied trades appear in "Proprietary Building Materials and Specialities," a chapter of specification which has this year again received revision, and has been added to by the inclusion of several ideas of well-deserved merit. Readers will be certain to find in this section something new and of interest, and in all probability will be impressed by the importance of an invention, the adoption of which would result in a saving of both time and cost.

The edition of *Specification* for 1928 can be recommended to all engaged in every branch of the arts and crafts of construction and design. The book will be found to contain, in a concentrated form, as much information as might be expected to be obtained from a whole collection of textbooks, and will always supply that extra piece of information found lacking in the favourite book of reference. The slogan for the publishers of this work might well be "When all else fails, try *Specification*."

B. O. FRICKER

Specification for 1928. Edited by Frederick Chatterton, F.R.I.B.A. Architectural Press. Price 108. 6d. net.

SPONS' POCKET PRICE BOOK

Rapid reference, accuracy assured, and every figure up to date are the sound foundations upon which the ever-increasing popularity of this book have been built. It is the book for the pocket. It can be carried and used on the job: it is most fully indexed, and any information required can be found and referred to in a moment. It seems to be the ideal pocket price book for the busy man. This year, as usual, the book has been brought thoroughly up to date. Among the salient features are the following: Prices for works in all trades, excavator to paper-hanger, arranged in the order of bills of quantities; current rates of wages; constants of labour; rough estimates; preliminaries; taking down and removing; credits for old materials. The book was first published in 1875 and revised annually since. For some years it has been produced under the editorship of Mr. Clyde F. Young, F.R.LB.A.

Spons' Architelds' and Builders' Pocket Price Book, 1928. Edited by Clyde F. Young. E. and F. N. Spon, Ltd. Price 55. net.

Members of the profession are cordially invited to visit the Reading Room at 9 Queen Anne's Gate, Westminster, S.W.I, where they can inspect at their leisure the books published by the Architectural Press. Any of these books will be sent on 5 days' approval on request.

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THE PROPOSED DUTY ON IMPORTED GRANITE: iii

L'URTHER evidence for the applicants was given when the Board of Trade inquiry was resumed into the application by the Aberdeen Granite Manufacturers' Association for the imposition of a duty on all imported manufactured architectural and monumental granite.

Mr. Richard Leighton (managing director of Messrs. Fenning & Co., Hammersmith, granite merchants) said that his firm had no complaint at all about the business methods of Aberdeen granite firms. In forty years his firm had placed orders with Aberdeen firms to the value roughly of $\pounds I$,250,000, and orders to the value of \pounds 200,000 with firms in other parts of the country.

Everything had to be so dead accurate in manufactured granite to be used for architectural purposes that his firm always went to Aberdeen. They did not place orders abroad for architectural granite as they could not trust the foreigners as regards accuracy. Moreover, it was more convenient for the architect for the granite to be ordered from Scotland as he could more easily go and inspect the goods if any question arose than if the granite was being sent by a foreign firm.

Mr. McLeod (a former vice-president of the Cornish Granite Merchants and Quarrymasters' Association, and governing director of McLeod, Ltd., granite merchants and quarry owners of Penryn, Cornwall) gave evidence as to the bad effect of foreign competition in monumental granite on the industry in Cornwall. The Devon and Cornwall granite trade, he stated, had been

in existence for at least a century. Many well-known structures,

Liebig's, Place de Meir, Antwerp. By Wallis, Gilbert and Partners.

such as Tower Bridge, Westminster Bridge, other Thames bridges, and the Nurse Cavell memorial, were some of the examples, among many other equally notable architectural works, which had been executed in Devon and Cornwall.

Up to 1903 the whole of the demand for granite in the home market was supplied from home sources, and in addition a considerable amount of export trade was done. The total amount of granite produced in Devon and Cornwall during 1927 was 18,300 tons, a total of 1,200 men being employed, including quarrymen.

From 1919 to 1922 employment was kept going by the monumental branch of the trade, at least 80 per cent. of the work done in the two counties at that time being of this class. In the latter part of 1922 a big slump occurred, but a revival took place about March 1923. This revival was due to the Government and various public bodies confining the supply of granite to home material on civic structures, such as the new bridge at Newcastleon-Tyne and the granite work for the Port of London extensions. So that for the last four years the Devon and Cornwall trade had been maintained through the securing of these contracts. Their trade had now completely swung round from monumental work to be almost entirely depending for its existence on British granite being specified for architectural and engineering purposes. But for that, unemployment in the granite trade of the two counties would now be of considerable magnitude.

Witness added that the foreign competition in the monumental trade had had the same effect on the industry of Cornwall and Devon as previous witnesses had shown it to have had on Aberdeen's trade.

Mr. Wm. Nankiwell (senior partner of Wm. Nankiwell and Sons, granite merchants and quarry owners, Bodmin, Cornwall) said he agreed with everything Mr. McLeod had stated, which represented the views of the Devon and Cornwall industry.

Mr. W. D. Esselton (secretary of the Aberdeen Association) at the following meeting addressed the committee in support of the contention that the granite manufacturing industry of this country is of substantial importance-a point on which the committee required to be satisfied before proceeding further with the inquiry. The number of workers employed in the quarrying industry, he said, must be taken into consideration as well as the number employed in manufacture, because the continued existence of the quarrying industry was wholly dependent on the maintenance of the manufacturing industry; if importation of foreign manufactured granite increased to such an extent as to drive the manufacturing industry of this country out of existence, it would mean the closing down of the quarries and the dismissal of the quarry workers. The workers employed in the production of the machinery and plant, pneumatic and other tools, and the various accessories of the industry would also suffer. He asked the committee to take into account the shrinkage which had occurred in the number of workers employed since the pre-war period. The number of skilled men and apprentices employed in the manufacture of monumental and architectural granite in the Aberdeen district before the war was roughly 1,900, and the number at present employed is 1,100. The number of such workers employed throughout the country is now 4,000, and, taking the percentage of shrinkage in Aberdeen as a basis-in the absence of definite figures-it would appear that the number so employed throughout the country before the war was 7,000 approximately. These figures did not include the unskilled workers and office staffs, or the quarry workers.

The present application, he said, was probably unique, in that it had the full support of the men's union and of the local employment committee of the Ministry of Labour.

Mr. Esselton also urged that the industry was of substantial importance by reason of the nature of its products, and that it was carried on in an efficient manner. Further, he pointed out that the Board of Trade, before appointing a committee to consider any safeguarding application, had to be satisfied as to the importance of the industry concerned, and the fact that the present committee had been appointed was evidence that the Board was satisfied in this case.

Mr. N. L. Macaskie (counsel for the opponents of the applica-

tion—a group of merchants, supported by the National Association of Master Monumental Masons) said that the whole of the manufactured granite imported last year was monumental, and he was instructed that no architectural granite was imported; further, the applicants did not ask for a duty on dock and engineering granite. No attempt had been made, however, to tell the committee how many workers were employed in the manufacture of these four classes, which would show how many were affected by the importation complained of. Again, referring to the applicants' contention that the workers employed in the quarries had to be considered, he said they were not entitled to ask the committee to consider any industry outside the applicant industry. The applicants had not even begun to satisfy the committee that the industry was of substantial importance by reason of the number of workers it employed.

Memorials, he continued, were made of many other materials as well as granite, the latter being the most expensive, and he contended, therefore, that the manufacture of granite memorials was a luxury trade. In spite of the importation, until December last the manufacturers would not reduce their prices, and it was because of that that buyers had bought from abroad. He regarded that as inefficiency in an industry which had to fight foreign competition, though it might not be inefficiency in the case of an industry which was not seriously affected by such competition. The inevitable result of a duty on imported granite would be to put the British manufacturers back into the position which, by reason of this competition, they had lost—that of being able to dictate to the consumers how and at what price the business was to be carried on.

The chairman asked Mr. Macaskie what he had to say about the evidence of Mr. Leighton (of Messrs. Fenning & Co., Ltd.),

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who had stated that he always went to the Aberdeen or Cornish manufacturers for his architectural granite, because the accuracy demanded was such that he would not trust the foreigners.

Mr. Macaskie replied that nobody went abroad for architectural granite, not so much because foreign manufacturers did the work less accurately than the British, but because the architect wanted to be on the spot where the granite was manufactured to ensure that accuracy was being maintained. An architect could not go to Germany or Finland in order to assure himself that his measurements were being faithfully adhered to.

The committee then adjourned until a date to be fixed later.

THE REGISTRATION BILL

Owing to the successful obstruction of Major Tasker, the member of the Select Committee who differed from his colleagues last year, the Architects' Registration Bill is practically "dead," for this session at any rate. The debate on the second reading had been in progress for only a couple of hours, when Major Tasker called attention to the fact that the necessary quorum of members was not present. After the customary interval of two minutes had elapsed, the House was "counted out." The day allotted to the Bill has, therefore, been lost, and it is difficult to see how further time is to be found for the measure this session.

The second reading of the Bill was moved by Sir Walter Raine, the Unionist member for Sunderland, who reminded the House that a similar measure was brought in twelve months ago, and was read a second time and sent to a Sclect Committee. The committee recommended that another Bill should be brought in, embodying certain amendments made by them. The present

Liebig's, Place de Meir, Antwerp. By Wallis, Gilbert and Partners. Decoration of entrance hall.

measure was the result of that recommendation, and, he thought, satisfied all parties. He claimed that the Bill would protect the public, inasmuch as they would know who were registered and were properly qualified architects. He denied that under the provisions of the Bill poverty would be a bar to anybody becoming an architect.

Sir C. Kinloch-Cooke, in seconding, as chairman of the Select Committee, recalled much of what happened before the committee. He strongly emphasized the fact that there was no desire to make the profession a close one. That idea, he said, had been entirely dissipated by the statements of Mr. Barnes, who had appeared before the committee on behalf of the R.I.B.A. The Bill merely restricted the use of the title " architect " and of the term " architectural " to persons at present employed in the profession and those in future who attained to the qualifying standard. The Bill would not only benefit architects, but it would be a safeguard to the general public.

