THE

ARCHITECTS'



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CHRISTIAN BARMAN, Editor

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

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NEW SECTION HOUSE, CRAWFORD STREET, W.

One of the many contracts executed for the Metropolitan Police



View of partly constructed floor.

Floors and Flat Roof on FAWCETT'S "MON'LITHCRETE"

System

FAWCETT CONSTRUCTION Co., Ltd.

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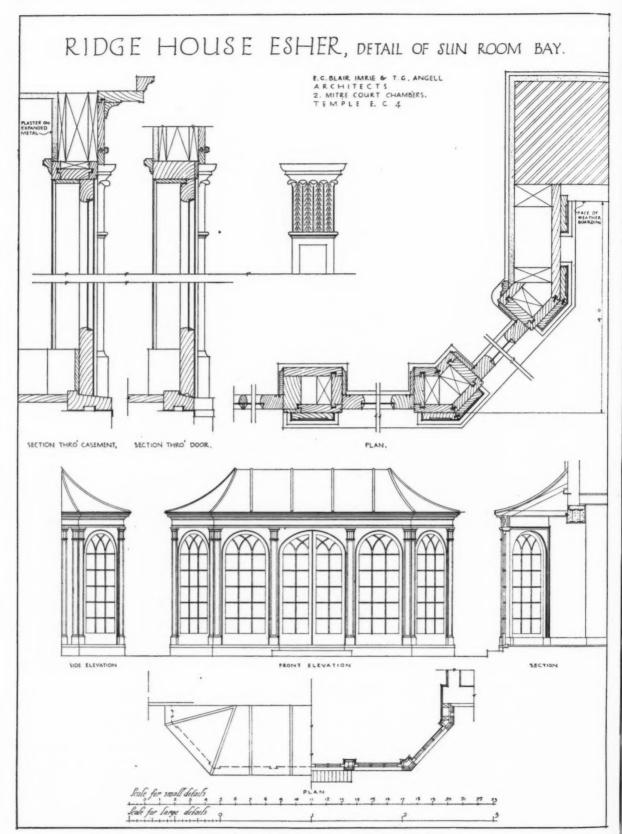
[A working detail of this window appears on the following page]

THE WINDOW TO THE SUN-PARLOUR AT RIDGE HOUSE, ESHER $[BY\ IMRIE\ AND\ ANGELL\]$

THE WEEK'S DETAIL

[BY IMRIE AND ANGELL]

This was an attempt to provide a seemly equivalent to the Victorian "Conservatory," by adapting the modern American sun-parlour to English conditions. Practically the whole of the external side of the room is made of glass, and the heating is carried out by means of radiators below floor level, just inside the window. This system leaves the glass unobstructed and adequately warms what would normally be an exceedingly cold room in winter. The centre portion of the window has a pair of sash doors for use in warm weather.



A photograph of this detail is given on the preceding page.



Wednesday, August 31, 1927

THE PRIVILEGED ARCHITECT

It would seem to be the fashion just now to seek analogies between the architectural and other professions. Such a procedure may here and there give point to an argument, but it has its limitations and its breakdowns, and one of these it is our purpose to consider. Where, amongst all the fine array of professional bodies, is one that can afford its practitioners a joy equal to that experienced by the architect when he builds a house for himself?

"Physician, heal thyself," is an ancient injunction, and one, indeed, that in modern times is rarely heeded, for the ailing physician at once enlists the services of a fellow, but even were he not to do so, would there be a thrill and ecstasy in the process of self-healing comparable to that experienced by the architect who sees his inspiration grow firm and strong and three-dimensional before his gaze, all for his own use and delectation? And with the lawyer, too, the architect can well afford to sympathize for the joys and delights that can never be his; to make his own will, to convey property to himself, and even to conduct litigation on his own behalf seems to offer to the lawyer scant scope for rejoicing. And if we turn to the other arts we find no one in so happy a position as the architect. Most painters at the beginning of their careers must perforce paint pictures for themselves, and many of them bequeath to the world a self portrait or a portrait of the artist as a young man, but these works are executed as often as not with a view to economizing in models.

But the fortunate architect who builds a house for himself experiences delights and joys unknown to these others; unknown, indeed, to the rest of mankind, and unknowable, for he is creating something out of his innermost self which is to become an integral part of his life; to become, says Sir Henry Wotton, "the Theater of his Hospitality, the Seate of his Selfe-fruition, the Comfortablest part of his owne Life, the Noblest of his Sonnes Inheritance, a kind of private Princedome."

And the experience, too, will reveal to him certain unsuspected frailties of character; for it is possible that even with such unique intimacy between client and architect there may be a certain strife, and the personality may, for a time, be rent by a schism, which will reveal much, and which may well be the begetter of humility. For it is probable that in his capacity of client he may in certain respects not vary from others of his acquaintance. At any rate, it is likely that at first he will

be assailed by dreadful doubts and fears that the enterprise will land him in financial ruin-fears that the architect will view with chagrin and dismay. But anon this mood will be followed by one of supreme recklessness so that the sanctioning of extras of twenty or fifty pounds will be undertaken with as little hesitation and anxiety as the ordering of a new suit of clothes. For the nonce his whole scale of values will have shifted. And now in his capacity of architect he will rejoice in the pliability of his client, and they will face each other in the shaving-mirror with a mutual satisfaction and esteem. "What a client!" the one will say; a man who knows his own mind and yet does not grudge an extra few pounds here and there, the spending of which will just make that difference." "And what an architect!" the other will respond; "I never did understand why men grumbled at their architects. No man was served with greater diligence than I. Scarcely a day passes but he visits the job. Nothing is too much trouble, and how he safeguards my financial interests and keeps the builder up to the mark."

There never was such a thing as an affluent architect, and so our friend will be beset by limitations; but, to quote Goethe's Faust, "in restraint the Master first manifests himself," and so his task will become the more exacting and the more bracing just on account of these very limitations. What the architect in the man will particularly rejoice in will be the absence of ambiguity in the programme. For the client here is a man who knows what can and what cannot be done, nor will he demand a synthetic plan of incompatibilities built up of irreconcilable fragments noted in houses scattered far and wide.

As the work proceeds there will be some chastening doubts mingling with the pleasure of seeing the realization of long-cherished ideas. The mistakes, too—for inevitably there will be mistakes, and the kind of man we have in mind will not be too complacent to observe them—will make for a feeling of humility, so that ever after our friend will have a deeper insight into, and more sympathy with, the mind of his clients. Yes, without doubt the enterprise is educative. This must be added to its other enticing qualities, for whatever is truly educative is also exciting and enthralling.

And so we would adapt the medical injunction and say, "Architect, build thyself a house," knowing full well that our advice, if taken, will lead to infinite delights and to enlargements of the outlook and sympathies.

NEWS AND TOPICS

SHORING TROUBLES—THE LINCOLN CHURCHES—AN ARCHITECT "DEBOROUGHED"—OUR GOOD POINTS—A CIRCUS IN TROUBLE.

SIR JOHN SIMPSON, in his letter in the Times on August 24, is suggesting that yet another responsibility should be added to the broad and breaking back of the architect. Surely the responsibility for shoring should be left with the contractor, and I should have thought that such was the intention of clause 21 of the R.I.B.A. Building Contract, which opens with the unequivocal statement that "the contractor shall be responsible for all structural and decorative damage to property, and for injury caused by the works or workmen to persons, animals, or things." . . . If the architect, therefore, interferes in the contractor's arrangement and disposition of shoring, he must assume responsibility for any failure. Why should he shoulder this extra burden? Moreover, the natural corollary of his so doing would seem to me to lie in his assumption of responsibility for scaffolding, gantries, derricks, and so forth, clearly an impossible situation. No; in my opinion, and it is one I know with which most architects will agree, the architect has more than enough to do in superintending his own work. Let him not assume the responsibility for shoring.

A report from the Society for the Preservation of Ancient Buildings on the proposed destruction of the churches of St. Benedict and St. Peter at Arches at Lincoln is expected shortly, and in all probability there will be a public inquiry by the Ecclesiastical Commissioners. St. Benedict's Church has a chancel of very Early English character, while the north aisle is Perpendicular. It is one of the three ancient churches which have survived out of about forty-nine which existed in the Middle Ages. St. Peter at Arches stands in a picturesque position just beyond the Stonebow, and dates from the year 1724. The Corporation wish to destroy these two historic churches in order to carry out street widenings. Thus buildings with an historical and architectural value are to make way for motor charabancs, which already cluster round St. Benedict's, using the quiet streets as parking places.

The opposition to this ill-considered plan is growing. The Architectural and Archæological Society of the County of Lincoln are on the warpath against the commercial element in the City Council. The Dean of Lincoln, who has saved the cathedral by his personal efforts, hopes to save the two condemned churches. This powerful and enthusiastic opposition is increasing, and time is to be given for careful reconsideration. I am told that it is now proposed to proceed under the Union of Benefices Amendment Measure, 1923. This provides that churches and parishes which are considered superfluous may, in the case of a union of benefices, be vested in the Ecclesiastical Commissioners with a power of sale. But a public inquiry is provided for, and no doubt this will take place at Lincoln. As a result of this inquiry the Ecclesiastical Commissioners have to prepare a scheme and submit it to the Privy Council with particulars of any objections raised. Only after this procedure is carried out is an order of the Privy Council

possible. This order has, of course, the force of law.

Southwark Cathedral, which, standing at the southwestern approach to London Bridge, is the noblest building in the south-east of the metropolis, has among its most admirable features a beautiful Lady Chapel. This chapel is, of course, very well known to architects, but not at all well known, I fear, to the general public, who, alas! care for none of these things. They, simple souls, would be much more interested to hear, not that the chapel is perhaps the finest Gothic building in London, but that it was at one time used as a bakehouse. Perhaps that degradation was contemporaneous with the brisk demand for bread suggested by the singing-game, "London Bridge is broken down-build it up with penny loaves." After the chapel, abandoned as a bakehouse, had been used as a pig-pen, it was restored to respectability by George Gwilt, who did the work without fee or reward. No doubt he advised the custodians of the church that the pillars supporting the very fine vaulted roof extended, presumably, much below the level of the floor that he knew as it exists for us, and that they would show much more graceful proportions if their full length were exposed. It is assumedrightly, I gather-that the existing floor, being at a higher level than the original one, conceals the bases and confounds the graces of the pillars; and now it is announced that an endeavour is to be made, by correcting the level of the floor, to make manifest the true proportions of the pillars. I can but congratulate the Dean and Chapter on their æsthetic sense and sensibility.

The problem of preventing the erection of ugly buildings in rural districts is particularly acute in such a place as Winchelsea. Here, as is well known, is a unique example of the town planning of Edward I, who was influenced by his experience of the Bastide towns in France. Although the place is very small, it contains at least five buildings, the three Gates, the Court Hall, and the Grey Friars, that have been scheduled as Historical Monuments. The beauty of the streets and the surroundings are well known to architects and artists. But there is nothing to prevent the speculative builder from erecting any kind of atrocity, and, indeed, a series of abominable villas have already been built cheek by jowl with the medieval Court Hall, and small houses with sham gables were erected only a few months ago in the very centre of the village. The Rye Rural District Council are responsible for Winchelsea, but, unfortunately, on these rural bodies there are few men with any real appreciation of the æsthetic and commercial value of the architectural treasures entrusted to their keeping. I am glad, however, to know that certain officials of the Ministry of Health have recently visited Winchelsea and have this aspect of building design under their notice. It will be well if it proves practical to construct a by-pass road which will free Winchelsea of the through heavy traffic, the vibration of which must undoubtedly be injurious to some of the old buildings.

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I rejoice to see that the R.I.B.A. Science Standing Committee is wrestling so manfully with the perplexing question of the damp house. As merely to collect the data that cluster so thickly about this ancient problem is likely to be as formidable a task as their scientific investigation, I fear that we may have to await "with stubborn patience" any very definite results of the inquiry. We

must, in the meanwhile, console ourselves with the assurance conveyed by the names of the investigators that the conclusions at which they ultimately arrive will be sound and thorough. I am particularly glad to believe that Mr. Edwin Gunn is taking a keen personal interest in the inquiry. As my readers are aware, he has been a frequent and valued contributor to this JOURNAL, in which, it will be recalled, originally appeared the substance of his admirably useful book on Little Things that Matter. His remarkably comprehensive mastery of the practical details of building should be of immense service in the present inquiry. As an architect of wide and varied practical experience, he fully realizes the force of Mr. J. E. Franck's claim the other day that "the question of the damp house is a national one," dampness being prolific of distressing disease. Clearly, then, those engaged in the investigation have a great opportunity, not only to do the State some service, but, furthermore, thereby to put all house-dwelling humanity under a lasting obligation. Women, I am convinced, should be invited to take an active share in it. For "Ladies, whose bright eyes rain influence," have had, especially of late, a very copious experience of other sorts of rain, and of the insidious ways in which the thirsty earth soaks it up, only to return it with heavy interest. Yes; women's co-operation would certainly be invaluable, and is, indeed, indispensable, as it always is.

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The Merthyr Corporation's opinion of the value of architectural services is no lower than that of many other public bodies, but it expresses its opinion with refreshing candour. We are told, in effect, that the architect must work under the engineer, his department a sub-section of the engineer's department, that his services hitherto retained at £540 must perforce be reduced at once to £400 a year, and at least one member of this Council sees in his retention of the appellation "Borough" architect a sinister attempt to mislead the Council into over-estimating his services, not to mention the usefulness of such a title when the architect should appeal for the replacement of his present 25 per cent. cut in salary. The steady absorption of architectural services into engineers' departments ought to stimulate architects into making a really serious attempt to organize in defence of their status before it is too late. Would it be believed that in this particular case the architect's protest was registered by an organization of engineers? There are occasions when individual effort can be commended, but in dealing with public bodies and commercial interests combined action alone promises an adequate safeguard for the future.

I remark with concern the decay of craftsmanship exemplified in many modern buildings which deem themselves architecturally important. The same cause—the fashion of an architect-designed classic style—led to such decay at the end of the eighteenth century, and has much to do with the bleakness of early adventures in the revival of Gothic. The gradual reawakening of an understanding of the principles of Gothic art re-established during the latter half of the nineteenth century a vigorous school of craftsmen, and it has been said that there is now as good craftsmanship as ever existed, although little of it. This fact makes inexcusable such perfunctory meaningless carving as we now see spanned over important frontages. At

Oxford Circus there is an elliptic applied panel or plaque, with pendent swags topped off with a cartouche representing a cherub whose countenance depicts a refugee dwarf from Molokai (the leper settlement) after a three months' debauch, and at each ear there stands out, like the two dead, swollen hands of a drowned man, used as a kind of hat-trimming, a pair of ill-shapen pinions. This depressing decoration, set up in the heart of the City, where, two hundred years ago, Wren and Gibbon showed how the same thing could be charmingly done, is repeated in machinemade facsimile some forty times. So, too, on the Americandesigned Devonshire House block in Piccadilly, there is a repetition of stale, machine-made sculptured panels in which two figures in bas-relief face each other like the halves of a dried herring, and the reiteration of a conventional dead face with mantling taken from the stock-room of a cinema decorator runs as a frieze apparently all round the building. This sort of thing is as deplorable as it is unnecessary. How well it can be done may be observed by anyone who looks, for instance, at the little Midland Bank by St. James's Church.

One of the chief particulars for which the nineteenth century is already recognized in history is its establishment of the responsibility of the community for the welfare of the The twentieth century, if we may at this individual. early date appraise it, promises to be memorable for the establishment of the rights of the community as against the individual. Every morning brings us with our daily paper protests or views of the activities of organizations against the encroachment of private interests upon public amenities. This is a sign of the times which is not to be overlooked, for it is all part and parcel of that trend of herd consciousness which makes up the sum of that overwhelming Without waiting to think, influence, public opinion. I write down the following list of recent or current occasions for public intervention in private exploitations. Stonehenge, advertisements on Brighton road, Kenwood, Foundling Hospital, London University site, Waterloo Bridge, Lewes Castle, preservation of New Forest, litter, playing-fields, defacement of countryside with shoddy houses, petrol pumps, City churches, Lincoln churches, and the activities of the Society for the Preservation of Ancient Buildings, and of the department concerned with the scheduling of ancient monuments. I have no sooner concluded the sentence than I realize that I might double the length of the list. The conclusion I draw is that with all our materialism, and vulgarity of taste, and disregard for cultivation, there is, nevertheless, some health in us.

An amusing example of the dangers to which ancient buildings are exposed by modern conditions occurred at Winchelsea only a few days ago. A travelling circus was passing through, and a large motor lorry hauling the tent and poles stuck in the Strand Gate, the embattled gateway through which the load from Rye mounts into the town. This gate is smaller than the Landgate of Rye, but it has the normal drum towers with the string-course and portcullised archway dating from the thirteenth century. The circus wagon would not move. All traffic up or down the hill was effectually blocked. Only by strenuous man power, and a hammer being used on the old stones, was the way cleared.

