THE

ARCHITECTS'



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WEEK\*

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# RAGNAR

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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.

THE ARCHITECTS' JOURNAL for November 10, 1926



## RENDERINGS OF ARCHITECTURE Selected and annotated by Dr. Tancred Borenius. xliii. Giovanni Paolo Pannini (1695-1768). Roman Ruins.

This is a particularly attractive example of Pannini's architectural fantasies, distinguished by a very simple and effective rhythm of design, the big ruined arch in the middle distance successfully dominating the whole scene and providing an effective setting to the figures—again, as so often with Pannini, echoing the etchings by Salvator Rosa—who are clambering among the broken columns and fragmentary mouldings. The bulk of motives seen in the picture is imaginary, but the circular temple in the back-ground is evidently inspired by the Temple of the Sibyl at Tivoli, so dear to the romantic landscape painters of the seventeenth and eighteenth centuries. A point of interest in connection with this picture is that it is signed, while quite a number of Pannini's ruin pictures are not. The initials of the artist appear on the slab on the left, behind which is seen the figure of a woman bending forward.—[Private Collection.]

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Wednesday, November 10th, 1926

# PROGRESS AT ST. PAUL'S

HE evidence given before the Commission on Cross River Traffic has revealed something of the present state of the Cathedral; it has also illustrated the state of mind of certain of its custodians, and in neither aspect of the case is there much ground for satisfaction to those who have the welfare of this great monument at heart. The news that the building is still moving was no news to readers of THE ARCHITECTS' JOURNAL, though the admission of movement was, indeed, a departure from the former optimism of the Cathedral authorities. It is a grave admission in view of the phenomenal weights of material piled up by Sir Christopher Wren to great heights upon slender supports, all the more grave since those supporting piers are but feebly constructed, and still more sinister when it is remembered that the lateral supports of the piers are themselves out of perpendicular, the surrounding arches all distorted, and the exterior walls bent to such an extent that the passer-by may recognize at a glance the deflection in the ground story window-sills at the south transept. Until evidence of a more detailed and of a more definite kind is forthcoming it cannot be known for certain whether such movements as are now proceeding in the structure are actually being produced by the interference with its old-established state which must follow from the injection of new loads of cement into the cracked piers, and from the vibration of the machine borers used for the purpose, though critics of the grouting scheme pointed out that such effects were likely to arise from such causes. Even if the natural decay of the building is alone to be blamed, continuous evidences of movement are highly disquieting, for, unless they are arrested, they can only lead to one result, disaster. But these matter-of-fact considerations have already been expressed, and Canon Alexander was literally exact when he informed the Press representative who brought the critic's warning again to his notice: "We have heard all this before, there is nothing new in it." Quite. It was just the same prediction that movements would be found to be continuous until restrained by a comprehensive scheme of repair, or ended by the fall of the building, which appeared in this JOURNAL after the publication of the St. Paul's Commission Second Interim Report, and when the Canon, in optimistic mood,

would not admit that movements were taking place. The prediction was not new, but the Canon's confirmation of it was new and of topical interest. It is the Cathedral authorities who supply the element of variety: first denying movement, then owning to movements which their advisers explained away as "Cumulative effects of temperature changes"; then, more recently, in evidence before the Commission on Cross River Traffic, solemnly asserting that movements are still taking place; and now, with a return to optimism, cheerily announcing: "We have heard all this before."

Placed in the most favourable light, these sudden changes of front are certainly not desirable in view of the importance of the National Monument. As the genuine expressions of puzzledom in the face of a difficult problem they may receive sympathy, but not commendation, for they indicate a condition of ignorance on a matter where ignorance is certain to be fatal and exact knowledge is urgently necessary.

What have the Dean and Chapter done to increase the store of knowledge? The Canon's insistence that they are advised by the best experts is without significance in the light of the facts. On the theoretical and analytical side the Cathedral experts produced the theory of "Cumulative effects of temperature changes," which was proved false and ridiculous immediately it was published, and on the practical side it has to be admitted after months of grouting that " movements are still taking place." But policy as well as puzzledom enter into the question. The clear issue of preserving Sir Christopher Wren's monument is complicated, in the view of the Dean and Chapter, by other interests which might, perhaps, be legitimate if the urgency of the Cathedral's need were not supreme. But this attitude of mind is not good for the structure of the Cathedral, and if persisted in must end in its fall and in the disgrace of the foolish custodians who have set the convenience of the moment above the requirements of permanent stability. The ostrich-head policy of contented ignorance of danger leads to dishonour as well as to disaster, and the Dean who can write so inspiringly about the English gentleman must walk warily if he is not to fall into a most horrible pit.

## NEWS AND TOPICS

## SATELLITE TOWNS AS A THREAT TO RURAL ENGLAND— ARCHITECTURE IN THE "DAILY MAIL"—THE WINNING OF WATERLOO—"THE LITTLE CITY CHURCHES"—ARCHI-TECTURE IN PICTORIAL ART."