Major Tasker, who moved the rejection, was strong in his opposition to the Bill and in his denunciation of the R.I.B.A. He accused Sir C. Kinloch-Cooke of having suppressed opposition before the committee, and denied that there was anything in the Bill which protected the public against unqualified men. All architects desired registration, but no scheme had yet been devised which had proved acceptable to the R.I.B.A. It was the duty of the R.I.B.A. to have ascertained the views of their members by a referendum, and, he thought, had that been done, there would have been a majority against the Bill. Some of the greatest buildings in London had been designed by men who had passed no examination. They found some of the most hideous structures in modern housing schemes designed by members of the R.I.B.A. He wanted to open the door to every genius, whether he had passed through Oxford or the Council school. He also complained that the Bill would revive all the old controversy that had formerly disturbed the profession.

Colonel Wedgwood, the Labour member for Newcastle-under-Lyme, seconded the rejection, and claimed that the Bill was unnecessary and would enable a sheltered profession to extract higher fees from industry. It would also bar the door on the working classes.

Mr. Smith-Carrington, a Unionist, caused considerable amusement by declaring the Bill to be a "jerrybuilt structure, erected on unsound foundations, and disclosing a decadent style!" He said it would not promote the employment of architects, or do anything to increase the architectural beauty of the country.

While Mr. Gardner, a Labour member, was supporting the Bill, the House was " counted out," and the debate ended.

SOCIETIES AND INSTITUTIONS

R.I.B.A. Annual Dinner, 1928

The Duke of York has graciously consented to be present at the annual dinner of the R.I.B.A., which will take place on May 23 in the hall of Lincoln's Inn, which has been kindly lent for the purpose by the Benchers. Full particulars and application forms will be sent by the R.I.B.A. to all members at an early date.

R.I.B.A. Prizes and Studentships, 1928-1929

The R.I.B.A. Prizes and Studentships pamphlet for 1928-1929 has just been issued. It contains full information upon the various prizes and studentships, totalling in value nearly £2,000, together with, where applicable, the detailed programmes for the competitions. Copies of the pamphlet are obtainable at the R.I.B.A., price 1s., exclusive of postage.

R.I.B.A. Statutory Examinations

The R.I.B.A. Statutory Examinations for the office of district surveyor under the London Building Acts, or building surveyor under local authorities, will be held at the R.I.B.A., London, on May 2, 3, and 4, and on October 17, 18, and 19, 1928. The closing dates for receiving applications for admission to the examinations, accompanied by the fee of ± 3 3s., are April 11 and October 1 respectively. Full particulars of the examinations and application forms can be obtained from the secretary, R.I.B.A.

R.I.B.A. Special Examination Qualifying for Candidature as Associate

The Council of the R.I.B.A. have decided that the thesis or written article shall be abolished in the case of the special examination, qualifying for candidature as Associate, which is open to architects in practice and assistants over thirty years of age whose applications are approved by the Board. Candidates will now be required only to submit in support of their applications, as evidence of their general architectural knowledge and capabilities, examples of their work accompanied by a detailed report, or reports. The report, or reports, will be required to deal with the reasons for the selection of the site, its treatment, and a description of the building of which the report is the subject.

Structural Engineers' Annual Dinner

The Marquess of Londonderry, K.G., has accepted an invitation to be the principal guest at the annual dinner of the Institution of Structural Engineers, which is to be held at the Park Lane Hotel, W.1, on Monday, March 26. It is expected that the usual average attendance of 500 members will be present at the function.

Leeds and West Yorkshire Architectural Society

At the last meeting of the above society a discussion took place as to whether competitions should be open or limited. The president, Col. Albert E. Kirk, occupied the chair, and there was a good attendance of members. Mr. Donald Brooke, of the Leeds School of Architecture, took the view that competitions should be thrown open. To have the opportunity of comparing his efforts with those of others was, for the young architect, a valuable experience. Competitions for important buildings had been won by young men, and there was no reason why they should not continue to have the opportunity to win their spurs. The opposite view was taken up by Mr. F. Chippindale. He said that nowadays many buildings were used for special and technical purposes. These buildings required the skill of architects versed in the particular class of work required, and in such cases young, inexperienced men were only wasting their time. When a young man did succeed in winning a competition, he was usually put into compulsory association with some older and more experienced man, who generally took a good half of the glory. After a lively debate, the president said he was in favour of the preliminary, eliminating competition, which allowed for the minimum of detailed drawing, All the promoters desired in the first instance was the main idea of the scheme. On the question being put to the vote, the meeting. by a large majority, decided in favour of open competitions.

The Part of Science in Building

Dr. R. E. Stradling, M.C., D.SC., A.M.INST.C.E., director of building research in the Department of Scientific and Industrial Research, addressed the South Wales Institute of Architects and the South Wales Branch of the Institute of Builders at Cardiff on "Cement and Concrete." Mr. T. Alwyn Lloyd, F.R.I.B.A., presided. Dr. Stradling, who illustrated his lecture with lantern slides, gave an extremely valuable and interesting statement on the scientific aspect of architectural and building work. He showed how interesting was the evolution of building methods, dealing in turn with those adopted by the early Briton, the Roman, the medieval builder, and the builder of the Renaissance period, and indicated that if the stately homes of England remained in the old style, the more modern structures, from the council houses to great commercial buildings, were being fashioned largely in the sturdy white grandeur and of the composite fabrics produced by modern scientific methods. Dr. Stradling's lecture made it clear that science is inevitably playing an increasing part in the building industry, and must have convinced his audience of the need for a greater knowledge of scientific method on the part of all who are co-operating in building work, whether as architects, builders, or craftsmen.

A NEW GLASS TO TRANSMIT THE SUN'S RAYS

[BY S. ENGLISH, D.Sc.]

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PERFECT health is no doubt the greatest blessing that man enjoys, but it is somewhat surprising that in some respects civilization has progressed along lines which have tended to impair the health of mankind. Rousseau realized this, and preached the gospel of getting back to Nature ; and to a certain extent he was right, for we now recognize that man's physical well-being is best attained under natural, as distinct from artificial, conditions of life. For this reason city workers take their holidays at resorts where they can lead an open-air life-they lay out their golf courses in open country, they spend their evenings in their gardens in short, they find that the best way to keep in good health and physically fit is by spending as much time as they can afford in congenial employment in the open air. The reason for this is not difficult to find; sunlight is universally recognized as a most powerful factor in promoting healthy conditions of life and growth, and in repairing the wear and tear of our physical and nervous systems caused by our daily employment. These facts may be illustrated by examples taken from opposite ends of the scale of civilization. On the one hand, primitive tribes are known to expose wounds to the action of direct sunlight to assist in the healing process and an apparent hastening of the healing results; while, on the other hand, progressive education authorities, both here and on the Continent, have established open-air schools for the benefit of children who are weak, under-developed, or suffering from malnutrition.

One may well ask why it is necessary to establish open-air schools—are not our ordinary schools well lighted and ventilated by good and sufficient windows? Or why is it necessary to establish sanatoria in the open country—are not our hospitals in town sufficiently well supplied with air and light? The answer to these questions is that we are living under unnatural conditions, partly because one of the advances made in the progress of civilization was not an unmixed blessing, though this was not suspected until a short time ago. The step in the progress of mankind referred to was the introduction of glass for use as windows. These glass

windows appeared for centuries to be perfect, for they admitted light to buildings; and still protected the interior of the buildings and their inhabitants from the wind, rain, dust, smoke or other undesirable state of the atmosphere that may have existed outside. What more could be asked of them? So far as could be discerned, the light inside rooms with glass windows was just the same as the light outside; but as a matter of fact there was an invisible and most important difference. The reason for this difference is now known, and after careful research into the problems involved, a glass has been developed which enables the light inside a room glazed with it to have the same quality as the sunlight outside.

It is reported that during the recent war an electrical engineer was unfortunate enough to have the windows in half of his factory shattered as the result of an air raid, and being unable to get these windows replaced at the time with glass, he filled up the frames with celluloid as a makeshift. The temporary measure had most unexpected results. The workmen in that part of the shop still glazed with glass continued their work exactly as before, but those in the part glazed with celluloid appeared to enjoy better health and more cheerful spirits, and they certainly materially increased their output. The reason for this difference in the two parts of the shop was that the light in that portion with the celluloid windows was nearer *in quality* to the outside light than it was in that portion with glass windows. To understand this action of ordinary glass in reducing the quality of daylight, we shall have to investigate the nature of sunlight itself.

It is now well known that ordinary light or, as it is often called, "white" light, is not a simple phenomenon, but consists of a combination of certain proportions of light of various colours. These component colours can be separated from one another by various means, and as a result a spectrum or a kind of rainbow is obtained in which the various colours are arranged in the order: red, orange, yellow, green, blue, violet. But sunlight contains more than these various lights; everybody knows that sunlight contains a certain amount of heat or heat-rays, and, as a matter of fact, these heatrays, although they are invisible, are found to come adjacent to and to be a continuation of the red colour of the visible spectrum, and are therefore spoken of as "infra-red rays."

In a somewhat similar manner, the violet colour is not the limit of the sun's spectrum in the other direction, for here again there are rays which, although invisible to the eye, may be detected by a photographic plate. These rays are spoken of as "ultra-violet" (meaning beyond the violet), and one of their chief characteristics is the remarkable way in which they promote chemical and physiological reactions.

Sunlight, then, may be said to consist of three sets of rays:

1: Ultra-violet rays, with wave-lengths less than '38 μ ($\mu = 0.001$ millimetre).

2: Luminous rays with wave-lengths between '38 μ and '7 μ .

3: Infra-red rays, with wave-lengths above '7 μ .

It has been found that in the sun's spectrum the ultra-violet rays are present down to a wave-length of 295μ , rays of shorter wave-length than this being completely absorbed by the atmosphere before reaching the earth's surface.