THE SALON DES ARTISTES-DECORATEURS

[BY P. MORTON SHAND]

The seventeenth Salon des Artistes-Décorateurs, which was held in the Grand Palais in Paris during the month of June, was chiefly remarkable, in an architectural sense, for Michel Roux-Spitz's simple and severe treatment of the central Rotonde Jean-Goujon.

An alcove of this rotunda contains a bahut in "Loupe d'Amboine" and rosewood, inlaid with ivory, an armchair covered in natural Morocco leather, and a low table, also in "Loupe d'Amboine." All of these, together with the hanging-lamp of opaque glass in the centre, have been carried out to the designs of the same artist. The rotunda itself is surrounded by six fluted columns without capitals or pediments, and has a patterned mosaic floor. The only other note of decoration is the classic frieze. The decorative panel behind the bahut is the work of M. Jean Dunand.

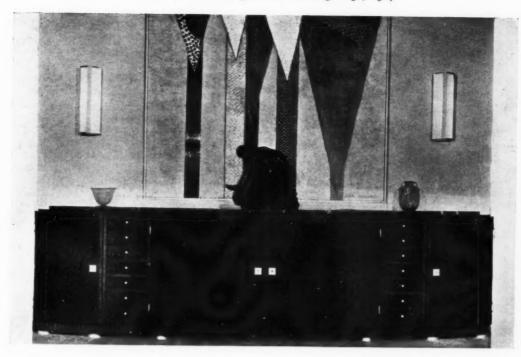
Notable among other rooms designed and furnished by the same artists was Paul Follot's very square and rather hard "Hall," with its hexagonal green armchairs, which seemed to have been designed to seat a diver, or Messrs. Michelin's well-known Robot, "Bibendum." The huge square chandelier was almost brutally graceless. An adjoining study, carried out in orange-coloured wood and velvet, was much more attractive than the hall itself.

Léon Jallot exhibited a light and pleasant dining-room in satinwood, which really seemed to have been designed to dine in, although the single table leg, massive as a treetrunk, left painfully little space for the diners' legs. The Studium du Louvre showed what the French call a "discreet," if rather theatrically soporific, lady's bedroom, by Fréchet, carried out in grey and mauve tones to set off the bright yellow woods employed. The mauve pegamoid of the settee and easy-chairs struck a rather perverse and hectic note, but they were at least preferable to many others covered with snakeskin patchwork; a covering so fragile that it begins to scale off almost as soon as touched. A bedroom by Maurice Dufrêne was in a much warmer colour-scheme, the Asiatic woods employed being stained an almost porphyry tint. Lucie Renaudot contributed a man's dressing-room, which, if decidedly practical and well thought out, was singularly funereal in aspect. The contours of a bureau by Lucien Prou, vaguely and hesitantly recalling the now execrated style, Louis XVI, struck a positively refreshing note amidst so much frenzied geometry.

Much of Dunand's work—and Dunand is a very fine craftsman, and one of the few ceramic artists of the present day who is a master of lacquering metal vases in cloisonné



The "Rotonde Jean-Goujon." By Michel Roux-Spitz.



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The "Rotonde Jean-Goujon." By Michel Roux - Spitz. Above, a decorative panel by M. Jean Dunand.

—was a sort of debauch of triangulation. His screens, though technically impeccable, are tormented by a restless quest of some still embryonic, or scarcely germinated, mode of decoration. The screens shown by Roche, embodying a design of black swans; and by Mlle. Suzanne Lalique, with a composition of birds roosting in the branches of a tree, are both charming pieces of work, though the execution of the latter is perhaps a little weak. The carpets, paradoxically enough, display no Euclidian designs. Most of them resemble capriciously, more than merely accidentally, blotted sheets of coloured blotting-paper.

All this furniture is massive in default of elegance, rather than massive as indicative of its strength and solidity. Still, simplicity, even when frankly hideous, can often be preferable to the absurdity of tortured and redundant lines. Moreover, many of these baldly rectangular shapes display fine, bold surfaces of new and exotic woods in a very effective manner. The cardinal defect of nearly all the chairs is their feet, which correspond in wood-carving to the thick-ankled models of the most modern nudes in painted flesh. This exhibition would seem to show more clearly than any preceding ones that the so-called "modernist" style in furniture has not yet found itself. The break from all pre-existing traditions of design is perhaps too absolute to make this possible for some years to come.

The designers have set themselves the task of inventing a new armchair; a task which is impossible without previously inventing a new sitting posture for humanity. None of these chairs, sideboards, and tables could "live" in the same house with furniture of other periods, even as representative "moderns," just because they have no period themselves. One and all of them show the evidence of an excessive number of very transitory and superficial influences, no sooner felt and partially assimilated than cast aside as insufficiently novel, which seem to have disturbed rather than inspired their designers. The family resemblance is so overwhelming as to become monotonous as an indefinitely repeated natural phenomenon like the Giant's Causeway.

In the silversmiths' exhibits there is the familiar tendency towards making coffee-urns like mausoleums and imparting a meaningless solidity to articles like sugar-bowls. Perhaps the most successful designs are those of Marc de Thèze and Henri de Lapparra. Some of the glass wrought by Marinot, Décorchemont, and Jean Besnard is quite charming and original without straining at peculiar effects. The same can hardly be said of the glass and wrought-iron sign of the exhibition hung out over the side entrance of the Palais, the work of Gabriel Englinger, which looks like a gigantic elliptical tea-rack.

are



Entrance door, in wrought iron, of a block of flats in the Rue Guynemer, Paris. By M. Roux-Spitz.



BENTLEY TRADITION THE

[BY A. R. POWYS]

I wo churches recently built, at Portsmouth by Mr. which are now held to be completely beautiful, such as Stanley Hall and at Edgbaston by Mr. Edwin P. Reynolds, are in the tradition begun by the late Mr. J. F. Bentley in the Roman Catholic Cathedral at Westminster.

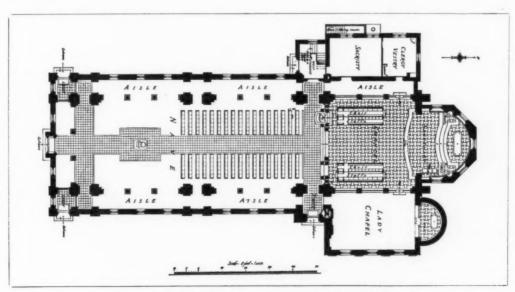
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In old days the masters of architecture saw new buildings,

Rheims and Amiens Cathedrals, and went from them roused to build elsewhere, not replicas, but others modified by æsthetic experience, tempered by economic forces and inspired by a desire for a more developed construction.



St. Cuthbert's Church, Copnor, Portsmouth. By E. Stanley Hall. Above, a view from the south-east. Below, the plan.







St. Cuthbert's Church, Copnor,
Portsmouth. By E. Stanley Hall.
Above (left), the south aisle,
and (right) the interior looking
east. Below, the sanctuary.





St. Cuthbert's Church, Copnor, Portsmouth. By E. Stanley Hall. Above, a detail of panelling, etc., in the sanctuary. Below, the font in Pentelic marble.

Thus, these two new churches call for some admiration and some criticism, but chiefly they make the architect desire an opportunity to build others that shall avoid certain faults and make better use of ideas not fully developed in them. He will discard a lingering archaism, avoid a meaningless feature in the effort to achieve a more perfect grace. In this way, through the three centuries that followed the beginning of the thirteenth, there came into being those works of architectural beauty which deserve and receive our admiration. It is well, however, not to forget that in those days the finest cathedral church was but a nobler example of the building methods that prevailed in commercial and domestic architecture, and that now

the architecture of commerce, the architecture of every-day life is no longer permanent and monumental, but quasi-temporary, being for the most part a framework of steel clothed in a veneer of stone and brick. Almost alone among buildings today, churches give an opportunity for raising buildings both monumental and lasting. They are different, also, for another reason. The Church is more conservative than any other organized body of men; so much so that unless a designer can quote from ancient examples a precedent for every form he draws, it is likely he will be set aside for another who will do so.

Mr. Stanley Hall's church, dedicated to St. Cuthbert, and built at Portsmouth, has many characteristics which

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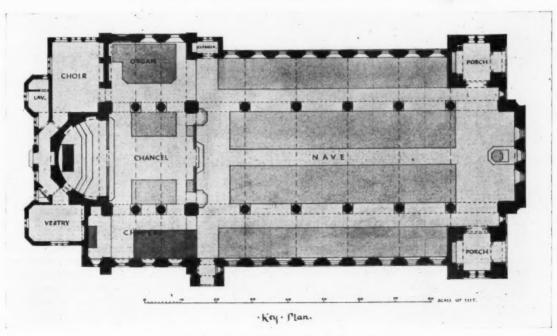
St. Germain's Church, Edgbaston, Birmingham. By Edwin F. Reynolds. Above, view from south-west. Below, the plan.



were derived consciously or unconsciously from the Westminster Cathedral. The nave with the choir is arranged in three domed bays divided by wide brick arches; and relatively narrow aisles are set on either side. The plan is

everyl, but ork of alone ty for ey are more en; so ncient likely hbert, which

simple and straightforward. The single columns which carry the filling beneath the wall arches of the clerestory are directly suggestive of Byzantine custom. The first impression of the visitor when he enters this building is one of



St. Germain's Church, Edgbaston, Birmingham. By Edwin F. Reynolds. Above, view from south-east. Below, the plan.

pleasure at the wide spaces before him. He enjoys the dignified breadth of treatment unspoiled by a multiplication of detail. The building is sufficiently, but not over, lighted. The paving of the sanctuary is to be noted; it is well done in the manner of the earlier churches of Rome and Italy. Outside, the plain masses of brickwork and the more elaborate tower are also modelled on Bentley's master work.

The mass of the building, when considered in three dimension, appears a comprehensive whole, a single unit of many parts; yet no part seems an added afterthought, except, perhaps, the eaves arcade of the apse, to which reference is again made later. Indeed, this church, more than most, looks as though the main lines and the general

will draw inspiration, and it is most certainly well fitted for its purpose.

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In the church of St. Germain at Edgbaston, Mr. Edwin F. Reynolds has followed a little uncertainly the basilican plan from which was developed the Gothic cathedrals. He has adopted the French or Byzantine apse instead of the square chancel-end almost always used in purely English churches. The porches placed within the west ends of the of the aisles are an unusual feature in planning. The way these are stopped short of the nave arcade provides an easy access to the gangways between the seats. This arrangement, however, seems to interfere with the appearance of width and length within, but it is one which may be developed in the future and become an accepted form. It



St. Germain's Church, Edgbaston, Birmingham. By Edwin F. Reynolds. View of one of the entrances.

disposition were seen in the mind's eye of the architect before he took a pencil to draw in out on paper. There is wisdom in this; to work in the manner of another who was a master in our own time is to follow the example of those who made splendid the medieval cities of Europe. I think that others exploring yet further the roads and byways along which Bentley was leading us may not again place round an apse the small arcade which appears beneath the eaves of St. Cuthbert's. Surely that feature is mishandled, if not altogether to be regretted. But such criticism may seem carping and mean, especially when without using words of unmerited praise it should be said that this church is good. It is one from which architects

is difficult to judge a building rightly when new forms are used. We are all, even those who have the greatest freedom of mind, bound very firmly by the accustomed. Windows filled with great sheets of glass, for instance, are condemned not so much on structural or æsthetic reasons, but because they do not occur in the old houses and churches we so rightly admire. Like Mr. Bentley and Mr. Stanley Hall, and probably compelled by the same force, economy, he has used brick as the material for the walls of his building. The roof is lifted high and is carried by a series of kingpost trusses not at all to be condemned because they are plain. If others study the plan of this church before building for themselves, perhaps they will feel that the arrangement of

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vestries is not "part and parcel" of the whole design, but rather that, like additions to many village churches, they appear adjuncts not originally thought to be essential. Again, these same students may feel that more effort appears in the design of the external forms than permits the observer to enjoy the whole as an harmonious unit—the inevitable result and part of the plan from which they grow. The buttress towers of the west front are of this sort. Again, wordy reason—one should more accurately say rationalization—may be employed to justify the change from eaves to parapet at the eastern end of the long roof, but the feeling will remain that this feature is not the outcome of a spontaneous instinct. It is rather the result of architecture, tutored, not felt. It is fair to say that

this church deserves study, praise, and appreciation; but it is also too much an experiment, too much a forced design to compel enthusiastic admiration. It may be that the design was reached after many alterations and trials had been made on the drawing-board and not as a mass seen in the mind before work was begun.

But let us remember that it is easy to be wise when a building is finished. We all know how difficult it is to build sanely and beautifully in these days when true tradition as opposed to revival is so weak, and when similarity in modern buildings is so readily followed by sneering talk of plagiarism. Such silly talk drives men to play for the crown of originality and to seek their own glory to the loss of buildings which, whether or no, have still to serve

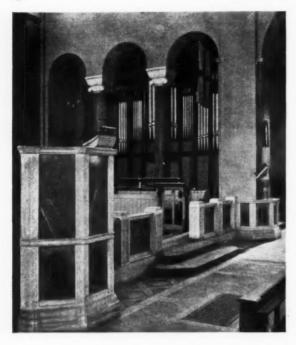


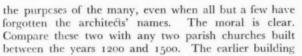
St. Germain's Church, Edgbaston, Birmingham. By Edwin F. Reynolds. View of interior.

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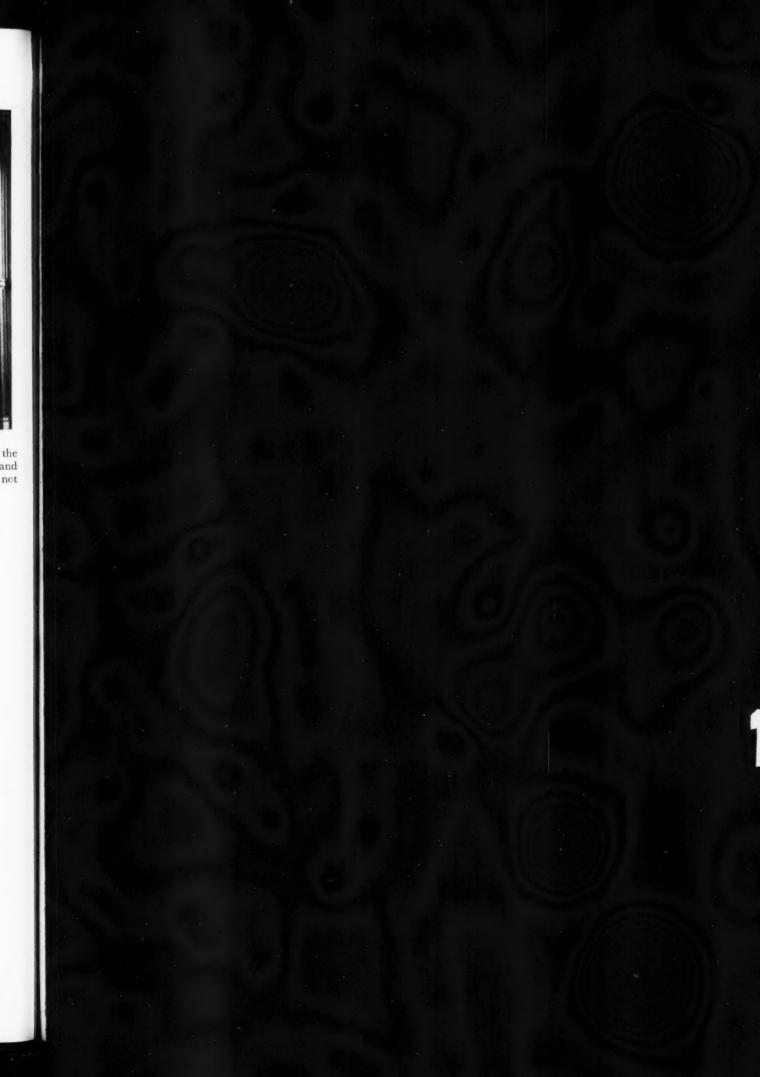


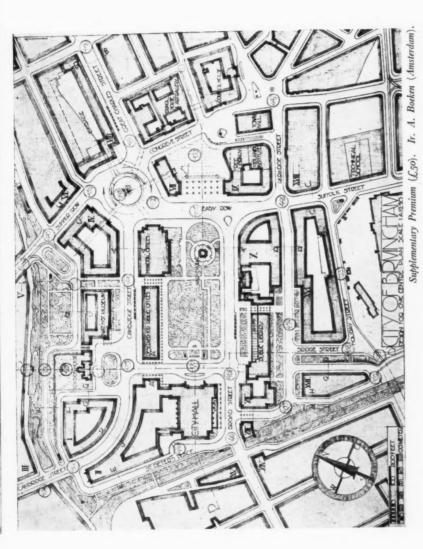


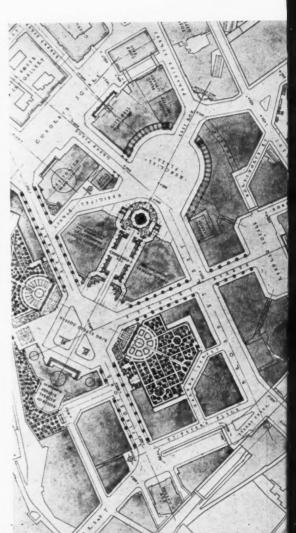
stood for more than its architecture, for more than the fame of its architect. They were rooted in reality and not in books, they fronted rain-filled winds and not word-proud critics.