Clear, colourless glass allows all the luminous rays to pass through it with very little reduction, but it does not transmit the ultra-violet rays, being, in fact, quite opaque to the rays of shorter wave-length than about 32μ or 33μ , according to the nature of the glass. Thus the light inside a room glazed with ordinary window glass is similar to the outside light so far as luminosity is concerned, but it is deficient in ultra-violet rays, and devoid altogether of those rays with wave-lengths between 295μ and 315μ . Now, it is just this range which contains the very beneficial and healthgiving rays of sunlight, and their exclusion from a room naturally reduces the health-giving power of the light.

This point is made clear by the curves shown in figure one. The curve "A" shows graphically the physiological activity of ultra-violet light as the wave-length changes from '320 μ down to '250 μ , as measured by two German scientists, Hausser and Vahle. As the sun's spectrum does not extend in the direction of the shorter waves beyond '205 μ it is clear that physiologically

HEALTH

the important part of the sun's spectrum is that portion lying between '315 μ and '295 μ , which portion may be said to contain the health-giving and healing rays. It is of interest to note from the curve "B" that ordinary window glass, 2mm. thick, does not transmit any of these health-giving rays, being quite opaque to rays of a shorter wave-length than '320 µ.

During recent years various attempts have been made to overcome this unfortunate state of affairs, both in this country, in Germany, and in the United States. As the result of continued research work over a period of many months, carried on partly in the Department of Glass Technology of the University of Sheffield, and partly in the research department of Messrs. Holophane Ltd., the author has developed and provisionally patented a formula for a new ultra-violet transmitting glass which has been named "Holviglass." This glass, which has been carefully tested at every stage, transmits freely the whole of the sun's rays --both visible and ultra-violet. It is particularly transparent to those health-giving rays having wave-lengths between '295 μ and '315 μ (see Figure two); thus, a room with windows of this glass possesses light of the same quality as the open-air sunshine. The healing and restorative properties of sunlight may, therefore, be enjoyed indoors, and there is no need for anyone to live or work under the unnatural conditions caused by the deprivation of sunlight of its most valuable health-giving rays.

The extraordinary transparency of "Holviglass" for ultra-violet rays is clearly shown by the photograph reproduced above. For this photograph the light from an electric arc between iron electrodes was used, as this source of light is very rich in ultra-violet light, giving a spectrum extending much farther into the ultra-violet region of short waves than does the sun. The first band, marked "Holviglass," shows that portion of the iron arc spectrum passing through the new glass, 2mm. thick. The second band, marked "Sheet," shows the extent of the transmission of the best quality of ordinary sheet glass (2mm.), while the third band, marked "Plate," shows the transmission of 1 in. plate-glass. Below these three bands is shown a wave-length scale.

It is clear from this photograph that the sample of plate-glass examined only transmits the ultra-violet rays down to a wavelength of 323μ , while the good quality sheet transmits as far as 310 µ. The first band, marked "Holviglass," shows that this glass is transparent to all the ultra-violet rays found in the sun's spectrum, and also the brightness of the band between '295 μ and '315 μ indicates that this glass is particularly transparent to this most important region. The brightness of the photograph in this region, and not the extent of the transmission below the 29 μ line, is the standard by which to test a glass for its usefulness for natural lighting purposes. Judged by this standard the photograph bears out the claim to have produced a glass with a high degree of transparency to the whole of the sun's ultra-violet rays. By the use of this glass complete and beneficial sunshine may be enjoyed indoors all the year round.

It should be emphasized that though the word "sunlight" has been used frequently, this does not mean that only sunlight possesses ultra-violet rays. On the contrary, diffused sky light is very rich in these rays, and some authorities maintain that diffused light from a clear, blue sky is richer in ultra-violet rays than is direct sunlight. This being so, ultra-violet transmitting glass may be used with beneficial results in windows facing any direction, and in any position from which sky is visible, whether they receive direct sunlight or not.

NEW INVENTIONS

[The following particulars of new inventions have been specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office, by our own patent expert. All inquiries concerning patents, specifications, and inventions 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, London, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

- 5648. Ashton, G. Embankment walls, &c. February 23.
- 5642. Bailey, R. W. Structural members subjected to high temperatures, &c. February 22.
- 5737. Evans, L. P. Floors, roads, &c. February 23. 5464. Hammond, F. Pressed-steel doors. February 21.
- 5897. Lee, G. Chimney pots, &c. February 24.

SPECIFICATIONS PUBLISHED

- 285614. Roberts, E. W. Structural building material.
- 285646. Ure, A. M. Interior-register or mantel-register grates.
- 285659. Las Heras, B. F. De. Scaffold-supporting means.
- Ackermann, H., and Scheidhauer & Giessing Akt.-281 593. Ges. Mould-boxes for brick or block presses.
- 285676. Leclerg, J. Arrangement of building.

ABSTRACT PUBLISHED

283414. Layer, E., 4 Bruggstrasse, St. Gallen, Switzerland. Hollow walls; building blocks.

ANNOUNCEMENTS

Mr. L. A. Culliford, F.R.I.B.A., F.S.I., and Mr. J. Eustace Salisbury, A.R.I.B.A., have entered into partnership under the name of Salisbury and Culliford, with offices at 3 John Street, Bedford Row, W.C.2, where Mr. Culliford has been practising for some time.

Messrs. Knapp-Fisher, Powell and Russell have, by arrangement with the executors, taken over the goodwill of the practice of the late Mr. G. H. Fellowes Prynne, F.R.I.B.A. All correspon-dence, etc., relating to Mr. Prynne's practice is accordingly transferred to their address, 4a Lower Belgrave Street, S.W.1.

THE PRINCE OF WALES AT HOPTON-WOOD STONE QUARRIES

During his recent visit to Derbyshire, His Royal Highness the Prince of Wales, accompanied by the Duke and Duchess of Devonshire, the Duke and Duchess of Rutland, the Marquis and Marchioness of Hartington, and others of the Chatsworth House party, visited the works of the Hopton-Wood Stone Firms, Ltd., near Wirksworth, where they were eccived by the chairman and managing director, Mr. C. H. Salmon, J.P.; Mr. A. P. I. Cotterell, and Capt. Perry, M.C., directors. His Royal Highness was con-

ducted through the works and displayed very great interest in the various machines and appliances for sawing and working the stone. He remarked on the very fine texture and pleasing appearance of Hopton-Wood stone, and inquired as to its use. The Prince's chief interest was centred on the various processes for producing headstones for British war cemeteries all over the world. The Hopton-Wood Stone Firms have been engaged on this work for the past six years, during which period they have sent out over 100,000 headstones. Special machinery has been installed capable of a production of 300 to 350 headstones per week. The feature which appealed to His Royal Highness, and in the examination of which he spent some time, was the engraving machine. which enables an unskilled or even disabled man to carve badges and cut inscriptions on the stones. He was shown various types of finished headstones-one for a V.C., others for native Indian soldiers, with inscriptions in Hindu characters, some with two badges for dual grave spaces, and many for the "unknown' dead, a tragic reminder of the effects of high explosives in the Great War. These headstones merely bear the inscription:

"A Soldier of the Great War"

"Known unto God."

Mr. Thomas Hodgkinson, the inventor of the engraving machine, was presented to His Royal Highness, and explained the principles which had first given him the idea. The Prince accepted a memento of his visit in the form of a paper-weight of Derbyshire black-bird's eye marble, with a medallion of Hopton-Wood stone inset, with his crest carved upon it.

TRADE NOTES

An interesting display of all types of signs and equipment for display purposes was shown by the Brilliant Sign Co., Ltd., and its subsidiary company, Stanley Jones & Co., Ltd., at the British Industries Fair at the White City. Among the specialities exhibited was a new double-purpose illuminated fascia. This combines a day sign and a night sign. In the daytime the sign shows black and gold, and at night the bright red edging to the gold letters has a very near approach to a neon light. The new daylight sign, manufactured under the registered word "Sunray," has the background double fired into the stippolyte under the registered "Permenart" process (No. 258664) which, it is claimed, ensures the durability of the sign for a business lifetime. There was a large number of foreign and colonial visitors, and from one colonial agent alone an order was received for 250 illuminated box-signs. The company is also sending out to the Near East 100 sunray signs. Another order was a repeat for 100 "Durasign" tablets for a South African brewer. The subsidiary company, Stanley Jones & Co., Ltd., report good actual business for shoplighting sundries, inquiries being very good for bronze and metal mouldings.

At Uxbridge Petty Sessions, Mr. F. Williams, general and builders' ironmonger, of High Road, Hayes, Middlesex, was charged with applying a false trade description to goods with intent to defraud, by selling as Solignum an article not manufactured by Solignum Limited, who are the sole makers and proprietors of this well-known wood preservative. Defendant pleaded guilty to each of four summonses, and was fined four guineas and twenty guineas costs.

On page 337 of our issue for February 29 we published a review of the new catalogue of the National Radiator Company, Ltd. We should have pointed out, however, that there is no upward limit whatever in the number of sections which can be contained in the firm's radiators, as these are constructed on the unit principle.

An interesting example of modern interior decoration is to be seen at the Potters Bar "Sun-Trap" House, stand 35, in the New Hall at the Ideal Home Exhibition. The whole of the interior walls are of plywood. In the dining-room and lounge, Venesta birch is used in large panels stained with "Parasidol" (supplied by the Stainax Company). The treatment is interesting because boards are used with the grain running vertically as usual, but the horizontal dimension is considerably greater than the vertical. This treatment does not make the room look small, as is sometimes usual with panelling. The ceilings in all the rooms are also made with plywood, papered and distempered.

COMPETITION CALENDAR

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

March 30. Extension of the College of Technology proposed to be erected on a site adjoining the present College of Technology building in Sackville Street and Whitworth Street, Manchester. Assessors, Messrs. Alan E. Munby, M.A., F.R.I.B.A., Henry M. Fletcher, M.A., F.R.I.B.A., and Francis Jones, F.R.I.B.A. Premiums, £500, £400, and \pounds_{300} . Particulars from Town Clerk, Town Hall, Manchester. Deposit £1 15.

September 1. The Council of the R.I.B.A. have accepted an offer from the directors of the Gloster Aircraft Co., Ltd., and Messrs. H. H. Martyn & Co., Ltd., to give a prize for the best imaginative scheme for a London aircraft terminus suitable to the supposed requirements of air traffic fifteen years hence. The competition is open to Associates, elected Students, or registered Probationers of the R.I.B.A. below the age of thirty years on September 1. The competition will be in two stages. From the preliminary competition ten competitors will be selected for the final, and each will be paid \pounds_5 for his expenses. The closing date for the final is January 10. There will be two prizes in the final, a first prize of \pounds_{125} and a second prize of \pounds_{25} . The following have consented to form the jury to award the prizes: Sir Sefton Brancker, K.C.B., Mr. C. Cowles-Voysey, Mr. E. Vincent Harris, Sir Edwin Lutyens, R.A., Major R. Mayo (consulting engineer, Imperial Airways, Ltd.), Mr. T. S. Tait, Mr. Maurice E. Webb, Mr. G. E. Woods-Humphery (general manager, Imperial Airways, Ltd.). Particulars may be obtained free on application at the R.I.B.A.

No date. The Lewisham Borough Council invite archite Ω_S of British birth and nationality to submit designs in competition for the town hall, shops, and offices on the site adjoining the existing Town Hall Buildings at the junction of Catford Road and Rushey Green, Catford. Assessor: Mr. Winton Newman, F.R.L.B.A. Premiums: £350, £250, and £150. Particulars, together with a plan of the site, can be obtained from the Town Clerk, Town Hall, Catford, S.F.G. Deposit two guineas.

THE WEEK'S BUILDING NEWS

The PRESTWICH U.D.C. surveyor has prepared a tentative layout plan of the Polefield estate, and the question of the number of houses to be erected was fully discussed, and it was decided that the number and types of houses to be erected be as follows: One block of twelve flats, two blocks of ten C type houses, two blocks of ten D type houses, twenty E type houses, and 194 C type, and 134 D type houses.

The Middlesex Education Committee is to crect a school for about 300 children in FRIERN BARNET.

Messrs. Watney, Combe, Reid & Co., Ltd., are to rebuild the "Angel" tavern, Silver Street, EDMONTON, at a cost of £15,000.

The SWANSEA Corporation is now to proceed with the Llansamlet pumping station. The revised estimate of the scheme is $\pounds_{33,000}$.

The tynemouth Corporation has arranged terms for the acquisition of $16\frac{1}{2}$ acres for housing purposes.

Messrs. A. W. Allard & Co., Ltd., are to crect business premises on land situate in the approach road to London Road station, GUILDFORD.

Plans passed by the SHIPLEY U.D.C.: Alterations to warehouse, Dale Street, for Messrs. S. Firth & Co., Ltd.; wagon store, Station Lane, for Scientific Roads, Ltd.; petrol storage tank, Carr Lane, for the Wrose Hill Fireclay Co., Ltd.; store shed and workshop, Hall Lane, for Mr. F. M. Hainsworth; store shed, 30 Sherwood Grove, for Mr. L. Walker; four houses, Kirkgate, for Mr. G. West; twenty-two bungalows, Nab Wood Grove, Nab Wood Drive, and Nab Wood Mount, for Messrs. Wm. Pitts and Sons; warehouse, Dockfield Road, for Messrs. F. Mann, Ltd.

The Council of the Browning Settlement is engaged upon a proposal for the rebuilding and extension of the Settlement in WALWORTH.

The governors of Regent Street Polytechnic, MARYLEBONE, are to commence the second portion of their building scheme. The L.C.C. are making a grant of £27,500.

The L.C.C. has decided to construct an open-air swimming-bath at London Fields, HACKNEY, at a cost of \pounds 10,000.

King Edward's Hospital Fund for London is to crect at BECONTREE a general hospital with accommodation for 300 or 400 patients. The HULL Corporation Housing Committee has approved plans submitted by the city architect of the second block of flats and shops at the corner of Scott Street and Caroline Street.

Plans passed by the LEWISHAM B.C.: Sixty houses, Cranston Road estate, for Messrs. Clout and Tysoe; sixty-two houses, Downham L.C.C. estate, for Mr. J. G. Stephenson; ten houses, Holme Lacey Road, for Messrs. W. J. Scudamore, Ltd.; additions, St. Saviour's Church, Brockley Rise, for Messrs. John Garrett and Sons, Ltd.; warehouse, Abbotswell Street, for Messrs. J. W. Heath and Sons.

Plans passed by the HULL Corporation: Twenty-six houses, Northfield Road, for Mr. H. Sanderson; two houses, Boothferry Road, for Mr. J. Emmerson; ten houses, Parkfield Drive, for Mr. S. H. Wrightson; ten houses, Belgrave Drive, for Messrs. A. H. Evans & Co., Ltd.; ten houses, Belgrave Drive, for Mr. F. C. Polley.

Plans passed by the GUILDFORD Corporation: Shop, High Street, for Guildford Stores, Ltd.; additions, porter's lodge, Isolation Hospital, for Joint Hospital Board; ten houses, Dunsdon Avenue, for Mr. Ashenden; workshop, Bridge Street, for Messrs. Rice and Harper; additions, Grenville Hostel, for Mr. A. J. Sullings; seven houses, Worplesdon Road, for Mr. R. C. Whitemore; bakery, North Plave, for Guildford Co-operative Society, Ltd.

Plans passed by the UXBRIDGE U.D.C.: Lavatory accommodation, Railway Public House, Vine Street, for Messrs. Harman's Brewery, Ltd.; extension to main department offices, Waterloo Road, for the Uxbridge Electric Supply Co., Ltd.; four houses, Harefield Road, for Captain Adams; conveyors, Attwell's Yard, for Messrs. Harman's Uxbridge Brewery, Ltd.

The GUILDFORD Corporation proposes to lay out 35 acres of the Stoke Park estate for building purposes.

The HENDON U.D.C. has acquired two further sites on the L.C.C. Eatling housing estate for the erection of schools.

To facilitate the development of the L.C.C.'s new estate at Morden, the Southern Railway is to erect a station on the estate at a cost of $\pounds_{45,000}$.

The Croydon Corporation Libraries Committee reports that the NORBURY branch library should be provided with as little delay as possible and has provided £11,000 in their estimates for its crection. The L.C.C. is preparing plans for the first blocks of dwellings to be erected on the China Walk area, LAMBETH.

The L.C.C. has prepared revised plans for the central block of dwellings to be erected at Ossulton Street, st. PANCRAS, the cost being estimated at \pounds 72,000. The block comprises eighty-seven tenements, with fourteen lock-up shops, a welfare centre. workshops and Salvation Army Hall. An experimental central hot water supply is to be provided.

The STRETFORD U.D.C. has obtained sanction to borrow $\pounds 40,000$ for further housing advances.

The Warwickshire Education Committee has decided that accommodation for 360 children shall be provided in the proposed new school at ATHERSTONE.

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The SEAHAM HARBOUR U.D.C. is to crect a further forty houses on the Carr House estate.

The CROYDON Corporation has decided to invite tenders for the erection of a further ninety houses on the Mitcham Road estate and for seventy on the Hermitage estate.

The Ministry of Health has approved of the proposals of the BEXHILL Council for the erection of a further 100 houses.

Plans for the development of the Hills estate, PRESTWICH, have been prepared by Messrs. Benson and Rosen.

The STOKE NEWINGTON B.C. has voted a revised estimate of $\pounds_{37,500}$ for the new baths scheme.

The MACCLESFIELD Corporation is to erect 126 houses on the Coalpit Lane housing estate.

The Wellington (Salop) U.D.C. is to erect sixty-four houses on the Orleton Lane estate.

The NEWTON ABBOT U.D.C. is to erect ninety houses on the Brooklands estate.

The GLASGOW Corporation has now agreed to a scheme for the erection of a joint hospital in the County of Dumbarton for the treatment of cases of smallpox occurring therein and arriving from overseas.

The CLYDEBANK Corporation has now acquired land in Mount Blow Road, Dalmuir, for a housing scheme.

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M ere Gov Lto The GLASGOW Corporation Housing Committee has instructed the housing director to submit suggested layouts of houses on the three reserved areas at Shettleston, leaving an open space in a section of the area between Grampian Street and Tollcross Burn.

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The GLASGOW Corporation has now agreed to sell a site at Carntyne to the United Free Church Presbytery for the erection of a church.

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Plans passed at SANDERSTEAD: Forty-eight houses, Farley Road, for Messrs. R. Costain and Sons; temporary school, Selsdon Road, for the Surrey Education Committee.

The BIRMINGHAM Corporation is acquiring property at a cost of $\pounds_{150,000}$ fronting High Street, Union Street, and Crooked Lane, to enable the traffic problem in this immediate vicinity to be the more efficiently dealt with.

Plans passed by the CHELTENHAM Corporation: New road, off Moorend Park Road, for Mr. H. F. Hall; ten houses, Swindon Road North, for Miss A. Morgan; six houses, Pilford Gardens, for Messrs. Bendall and Sons; extension to showroom, High Street, for Messrs. Tibbles & Co.; alterations, 344 High Street, for Messrs. Worth; alterations, Montpellier Avenue, for the National Provincial Bank, Ltd.; alterations, Tewkesbury Road, for Messrs. Shell Mex, Ltd.

The LANCASTER Corporation has made a compulsory order to acquire two housing sites in the town, and application to the Ministry of Health for permission to erect 200 houses—work to commence, if possible, early in April.

At the last meeting of the LANCASTER Town Council it was reported that the Morecambe Corporation and the Carnforth and Heysham U.D.C.'s had intimated that they agree in principle to the proposed scheme arranged by the Lancaster Corporation for a new hospital, subject to the details being submitted, in due course, to the respective authorities for approval.

The MANCHESTER Corporation has voted $\pounds_{186,246}$ for the erection of 350 houses on Blackley estate.

The PLYMOUTH Corporation has referred the question of the appropriation of a site adjoining Wolseley Road for the purpose of a branch library to a subcommittee for consideration and report.