St. Germain's Church, Edgbaston, Birmingham. By Edwin F. Reynolds. Above (left), the chancel, and (right) view of chancel from aisle. Below, the altar.









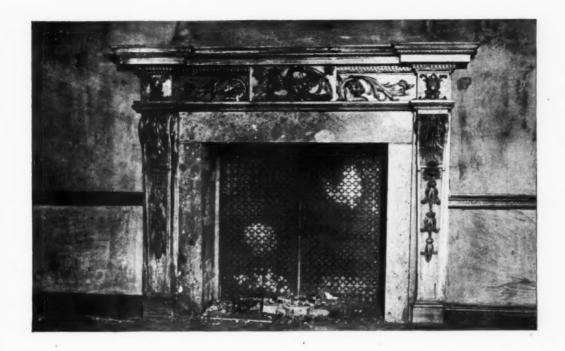
Supplementary Premium (£100). Armando d'Angelo (New York).



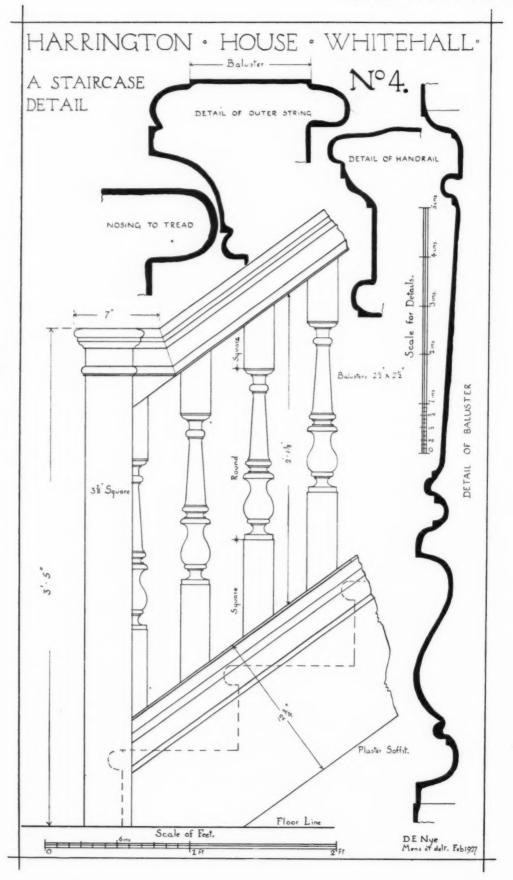
Supplementary Premium (£100). G. Oulie Hansen (Oslo, Norway). BIRMINGHAM CIVIC CENTRE COMPETITION. DESIGNS AWARDED SUPPLEMENTARY PREMIUMS.

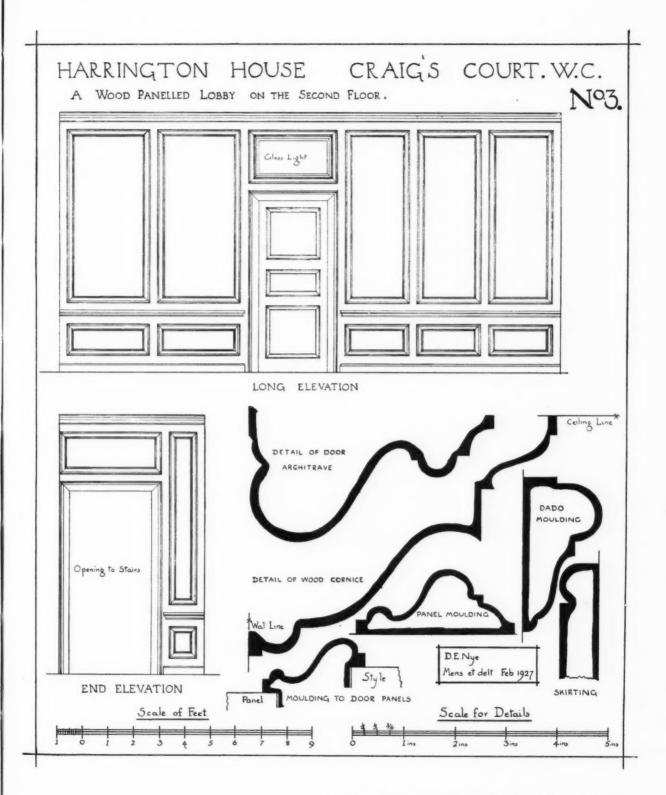




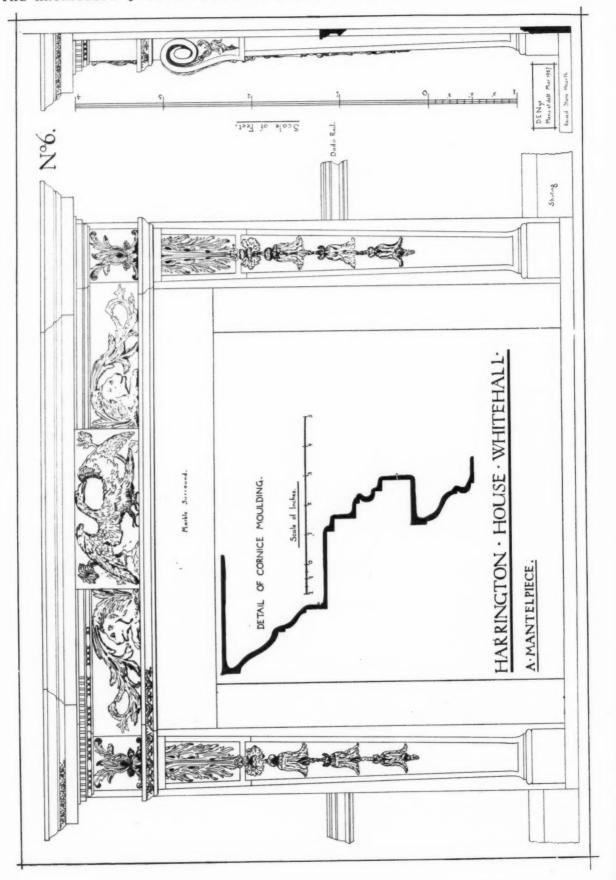


HARRINGTON HOUSE, WHITE-.
HALL: A MANTELPIECE.





HARRINGTON HOUSE, WHITEHALL. DETAILS OF THE INTERIOR. MEASURED AND DRAWN BY D. E. NYE.



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THE STUDY OF THE VERNACULAR

[BY ARTHUR J. PENTY]

I WENTY-FIVE years ago it was a commonplace of architectural thought to say that inasmuch as architecture was not an individual but a co-operative art, having its basis in communal traditions of design and handicraft, which in all the great ages of architectural activity were the common possession of the whole people, the higher branches of architecture would never flourish until the mass of ordinary building was decently and well done. Since the Renaissance was revived this theory has been largely abandoned and the idea promulgated that architecture is an individual rather than a co-operative art, dependent upon the skill of the individual architect. That certain very gifted architects have, in spite of the absence of communal traditions of design and handicraft among the people, succeeded in producing buildings of real architectural merit I should be the last to deny; and in one sense it is true that the great change must follow the multiplication of such architects; but that there is any prospect of a general revival of architecture so long as the philosophy of the Renaissance which regards architecture and building as separate things obtains, is to be denied; for architecture in its higher and lower forms is a one and indivisible substance. This idea was formerly taught, and it is an idea to which we must

The abandonment of the idea that any widespread revival of architecture must come from a revival of ordinary building traditions, was not, I am persuaded, due to the fact that it was felt to be untrue, but because the path of the reformer was beset with difficulties. These difficulties are of a twofold nature. The first owes its existence to the economic problem in architecture which becomes more perplexing the lower we go down; and the second is that an architect engaged upon small-scale work must rely almost entirely upon his own resources; and so it works out paradoxically in these days that it is really much more difficult to design cottages well than larger work. If an architect is commissioned to build a church, a public building, or a large house he has ready to his hand a vast amount of data to go upon. A hundred volumes will tell him most of what is to be known about the more important buildings of the past, and the details of these, if need be, may be used very much in their original form. But with small domestic work this is not the case. There is not a tithe of the data available; while such as there is has not been subjected to the same careful critical analysis, and is not as a rule immediately available for modern use, owing to the fact that the modern demand differs fundamentally from the old. The consequence of this is that the architect of small domestic work has not only to collect and analyse most of his data for himself, but he has in addition to translate such ideas as he may gather from old work into the terms of modern practice. He is at the same time hampered in this supremely difficult task by an almost diabolical combination of legal and economic difficulties from which the architect of larger work is for the most part free. The result is that the majority of architects fail entirely to unravel the æsthetic and economic entanglements in which they are involved; and, as is natural when men fail to see the light, they follow the line of least resistance and succumb to purely commercial influences. At the best they give their thought to the purely practical questions of sanitation and convenience, muddling through the æsthetic problem as best they can, while apparently remaining satisfied if their efforts are no worse than those of others.

A consideration of such circumstances leads me to the conclusion that there can be no hope for any widespread revival of small domestic architecture and other utilitarian building that lies at the basis of our problem until a literature is available clearly formulating the principles that should govern such work. One of the aims of such a literature would be to gain respect for such work by killing the idea that order obtains in the higher forms of architecture but is inapplicable to the lower, and by showing that the picturesque or, as I would prefer to call it, informal design is not a mere haphazard arrangement that is accidentally pleasing, but has behind it a conception of order just as much as classic architecture which has hitherto escaped the attention of architects because it is not so obvious.

Architecture which may be classed as informal covers such a range of styles and varies so much from country to country and locality to locality that I have no option but to confine the scope of my inquiries within certain narrow limits. Immediately the theory I propose to enunciate has been deduced from a study of the vernacular architecture of the Home Counties, but will, I believe, prove to be of wider application in the sense that it provides a key to the study of the picturesque wherever it is

to be found, in large buildings as well as small.

To begin, then, the key to informal design is not to be found in any external rule or system of proportion, but in a method of work, in a way of approach. It postulates the perception of a certain order in which the various issues should be taken. If the issues are taken in their right or natural order, everything will fall naturally into its place, but if they are taken in the wrong order everything will go wrong. The key to this order is, I am persuaded, to be found in the plan of the roofs. To master the principle on which the old roofs were planned is to go a long way towards mastering the picturesque, for in all informal architecture the roof plays the leading part. When we think of a picturesque building or village or city, we immediately think of the arrangements of the roofs. Any general view of a town is often little more than a collection of roofs with a few large buildings, generally churches, towering over them; and this is as true of Italy, France, Germany, as of England. In each case the general impression is one of roofs, whether they be the highpitched roofs of northern Europe or the low-pitched ones of the

It is the custom of most architects, when they begin to design, to begin with the ground-floor plan. The study of old work combined with practice has convinced me that this is a mistake, and that the old builders began with the plan of the roof; or if that is not entirely true, it may be said that they formed in their minds some conception of the general form of building contemplated, some rough idea of the proportions that the length, breadth and height should bear to each other as a working hypothesis from which to start, and that the key to such general conceptions was to be found in a theory of roof planning. This general idea, which formed the basis of the design, would be amended and amplified as the planning of the internal arrangements suggested modifications in this or that direction; and it was the interaction, as it were, between the first original general conception and the necessities of plan that gave to such buildings their quaint features, justifying all kinds of things which came about in an accidental kind of way. Thus we see that picturesque buildings were, so far as their general conception was concerned, premeditated design, but not so in regard to the details which came about as the result of a compromise between the original working hypothesis and the actual practical demands.

As I have worked upon such lines for many years, I can assure my readers that designing became for me very much easier and was infinitely more successful once I got hold of this idea. The important thing is to get hold of the first "nucleus idea," if I may so call the original working hypothesis, and to let practical considerations suggest modifications. Apart from some such nucleus idea, the plan is apt to become a mere aggregation of rooms and the elevations a mere aggregation of features. The plan may be convenient or not, the features of the elevation may be interesting or not, but unless they are related to some central nucleus idea the design will not present a unity; and the secret of such unity, I contend, is to be found in a mastery of roof plans, because the roof plan governs both floor plans and elevations. If the architect begins with the ground-floor plan and thinks

nothing about his roof until he comes to it, he will probably find that instead of being a simple, straightforward affair it becomes very confused and complicated, while the elevations do not "pan out" exactly as he would have them do. The windows and doors will not naturally fall into their places with that feeling of inevitability which is the distinctive note of all good design. There will be misfits everywhere. And having got himself into this mess the architect will be tempted to redeem the situation by the addition of little decorative trimmings. Little bits of half-timbering, tile hanging, and rough-cast will be dotted about without rhyme or reason in a vain attempt to redeem the unredeemable, it never apparently occurring to such architects when they find themselves in such difficulties that there is no way out of them other than to retrace their steps back to fundamentals. They imagine that the difference between themselves and better architects is that the latter have a genius for extricating themselves from such difficulties; whereas the truth is that they have sufficient foresight not to get into them. If the necessary care and forethought are exercised in the early stages of a design, it ought to be possible in ordinary domestic work to design the elevations almost with the eyes closed. Nor, as a rule, should the suggestions of clients prove very troublesome; for when a design is built up in an organic way it is very adaptable; and, generally speaking, it is possible to incorporate the suggestions of clients without spoiling the effect; nay, at times, it may actually enhance it. I have not infrequently found that clients' suggestions have acted as a stimulant. No one who has ever tried working upon such lines will doubt it was the way the old builders worked.

The decision as to what form the general idea of a particular building should take is, of course, finally a matter of judgment, instinct, and imagination, and no rules can be given to enable the architect to decide which is most suitable to a given site or set of circumstances. All the same, we can learn much from the past. An acquaintance with the general forms of old buildings is food for the imagination and would keep us straight within certain limits. The first thing to decide is whether the roof should be large and dominate the wall space, or whether the walls should dominate, in which case the roof would be kept small. The thing to avoid is equality between the two. Either the roof must be subordinated to the walls or the walls must be subordinated to the roof, for emphasis must be only at one point. If this is not absolutely true, it is true so far as the great mass of ordinary buildings is concerned. Very large buildings may have more than one point of emphasis but average-sized buildings may not.

The next thing to decide is the proportion that length, breadth, and height should bear to each other. Tall buildings that assume the form of a tower, and very low ones like a summer-house, may be square on plan; but, generally speaking, it is advisable to avoid a plan that approximates to a square. This is especially

the case in houses that are two stories high up to the eaves, for with such a plan it is impossible to make a fine-looking building; and it is because the vast majority of houses in the suburbs approximate to a square on plans that suburban architecture in these days is so deadly.

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I say, then, it is impossible to make a really fine-looking building with a plan that approximates to a square. The usual roof treatment of houses on such a plan in the suburbs is like figure one, where a start is made by hipping the roof all around and adding gables here and there to destroy the monotony. Such a treatment is hopeless, for the roof becomes humpy and awkward.

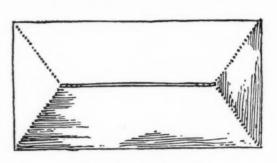


FIG 5. (PLAN)

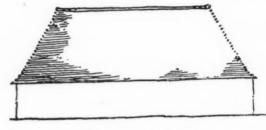
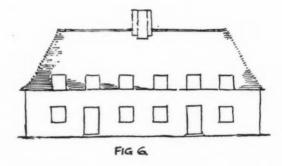


FIG. 5 (ELEVATION)



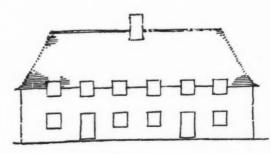


FIG. 7.



FIG. I.