Mr. Ninian Macwhannell, architect, is erecting premises in Waddell Street, GLAS-GOW, for the Scottish Grain Distilling Co., Ltd. Messrs. John Keppie and Henderson, architects, are to erect buildings at the junction of Glasgow Cross and London Road, GLASGOW.

The YORK Education Committee has selected for the purposes of a public elementary school land at the junction of Fourth Avenue and Seventh Avenue.

*

Messrs. Robson and Withington have submitted to the Corporation plans for the construction of a greyhound racing track at Ilford Lane, ILFORD.

Plans passed by the YORK Corporation: Two houses, New Walk Terrace, for Mr. R. J. Pulleyn; additions, 34 Heworth Road, for Mr. W. West; additions, 38, 90, and 92 Heworth Road, for Mr. T. Bland; additions, 34 St. Mary's Road, for Mr. A. M. Inglis; house, shop, and garage, Surtees Street, for Messrs. Evans Bros.; additions, Fishergate, Casino Picture Theatre, for the licensee; factory, Bishopthorpe Road, for Messrs. J. Terry and Sons, Ltd.; alterations, Bishophill, for Messrs. Cooke, Troughton and Simms, Ltd.

At a meeting of the YORK Corporation Housing Committee, the city engineer submitted a plan showing the proposed layout of the fifty houses to be erected north of Bad Bargain Lane. The layout was approved, the houses along the frontage to be of the parlour type, the remaining houses to be of the non-parlour type. The subcommittee is to consider the question of these houses being fitted as all-electric houses.

Plans passed by the BARKING U.D.C.: Five shops and houses, Ripple Road, for Messrs. E. Glenny and Son; licensed premises, Gale Street, for Messrs. Barclay, Perkins & Co., Ltd.; shop, East Street, for Messrs. F. W. Woolworth & Co., Ltd.; rebuilding, "Who'd Have Thought It" off-licensed premises, Axe Street, for Messrs. Mann Crossman and Paulin, Ltd.; cement store and mixing shed, River Road, for Messrs. Aerocrete Units, Ltd.; celluloid store, River Road, for Messrs. The River Roden Co., Ltd.; two shops, St. Paul's Road, for Mr. J. Yallop; additions, Elim Hall, for Mr. E. J. Phillips; sixteen houses, Cranleigh Gardens, for Mr. C. Gray.

Plans passed by the STOKE-ON-TRENT Corporation: Additions, Caloric Works, Vescy Terrace, for Messrs. Truswell; confectionery and butchery departments, Trentham Road, for Burslem Co-operative Society; six houses, Regent Street, for Mr. G. Fleet; ten houses, Harpfield Farm estate, for Mr. J. S. Palmer; eight houses, Waterloo Road, Hartshill, for Messrs. J. G. Holloway & Co.; ten houses, Palmers Green, Harpfield, for Mr. J. S. Palmer.

Plans passed by the ILFORD Corporation: Fourteen houses, Vicarage Gardens, for Mr. J. W. Lohden; six houses, Woodford Avenue, for Messrs, Brand and White: eight houses, Derwent Gardens, for Messrs. Brand and White: twenty-three garages, Wanstead Park Road, for Mr. J. F. Pretry; alterations, 221 High Road, for Messrs. E. Pollard & Co., Ltd.; alterations. 78-80 High Road, for Messrs. Meredith and Verlyck; additions, Howard's Factory Uphall Road, for Messrs. Howards and Sons, Ltd.; public-house, Green Lane, for Mr. S. E. S. Yeo; thirty houses, Westminster Gardens, for Mr. J. Aldridge: rebuilding, 44, 44a, and 46 High Road. for Messrs. C. J. Dawson, Son and Allardyce: fifteen houses, Woodford Avenue, for Messrs. Brand and White: additions. Britannia Works, Roden Street.

Plans passed by the TUNSTALL Corporation: Eight houses, Summerbank Road, for Messrs. Nixon and Beckett: engine-house, Royal Staffs Pottery, Prospect Street, for Messrs. A. J. Wilkinson, Ltd.; garages and warehouse, Blackwells Row, for Mr. J. Jackson; alterations, "Farmers' Arms," High Street, for Messrs. C. Bunting, Ltd.

Plans passed by BURSLEM Corporation: Four houses, Brackley Avenue, for Messrs, J. H. Broadhurst and Son; sixteen houses, off Hanley Road, for Messrs, Shenton Bros.; shop premises, High Lane, for Burslem Co-operative Society; heating plant, Oldcott Road, for Potteries Electric Traction Company.

The borough engineer of EASTBOURNE has prepared plans for another thirty-four houses to be erected on the hutments site, and tenders are to be invited.

The Southern Railway is negotiating for the EASTBOURNE Corporation for a site for the erection of houses for railwaymen.

Plans passed by the NORTHAMPTON Corporation: Two houses, Towcester Road, for Messrs. H. Martin, Ltd.: three houses. Queen's Park Parade, for Messrs. Chowns, Ltd.; machine-room, St. Mary's Street, for Express Printers, Ltd.; extensions to printing department, 25 The Drapery, for Messrs. W. Marks & Co., Ltd.: two houses, The Drive, for Messrs. A. Glenn and Sons, Ltd.; new streets, off Park Avenue, for Messrs. A. P. Hawtin and Sons, Ltd.; three houses. The Drive, for Mr. C. H. Rainbow; four houses, Brookland Road, for Messrs. Lack and Revitt; extension to drawing office and pattern shop, Main Road, Far Cotton, for Messrs. Crown Foundry Co., Ltd.; sixteen houses. Gipsy Lane, for Messrs. Chowns, Ltd.; four houses, Lloyd Road, for Messrs. W. J. Richardson and Son; four houses. Lloyd Road, for Messrs. Throssell & Co.

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THE ARCHITECTS' JOURNAL for March 14, 1928

RATES OF WAGES

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• In these areas the rates of wages for certain trades (usually Painters and Plasterers) vary slightly from those given. The rates for each trade in any given area will be sent on request.

PRICES CURRENT

| EXCAVATOR AND CONC | RE | тс | R |
|--|---------------------|------------------|--------------|
| EXCAVATOR, 1s. 44d. per hour; LABOURI per hour; NAVVY, 1s. 44d. per hour; T 1s. 6d. per hour; SCAFFOLDER, 1s. 54d. WATCHMAN, 7s. 6d. per shift. | ER, 1 MBF per | s. 4 RM ho | AN . ur ; |
| Broken brick or stone, 2 in., per ud. | £0 | 11 | 6 |
| Thames ballast, per yd. | 0 | 11 | 0 |
| Pit gravel, per yd. | 0 | 18 | 8 |
| Washed sand | Ő | 15 | Ö |
| Screened ballast or gravel, add 10 per c | ent. | per | yd. |
| Clinker, breeze, etc., prices according to Portland cement, per ton | £2 | 15 | . 0 |
| Lias lime, per ton | 2 | 10 | . 0 |
| Sacks charged extra at 1s. 9d. each a | nd c | red | ited |
| Transport hire per day : | | | |
| Cart and horse £1 3 0 Trailer . | £0 | 15 | 0 |
| 3-ton motor lorry 3 15 0 Steam roller Steam lorry 5-ton 4 0 0 Water cart | 1 | 05 | 0 |
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| dinary earth not exceeding 6 ft. | 0 | 9 | 0 |
| Exceeding 6 ft., but under 12 ft., a | dd | 30 | per |
| cent. | - | | |
| In stiff clay, add 30 per cent. | | | |
| In rock, including blasting, add 225 per | r cen | t. | |
| If basketed out, add 80 per cent. to 15 | 0 pe | r ce | nt. |
| Headings, including timbering, add 40 | u pe | r ce | nr. |
| per yd. | 20 | 1 | 6 |
| SPREAD and level, including wheeling, | 0 | | 6 |
| FILLING into carts and carting away | 0 | | 0 |
| to a shoot or deposit, per vd. cube . | 0 | 10 | 6 |
| FRIMMING earth to slopes, per yd. sup. | 0 | 0 | 0 |
| paving, per yd. sup. | 0 | 1 | 3 |
| PLANKING to excavations, per ft. sup. | 0 | 0 | 5 |
| in depth, 30 per cent. | | | |
| IF left in, add to above prices, per ft. | | | |
| cube | 0 | 2 | 0 |
| 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 2 | 10 | 0 |
| DO. 6-2-1, per yd. cube | 1 | 18 | õ |
| Do. in upper floors, add 15 per cent. | 0 00 | | n f |
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| LIAS-LIME CONCRETE, per yd. cube . | £1 | 16 | 0 |
| BREEZE CONCRETE, per vd. cube . | 0 | 1 | 6 |
| CEMENT concrete 4-2-1 in lintels | 0 | | 0 |
| packed around reinforcement, per | 0 | 2 | 0 |
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| LABOURER. 1s. 41d. per hour : TI | MBE | RM | AN. |
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PLOMBER, 1s. 9¹/₂d. per hour; WATCHMAN, 7s. 6d. per shift. .

| Stoneware pines. | tested | qual | ity. 4 | in., | | | |
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| per ft. | | | | | 20 | 0 | 10 |
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| Cast-iron pipes. | coaled. | 9 f | t. leng | ths. | | | |
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prices. Fittings in Stoneware and Iron according to type. See Trade Lists.

BRICKLAYER

| BRICKLAYER, | 18. | 9}d. | per | hour | ; L | ABO | URER, |
|-----------------|--------|------|------|--------|------|-----|-------|
| 1s. 4 d. per ho | our; s | CAFF | OLDE | R, 18. | 5 d. | per | hour. |

| London stocks, per M. | | | | - £4 | 15 | . (|
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| Flettons. per M. | | | | 3 | 0 | 6 |
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| Cement and sand, see " | Exce | wator' | abor | N | | |
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Do. in raising on old walls, etc., add 121 per cent. bo, in raising on old wais, etc., and 12 per cent. per rod. Do, in underpinning, add 20 per cent. per rod. HALF-BRICK walls in stocks in cement mortar (1-3), per ft. sup. & 1 0 BEDDING plates in cement mortar, per ft. run 0 0 3 BEDDING window or door frames, per ft. run 0 0 3 It. run
BEDDING window or door frames, per ft. run
LEAVING chases 24 in. deep for edges of concrete floors not exceeding 6 in. thick, per ft. run
CUTTING do. in old walls in cement, per ft. run
CUTTING, toothing and bonding new work to old (labour and materials), per ft. sup.
CUTTING, toothing and bonding all cut-tings, per ft. run
FERRA-COTTA flue pipes 9 in. diameter, jointed in fireclay, including all cut-tings, per ft. run
D. 14 ft. by 9 in. do., per ft. run
FLAUNCHING chinney pots, each
CUTTING and pinning ends of timbers, etc. in cement
Do, picked stocks, per ft. sup. extra
DO, picked stocks, per ft. sup. extra
DO, nalt white or ivory glazed, per ft. sup. extra
TUCK pointing, per ft. sup. extra
Sup. extra
Sup. bo, 14 in., per yd. sup. 0 0 2 0 0 4 0 0 7 $egin{array}{ccc} 0 & 3 \\ 0 & 6 \\ 0 & 2 \end{array}$ 0000 0 4 9 0 0 6 $egin{array}{ccc} 0 & 5 \\ 0 & 6 \\ 0 & 7 \end{array}$ sup. Do. 1 % ln., per yd. sup. Do. 2 in., per yd. sup. If coloured with red oxide, per yd. 0 1 0 sup. If finished with carborundum, per yd. sup. If in small quantities in finishing to steps, etc., per ft. sup. Jointing new grano, paving to old. 0 0 6 0 1 4 Jointing new grano, paving to old, perf.run Extra for dishing grano, or cement paving around gulles, each Birtomyous DAMP COURSE, ex rolls, perft. sup. AspHAIT (MASTIC) DAMP COURSE, in., per yd. sup. Do, vertical, per yd. sup. SLATE DAMP COURSE, per ft. sup. AspHAIT ROOFING (MASTIC) in two thicknesses, in., per yd. DO. SkirtING, 6 in. BREEZE PARTITION BLOCKS, set in cement, 14 in. per yd. sup. Do. Do. 3 in. BREEZE fixing bricks, extra for each 0 0 4 0 1 6 0 0 7 $\begin{smallmatrix} 0 & 8 & 0 \\ 0 & 11 & 0 \\ 0 & 0 & 10 \end{smallmatrix}$ $\begin{smallmatrix}0&8&6\\0&0&11\end{smallmatrix}$ $\begin{array}{ccc}
 0 & 5 \\
 0 & 6 \\
 0 & 0
 \end{array}$ 63

6 0 0

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0000

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 st and are intended to cover delivery at works, wharf, station, or yard as custom-ary, 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, 18. 9¹/₂d. per hour; DO. fixer, 18. 10¹/₂d. per hour; LABOURER, 18. 4¹/₂d. per hour: SCAFFOLDER, 18. 5¹/₂d. per hour.

lanannananananan

| | * | | | | | |
|-------------------------------|----------|--------|-------|-------------|-----|-----|
| 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 la | arge bl | locks. | | | | |
| York paving, av. 24 in., p | er yd. | supe | F . | 0 | -6 | 6 |
| York templates sawn, per | ft. cub | e | | 0 | 6 | 9 |
| Slate shelves, rubbed, 1 in. | per f | 1. su) | 0. | 0 | 2 | 6 |
| Cement and sand, see " | Exca | vator. | " el | , ab | ore | |
| | * | | | | | |
| HOISTING and setting s | tone, | per | ft. | | - | - |
| cube | ve 30 | it a | đả 1 | £0 5 per | 2 | nt. |
| PLATN face Portland hasi | a nor | ft ar | TTO A | 20 | 9 | 8 |
| Do circular parft sun | o, por | 10.00 | vp. | -0 | ā. | ő |
| SUNE FACE, per ft. sup. | | | | ő | 3 | 9 |
| Do circular per ft. sun. | • | | • | ñ | 4 | 10 |
| JOINTS Arch per ft sup | | | | ö | 2 | 6 |
| Do supk per ft. sup. | | | | ŏ | 2 | 7 |
| DO. DO. circular, per ft. s | mp. | | | ŏ | - Ā | 6 |
| CIRCULAR-CIRCULAR WOR | k. ner | ft. an | m. | ĩ | 2 | ŏ |
| PLAIN MOULDING STRAIS | tht n | or in | ch | - | - | |
| of girth per ft run | trans to | | Uss | 0 | 1 | 1 |
| Do circular do perft | min | | | 0 | î. | â |
| por on ontoniar, doi, per ter | a crad | | | 0 | | |
| | | | | | | |

| HALF SAWING, per ft. sup | £0 | 1 | 0 | |
|---|------|------|-----|--|
| Add to the foregoing prices, if in | Yerk | stor | ne, | |
| 35 per cent. | | | | |
| Do. Mansneid, 124 per cent. | | | | |
| Deduct for Bath, 33 per cent. | | | | |
| DO. for Chilmark, 5 per cent. | | | | |
| SETTING 1 in, slate shelving in cement, | | | | |
| perft.sup. | 60 | 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 | Ő | |
| ARTIFICIAL stone paying, 2 in, thick, | | | | |
| nerft sun | 0 | 1 | R | |
| bo flip thick porth and | ő | | ö | |
| Do. 2 y m. unick, per m. sup | 0 | 1 | 9 | |
| | | | | |
| OT A TED AND THE | Th | | | |

SLATER AND TILER SLATER 1s 91d mer hour . THER 10 91d ner

| hour ; SCAFFOLD 1s. 4 d. per hour N.B.—Tiling is o | ER, 1 | exect | l. per h | our , | Cewor | CRI | ER, |
|--|-------|--------|----------|-------|-----------|-----|-----|
| Slates, 1st qualit | 1. 20 | ¥ 1.20 | 0: | | | | |
| Portmadoc Ladi | es . | * 1900 | | | £14 | 0 | 0 |
| Countess . | | | | | 27 | 0 | 0 |
| Duchess . | | Med | aren | | 32 Mad | 0 | 0 |

| Ducness . | | | | | 32 | 0 | 0 |
|--|----------------------|--------------|--------|-------|--------|-------|------|
| Old Delabole | Med | . Gr | ey | | Med. | GI | reen |
| 24 in. \times 12 in. | £42 | 11 | 3 | | 245 | 1 | 0 |
| $20 \text{ in.} \times 10 \text{ in.}$ | 31 | 4 | 3 | | 33 | 0 | 6 |
| $16 in. \times 10 in.$ | 20 | 18 | 0 | | 22 | 4 | 9 |
| 14 in. × 8 in. | 12 | 1 | ŏ | | 12 | 16 | 3 |
| Green Randome ne | w lon | | 0 | | 10 | 10 | ő |
| Green nunuomo pe | 1 2010 . | | | | 2 | 0 | |
| Grey-green ao., per | ion : | | • | | 1 | 0 | 3 |
| Green peggies, 12 in | 1. 10 8 11 | n. 101 | 19.1 | er to | 71 0 | 3 | . 9 |
| In 4-ton truck load | ts, delit | ered | Ni | ne E | 1118 8 | stati | ion. |
| Clips, lead, per lb. | | | | | 20 | - 0 | - 6 |
| Clips, copper, per lb | | | | | 0 | - 2 | - 0 |
| Nails, compo, per ci | not. | | | | 1 | 6 | 0 |
| Nails conner ner li | h | | | | ő | 1 | 10 |
| Cement and sand | 000 46 E | "magas | atos | . 11 | to al | home | |
| Hand made Allen | occ L | acut | un | , 6 | 0.5 | 10 | |
| riana-maae nies, pe | er M. | | | | 23 | 10 | 0 |
| Machine-made files | , per M. | | | | 5 | 3 | - 0 |
| Westmorland slates. | , large, 1 | per to | 78 | | 9 | - 0 | 0 |
| DO. Peggies. per la | m . | | | | 7 | - 5 | 0 |
| | - | | | | | | |
| SLATING, 3 in. lap | o, comp | o n | ails | Po | rtma | doc | or |
| Ladios por canor | | | | | 01 | 0 | 0 |
| Laures, per square | | | • | | 0.2 | | |
| Countess, per squi | are . | | • | ۰ | 4 | 0 | 0 |
| Duchess, per squa | re . | | | | - 4 | 10 | - 0 |
| WESTMORLAND, in | diminis | hing | cou | rses | | | |
| per square | | | | | 6 | - 5 | 0 |
| CORNISH DO., Der so | mare . | | | | 6 | 3 | Ö |
| Add if vertical net | PGOILBER | ann | POT | | ŏ | 12 | ő |
| Add, if with coppe | r nails, | per | squ | are | 0 | 10 | |
| approx | • • | | • | | 0 | 2 | 0 |
| Double course at ea | ives, pe | r It. a | app | rox. | 0 | 1 | 0 |
| SLATING with Old | Delabo | le sl | ate | e to | a 3 1 | n. | lap |
| with copper nail | s, at pe | r sq | uare | в. | | | |
| | Me | ed. G | rev | | Med. | Gr | een |
| 24 in. × 12 in. | 25 | 0 | 0 | | 45 | 2 | 0 |
| 20 in × 10 in | 5 | 5 | ő | | 5 | 10 | ŏ |
| 16 in ¥ 10 in | 4 | 3.6 | 8 | | 5 | 4.0 | × × |
| It in. A It in. | | 10 | 0 | | 0 | | U U |
| 14 III. X 8 III. | 4 | 10 | 0 | | * | 10 | |
| Green randoms | | | | | 6 | 7 | 0 |
| Grey-green do. | | | | | 5 | - 9 | - 0 |
| Green peggies, 12 in | a. to 8 in | 1. lor | 382 | | 4 | 17 | - 0 |
| TILING, 4 in. gauge nailed, in hand-n | e, every nade til | 4th es, a | cou | rse | | | |
| per square . | | | | | 5 | - 6 | 0 |
| Do., machine-mad | edo., p | er so | HAT | e . | 4 | 17 | 0 |
| Vertical Tiling in | oluding | r noi | ntir | 107 0 | 44 11 | 2.0 | 04 |
| Der sallere | | por | as val | -9, 0 | the At | | |
| Firing load sookor | n non de | man | | | 00 | 0 | 10 |
| FIXING lead soaker | s, per do | zen | | | £0 | 0 | 10 |
| STRIPPING old slate | es and s | tack | ing | IOP | | | |
| re-use, and clean | ring aw | ay s | urp | lus | | | |
| and rubbish, per: | square | | | | 0 | 10 | 0 |
| LABOUR only in lay | ing slat | tes. 1 | but | in- | - | - | - |
| cluding nails ner | SOURTE | and i | | | 1 | 0 | 0 |
| See "Sundring for | Achost | T ac | iline | | | | 4 |
| See "Sundries for | Asbest | 08 T. | iling | č. ** | | | |