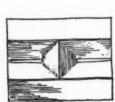


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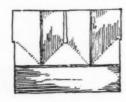


FIG. 4

If the plan inevitably approximates to a square, there are three ways of rescuing the design from sheer ugliness. The first is to put a flat in the centre of the roof, as at figure two; the second is to make two parallel roofs, as at figure three; and the third is as shown in figure four.

The reason why the average suburban house today approximates to a square on plan is because it is customary to make houses two rooms thick on plan, and because the frontages allotted to houses is as a rule too narrow. In former times, the average house in the country was one room thick, and this, by halving the breadth and doubling the length, gave a very pleasing proportion. It resulted in the long, narrow type of plan which is the basis of the old domestic architecture. Houses in the past which were two rooms thick were either very large ones or were built in groups which gave the roofs a sufficient length to produce a pleasing proportion. Generally speaking, it may be said that when such groups of houses are roofed by a single span, emphasis is given to the roof by commencing the roof at the first-floor level, as at figure five.

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Provided it is long enough, a one-story building with a highpitched roof is very charming. But buildings that lend themselves to such a treatment of their proportions are exceptional, and in former times this style of proportion was rarely used except for barns; for in domestic work it results in a curtailment of the bedroom accommodation. Preference, therefore, was usually given to houses two full stories high with or without attics in the roof; or a compromise was made with one full story and one-half in the roof, as at figure six. In such cases the eaves line should be at the level of the first floor window-sill; they should not be half-way up the window as at figure seven, which is a very unpleasant arrangement except in cases where the windows are a good distance apart. For where there are many windows the eaves lines are chopped up into too many little parts. As, however, it is necessary to confine our inquiry within manageable dimensions, it is desirable for the present to rule out all these exceptions and to explain the principle of roof planning as applied to buildings two full stories high; for if we grasp the principle as applied to one type of building it will be easy for the architect to follow the subject up in other directions. But that must be in the next

[To be continued]

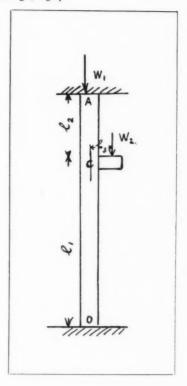
ECCENTRIC LOADS ON PILLARS

[BY PROFESSOR HENRY ADAMS]

LOADS are generally brought upon pillars by rolled joists; if the loading is central, or symmetrical on both sides of the centre, it is considered an axial load, but if the load is carried on one side only, whether by the flange or web, it is an eccentric load. A solid steel column is not well adapted to carrying a bracket to receive a loaded joist owing to the difficulty of making a connection that will not be liable to slip and will not cut into the column to weaken it.

For illustration we will assume a rolled steel joist as stanchion 20 ft. between the fixed ends, with a bracket on the flange receiving a load of 5 tons from a rolled joist 8 ft. from the top, and an axial load of 10 tons, as sketched in the figure.

Then by Prof. Morley's method, which is the best one known: u=B.M. in tons-inches $=W_3 \times L_5$; $n=\frac{L_1}{L_1+L_2}$; $M_A=un~(2-3n)$; $M_0=u(1-4n+3n^2)$; below C, $M_{C1}=u(-6n^3+9n^2-4n+1)$; above C, $M_C=-u+M_{C1}$. In this case $W_1=10$ tons, $W_3=5$ tons, $L_1=12$ ft., $L_2=8$ ft., $L_3=$ say, 12 in. Then $u=5\times 12=60$; $n = \frac{12}{12 + 8} = \text{ o·6.}$ Bending moment at $A = M_A = 60 \times \text{ o·6}$ $(2-3\times0.6)=7.2$ tons-in. Bending moment at $O=M_0=60$



 $1-4\times0.6+3\times0.6^2$ = -0.32 tons-in. Bending moment below $C = M_C = 60(-6 \times 0.6^3 + 9 \times 0.6^2 - 4 \times 0.6 + 1) = 60(-1.296 + 3.24)$ -2.4+1)= 60×0.544 =32.64 tons-in. Bending moment just above $C=M_{C_2}=-60+32.64=-27.36$ tons-in. Hence the maximum bending moment is just below C, say at the level of the bracket =32.64 tons-in. Try 8 in. by 6 in. by 35 lb. R.S.J. The sectional area of this is 10.296 sq. in.; the radius of gyration 3.343 in. about X-X (through centre of web parallel to flanges) and 1.375 about Y-Y (through centre of web perpendicular to flanges), the corresponding moduli of section being 27.6 and 5.97. Then the maximum stress on the pillar (assuming the load to be carried by the flange) will be $\frac{W}{A} + \frac{M}{Z} = \frac{10 + 5}{10^{\circ}296} + \frac{32^{\circ}64}{27^{\circ}6} = 2^{\circ}63$ tonssq. in. By the ordinary method of calculation $\frac{W}{A} \pm \frac{M}{Z}$ we have:

 $\frac{10+5}{10\cdot 296} \pm \frac{5\times 12}{27\cdot 6} = 1\cdot 456 + 2\cdot 173 = 3\cdot 629$ tons-sq. in. By the L.C.C. regulations the safe working stress (f) with both ends fixed $=6.5 - \frac{l}{l} \text{ (0.05)}; \ \frac{l}{l} = \frac{13(12 + 8)}{1.378} = 174.$

:. f=6.5-174(0.025)=2.15 tons-sq. in. So that the stanchion is barely strong enough, and an endeavour should be made so to design the connection between the bracket and loaded joist that

the leverage may be reduced.

If the bracket had been carried by the web of the stanchion, and we assume that the leverage could thus be reduced to 3 in., the calculation would be as follows: taking the bending moment below C=M 5 $\times 3(-6 \times 0.6^{8} + 9 \times 0.6^{2} - 4 \times 0.6 + 1) = 15 \times 0.544$ = 8·16 tons-in. Then $\frac{W}{A} \pm \frac{M}{Z} = \frac{15}{10\cdot296} \pm \frac{8\cdot16}{5\cdot97} = 1\cdot456 \pm 1\cdot36$ = 2·816 tons-sq. in. Still beyond the L.C.C. regulations and the next stanchion 9 in. by 7 in. by 58 lb. would probably be adopted. It should be noted that when the bracket is carried by the flange of the stanchion the greater section modulus 27.6 has to be used, and when carried by the web the lesser section modulus 5'97. In the L.C.C. regulations the least radius of gyration has to be taken.

CORRESPONDENCE

"THOSE SALARIED MEN"

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—Your leading article on this question sheds much-needed light in many dark spots. That "the majority of qualified architects receive their livelihood in the shape of a salary and not a commission," and that "the tendency today is for municipalities and big businesses to rely more and more upon their own architectural staffs and to make less and less use of the independent architect" are facts which are indisputable, and, so far as I am aware, they have never been disputed. If the present trend of affairs is to continue unchecked, I do not know what will be the state of the profession in fifteen years' time.

There are those who prefer to ignore these awkward realities and endeavour to fortify themselves with the comforting views of Victorian days. Such an attitude may be "gentlemanly," but it is very damaging to the profession as a whole. Either those within the profession must admit and also solve these problems in a material way, or these problems will be settled by those outside the profession and without any regard to the well-being of architects generally. If "this purblind, die-hard attitude" is maintained until the latter course eventuates, then the result will certainly be disastrous to the profession and the practice of architecture will be nothing more than a fourth-rate industry.

In fairness to the members of the R.I.B.A. Council, it is well to remember that a fair proportion of that body is alive to the importance of these problems and desirous of taking practical action with a view to regulating these new developments. Admittedly this proportion is a minority, and it therefore rests with the general body of members to see that each annual election results in this proportion being steadily increased. The Council can then become a representative body, a condition which (as your leading article remarks) it certainly does not fulfil at present.

A. SEYMOUR REEVES

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—The thanks of all salaried architects and assistants are due to the architects' journal for the leading article in the current issue.

The remedy you suggest to raise the status of "Those salaried men" to the position they should undoubtedly occupy is the only one likely to be successful, but as it can be applied by concerted action only, the feeling that it is ungentlemanly to combine must be eliminated. That this feeling does exist there is no doubt, although it is difficult to discover any reason why the salaried architect or assistant should be more sensitive than the man in practice. There seems to be only one answer to the question why "Those salaried men" should not have an Institute as well as the man in practice.

The apparent apathy shown by the very small proportion of the members who take the trouble to vote at the election of the Council of the R.I.B.A. is probably due, to a great extent, to the difficulty of deciding how to vote with no knowledge of any, or perhaps most, of the candidates. To nominate candidates who if not salaried architects or assistants could be trusted to look after their interests, and to supply the necessary directions for voting, can obviously be done only by concerted action.

This action has been an important part of the programme of the "Association of Architects, Surveyors, and Technical Assistants," generally known as the "A.A.S.T.A.," and a certain amount of success has already been achieved. It is therefore to be regretted that all "Those salaried men" have not felt it their duty as well as their interest to help not only financially by joining up, but by taking a personal interest in its administration and thereby ensure the adequate representation necessary.

I enclose my card, and sign myself-

DEE

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—I have read with interest your leading article in the current issue of the JOURNAL, and Mr. John Mitchell's article on "A Policy for the Profession." I am in complete agreement with the views expressed. It is becoming increasingly apparent that conditions in the architectural profession as at the present day have come to stay, and it behoves the Institute, as the leading professional organization, to adopt a definite policy whereby the method of entry to the profession is regularized, and the evils of overcrowding and casual labour, with corresponding loss of prestige and underpayment, are tackled in a resolute manner.

The present Council of the Institute is composed practically of architectural practitioners, and all the acts of that body are aimed to benefit that particular class of architect. For the salaried architect the Institute has no policy; it tries to make itself believe that such a person does not exist, though considerably over 50 per cent. of the members of the Institute belong to such a class.

The remedy lies in the hands of members of the Institute, in returning to power a fully representative Council.

REFORM "

LAW REPORTS

TOWN PLANNING: ALLEGED RESTRICTIONS

Re Forsey and Hollebone's Contract. Court of Appeal. Before the Master of the Rolls and Lords Justices Sargant and Lawrence

This appeal arose out of a decision of Mr. Justice Eve, in the Chancery Division, on a dispute between the vendor and purchaser of property at Upperton Road, Eastbourne. The appeal was by the purchaser, Mrs. Florence Amy Hollebone, of Jevington Gardens, Eastbourne, from a judgment of Mr. Justice Eve, on a question raised by the appellant, that the vendor, Mrs. Jessie Mary Forsey, had not shown a good title to property known as Birklands, Upperton Road, Eastbourne, which she had, in December 1926, contracted to sell to appellant for the sum of £3,200, and in respect of which the appellant had paid £325, the return of which she claimed.

Mr. Topham, к.с., and Mr. Byrne appeared for appellant, and Mr. Farwell, к.с., and Mr. Harman for the respondent.

Mr. Topham explained that his client's case was that, unknown to either party when the contract was made, a town-planning scheme had been imposed on Eastbourne, and a resolution to that effect had been passed by the Corporation and registered as a local land charge. The effect of that was, he contended, that it became binding and operated from the date of the resolution. The scheme, he said, would impose restrictions on the property, and from the date of the resolution appellant would be precluded from taking compensation in respect to any building which might contravene the scheme. She was subject to unknown restrictions, and might lose from 10 ft. to 20 ft. of her frontage for roadwidening purposes. The property was purchased free from encumbrances, and when the usual searches were made the resolution was discovered. Mr. Justice Eve had held that the registered resolution did not constitute an encumbrance within the meaning of the contract, and if it was, it was one of which the purchaser had notice, and of a nature which precluded her from repudiating the purchase. He accordingly made no order in the case. Counsel said his client appealed from that decision, and he now submitted that the learned judge had gone wrong in law and that his client was entitled to have the appeal allowed.

Mr. Farwell, for the respondent, supported the learned judge's judgment, and he contended that the purchaser's objection was not well founded and that she must be taken to have known

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comp dealis Cam Stree before and at the date of the contract of the existence of the resolution, and that prevented her from objecting to take the land because of the resolution. He further submitted that there was no encumbrance at all within the meaning of the contract which the parties had entered into.

The Court dismissed the appeal, holding that the conclusions arrived at by Mr. Justice Eve were correct in law having regard to

the material clauses in the Town Planning Acts.

The Master of the Rolls said, in his opinion, the purchaser was not entitled in the circumstances to say that the vendor had, or would fail to show, a good title to the property she had contracted to sell to Mrs. Hollebone. The judgment would therefore stand. Lords Justices Sargant and Lawrence agreed.

COMPETITION CALENDAR

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

Odober 31. Designs are invited by the Herne Bay Urban District Council for the erection of municipal buildings and business premises on a prominent site at Herne Bay. The President of the R.I.B.A. has nominated Professor A. E. Richardson, F.S.A., F.R.I.B.A., to act as assessor. Premiums: £150, £100, £50. Printed conditions can be obtained from the Clerk to the Council, Westminster Bank House, Herne Bay. A deposit of one guinea is required for a set of the printed conditions, which will be returned upon the submission of a bona fide design.

November 30. New town hall and municipal buildings, proposed to be erected on a site in the Broadway, Wimbledon, for the Wimbledon Corporation. Assessor: Mr. H. V. Ashley, F.R.I.B.A. Premiums: £200, £150, and £75. Particulars from Mr. Herbert Emerson Smith, LL.B., Town Clerk. Deposit £2 2s.

FORTHCOMING BOOK

Messrs. Tiranti, of Maple Street, W.1, announce for publication on September 1 a book dealing with modern French shop fronts and interiors, the authors being Mr. Rene Herbst and Mr. James Burford, A.R.I.B.A.

LONDON HOUSING

In his review for the year 1926-27, the chairman of the L.C.C. states that in 1926 the number of houses built in Greater London was about 33,500, or some 10,000 more than in any one year since the war. Although the number of dwelling-houses of all classes now being provided exceeds the normal requirements due to increasing population, the building of working-class houses still falls short of requirements. There appear to be no signs as yet of private enterprise resuming the provision to any extent of working-class houses for letting at weekly rents, and the Council is continuing the great effort which it has made to satisfy the needs of the working classes of London for accommodation of this character.

During 1926-27 over 4,800 houses were completed by the Council, making a total since the war of 17,824. The development of Castelnau estate, Barnes, and Wormholt estate, Hammersmith, was commenced and further extensions of building operations at Becontree, Downham, and Watling estates were put in hand. The Council's immediate programme of housing work provides for upwards of 15,000 houses in addition to those completed, and the full results of the gigantic organization which the Council has brought into being are now materializing. About 12,000 workmen are engaged on the Council's housing contracts, and the rate of production is already equivalent to about 150 completed houses a week.

Besides the provision of accommodation on new housing estates, twelve slum clearance schemes, involving twenty-two areas and comprising some 91 acres, are now in progress, the scheme for dealing with two of the areas (Basing Place and Blue Anchor Lane, Camberwell) having been made during the year. The Ossulston Street scheme was confirmed during the year, and active steps are

being taken for the clearance and reconstruction of the area included in the scheme. Accommodation has to be provided for upwards of 25,500 persons residing in these twenty-two areas, either on the areas themselves or elsewhere. To expedite the work of clearance the Council at different times acquired a number of sites in the County of London for re-housing purposes. Two such sites comprising some 7 acres at Camberwell and South Hackney have been acquired by the Council during the year for the erection of dwellings for the accommodation of families who will be displaced by the clearance of slums. In addition, a site of about 8 acres at St. Quintin Park has been appropriated for

general housing purposes.

The financial assistance afforded by the Council to private enterprise is a material factor in the encouragement of housing operations. During the year the Council approved, for the purpose of subsidy, 654 houses, and agreed to make grants to 575 prospective owner-occupiers and to make advances by way of loan under the Housing Act, 1925, and the Small Dwellings Acquisition Acts, amounting to £880,880. The total number of houses approved by the Council for purposes of subsidy had, up to March 31, 1927, amounted to 2,599, and the total number of subsidies to 1,677. The total advances agreed to be made on loan from August 1, 1923, to March 31, 1927, amounted to £2,540,530, in respect of the building and purchase of 4,073 houses. In addition to the total advances referred to, the Council has sanctioned loans amounting to £600,000 to metropolitan borough councils to enable them to make advances under the Small Dwellings Acquisition Acts in respect of 1,180 houses; and £1,150,000 has been included in the estimates of the Council for the current year in respect of the grant of loans to prospective owner-occupiers of houses.

The total expenditure of the Council on all its dwellings and estates, including clearance of unhealthy areas and advances on loan under the Housing and Small Dwellings Acquisition Acts, amounted, up to March 31, 1927, to about £25,500,000. The income for the year 1926-27 in respect of dwellings erected by the

Council was about £981,400.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for the architects' journal, by permission of the Controller of H.M. Stationery Office, by our own patent expert. All inquiries concerning inventions, patents, and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.I. 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

21347. Billington, W. J. Domestic firegrates, &c. August 13. 21088. Chedburn, N. S. Clamps for manufacture of concrete walls. August 10.