CARPENTER AND JOINER

CARPENTER, 1s. 91d. per hour ; JOINER, 1s. 91d. per hour ; LABOURER, 1s. 41d. per hour.

| - | | | | | |
|---|--------|----------|------------|------|--|
| Timber, average prices at Docks, L | ond | on S | land | ard | |
| Scandinavian, etc. (equal to 2nds) | : | | | | |
| 7×3. per std. | | €21 | 0 | 0 | |
| 11×4. per std. | | 33 | 0 | 0 | |
| Memel or Equal. Slightly less that | n fo | rean | na. | - | |
| Flooring, P.E., 1 in., per sq. | | 21 | 2 | 6 | |
| DO T and G lin per sa | | 1 | 2 | 62 | |
| Planed boards, 1 in. × 11 in. ner at | 2 | 30 | õ | 18 | |
| Wainscot oak, ner ft, sup, of 1 in | | 0 | 1 | 2 | |
| Mahogany Honduras per fi sun o | 114 | a õ | î | 3 | |
| Do Cuba ner ft sun of 1 in | 4.65 | . 0 | - ô | 3 | |
| Do African ner fi eun | • | ŏ | ĩ | 13 | |
| Teal new ft sun of 1 in | • | 0 | ÷. | 2 | |
| Do H cube | • | - ă | 10 | 42 | |
| DO., fr. cube | | 0 | 1.0 | 0 | |
| | | | | | |
| Fir fixed in wall plates, lintels, slee | per | | - | ~ | |
| etc., per ft. cube | | 0 | - 5 | 6 | |
| Do. framed in floors, roofs, etc.,) | per | | | | |
| ft.cube | | 0 | 6 | 6 | |
| DO. framed in trusses, etc., includi | ng | | | | |
| ironwork, per ft. cube . | | 0 | 7 | 6 | |
| PITCH PINE, add 331 per cent. | | | | | |
| FIXING only boarding in floors, roo | fs, | | | | |
| etc., persq | | 0 | 13 | 6 | |
| SARKING FELT laid, 1-ply, per yd. | | 0 | 1 | 6 | |
| DO. 3-ply, per vd. | | 0 | 1 | 9 | |
| CENTERING for concrete, etc., inclu | -bt | | - | | |
| ing horsing and striking, per sq. | | 2 | 10 | 0 | |
| FURNING pieces to flat or segme | ntal | - | ** | ~ | |
| soffits, 4 in, wide, per ft, run | | 0 | 0 | 44 | |
| Do. 9 in, wide and over per ft. sup | | ŏ | 1 | 2 | |
| bor ball man and break bor to bur bar | | | • | | |
| | 100754 | 14.4.4.0 | 11.91.0 10 | 1000 | |

| CARPENTER AND JOINER | : con | tinu | ed. |
|--|-----------|-----------|---------|
| SHUTTERING to face of concrete, per square | £1 | 10 | 0 |
| per ft. sup. | 0 er c | 0 ent. | 6 of |
| above prices. SLATE BATTENING, Der sg. | £0 | 12 | 6 |
| DEAL boarding to flats, 1 in. thick and firrings to falls, per square | 2 | 10 | 0 |
| STOUT feather-edged tilting fillet to eaves, per ft, run | 0 | 0 | 6 |
| FEATHER-edged springer to trimmer | 0 | 0 | 4 |
| STOUT herringbone strutting (joists measured in), per ft, run | 0 | 0 | 6 |
| Sound boarding, 1 in. thick and fillets | | | |
| measured over), per square | 2 | 0 | 0 |
| one-ply, per yd. sup. | 0 | 20 | 3 6 |
| Do., three-ply, per yd. sup. | ŏ | ŝ | õ |
| thick, laid complete with splayed | 9 | 5 | 0 |
| DRAL skirting torus, moulded 11 in. | - | 0 | |
| ings, per ft. sup. | 0 | 1 | 0 |
| Wood block flooring standard blocks | 0 | U | 0 |
| Deal 1 in. thick, per yd. sup | 0 | 10 | 0 |
| Maple 1 in. thick, per yd. sup. | 0 | 15 | 0 |
| moulded bars in small squares, per | | | |
| Do. 2 in. do., per ft. sup. | 0 | 2 | 9 |
| DEAL cased frames, oak sills and 2 in. moulded sashes, brass-faced pulleys | | | |
| MOULDED horns, extra each | 0 | 4 | 3 |
| DOORS, 4-panel square both sides, 14 in. thick, per ft. sup. | 0 | 2 | 6 |
| DO. moulded both sides, per ft. sup. . DO. 2 in. thick, square both sides, per | 0 | 2 | 9 |
| ft. sup. Do. moulded both sides, per ft. sup. | 0 | 23 | 9 |
| po.in 3 panels, moulded both sides, upper panel with diminished stiles | | | |
| with moulded bars for glass, per ft. | 0 | 3 | 6 |
| If in oak, mahogany or teak, multiply DEAL frames, 4 in. × 3 in., rebated and | 3 (11 | nes. | |
| Add for extra labours, perft.run | £0 0 | 15 0 | 01 |
| BTAIRCASE work : DEAL treads 11 in. and risers 1 in., | | | |
| tongued and grooved including fir carriages, per ft. sup. | 0 | 2 | 6 |
| DEAL wall strings, 1 in. thick, moul- ded, per ft. run . | 0 | 2 | 6 |
| If ramped, per ft. run SHORT ramps, extra each | 0 | 57 | 0 6 |
| ENDS of treads and risers housed to strings, each | 0 | 1 | 0 |
| 2 in. deal mopstick handrail fixed to brackets, per ft. run | 0 | 1 | 6 |
| 41 in. × 3 in. oak fully moulded handrail. per ft. run | 0 | 5 | 6 |
| 1 in. square deal bar balusters, framed in, per ft, run | 0 | 0 | 6 |
| FITTINGS : SHELVES and bearers, 1 in., cross- | | | |
| tongued, per ft. sup. | 0 | 1 | 6 |
| ded and square, per ft. sup. | 0 | 2 | 9 |
| thick and bedding, per ft. sup. | 0 | 4 | 6 |
| Fixing only (including providing | | | |
| To DEAL- Hinges to sashes, per pair | 0 | 1 | 2 |
| Do. to doors, per pair | 0 | 1 | 7 |
| Sash fasteners, each | 0 | 1 | 0 |
| Mortice locks, each | 0 | 4 | 0 |

| C & I | ~~~ | ** |
|------------|---------|----|
| - No. (b.) | | ы |
| 1.2 1.9 1 | | |

20 0

2 0 0 2 5 0

0 2 0

| SMITH, weekly rate equals 1s. 91d | . per | hor | e |
|--|--------|------|---|
| MATE, do. 1s. 4d. per hour ; ERECT | OR. 14 | 3. 9 | ł |
| ner hour : FITTER, 18, 91d, ner hour | . LABO | UR | Ē |
| 1s. 4d. per hour. | | | |
| 3 4 1 | | | |
| Mild Steel in British standard sections. | | | |
| per lon | €12 | 10 | |
| Sheet Steel : | ~~~ | ** | |
| Flat sheets, black, per ton | 17 | 0 | |
| Do., galrd., per ton | 19 | 0 | |
| Corrugated sheets, galvd., per ton | 18 | 10 | |
| Driving screws galvd, ner are | 0 | 1 | 1 |
| Washers aaled ner are | ŏ | î | |
| Polle and nute new out and up | 1 | 10 | |
| bous and nuts per cut, and up . | I. | 10 | |
| * | | | |
| MILD STEEL in trusses, etc., erected, | | | |
| per ton | 25 | 10 | |
| DO in small sections as reinforce- | | | |
| ment ner ton | 16 | 10 | |
| Do in compounds porton | 17 | -0 | |
| bo, in compounds, per ton | 11 | U | |

ment, per ton Do., in compounds, per ton Do., in as or rod reinforcement, per ton WROT-IRON in chimney bars, etc., including building in, per cwt. Do., in light railings and balusters, per cwt. FIXING only corrugated sheeting, in-cluding washers and driving screws, per yd.