20808. Edwards, W. V. Method of casting concrete columns, &c. August 8.

21357 Hill & Co, Ltd., R. Hollow column construction. August 13.

21060. Lee, S. Brick-moulding appliance. August 10.

SPECIFICATIONS PUBLISHED

275320. Thomas, F. W. Roofing material.

275364. Westrum, L. S. Van. Manufacture of bituminous concrete.

275394. Yardley, T. W. Windows for dwelling-houses and other buildings.

275409. Sander, M. Surveying instruments.

275478. Bruce, H. E. W. Windows.

ABSTRACT PUBLISHED

273127. Ulbricht, R., 61 Gartenstrasse, and Buchwald, R., 50 Oberratherstrasse, both in Rath, Dusseldorf, Germany. Connecting tubular members.

SOCIETIES AND SCHOOLS

A.A. School Session, 1927-28.

Owing to the delay in the rebuilding of the premises it has been decided to postpone the re-opening of the school till Monday, October 10. The terms for this session will be as follow: Winter Term. Monday, October 10, to Friday, December 16 (ten weeks). Spring Term. Monday, January 2, to Wednesday, March 28 (twelve and a-half weeks). Summer Term. Monday, April 23, to Friday, July 13 (twelve weeks). It will be seen from the above that the re-arrangement which has had to be made has only had the effect of making the Summer Term twelve weeks and the Winter Term ten weeks, and that the number of weeks in the school session has not been interfered with.

Cardiff Technical College. Department of Architecture and Civic Design

At the Technical College, Cardiff, ten scholarships, covering tuition fees and maintenance grants of £40 per annum for three years, are offered for competition annually. As candidates for entry to the Department of Architecture and Civic Design are eligible to compete for these scholarships, they are of considerable interest to those contemplating entering the architectural profession. The scholarship examination is a competitive one, and is of about the same standard as matriculation. In the case of candidates for the School of Architecture, the subjects are: (1) English (2) mathematics—two papers: (a) algebra and arithmetic; (b) geometry and mensuration; (3) a modern language (French, German, or Welsh); (4) physics with mechanics, or chemistry, or higher mathematics; (5) history, geography or elementary architectural drawing.

Candidates not taking elementary architectural drawing as one of the subjects of the examination, must satisfy the head of the

department as to their ability in this subject.

The department has now been at work for rather more than seven years, under the charge of Mr. W. S. Purchon, M.A., A.R.I.B.A., the lecturer in architecture being Mr. R. H. Winder, M.A., A.R.I.B.A., and the assistant lecturer, Mr. Lewis John, M.A., A.R.I.B.A.

The following local architects assist in the work of the advanced course as honorary lecturers, viz.: Messrs. Percy Thomas, v.-p.r.i.b.a.; Ivof Jones, A.R.I.B.A.; T. Alwyn Lloyd, F.R.I.B.A., M.T.P.I.; H. Teather, F.R.I.B.A.; A. L. Thomas, F.S.I., M.T.P.I.; C. S. Thomas, F.R.I.B.A.; J. H. Jones, F.R.I.B.A.

Students in the department also attend courses of instruction in the Department of Engineering, Technical Chemistry, Mathematics, and the School of Art, all of which are housed in the same

building

This School of Architecture is recognized by the R.I.B.A., which grants exemption from its intermediate examination to students who pass successfully through the three years' full-time (day) course leading to the certificate. Individual students who pass successfully through the diploma course are exempted from the R.I.B.A. final examination, with the exception of the subject of two sessions, the former of these being of six months' duration only, the intervening six months being spent in architects' offices.

There is also an evening atelier for architects' assistants who

cannot attend the day courses.

The department is in close touch with the South Wales Institute of Architects, representatives of this body being on the Advisory Committee of the school, and students of the school are eligible for the prizes awarded by the Institute. In addition to these awards there are a number of school prizes, presented in the main by local architects.

The external examiner for the past session was Professor A. C.

Dickie, M.A., F.S.A., A.R.I.B.A.

The school year commences on Tuesday, October 4, but intending students are advised to apply at an early date for the particulars of the courses of instruction and of the entrance and scholarship examinations. Candidates for the latter should obtain application forms, which must be completed and submitted by September 17.

R.I.B.A. Council Meeting

British Architects' Conference. A very hearty vote of thanks was passed in favour of all those who offered hospitality and assisted in connection with the recent Conference.

Presentation of Greek Vase by Mr. Greville Montgomery (Hon. Associate). The Council accepted, with much pleasure, a Greek vase, probably of the fourth or fifth century B.C., presented to the R.I.B.A. by Mr. Greville Montgomery, and expressed their cordial thanks to Mr. Montgomery for his generous gift.

Comitó Permanent International des Architectes. The British section of the C.P.I.A. was reconstituted as follows: Sir Reginald Blomfield, R.A., HON. D.LITT.; Sir John J. Burnet, R.A., R.S.A., HON. LL.D.; Lt.-Col. H. P. Cart de Lafontaine, O.B.E.; Sir Banister Fletcher, F.S.A.; Mr. H. M. Fletcher, M.A.; Mr. Ian MacAlister, Professor C. H. Reilly, O.B.E.; Mr. Howard Robertson; Sir John W. Simpson, K.B.E.; Sir Aston Webb, G.C.V.O., C.B., R.A.

International Congress at Amsterdam. Lt.-Col. H. P. Cart de Lafontaine was appointed as the R.I.B.A. delegate at the International Congress to be held at Amsterdam from August 20 to

September 4, 1927.

Conference of Public Lighting Engineers at Brighton. Mr. J. L. Denman (A.) was appointed as the R.I.B.A. delegate at the Fourth Annual Meeting and Conference of the Institution of Public Lighting Engineers to be held at Brighton from September 12 to 15.

Competition for League of Nations Building at Geneva. It was decided to make arrangements for holding an exhibition at the R.I.B.A. of the designs submitted by British competitors for the League of Nations Building at Geneva.

Birmingham Civic Centre Competition. It was decided to make arrangements for holding an exhibition at the R.I.B.A. of the designs submitted for the Birmingham Civic Centre Competition.

Studentship. The following probationers were elected students of the R.I.B.A.: Alexander, E. B. (University of Manchester); Bertram, W. R. B. (Glasgow School of Architecture); Dallachy, J. E. W. (Glasgow School of Architecture); Goldstraw, G. A. (University of Manchester); Highet, G. I. C. (Architectural Association); King, L. E. (University of London); McNicol, W. H. (University of Manchester); Smith, M. S. (special exemption); Tinker, R. M. (Architectural Association); Willis, R. F. (Architectural Association); Woodrow, A. (Architectural Association).

Reinstatement. The following ex-member was reinstated: As Licentiate—Miller, G. F.

Resignations. The following resignations were accepted with regret: Cave, A. O. (F.); Pidsley, W. G. (A.); Phillips, A. J. (L.).

THE BENTLEY TRADITION

In connection with the two churches dealt with in the article on page 291, the following contractors and sub-contractors were employed:

St. Cuthbert's Church, Copnor, Portsmouth. General contractor, Samuel Salter. Sub-contractors: Thos. Faldo & Co., Ltd., asphalt; Redpath, Brown & Co., Ltd., structural steel; Roberts, Adlard & Co., Ltd., roofing tiles; Acme Flooring and Paving Co., Ltd., wood-block flooring; The Kleine Patent Fire-Resisting Flooring Syndicate, Ltd., patent flooring; Dargue, Griffiths & Co., Ltd., central heating; Miller and Sons, Ltd., electric wiring; Birmingham Guild, Ltd., electric light fixtures; Wainwright and Waring, Ltd., steel casements; Art Pavements and Decorations, Ltd., mosaic and marble.

St. Germain's Church, Edgbaston, Birmingham. General contractors, Collins and Godfrey, Tewkesbury. Sub-contractors: Blockley, wire-cut faced bricks; Ames and Hunter, roofing tiles; Midland Heating and Ventilation Co., central heating; Knight and Keeley, electric wiring; Harvey and Ashby, leaded lights and casements; Jones and Willis, pulpit, lectern, screen, font; Fenning & Co., granite; W. H. Fraley and Son, marble; Charles Carr, Ltd., bell; Rushworth and Dreaper, organ.

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READERS' QUERIES

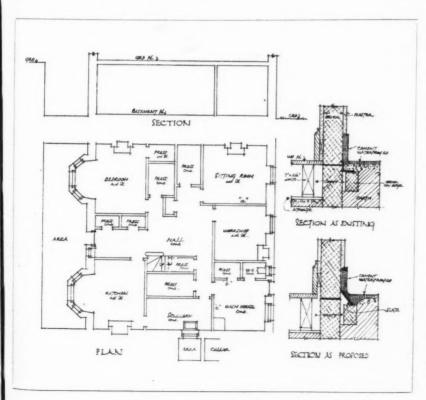
DAMP IN PARTITION WALLS

S. S. writes: "In the basement of a house, approximately thirty years old, and shown on the accompanying plan, the party and external walls are dry, but all the internal 41 in. walls are damp, with the exception of 'a' and 'b.' Dampness shows at various heights up to 30 in. from the floor. About nine months ago a dampproof course was inserted, as shown on existing section, at all walls except 'a,' 'b,' and 'c. This failed to stop the dampness. The dampness is always worse on such days as usually produce 'sweating' in buildings, and with a view to discovering if it were actually a case of 'sweating,' a portion of wall was stripped to a height of about 3 ft., the plaster scraped, and the wall repapered with a double thickness of paper. This, however, still shows dampness. At the same time another portion of the wall was replastered to a height of 3 ft. with waterproofed cement. This is dry. The walls in the washhouse and scullery have also at one time been cement-plastered for a portion of their height, and these are dry except for a small part immediately above the cement plaster on wall 'c' of the scullery. This last observation, together with the fact that the wall 'a' where the asphaltbeneath wood floors and shown on section-seems to have been carried through the wall in the original building, leads me to the conclusion that the D.P.C. which has been inserted is not

efficient. I think moisture must weep through at the junction of the horizontal and vertical D.P.C.'s, and suggest providing cavities about the D.P.C. as shown on proposed section. Do you think my conclusion right? Does ground moisture rise in walls on humid days (rainy periods don't seem to affect the walls), and do you think my suggestion would be effective? Before the insertion of the D.P.C.'s referred to, the 4½ in. walls, except at "a," were without D.P.C.'s."

The plan shows that the house is constructed in a manner which creates a difficulty in respect of the drying out of the spaces beneath the wooden floors and the lower parts of the partition walls. The dampcourses may not be inefficient, for under the conditions which have existed for thirty years the partition walls may have soaked up more water than they can get rid of by evaporation in the course of nine months. The junction of vertical and horizontal dampcourses is always a point of weakness however, and the proposed creation of an air space may effect some improvement, especially if the air space can be effectively ventilated. The continued damp in the lower parts of some of the partition walls may be due to the gradual descent of water from the soaked upper parts of the wall, and if so, it may cure itself in time as the basement rooms are used and ventilated. If the site is flooded or waterlogged it may be possible to improve the condition of the basement by more adequate drainage of the area in front and of the garden at the back so as to draw off water from under the floors of the house.

W. H.



ECCENTRIC LOADING

"Safety" writes: "Solid steel columns 13 ft. 8 in. long (15 in. is buried in concrete) support 14 in. R.S.J. one side only; on top is another column 10 ft. 6 in. long with another R.S.J. one (same) side only; on these are lintels transmitting dead load of seventeen tons. The reaction at end of R.S.J.'s is seven tons at each level. What is the minimum diameter of columns allowable? In two or three instances our local authority has made these slender solid rounds replaced."

From a tracing (not reproduced) accompanying this query it appears that the steel columns are made independently and connected at the floor levels to rolled joists which give central loads, and a lintel carrying a brick wall which gives an eccentric load. Taking the upper column first, there will be a central load of seven tons, and a load of seventeen tons with 2 in. eccentricity. Assume a 3 in. diameter solid steel column, 7 sq. in. area. The central load will produce a stress of one ton per sq. in. The section modulus is '0982D=2'65. The stress from the eccentric load will be:

$$\frac{W}{A} \pm \frac{M}{Z} = \frac{17}{7} \pm \frac{17 \times 2}{2.65}$$

=2'43 \pm 12'8, or 15'23 tons sq. in. compression at one side and 10'37 tons sq. in. tension on the other side. Combining this with the stress due to the central load, we have 16'23 tons sq. in. total compression and 9'37 tons sq. in. total tension. Clearly the column is not large enough. Try 4 in. diameter, sectional area 12'6 sq. in. Central load $\frac{7}{12'6}$ = '56 tons sq. in. Section modulus = 6'28. Stress from

$$\frac{17}{12.6} \pm \frac{17 \times 2}{6.28}$$

eccentric load:

=1°35 \pm 5'4, or 6°75 tons sq. in. compression and 4°05 tons sq. in. tension. Combining this with central load of '56 tons sq. in., we have a total of 7'31 tons sq. in. compression and 3'49 tons sq. in. tension.

For the lower column the central load will be fourteen tons, and the eccentric load of seventeen tons will also be transmitted. Try a column 41 in. diameter, sectional area 15'9, say 16 sq. ins. Central load fourteen tons, $\frac{14}{16} = 0.88$ tons sq. ins. Section modulus = 8.95. Then from eccentric load $_{16}^{17} \pm \frac{_{17} \times _{2}}{8.95} = 1.06 \pm 3.8$, 4.86 tons sq. ins. compression and 2.74 tons sq. in. tension. Combining this with the central load of o 88 tons sq. in., we have a total of, say, five tons sq. in. compression and 1.86 tons sq. in. tension. Apparently a 41 in. column would be sufficient, but unless the workmanship is perfect and the connections properly designed there will always be a certain amount of risk, and it is not well to sail too close to the wind.

HENRY ADAMS

THE WEEK'S BUILDING NEWS

One new bridge over the MURRAY RIVER has just been completed, and four others are now under construction. The longest one will have nine spans of 270 ft. each. The total cost will be £630,000.

For the purpose of widening and improving the bridge at GOOLE over the River Don, the Goole Urban Council has received a promise from the Ministry of Transport to provide a grant of 50 per cent. of the amount required, providing that the total cost does not exceed £4,400; while the West Riding County Council has promised a grant of 25 per cent.

The MARGATE Town Council has decided to acquire for £4,750 Thanet College and grounds of about 4 acres for the purposes of a junior mixed school to accommodate 400 children.

The WEST BROMWICH Town Council has decided to erect a further 1,200 houses during the next two years.

Postponement of the erection of a new wing at the County Hall, which will cost £655,000, is recommended by the L.C.C.

Bush House, Aldwych, is to be enlarged by the addition of two wings at an expenditure of something like £400,000. Work is to start almost immediately. The wings will spread on either side of the present building in the shape of a curve, to a distance of 155 ft.

The lease of a site in Tabard Street, SOUTHWARK, has been granted to Church Army Housing, Ltd., on special terms, and this public utility society is building a group of twelve five-roomed cottage flats in connection with the L.C.C. slum clearance scheme.

For the VILLERS BRETONNEUX War Memorial the Australian Federal Government has accepted a design at a cost of £100,000, says the Exchange.

The Belfast Harbour Board has decided to spend £20,000 on improvements at the Albert Quay to facilitate the coal trade.

Work was begun recently on the construction of the FLEETWOOD sea defence wall and promenade. The wall and promenade, which will be 6,000 ft. long, will form a link of a promenade which, when completed, will extend from Fleetwood to Lytham, approximately 20 miles. It is expected that this promenade will be complete in about a year's time.

The GRAVESEND Corporation is to build a £9,000 isolation hospital.

During reconstruction work it has been found that the Old Vic, WATERLOO ROAD, s.E., has suffered severely from the vibration of passing traffic, and the original estimate of £16,000 for the work has been increased to £25,000.

The "World's End" is to be improved by the CHELSEA Council at a cost of £50,000.

Difficulties which had arisen in connection with the scheme for the erection of 200 houses for the Trimsaran Colliery Co., at TRIMSARAN, have now been overcome and a start has been made with the erection of the houses.

Mr. P. Monahan, Commissioner for the county borough of CORK, has under consideration the creation of new Corporation redeemable stock, amounting to a sum not exceeding £100,000. The larger portion of the loan, £75,000, will be devoted to the building of working-class dwellings, the shortage of which is particularly acute in the city. It is intended to utilize the remainder of the stock for the reconstruction of a culvert under Patrick Street, the principal street of the city.

Work has now begun on the large plot of building land adjoining Baker Street Station. When completed, the building will include shops, flats, a public hall, restaurant, and other amenities, which it will be possible to visit without leaving the shelter of the station. The site, which is bounded by MARYLEBONE ROAD, Upper Baker Street, and Allsop Place, is the property of the Metropolitan Railway, who hold the freehold, and has been vacant for several years. The scheme now being carried out will, according to the architect of the Metropolitan Railway, cost approximately £750,000. Messrs. Higgs and Hill are the politan contractors, and they estimate the work to take two years.

A start has been made on a £12,000 scheme for the restoration of MALMESBURY Abbey (Wilts). The principal work to be carried out comprises the restoration of the roof of the two western bays, the lowering and repair of the floor, which now stands some 18 in. above the original level and hides the bases of the massive Norman pillars, and the removal of the western gallery.

The WAKEFIELD Education Committee has received sanction to a loan of £31,500 for the erection of an elementary school at Manygates, and instructions have been given for the work to be proceeded with.

Mcssrs. Worsfold and Hayward are to extend the Buckland Paper Mills, London Road, DOVER.

Plans passed by the LEEDS Corporation: four bungalows, Park Spring Gardens, Bramley, for Messrs. A. Gibbs and Son; two houses, Mount Pleasant Avenue, off Harehills Lane, for Mr. Thomas Robinson; eight houses, Skelton Road, White Horse Estate, for Mr. Albert Cryer; three houses, York Road, for Mr. William Jowitt; two bungalows, Armley Ridge Road, Armley, for Mr. Joseph Prince.

The GUILDFORD Corporation has asked the borough engineer to prepare plans for the erection of a swimming bath at Millmead.

The coulsdon U.D.C. has decided to purchase 15 acres at Rickman Hill for a recreation ground.

The Purley Men's Club is to erect a hall and premises in Whitecliffe Road, PURLEY.

The Dame Superior is to have erected a recreation room and five additional class-rooms at the Convent School in SANDERSTEAD.

The MANCHESTER Education Committee has obtained sanction to a loan of £2,200 for the purchase of a site for the Gorton day school for mentally defective children.

The surveyor to the Beddington and Wallington U.D.C. has prepared plans, specifications, and estimates of the cost of carrying out the improvements to certain sections of the River Wandle. Directly the plans respecting the remaining section of the river are received, the matter will be referred by the surrex County Council to the River Wandle Advisory Committee for their observations.

Thirty-five subsidy cottages are to be built in Oak Road, oldham, by Mr. R. Whitehead.

The Ministry of Health has sanctioned the proposal of the BARKING TOWN U.D.C. to erect by direct labour thirty flats in Gascoigne Road, and the engineer has been instructed to proceed with the work.

The PLYMOUTH Education Committee has asked the borough engineer to prepare plans and specifications for laboratories and workshops and alterations to the main buildings of the Junior Technical School in Durnford Street.

The ossett Corporation is considering the purchase of a housing site in Storrs Hill Road.

Twenty houses in a new road off Cross Lane, GRAVESEND, are to be built by Mr. Pettman. mate the of force £4.7 new bridge concilimina £7.5 the Con the Plant three Caley Mr. I

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The surrey county surveyor has prepared three alternative schemes for the improvement of the GODALMING great bridge: a: widening of the existing bridge by extending the existing arches at an estimated cost of £5,163; b: strengthening the existing arches by a covering of reinforced concrete, at an estimated cost of £4.777; and c: the provision of an entirely new bridge on the site of the existing bridge, to be constructed of reinforced concrete in accordance with the preliminary drawings, at an estimated cost of The County Council is asking the Godalming Corporation for their views on the three schemes.

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Plans passed by the HULL Corporation: three houses, Victoria Avenue, for Mr. H. J. Caley; twelve houses, Northfield Road, for Mr. L. Caley; six houses, Boothferry Road, for Mr. G. Overton; twelve houses, Claremont Avenue, for Mr. E. Mowforth; seven houses, Calvert Lane, for Mr. R. W. Trigg; twelve houses, Northfield Road, for Mr. H. Sanderson; eleven houses and one shop, James Reckitt Avenue, for Mr. E. Pickering; three houses and shops, Portobello Street, for Mrs. Isabella Price.

On behalf of Messrs. Pearks, Davies, Ltd., Messrs. Storrar and Hunt are to reconstruct the Castle Hotel, Market Jew Street, PENZANCE.

At the WAKEFIELD Corporation's meeting the architect submitted a draft preliminary statement on the Sandal area and reported that he was proceeding with the preparation of the preliminary town-planning statement for the Lupset area.

Messrs. G. Benson and Son are to build eighty-four subsidy houses on the Duckworth estate, prestwich.

The committee of the Ilford Emergency Hospital is to acquire premises in Cranbrook Road, ILFORD, for conversion into a nurses' home.

Plans passed by the NORTHAMPTON Corporation: Extension to factory, Spencer Street, for Messrs. M. Tomalin and Son; garage and workshops, Cattle Market Road and Bridge Street, for Messrs. A. Mulliner, Ltd.: four houses, Ardington Road, for Northampton Co-operative Society, Ltd.; shop and workroom, Greenwood Road, for Mr. A. E. Farmer; twelve lock-up garages, Harborough Road, for Messrs. Brookes & Co.

A revised lay-out of the site at Haghill has been prepared by the GLASGOW Corporation housing director, showing 594 houses in the rehousing section, 50 per cent. to be of two apartments, and 50 per cent. of three apartments, and also 168 houses of three and four apartments of the intermediate type of construction.

Plans passed by the EASTBOURNE Corporation: Two houses, Roselands Avenue, for Mr. A. Ford, architect; shop premises, Green Street, for Mr. A. E. Hill; four houses. Milton Road, for Mr. F. C. Benz, architect; two houses and garages, Woodgate Road, for Messrs. W. Llewellyn and Son; additions, "Est Hall," Saffrons Road, for Messrs. G. Bainbridge and Sons; alterations, "Club Hotel," Pevensey Road, for Messrs. Denman and Sons, architects; alterations and additions, "Tally Ho Hotel," Church Street, for Messrs. Field and Cox; additions to playroom, etc., St. Anthony's School, Vicarage Road, for Mr. F. G. Cooke, architect.

Dr. Colgate has acquired a site in South Street, EASTBOURNE, for the erection of a masonic temple and business offices.

The GLASGOW Corporation has obtained sanction to borrow £1,780,000 for various new housing schemes.

The Ministry of Transport has promised a grant of 50 per cent. of the cost, estimated at £50,000, for the diversion of the roads and the construction of a new bridge at BLACKWELL.

The Hexham R.D.C. is urging the county authorities of Northumberland and Durham to widen EBCHESTER Bridge.

The Surrey Education Committee has obtained sanction for a loan of £35,000 for the erection of an elementary school in Western Road, MITCHAM.

An estimate of £21,000 has been voted by the West Riding Education Committee for the erection of an elementary school at HOYLAND.

The Post Office authorities propose the erection of an automatic telephone exchange in Teevan Road, Addiscombe.

The Chorley Corporation proposes the acquisition of $3\frac{1}{2}$ acres in Marlborough Street for another housing scheme.

The MIDDLESBROUGH Education Committee is to erect a treatment clinic at a cost of £5,500.

The derby Corporation Tramways Committee is seeking sanction for a loan of £37,700 for the erection of new tram and bus sheds at Osmaston Road.

The Basingstoke Committee of the Park Prewett Mental Hospital has accepted the tender of Messrs. Chapman, Lowry and Puttick, Haslemere, £16,666, for the erection of a nurses' home at the Hospital

Plans passed by the BOURNEMOUTH Corporation: Shops and flats, Wimborne Road, for Mr. S. Brown; church, Heron Court Road, for the trustees; three houses, Redbreast Road, for Mr. S. G. Ward; addition, Richmond Park Conservative Club, Charminster Road, for the committee; additions and alterations, High School for Girls, Norwich Avenue, for the Governors; alterations and additions, "Melford Hall," St. Peter's Road, for Mr. C. Brown; five houses, Edgehill Road, for Mr. F. Ricketts; flats, Portland Road, for Mr. F. W. Holloway; rebuilding of premises, Orchard Street, for Messrs. D. Drake and Son; stand and lavatories, Dean Court, King's Park, for the Bournemouth and Boscombe Football Club Co., Ltd.; shops and houses, Wilson Road, for Mr. H. W. Jeans; shops and business premises, Richmond Hill, for Messrs. Montague Burton, Ltd.; club premises, Stamford Road, for the Southbourne British Legion Club.

The Middlesex County Council is obtaining land for the widening of the Dolphin Bridge, Windsor Road, UXBRIDGE, the cost of the works being estimated at £9,000.

The Lancashire Education Committee has purchased land at WARDLE for the erection of an elementary school. It has also voted an estimate of £31,000 for extensions at the Rivington and Blackrod Grammar School; and £14,450 for the extensions at the Grammar School, Hindley.

The Surrey c.c. has purchased 11 acres on the Connaught estate, BROOKWOOD, for the Brookwood Mental Hospital.

The STRETFORD U.D.C. has obtained sanction to grant another fifty housing subsidies.

The Maypole Dairy Co., Ltd., is to reconstruct their premises in Fratton Road, PORTSMOUTH.

The West Riding Education Committee has voted £3,000 for the adaptation of premises at Myrtle Park, BINGLEY, for school purposes.

The EPSOM R.D.C. has prepared townplanning schemes for the districts of Cheam, Banstead, and Woodmansterne.

The MANCHESTER Education Committee is to lay out playing fields of 20 acres in Wilbraham Road at a cost of £5,000, provision being made for the erection of two sports pavilions.

The Normans Riding, Blaydon, Ryton, and Whickham Joint Hospital Committee has obtained a site at NORMANS RIDING for the erection of new buildings.

RATES OF WAGES

	KATES OF WHOLE	
A Aberrayavenny S. Wales & M. 1 8 1 3 1 3 1 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4	A E. Glamor- granshire A Monmouthshire B Exter S.W. Countles 1 7 1 2 1 A Newbort S.W. Counties B Exter S.W. Countles 1 5 1 1 A Newbort S.W. Countles B Frelixstowe E. Countles 1 6 1 1 2 A North Staffs Mid. Countles A Fleetwood S. Countles 1 8 1 3 4 A North Staffs Mid. Countles B Fredsham N.W. Countles 1 8 1 3 4 North Staffs Mid. Countles A Fleetwood S. Countles 1 8 1 3 4 North Staffs Mid. Countles A Frodsham N.W. Countles 1 8 1 3 4 North Staffs Mid. Countles A Frodsham N.W. Countles 1 8 1 3 4 North Staffs Mid. Countles A Frodsham N.W. Countles 1 8 1 3 4 North Staffs Mid. Countles A Frodsham N.W. Countles 1 8 1 3 4 North Staffs Mid. Countles A Frodsham N.W. Countles 1 8 1 3 4 North Staffs Mid. Countles A	8. d. 1. 2 1 8 1 3 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8
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	wages for certain trades (usually Painters and Plasterers) vary slightly from those given. rates for each trade in any given area will be sent on request.	

EXC per hou 1s. 6d. WATCH

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LABOUR 1s. 6d. p PLUMBER per shift.

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STONEWA tested; Do. 6 in. Do. 9 in. CAST-IRO 4 in., p. Do. 6 in. Note.—7
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PRICES CURRENT

EXCAVATOR AND CONCRETOR
EXCAVATOR, 1s. 4\frac{1}{2}d. per hour; LABOURER. 1s. 4\frac{1}{2}d. per hour; NAVVY, 1s. 4\frac{1}{2}d. per hour; TIMBERMAN. 1s. 6d. per hour; WATCHMAN, 7s. 6d. per shift.
Ducken brick or stone 2 in ner ud 60 11 6

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Broken brick or stone	. 2 in	2 7	er ud.		69	11	6
Thames ballast, per 3					0	11	0
Pit gravel, per ud.		-			0	18	0
Pit sand, per yd.					0	14	6
Washed sand .					0	1.5	0
Screened ballast or	arar	07. 1	add 10 ne	r or	nt.	ner	ud.
Clinker, breeze, etc.	mri	CER	according	to	loca	litu	
Portland cement, per			e e		£2	19	0
Lias lime, per ton	0000				2	10	0
Sacks charged extre	a at	18			d c	redi	ted
when returned at 1s.	64	100	our com				
Transport hire per d							
Cart and horse £1	3	0	Trailer		69	15	0
3-ton motor lorry 3	1.5		Steam ro		4	5	0
Steam lorry, 5-ton 4			Water co		1	5	0
Steam torry, o-ton 4	0	-	" biter to	00	-		
EXCAVATING and th							
dinary earth no				. 3	0	2	0
deep, basis price, 1	er v	a. (une.		1)	- 3	U

EXCAVATING and throwing out in or- dinary earth not exceeding 6 ft.			
deep, basis price, per yd. cube. Exceeding 6 ft., but under 12 ft., a		30	
cent.			
In stiff clay, add 30 per cent.			
In underpinning, add 100 per cent.			
In rock, including blasting, add 225 pe	rcen	t.	
If basketed out, add 80 per cent. to 1:	o ne	r ce	nt.
Headings, including timbering, add 40	0 pe	r ce	ent.
RETURN, fill, and ram, ordinary earth.			
per yd	€0	1	6
SPREAD and level, including wheeling.	-		
per yd	0	1	6
FILLING into carts and carting away			
to a shoot or deposit, per yd. cube .	0	10	6
TRIMMING earth to slopes, per yd. sup.	0	0	6
HACKING up old grano, or similar			
paving, per yd. sup	0		3
PLANKING to excavations, per ft. sup	0	0	5
po. over 10 ft. deep, add for each 5 ft.			
in depth, 30 per cent.			
Ir left in, add to above prices, per ft.			
cube	0	2	0
HARDCORE, 2 in. ring, filled and			
rammed, 4 in. thick, per yd. sup	- 0		1
po. 6 in. thick, per yd. sup	0		10
Puddling, per yd. cube	1	10	
CEMENT CONCRETE, 4-2-1, per yd. cube	2		0
po. 6-2-1, per yd. cube	1	18	0
po. in upper floors, add 15 per cent.			
po. in reinforced-concrete work, add 2	10 pe	r cc	nt.
po. in underpinning, add 60 per cent.			
LIAS-LIME CONCRETE, per yd. cube .	£1	16	0
Breeze Concrete, per yd. cube .	1	7	0
po. in lintels, etc., per ft. cube	0	1	6
CEMENT concrete 4-2-1 in lintels			
packed around reinforcement, per			
ft. cube	0	3	9
FINE concrete benching to bottom of	-	-	
manholes, per ft. cube	0	2	6
FINISHING surface of concrete spade			
face, per vd. sup	0	0	9

DRAINER

LABOURER. 1s. 44d. per hour; TIMBERMAN, 1s. 6d. per hour; BRICKLAYER, 1s. 94d. per hour; PLEMBER, 1s. 94d. per hour; WATCHMAN, 7s. 6d. per shift.

		75					
Stoneware pipe	s, tested	quali	ty. 4	in.,			
per ft					£0	0	10
Do. 6 in., per fi	t				0	1	3
Do. 9 in., per fi					0	2	3
Cast-iron pipes		9 /	. lena	ths.			
4 in., per yd.					0	5	6
Do. 6 in., per y	d.				0	8	6
Portland cemen	t and sar	nd. 80	e "Ex	care	tor"	ab	ore.
Lead for caulkin	a, per cu	t			£2	5	6
Gaskin, per tb.					0	0	4 1
		*					
STONEWARE DE	PAINS, ioi	nted	in cem	ent.			
tested pipes.					0	4	3

tested pipes, 4 in.,	perft.			0	4	3
Do. 6 in., per ft				0	5	0
Do. 9 in., per ft.				0	7	9
CAST-IRON DRAINS.	jointed	in	lead.			
4 in., per ft				0	8	0
Do. 6 in., per ft.				0	10	0
Note.—These price bed and filling for no						

Fittings in Stoneware and Iron according to Portland Stone:

BRICKLAYER

BRICKLAYER, 1s. 9\d. per hour; LABOURER, 1s. 4\d. per hour; SCAFFOLDER, 1s. 5\d. per hour.