• .*

| ed. | PLUMBER | | | |
|--------|---|---------|------|---------|
| 0 | PLUMBER, 1s. 91d. per hour ; MATE OI 1s. 41d. per hour. | R LAI | BOU | RER, |
| 6 | Lead, milled sheet, per cut | £1 | .9 | 0 |
| of | DO. drawn pipes, per civi. | 1 | 10 | 0 |
| 6 | DO. scrap, per cwl. | 1 | 1 | 9 |
| 0 | Solder, plumber's, per lb. | 0 | 1 | 39 |
| 6 | Cast-iron pipes, etc. : | 0 | 4 | 0 |
| 4 | Do. 4 in. per yd. | 0 | 40 | 91 |
| 6 | Do. 3 in., per yd. | 0 | 1010 | 7 |
| | Gutter, 4 in. H.R., per yd. | 0 | 1 | 6± |
| 0 | Do. 4 in. O.G., per yd | 0 | 1 | 104 |
| 3 | MILLED LEAD and labour in gutters, | 8 | 9 | 6 |
| õ | LEAD PIPE, fixed, including running | 0 | 9 | 0 |
| 0 | DO. 1 in., per ft. | 0 | 1010 | 3 |
| 0 | Do. 1 in., per ft. | 0 | 4 | Ő |
| 0 | complete, 21 in., per ft. | 0 | 6 | 0 |
| 6 | DO. 3 in., per ft | 0 | 79 | 09 |
| 0 | WIPED soldered joint, 1 in., each | 0 | 23 | 62 |
| 0 | DO. 1 in., each BRASS screw-down stop cock and two | Ö | 3 | 8 |
| | soldered joints, in., each | 0 | 11 | 0 |
| 6 | CAST-IRON rainwater pipe, jointed | 0 | 4 | - |
| 0 | Do. 3 in., per ft. run | 0 | 2 | .0 |
| 6 | CAST-IRON B.R. GUTTER, fixed, with | 0 | 2 | 10 |
| 3 | all clips, etc., 4 in., per ft | 0 | 29 | 3 |
| 6 9 | CAST-IRON SOIL PIPE, fixed with caulked joints and all ears, etc., | | | |
| 9 | 4 in., per ft. | 0 | 4 | 6 |
| Ō | Fixing only: | | | |
| | and including joints to water waste | | | |
| 6 | BATHS, with all joints | 1 | 3 | 6 |
| | joints, on brackets, each | 1 | 10 | 0 |
| 0 | PLASTERER | | | |
| | PLASTERER, 1s. 94d. per hour (plus a | llow | ince | s in |
| 6 | Lonuon onty); LABOCRER, 18. 4 ju. per | noui | | |
| 6 | Hair, per cut. | #2 | 17 | 0 |
| 0 | Sand and cement see "Excavalor," en Lime pully, per cul. | 1c., a | 2 | e. 9 |
| 0 | Hair mortar, per yd. | 1 | 14 | 0 |
| 0 | Sawn laths, per bdl. | 0 | 2 | 5 |
| 6 | Sirapile, per lon | 3 | 10 | 0 |
| 6 | Plaster, per ton | 3 | 0 | 0 |
| 6 | DO. fine, per ton | 5 | 12 | 0 |
| 6 | Lath nails, per lb. | 0 | 0 | 4 |
| 0 | LATHING with sawn laths, per vd. | 0 | 1 | 7 |
| 8 | METAL LATHING, per yd. FLOATING in Cement and Sand 1 to 3 | 0 | 2 | 3 |
| 0 | for tiling or woodblock. ‡ in., | 0 | 0 | |
| | po. vertical, per yd. | 0 | 20 | 7 |
| 2 | RENDER in Portland and set in fine | 0 | 4 | * |
| 7 | RENDER, float, and set, trowelled, | 0 | 3 | 3 |
| 0 9 | RENDER and set in Sirapite, per yd. | 0 | 202 | 9 5 |
| 0 | DO. in Thistle plaster, per yd. EXTRA, if on but not including lath- | 0 | 2 | 5 |
| | ing, any of foregoing, per yd. | 0 | 0 | 5 |
| | ANGLES, rounded Keene's on Port- | 0 | 0 | 6 |
| à | PLAIN CORNICES, in plaster, per inch | v | 0 | 0 |
| R. | per ft. lin. | 0 | 0 | 3 |
| | and jointed in Parian, per yd., | | | |
| 0 | FIBROUS PLASTER SLABS, per yd. | 0 | 1 | 10 |
| 0 | GLAZIER | | | |
| 0 | GLAZIER, 1s. 8 d. per hour. | | | |
| 10 | Glass : 4ths in crates : | 00 | | 4.1 |
| 0 | DO. 26 02. | £0 0 | 0 | 5 |
| | Polished plate, British ‡ in., up to | 0 | 0 | 73 |
| 0 | 2 ft. sup per ft | 0 | 12 | 23 |
| 0 | DO. 6 ft. sup | 0 | 219 | 6 |
| 0 | DO. 45 ft. sup. ,, | 0 | 000 | 3.5 |
| 0 | Do. 100 ft. sup. | 0 | 230 | 10 |
| 0 | DO. 1 in. per fl. | 0 | 0 | 64 |
| 0 | Lanseeu ou puuy, per cut | 0 | 15 | 0 |

GLAZING in putty, clear sheet, 21 oz. DO. 26 oz.

00 0 11

PAINTER AND PAPERHANGER PAINTER, 1s. 84d. per hour; LABOURER, 1s. 44d. per hour; FRENCH POLISHER, 1s. 9d. per hour; PAPERHANGER, 1s. 84d. per hour. Genuine while lead, per cut. Linseed oil, raw, per gall. Do., boiled, per gall. Turpentine, per gall. Liquid driers, per gall. Liquid driers, per gall. Distemper, washable, in ordinary col-ours, per cut., and up Double size, per firkin Pumice stone, per lb. Single gold leaf (transferable), per book. 16 22 7 0 3 0 3 0 4 0 8 0 18 6680 6 0 5 3 0 0 6 4 } 2000 $\begin{smallmatrix} 0 & 2 \\ 0 & 12 \\ 1 & 2 \\ 0 & 16 \\ 0 & 17 \\ 0 & 15 \end{smallmatrix}$ book Varnish, copal, per gall, and up Do., fal, per gall. Do., paper, per gall. French polish, per gall. Ready mixed paints, per gall, and up 060060 LIME wHITING, per yd. sup. 4 LIME wHITING, per yd. sup. WASH, stop, and whiten, per yd. sup. Do., and 2 coats distemper with pro-prietary distemper, per yd. sup. KNOT, stop, and prime, per yd. sup. FLAIN FAINTING, including mouldings, and on plaster or joinery, 1st coat, per yd. sup. Do., subsequent coats, per yd. sup. BRUSH-GRAIN, and 2 coats varnish, per yd. sup. Figursh Do., bo., per yd. sup. Figursh Do., bo., per yd. sup. Figursh Do., por, per yd. sup. STRIFFING old paper and preparing, per piece HANGING PAPER ordinary nor piece. $\begin{array}{ccc}
 0 & 0 \\
 0 & 0
 \end{array}$ 36 0 0 00 97 0 0 1 10 0000 9 21 0000 3510 00000 Per piece . HANGING PAPER, ordinary, per piece . DO., fine, per piece, and upwards . VARNISHING PAPER, 1 coat, per piece CANVAS, strained and fixed, per yd. 1129 0000 10 4 0 3 0 VARNISHING, hard oak, 1st coat, yd. 0 1 2 sup. sup. each subsequent coat, per yd. sup. DO. 0 0 11 SUNDRIES Fibre or wood pulp boardings, accord-ing to quality and quantity. The measured work price is on the same basis . . . per fl. sup. 20 0 24 0 0 6 Plaster board, per yd. sup. . from 0 1 7 PLASTER BOARD, fixed as last, per yd. sup. 0 2 8 · · · Asbestos sheeting, 52 in., grey flat, per 23 0 33 yd. sup. Do., corrugated, per yd. sup. ASBESTOS SHEETING, fixed as last, flat, per yd. sup. Do., corrugated, per yd. sup. Assessing of the second 00 4 5 0 $\begin{array}{ccc} 2 & 15 \\ 3 & 0 \end{array}$ 00 DO., red debestos cement slates or tiles, $\frac{5}{52}$ in. punched per M. grey DO., red 0 16 18 00 punched per n. ... Do., red Aspestos Composition Flooring : Laid in two coats, average 1 in. thick, in plain colour, per yd. sup. Do., 1 in. thick, suitable for domestic work, unpolished, per yd. 0 7 0 0 6 6 Metal casements for wood frames, domestic sizes, per ft. sup. Do., in metal frames, per ft. sup. 0 1 6 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 . in

Waterproofing compounds for cement. Add about 75 per cent. to 100 per cent. to the cost of cement used.

PLYWOOD, per ft. sup.

| Thickness | 1 1 | in | | 1 | ia. | | 1 | in. | | - | in. | |
|-------------|-------|----------|-----|------|-----|-----|-----|-----|----|-----|----------|----|
| Qualities . | . AA. | A. d. | B. | AA. | A. | B. | AA. | A. | B | AA. | A. d. | B. |
| Birch | . 6 | 8 | 2 | 5 | 4 | 8 | 74 | 6 | 44 | 84 | 7 | 6 |
| Alder | . 81 | - 8 | 2 | 5 | | 8 | 65 | 54 | 48 | S | 7 | 6 |
| Gaboon | 1 | | | | | | | | | | | |
| Manogan | 5 4 | - 3 | - 8 | 6) | 51 | - 4 | 91 | 74 | - | 1 0 | 10 | - |
| Figured Oak | | | | 1 | - | | | | | 1 | | |
| 1 std | e 84 | 7 | - | 011 | 8 | - | 114 | - | - | 1 6 | - | |
| Plain Oak | | | | | | | | | | | | |
| 1 sid | e 6à | 6 | - | . 75 | 7 | - | 94 | - | - | 1 0 | - | - |
| Oregon Pine | 15 | 4 | - | 1.54 | 5 | - | 6 | - | - | - | - | - |

SI

GLAZING in beads, 21 oz., per ft. <u>60</u> 1 1 DO. 26 oz., per ft. <u>60</u> 1 4 Small sizes slightly less (under 3 ft. sup.). Patent glazing in rough plate, normal span, 1s. 6d. to 2s. per ft. LEAD LIGHTS, plain, med. sqs. 21 oz., usual domestic sizes, fixed, per ft. sup. and up Glazing only, polished plate, 6¹/₂d. to 8d. per ft. according to size.

THE ARCHITECTS' JOURNAL WORKING DRAW

THE FRANCIS WILLMER MCAULAY MEMORIAL HOMES, AYLESBY, NEAR GRIMSBY: DETAIL OF SOUTH ELEVATION. BY C. H. JAMES.