1s. 44d. per hour; SCAFFOLDER, 1s. 54d. per hour; LABOCKER, 1s. 54d. per hour; SCAFFOLDER, 1s. 54d. 1s. 64d. per hour; SCAFFOLDER, 1s. 5d. 1s. 6d. per hour; SCAFFOLDER, 1s. 6d. per hour; Labour, 1s. per ho

Brickwork in stone lime mortar,			
Flettons or equal, per rod	£33	0	0
Do. in cement do., per rod	36	0	0
Do. in cement do., per rod			
no. in blues, add 100 per cent, per rod.			
Do. in blues, add 100 per cent. per rod. Do. circular on plan, add 121 per cen	it. De	er r	nd.
Do. in backing to masonry, add 121 p	er ce	nt.	Der
rod.		****	per
Do. in raising on old walls, etc., add 15	21 ne	r cc	nt.
per rod.	a be	1 00	ALC.
Do. in underpinning, add 20 per cen	t m	0.22 E	ho
HATE-PRICE malls in stocks in coment	it. pi	Cr r	ou.
HALF-BRICK walls in stocks in cement	£0	4	0
mortar (1-3), per ft. sup	250	1	U
Bedding plates in cement mortar, per	0	0	-
ft. run	0	0	3
BEDDING window or door frames, per			0
ft. run	0	0	3
LEAVING chases 21 in. deep for edges of			
concrete floors not exceeding 6 in.			
thick, per ft. run	0	0	2
CUTTING do. in old walls in cement, per			
ft. run	0	0	4
CUTTING, toothing and bonding new			
work to old (labour and materials),		-	_
per ft. sup.	0	0	7
TERRA-COTTA flue pipes 9 in. diameter,			
jointed in fireclay, including all cut-			
tings, per ft. run	0	3	6
Do. 14 ft. by 9 in. do., per ft. run .	0	6	0
FLAUNCHING chimney pots, each .	0	2	0
CUTTING and pinning ends of timbers,			
etc., in cement	0	1	0
FACINGS fair, per ft. sup. extra	0	0	3
Do. picked stocks, per ft. sup. extra .	0	0	7
Do. red rubbers gauged and set in			
putty, per ft. sup. extra	0	4	9
Do. in salt white or ivory glazed, per	U	*	
ft. sup. extra	0	- 5	6
Tuck pointing perft sup extra	0	0	10
TUCK pointing, per ft. sup. extra WEATHER pointing, do. do.	0	0	3
Tile creasing with cement fillet each	0	U	4,0
side per ft. run	0	0	6
GRANOLITHIC PAVING, 1 in., per yd.	0	U	0
	0	5	0
sup.	0	6	0
DO. 1 in., per yd. sup DO. 2 in., per yd. sup.	0	7	0
If coloured with red oride ron ud	U	1	0
If coloured with red oxide, per yd.	0	- 1	0
sup.	0	1	U
If finished with carborundum, per yd.	0	0	6
sup.	0	0	0
If in small quantities in finishing to		-	
steps, etc., per ft. sup.	0	1	4
Jointing new grano, paving to old,			
per ft. run	0	0	4
Extra for dishing grano, or cement		-	-
paving around gullies, each	0	1	6
BITUMINOUS DAMP COURSE, ex rolls,			_
per ft. sup	0	0	7
ASPHALT (MASTIC) DAMP COURSE, 1 in.,		-	-
per yd. sup.	0	8	0
DO. vertical, per yd. sup. SLATE DAMP COURSE, per ft. sup. ASPHALT ROOFING (MASTIC) in two	0	11	0
SLATE DAMP COURSE, per ft. sup	0	0	10
ASPHALT ROOFING (MASTIC) in two		-	
thicknesses, I in., per yd	0	8	6
DO. SKIRTING, 6 in	0	0	11
BREEZE PARTITION BLOCKS, set in			
cement, 1 in. per yd. sup	0	5	3
DO. DO. 3 in	0	6	6
BREEZE fixing bricks, extra for each .	0	0	3

THE wages are the Union rates current in London at the time of publication. The prices are for good quality material, and are intended to cover delivery at works, wharf, station, or yard as customary, but will vary according to quality and quantity. The measured prices are based upon the foregoing, and include usual builders' profits. Though every care has been taken in its compilation it is impossible to guarantee the accuracy of the list, and readers are advised to have of the list, and readers are advised to have the figures confirmed by trade inquiry.

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MASON

Mason, 1s. $9\frac{1}{2}d$. per hour; do. fixer, 1s. $10\frac{1}{2}d$. per hour; labourer, 1s. $4\frac{1}{2}d$. per hour; scaffolder, 1s. $5\frac{1}{2}d$. per hour.

Portlana 2	stone:						
Whitbed,	per ft. cube				£0	4	(
Basebed,	per ft. cube				0	4	1
	perft cube				0	3	- (
Usual tra	de extras for	large	blocks	1.			
	ng, av. 21 in.,			er .	0	6	- 6
	lates sawn, pe				0	6	1
	es, rubbed, 1 i				0	2	-
Cement a	nd sand, see	"Exc	carator	"," et	c., ab	ove.	
		*					
HOISTING	and setting	ston	e, per	ft.			
cube					£0	2	6

76					
Hoisting and setting stone,	per	ft.	.00	9	q
Do. for every 10 ft. above 30			15 per	CE	ent.
PLAIN face Portland basis, per	ft. 8	sup.	£0	2	8
Do. circular, per ft. sup.			0	4	0
SUNK FACE, per ft. sup			0	3	9
Do. circular, per ft. sup.	0		0	4	10
JOINTS, arch, per ft. sup.			0	2	6
Do. sunk, per ft. sup			0	2	7
DO. DO. circular, per ft. sup.			0	4	6
CIRCULAR-CIRCULAR WORK, per	ft.s	up.	1	2	0
PLAIN MOULDING, straight, I	er i	nch			
of girth, per ft. run .			0	1	1
Do. circular, do., per ft. run			0	1	4

HALF SAWING, per ft. sup. Add to the foregoing prices, if in 35 per cent.	₽0 York	sto	one,
Do. Mansfield, 12 per cent.			
Deduct for Bath, 331 per cent.			
Do. for Chilmark, 5 per cent.			
SETTING 1 in. slate shelving in cement,			
per ft. sup.	60	0	6
RUBBED round nosing to do., per ft.	000		
lin.	0	0	6
YORK STEPS, rubbed T. & R., ft. cub.			
fixed	1	9	0
YORK SILLS, W. & T., ft. cub. fixed .	1	13	0
ARTIFICIAL stone paving, 2 in. thick,	_		-
per ft. sup	0	1	6
DO. 21 in thick perft sun	0	1	9

SLATER AND TILER

SLATER, 1s. 9\d. per hour; TILER, 1s. 9\d. per hour; SCAFFOLDER, 1s. 5\d. per hour; LABOURER, 1s. 4\d. per hour.

N.B.—Tiling is often executed as piecework.

Slates, 1st quality, pe	er 1.20	00:				
Portmadoc Ladies .				214	0	-
Countess				27	0	- (
Duchess				32	0	- (
Old Delabole	Med.	Greu		Med.	Gr	eer
$24 \text{ in.} \times 12 \text{ in.}$	£42	11 3		£45	1	(
20 in. × 10 in.	31	4 3		33	0	-
16 in. × 10 in.	20	18 0		22	4	9
14 in. × 8 in.	12	1 0		12	16	9
Green Randoms, per	on .			8	3	-
Grey-green do., per to	n.			7	3	-
Green peggies, 12 in.	to 8 in	. long.	ner to	m 6	3	- 5
In 4-ton truck loads,	delin	ered N	ine F	lms s	tati	on
Clips, lead, per lb				£0	0	-
Clips, copper, per lb.				0	2	(
Nails, compo, per cut				1	6	(
Nails, copper, per lb.				ō	1	16
Cement and sand, s	ee "E	reavate	r." e	te., at	one	
Hand-made tiles, per	M	-	., .	₽5		- 1
Machine-made tiles, 7	er M.			5	. 8	ì
Westmorland slates, le	rae. n	erton		9	0	1
DO. Peggies, per ton	or go, p			7	5	-
	*					
SLATING, 3 in. lap, equal:	comp	o nail	s, Po	rtma	doc	01
Ladies, per square				-04	0	-
Countess, per square	0			4	5	-
Duchess, per square				4	10	0

WESTMORLAND, in dir	minis	hins	cou	rses.			
per square .					6	5	0
CORNISH DO., per squa	are .				6	3	0
Add, if vertical, per so	mare	anı	POT.		0	13	0
Add, if with copper i	nails.	ner	san	are		-	-
approx		\$ POL	ogu		0	2	6
Double course at eave	a nei	e ft	enn	TOT	0	ĩ	0
SLATING with old D	elaho	la c	lates	to	9 3	in.	lan
with copper nails	of no	m 00	HALO			IAA.	ace p
with copper nams					18-3	0-	
24 in. × 12 in.		a. c	drey	1	Med.		
	£5	U	0		£5	2	0
$20 \text{ in.} \times 10 \text{ in.}$	9	- 5	0		5	10	0
16 in. × 10 in.	- 4	15	0		5	1	0
14 in. × 8 in.	4	10	0		4	15	000
Green randoms .					- 6	7	
Grey-green do					- 5	9	0
Green peggies, 12 in.	to 8 ir	a. lo	ng		4	17	0
TILING, 4 In. gauge, o				rse	_	-	
nailed, in hand-ma							
per square		cus .		480	5	6	- 6
Do., machine-made	do n	OPR	anar		A	17	0
Vertical Tiling, incl	nding	DI BI	intie		14 1	20	60
per square	namili	po	milli	ig, ai	in I	od.	vu.

FIXING lead soakers, per dozen STRIPPING old slates and stacking for	£0	0	1
re-use, and clearing away surplus and rubbish, per square LABOUR only in laying slates, but in-	0	10	•
cluding nails, per square See "Sundries for Asbestos Tiling."	1	0	•

CARPENTER AND JOINER

CARPENTER, 1s. 9 d. per hour; Joiner, 1s. 9 d. per hour; LABOURER, 1s. 4 d. per hour.

per nour, Labour	Marie, 10. Til	a. per	W.				
Timber, average	nvines at De	oko F	and.	on Si	and	and	
Scandinavian, etc				on is	unu	ceres	
7×3 , per std.	. (equal to	witte)		£20	0	0	
11×4. per std.		0		30	0	0	
Memel or Equal.	Slightly	one them	in		na	0	
Flooring, P.E., 1	m men ea	oo inui	. 10	£1	5	0	
DO. T. and G., 1 i	n., per oq.			21	5	0	
Planed boards, 1 is	n., per sq.	mam of d		30	0	0	
Wainscot oak, per	d ann of i	per sea	l'o	0	1		
Mahagany Honda	jt. sup. of 1	in.	192		1	6 6 3	
Mahogany, Honda			111		1 2	2	
Do. Cuba, per ft.			9.	0	1	0	
Do., African, per		0		0	1	3	
Teak, per ft. sup. o	II in			U	1	6	
Do., ft. cube .				0	15	0	
	*						
FIR fixed in wall p	lates, linte	ls, slee	per	8.			
etc., per ft, cube				0	5	6	
Do. framed in fl	oors, roofs.	etc., 1	er	_	-		
ft. cube .				0	6	6	
Do. framed in tru	isses, etc., i	neludi	næ	-			
ironwork, per ft				0	7	6	
PITCH PINE, add		at.					
FIXING only boar			fa				
etc., per sq.	umb in noc	10, 100	1109	0	13	6	
SARKING FELT laid	I 1-nly no	e wd		0	1	6	
Do. 3-ply, per yd		y u.		0	î	9	
CENTERING for co	noroto oto	inch	d.	U		o	
ing horsing and			Itt.	0	10	0	
TURNING pieces			200	-	10	U	
soffits, 41 in. wi			uta	0	0	4.1	
Do. 9 in. wide an				0	1	4.8	
bo. o m. wide an	dover per	to. sup		0	1	4	

continued overleaf

PARTY 19 19 19 19 19 19 19 1	CARPENTER AND JOINER: continu	d. PLUMBER	GLAZING in beads, 21 oz., per ft 60 1 1
Description of the property	SHUTTERING to face of concrete, per	PLUMBER, 1s. 9 d. per hour; MATE OR LABOURER,	DO. 26 oz., per ft 0 1 4 Small sizes slightly less (under 3 ft. sup.).
Doe and washe of timbers, allow 25 per cent. of the part of the pa	Do. in narrow widths to beams, etc.,	* * * * * * * * * * * * * * * * * * * *	1s. 6d. to 2s. per ft.
Description	Use and waste of timbers, allow 25 per cent.	of Do. drawn pipes, per cwt 1 14 0	usual domestic sizes, fixed, per ft.
Print Prachage desirating (lotted prints) Print Prints Print	SLATE BATTENING, per sq £0 12	e Do scrap per cut 1 5 6	Glazing only, polished plate, 6 d. to 8d. per ft.
Comparison of the part 1.00 Comparison of the part 1.0	firrings to falls, per square . 2 10	DO, fine, per 10	DAINTED AND DADEDHANCED
Fig. 1, and Fig. 2, and Fig. 3, and Fig. 4, and Fig. 4, and Fig. 4, and Fig. 4, and Fig. 5, and	eaves, per ft. run 0 0	6 Cast-iron pipes, etc.:	
Continue with the part of the continue with th	arches, per it. run	4 Do. 4 in. per yd 0 4 9½ $R.W.P.$, 2½ in., per yd 0 2 2 $\frac{1}{2}$	per hour; FRENCH POLISHER, 1s. 9d. per hour; PAPERHANGER, 1s. 8 d. per hour.
Remanour or similar quality reoffee, 10. Served by part augus, 10. Served by augus, 10	measured in), per ft, run 0 0		*
Remanour or similar quality reoffee, 10. Served by part augus, 10. Served by augus, 10	nailed to sides of joists (joists measured over), per square 2	Gutter. 4 in. H.R., per yd 0 1 6½ 0 Do. 4 in. O.G., per yd 0 1 10½	Linseed oil, raw, per gall. 0 3 6
Do., the problem of the property of the proper	Rupepour or similar quality roofing.	3 MILLED LEAD and labour in gutters.	Furpentine, per gall 0 4 0
Towers and growted flooring. 1 in background and professional profes	Do., two-ply, per yd. sup 0 2 Do., three-ply, per yd. sup 0 3	A Transport fixed including running	Knotting, per gall 0 18 0
Description of the property of	Tongued and grooved flooring, 11 in. thick, laid complete with splayed	DO. 7 In., per It	Double size, per firkin 0 3 6
Complete in marrier de market to do. 10	headings, per square	po. 14 in., per ft 0 4 0	Pumice stone, per lb 0 0 44
Worth block flooring standard blocks Doal 1 In. thick, per yd, sup. Doal 1 In. thick, per yd, sup. Data, moduled sales, 1 In. worth R. spp. Data, cased remains, oak sills and 2 In. Supple 1 In. thick, per yd, sup. Data, cased remains, oak sills and 2 In. Supple 1 In. thick, per yd, sup. Data, cased remains, oak sills and 2 In. Supple 1 In. thick, per yd, sup. Data, cased remains, oak sills and 2 In. Supple 1 In. thick, per yd, sup. Data, cased remains, oak sills and 2 In. Supple 1 In. thick, per yd, sup. Data, cased remains, oak sills and 2 In. Supple 1 In. thick, per yd, sup. Data, cased remains, oak sills and 2 In. Supple 1 In. thick, per yd, sup. Data, cased remains, oak sills and 2 In. Supple 1 In. thick, source that sides, yet yd. Data, cased remains, oak sills and 2 In. Supple 1 In. thick, per yd, sup. Data, cased remains, oak sills and 2 In. Supple 1 In. thick, per yd, sup. Data, cased remains, oak sills and 2 In. Supple 1 In. thick, per yd, sup. Data, cased remains, oak sills and 2 In. Supple 1 In. thick, per yd, sup. Data, cased remains, oak sills and 2 In. Supple 1 In. thick, source that sides, yet yd. Data, cased remains, oak sills and 2 In. Data, transfer, sup. Data, cased remains, oak sills and 2 In. Data, transfer, sup. Data, cased remains, oak sill supple 1 In. Supple 1 In. thick, source that sides, yet yd. Data, cased remains, oak sills and 2 In. Data, transfer, sup. Data, cased remains, oak sills and 2 In. Data, transfer, sup. Data, transfer	ings, per it. sup	0 complete 21 in per ft. 0 6 0	Varnish, copal, per gall, and up 0 14 0
Data 1 n. thick, per y d. smi. 10 10 10 10 10 10 10 1	Wood block flooring standard blocks	Do. 3 in., per ft	Do., flat, per gall
Maphe I in thick, per yl, win, moulded bars for glass, per ft. sup. De Jin. 1, thick, per ft. sup. De Jin. 1, thick, sup ft. sup. De Jin. 1, thick sup ft. sup. De Jin. 1, thick sup ft. sup. De Jin. 2, thick sup. De Jin. 3, thick sup. De Jin. 2, thick sup. De Jin. 2, thick sup. De Jin. 3, thick sup. De Jin. 2, thick sup. De Jin. 2, thick sup. De Jin. 3, thick sup. De Jin. 3, thick sup. De Jin. 4, thick sup. De Jin. 5, thick sup. De Jin. 5, thick sup. De Jin. 5, thick	Deal 1 in. thick, per yd. sup 0 10	U Do. 1 in., each U 3 2	Ready mixed paints, per gall. and up 0 15 0
Detail and primers, oak sills and 2 in.	Maple 11 in. thick, per yd. sup. 0 15	O Drawn dema stem sock and two	LIME WHITING, per yd. sup 0 0 3
MOURDED bornes, active acceled patterns of the Mourage bornes, active acceled to the second patterns of the mount of the m	moulded bars in small squares, per	DO. ‡ in., each	Do., and 2 coats distemper with pro-
MOURDED bornes, active acceled patterns of the Mourage bornes, active acceled to the second patterns of the mount of the m	po. 2 in. do., per ft. sup	9 in red lead, 2½ in., per ft. run 0 1 7	prietary distemper, per vd. sup 0 0 9
Do nonlike this disc, per (1 e. app. 2 g p.	moulded sashes, brass-faced pulleys		and on plaster or joinery, 1st coat,
Do. Do. 1 in Johnstein, square both sides, per ft. sup. Do. 1 in Johnst. moulded both sides, per ft. sup. Do. 1 in Johnst. moulded both sides, per ft. sup. Do. 1 in Johnst. moulded both sides, per ft. sup. Do. 1 in Johnst. moulded both sides, per ft. sup. Do. 1 in Johnst. moulded both sides, per ft. sup. Do. 1 in Johnst. moulded both sides, per ft. sup. Do. 1 in Johnst. moulded both sides, per ft. sup. Do. 1 in Johnst. moulded both sides, per ft. sup. Do. 1 in Johnst. moulded both sides, per ft. sup. Do. 1 in Johnst. moulded both sides, per ft. sup. Do. 1 in Johnst. sup. DEAL frames, sin. 3 in., rebated and ft. sup. DEAL frames, sin. 3 in., rebated and supering	MOULDED horns, extra each 0 0		Do., subsequent coats, per vd. sup. 0 0 9
Do. Do. molded both sides, per f. ang. p. o. 1 and not be a provincing of the first one of the provincing of the provinc	thick, per ft. sup 0 2	6 Cast-iron soil pipe, fixed with 9 caulked joints and all ears, etc.,	BRUSH-GRAIN, and 2 coats varnish.
Do. notineed both sciese, per ft. supposed poor with diminished stiles with moulded bars for ginss, per ft. supposed with moulded bars ft	Do. 2 in. thick, square both sides, per	9 po. 3 in., per ft	per yd. sup. 0 3 8
and including joints to water waste 2 5 0 and including joints to water waster. A few part of the part of th	Do. moulded both sides, per ft. sup 0 3 Do. in 3 panels, moulded both sides,	W.C. PANS and all joints, P. or S.,	WAX POLISHING, per it. sup. 0 0 6
Harbook, mahoneany or teak, multiply 3 times. Dearframes, 4 in. × 3 in., related and beaded, per ft. cub. Dearframes, 4 in. × 3 in., related and beaded, per ft. cub. Dearframes, etc., ret. cub. Dearframes, per ft. cub. De	upper panel with diminished stiles with moulded bars for glass, per ft.	and including joints to water waste preventers, each 2 5 0	per piece 0 1 7
PLASTERER Add for extra labours, per ft. run Deal treads 1 in. and risers 1 in. tongued and grooved including ft Deal treads 1 in. and risers 1 in. tongued and grooved including ft Deal treads 1 in. tongued and grooved including ft Deal treads 1 in. tongued and grooved including ft Deal treads 1 in. tongued and grooved including ft Deal treads and risers housed to 2 in. deal mopatick handrall fixed to 2 in. d	sup	LAVATORY BASINS only, with all	DO., fine, per piece, and upwards . 0 2 4
STAIRCASE WOYE: DEAL TWEST \$1 in. drighted and grooved including fit of the person of treads and grooved including fit of the person of treads and friend the person of the person of the person of the person of treads and friend fixed to brackets, per fit. 1 in on posticle handral fixed to brackets, per fit. 1 in square deal bar balusters, and the person of the person of treads and performed from the person of the perso	headed perft cube	0	CANVAS, strained and fixed, per yd.
DEAL wall strings. I in. thick, moulded land of the strings of treads and risers housed to protect the strings of treads and risers housed to protect the strings of treads and risers housed to protect the strings of treads and risers housed to protect the strings of treads and risers housed to protect the strings of treads and risers housed to protect the strings of treads and risers housed to protect the strings of treads and risers housed to protect the strings of treads and risers housed to protect the strings of treads and risers housed to protect the strings of treads and risers housed to protect the strings of treads and risers housed to protect the strings of treads and risers housed to protect the strings of the strings of treads and risers housed to protect the strings of the strin	STAIRCASE WOLK:		VARNISHING, hard oak, 1st coat, yd.
Dealt well strings 1 in, thick, moul ded, per ft. run 0 2 6 5 6 6 6 6 6 6 6 6	tongued and grooved including fir		Do., each subsequent coat, per yd.
Enge of treads and risers housed to strings, each tick kandraid fixed to 0 1 0 8 seem laths, per bot. 0 1 0 8 seem laths are clearly an experience of the latest seem laths and the latest seem laths are clearly as the latest seem latest	Draf well strings 11 in thick moul-	Train time, per ton	
Ense of treads and risers housed to strings, each tick kandraid fixed to 0 1 6 Securities, per dot. 0	If ramped, per ft. run	6 Lime putty, per cut £0 2 9	Fibre or wood pulp boardings, accord-
## SMITH SMITH Seekly rate equals 1s 9id, per hour; Interest SMITH SMITH seekly rate equals 1s 9id, per hour; Interest SMITH SMITH seekly rate equals 1s 9id, per hour; Interest SMITH SMITH seekly rate equals 1s 9id, per hour; Interest SMITH SMITH seekly rate equals 1s 9id, per hour; Interest Since Sin	ENDS of treads and risers housed to	Fine stuff, per vd 1 14 0	The measured work price is on the
4 in. x 3 in. oak fully moulded handrall, perf. trun. 5 6 Plaster, per ton 3 18 0 and waste, fixed on, but not including studs or grounds, per tr. 1 in. square deal bar balusters, 0 6 Do. per ton. 3 12 6 Sheeper ton 5 5 Sheeper ton 5 5 Sheeper ton	2 in, deal monstick handrail fixed to	. Keene's cement per ton	
1	44 in. × 3 in. oak fully moulded handrail, per ft. run . 0 5	Do. fine, per ton	and waste, fixed on, but not in-
### SHELIVES and bearers. 1 in., cross ### SHELIVES and bearers. 1 in., cross ### SHELIVES and bearers. 1 in., cross ### Lath nails, per id. #	framed in, per ft. run 0	DO ner ton 3 12 6	sup from 3d. to 0 0 6
14 lin. beaded cupboard fronts, moulded and square, perf s. sup. 0 2 9	SHELVES and bearers, 1 in., cross-	Thistle plaster, per ton 3 9 0	Plaster board, per yd. sup from 0 1 7
det and square, her it. sup. METAL LATHINO, per yd. METAL LATHINO, per yd. METAL LATHINO, per yd. FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, \$\frac{1}{2}\$ in. grey flat, per yd. FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, \$\frac{1}{2}\$ in. grey flat, per yd. FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, \$\frac{1}{2}\$ in. grey flat, per yd. FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, \$\frac{1}{2}\$ in. grey flat, per yd. FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, \$\frac{1}{2}\$ in. grey flat, per yd. FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, \$\frac{1}{2}\$ in. grey flat, per yd. FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, \$\frac{1}{2}\$ in. grey flat, per yd. FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, \$\frac{1}{2}\$ in. grey flat, per yd. FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, \$\frac{1}{2}\$ in. grey flat, per yd. FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, \$\frac{1}{2}\$ in. grey flat, per yd. FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, \$\frac{1}{2}\$ in. grey d. FREXIDER, on brickwork, 1 to 3, per yd. RENDER, on brickwork, 1 to 3, per yd. RENDER, on brickwork, 1 to 3, per yd. RENDER, no brickwork, 1 to 3, per yd. RENDER, on brickwork, 1 to 3, per yd. RENDER, on brickwork, 1 to 3, per yd. RENDER, on brickwork, 1 to 3, per yd. RENDER, no brickwork, 1 to 3, per yd. RENDER, no brickwork, 1 to 3, per yd. RENDER, on brickwork, 1 to 3, per yd. RENDER, no brickwork, 1 to 3, per	1 in. beaded cupboard fronts, moul-	*	sup from 0 2 8
Fixing only (including providing screws): Fixing only (including and screws): Fixing only (including screws): Fixing onl	TEAK grooved draining boards, 11 in.	METAL LATHING, per yd 0 2 3	Asbestos sheeting, 3 in grey flat, per
## RENDER, on brickwork, 1 to 3, per yd. RENDER in Dritland and set in fine stuff, per yd. RENDER in Dritland set in fine stuff, per yd. RENDER in Dritland set in fine stuff, per yd. RENDER in Dritland set in fine stuff, per yd. RENDER in Dritland set in fine stuff, per yd. RENDER in Dritland set in fine stuff, per yd. RENDER in Dritland set in fine stuff, per yd. RENDER in Dritland set in fine stuff, per yd. RENDER in Dritland set in fine stuff, per yd. RENDER in Dritland set in Stagistic per yd. RENDER in Dritland set in Stagistic per yd. RENDER in Dritland set in Stagistic per yd. RENDER in Dritland set		for tiling or woodblock. 4 in	ud sun
RENDER in Portland and set in fine Do. to doors, per pair 0 1 2 7 8 1 7 8 1 8	screws):	DO. vertical, per yd 0 2 7 RENDER, on brickwork, 1 to 3, per yd. 0 2 7	
Barrel bolts, 9 in., iron, each 0 1 0 RNDER, float, and set, trowelled, Sash fasteners, each 0 1 0 Rim locks, each 0 1 1 0 Rim locks, each 0 1 1 9 Rim locks, each 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Hinges to sashes, per pair 0 1	RENDER in Portland and set in fine stuff, per yd 0 3 3	Do., corrugated, per yd. sup 0 5 0
Rim locks, each 0 1 9 No. in Thistel plaster, per yd. 0 2 5 5 5 5 5 5 5 5 5	Barrel bolts, 9 in., iron, each 0 1	RENDER, float, and set, trowelled,	including battens, or boards, plain
SMITH SMITH, weekly rate equals 1s. 9id. per hour; MATE, do. 1s. 4d. per hour; ERECTOR, 1s. 9id. per hour; FITTER, 1s. 9id. per hour; LABOURER, 1s. 4d. per hour; LABOURER, 1s. 4d. per hour; ERECTOR, 1s. 9id. Mild Steel in British standard sections, per fon Sheet Steet: Flat sheets, black, per ton Corrugated sheets, galved, per grs Mild Steel, per ton Corrugated sheets, galved, per grs Mild Steel, per ton Corrugated sheets, galved, per grs Mild Steel in trusses, etc., erected, per ton Bolls and nuts, per cut. and up 1 18 Mild Steel in british standard sections, per ton Corrugated sheets, galved, per grs Mild Steel in trusses, etc., erected, per ton Do., in compounds, per ton Do., in compounds, per ton Do., in bar or rod reinforcement, per ton Do., in bar or rod reinforcement, per ton Do., in bar or rod reinforcement, per ton Do., in light railings and balusters, per ext. Fixing only corrugated sheeting, in-cluding washers and driving screws. GLAZIER, in. per ft GLAZIER, in. per ft Do. 45 ft. sup Do. 46 ft. sup Do. 46 ft. sup Do. 47 british diamage and selecting, in-cluding washers and driving screws. Fixing only corrugated sheeting, in-cluding washers and driving screws.	Rim locks, each 0 1	a RENDER and set in Strapite, per vd. 0 2 5	DO., red 3 0 0
SMITH SMITH, weekly rate equals 1s. 9\flat. per hour; ERECTOR, 1s. 9\flat. per hour; LABOURER, 1s. 4d. per hour. Mild Steel in British standard sections, per fon Sheet Steel: Flat sheets, black, per ton 19 0 0 Do., gated., per fon Corrugated sheets, galed., per grs. 0 1 10 Glass: 4ths in crates: Clear, 21 0z. Washers, galed., per grs. 0 1 1 1 Bolts and nuts, per cut. and up 1 18 01 Do., in small sections as reinforcement, per ton 100., in small sections as reinforcement, per ton 100., in small sections as reinforcement, per ton 100., in bar or rod reinforcement, per ton 100., in compounds, per ton 11 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		ing, any of foregoing, per yd 0 0 5	punched per M. grey 16 0 0
SMITH,	SMITH	Angles, rounded Keene's on Port-	ASBESTOS COMPOSITION FLOORING:
1. 4d. per hour ; FITTER, 1s. 9\flat d. per hour ; LABOURER, 1s. 4d. per hour ; LABOURER, 1st. 1st. per ft. sup ; LABOURER, per cwt. sup ; LABOURE, per cwt. sup ; LABOURE, per cwt. s	SMITH, weekly rate equals 1s. 9td. per hou	PLAIN CORNICES, in plaster, per inch	thick, in plain colour, per yd. sup. 0 7 0
## Mild Steel in British standard sections, per fon	per hour; FITTER, 1s. 91d. per hour; LABOUR!	R per ft. lin 0 0 3	work, unpolished, per yd 0 6 6
Sheet Steel: Shee	*	and jointed in Parian, per yd.,	Metal casements for wood frames,
Flat sheets, black, per ton 19 0 0 OLAZIER, 1s. 8¼d per hour. 20 0 0 OLAZIER, 1s. 8¼d per hour. 20 0 0 OLAZIER, 1s. 8¼d per hour. OLAZIER, 1s. 8¼	Mild Steel in British slandard sections, per ton £12 10	0 FIBROUS PLASTER SLABS, per yd 0 1 10	
Doc 10 10 10 10 10 10 10 1	Flat sheets, black, per ton	0	HANGING only metal casement in, but not including wood frames, each . 0 2 10
Washers, galvd., per grs	Corrugated sheets, galvd., per ton . 20 0	O Class Albe in crotes :	
MILD STREEL in trusses, etc., erected, per ton	Washers, galva, per grs 0 1 Rolls and nuts, ner out and un	1 Clear, 21 oz	6
per ton DO., in small sections as reinforce- ment, per ton DO., in compounds, per ton DO., in bar or rod reinforcement, per ton WROT-IRON in chimney bars, etc., including building in, per evt. DO., in light railings and balusters, per cwt. Fixing only corrugated sheeting, in- cluding washers and driving screws. 25 10 0 2 ft. sup. DO. 4ft. sup. DO. 6ft. sup. DO. 6ft. sup. DO. 45 ft. sup. DO. 6ft. sup. DO. 45 ft. sup. DO. 45 ft	*	Cathedral white, per ft. 0 0 7	Add about 75 per cent. to 100 per
DO., in bar or rod reinforcement, per ton DO. 45 ff. sup. DO. 65 ff. sup. DO.	per ton 25 10	o 9 ff our ner ff 0 1 6	6
DO., in bar or rod reinforcement, per ton DO. 45 ff. sup. DO. 65 ff. sup. DO.	ment, per ton 16 10	0 Do. 6 ft. sup 0 3 0 0 0 0 0 20 ft. sup 0 3 7	Thickness Ain Jin Jin Jin
Including building in, per cwt. 2 0 0 Rough plane, 75 th., per ft	Do., in bar or rod reinforcement, per	Do. 45 ft. sup. ,, 0 3 9 Do. 65 ft. sup. ,, 0 3 11	Qualities AA. A. B. AA. A. B. AA. A. B. AA. A. B. Ad. Ad. Ad. B. Ad. Ad. Ad. B. B. Ad. Ad. Ad. B. Ad. Ad. Ad. B. B. Ad.
Fixing only corrugated sheeting, in- cluding washers and driving screws. Glazing in putty, clear sheet, 21 oz. 0 0 11	WROT-IRON in chimney bars, etc., including building in, per cwt. 2 0	DO. 100 ft. sup. , ,	
Fixing only corrugated sheeting, in- cluding washers and driving screws. Glazing in putty, clear sheet, 21 oz. 0 0 11	Do., in light railings and balusters,	0 Linseed oil putty, per cut 0 0 68	Mahogany 4 3 3 6 5 3 4 9 7 - 1 0 10 -
per yu. ,	Fixing only corrugated sheeting, in- cluding washers and driving screws,	GLAZING in putty, clear sheet, 21 oz. 0 0 11	Plain Oak - 119 10 10 119 1 0
	per yu 0 2	DO. 20 02	Oregon Pine 5 4 - 59 5 - 6