MR. R. W. DAVIDGE, in his recent presidential address to the Town Planning Institute, touched upon a number of urgent questions now agitating the minds, not only of town planners, but of a very numerous body of city dwellers who watch with anxiety some of the modern trends of urban development. He pointed out the rapid and disordered growth of the great city, the spoliation of the countryside, the growing difficulties of traffic, and the inadequacy of both the policies and powers of public bodies entrusted with the task of coping with these problems. Mr. Davidge committed himself to one statement of opinion especially important. He definitely opposed the "satellite town" solution of the problem of urban congestion. London, if it were compelled to adopt this method of growth, would be obliged to throw out at least two or three new garden cities every year. "But what," asks Mr. Davidge, "would be the state of the Home Counties if satellite towns were thrown off at this rate. Would not the threat to rural England be even more serious than it now is?" He believes on the contrary that we cannot, and ought not, to stop the growth of the big cities. All we can do is to insist that this growth should be guided by certain principles of public policy, and that a sufficiency of open spaces be preserved in perpetuity.

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Architects too often have to complain that their works are seldom thought worthy of notice in the daily Press, or that if the building is mentioned the name of the designer is ignored. The Daily Mail has broken through these bad old traditions in its lucid description of Sir Aston Webb's new block of office buildings erected in Moorgate for the Ocean Accident and Guarantee Corporation. The criticism of the design is astonishingly sound, and one would like to feel that the newspaper reader appreciates it, and that space will be found for other equally just and instructive descriptions of new architectural works in many future issues. After acknowledging that severely practical results have been achieved in the interior, the critic, who writes over the initials P. G. K. (P. G. Konody), admits that "The exterior, too, aims at a simplicity that is not usually associated with Sir Aston's work; but it is provided, nevertheless, with a variety of decorative motives, such as fluted pilasters, elaborately carved capitals, panels and keystones with representations of Neptune's head, seahorses, and ships' prows, and with a classic cornice that scarcely suits the box-like character of the main block.' But the critic does not stop there, and the emphasis he places upon the value of restraint and decision of mind is admirable. "Sir Aston was evidently more interested in these applied adornments than in the architectural articulation of the building, which hesitates between the horizontal and the vertical, and is neither the one nor the other." Even so the critic can see relative, if not positive, good in the design, and admits that the building is "a vast improvement on the over-decorated and tastelessly showy city palaces of the last century."

Evidence which the chairman of the Commission on Cross River Traffic, Viscount Lee of Fareham, regards as "most valuable and important" has been given by Sir Alexander Gibb to the effect that it would be sufficient to rebuild certain of the arches, and to repair others. His advice that the most dangerously affected piers should be pulled down agrees with the proposals of Mr. Humphreys and Mr. Basil Mott, and is not ideally satisfactory from the point of view of accurate conservation. As it is suggested that some piers may be repaired and underpinned while in position with the help of "free air coffer dams," it is a question of expediency whether any particular pier shall be treated to demolition and rebuilding, or to repair as it stands. Many architects who are opposed to demolition of the bridge as a whole in order that a bridge of another type might be built in its place would be inclined to withdraw their objection if the demolition were only to be partial and were directed towards the repair of the bridge to the present design. One disadvantage of permitting any demolition at all would be the opportunity it would afford for wire-pulling in favour of a bridge of new design; any trifling change of opinion would mean that the project of repair might be abandoned as soon as the dangerous piers are demolished, whereas if all are required to be repaired in position, the enemies of Rennie's work will not be supplied with so strong a lever. Apart from this important consideration-and past events leave no doubt of its importance, since a strong body of engineers ardently desires a new bridge-the demolition of the most damaged piers and the most distorted arches has something to be said in its favour. Waterloo Bridge is a classic conception, and its beauty is to a certain extent bound up with the accuracy and precision of its lines. In wishing to preserve the bridge it is not essential to preserve all the twists and bulges which are evidence of weakness and insecurity. They are not added graces applied by the mellowing hand of time, but hideous distortions due directly to human neglect to take any precautions to avoid excessive scour near the foundations.

Sir Edwin Lutyens and Professor Reilly make a strong plea for the preservation of the City churches in an article, "Bankers versus Bishops," which appears in the November issue of the *Banker*. "Apart altogether from whether or not our financial magnates often visit their (the City churches') interiors to meditate on their deeds in the light of eternity," the authors say, " they cannot help but be glad, consciously or subconsciously, that their daily work is carried on in a quarter which still has some links, and very beautiful ones, with the more humane side of life. They (the City churches) stand there retrieving, by their very existence and gracious appearance, the City from a monotony of commercial architecture as well as from a monotony of commercial views. Consciously or unconsciously, all who use the City benefit by their presence. Under the Bishop of London's scheme nearly half of these churches are threatened with extinction or mutilation, and when that half has gone the remainder will be in a like predicament. The excuse is that the suburbs need new churches and the City new banks. The City can look after itself, and if the suburbs really want new churches they will provide them themselves, and in the process benefit their souls. The church that is given is of little value compared with the church that is made." The authors scathingly condemn "the bishop's mechanical way of measuring

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the value of these buildings by the number of persons who perform a definite rite within them, without taking notice of the hourly influence of the buildings themselves on all who pass or see them during their daily work."

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That few people enter the City churches has been made an argument in favour of their sale and demolition, though most architects feel that this is a shortsighted policy. Now it is pointed out that churches may be useful even to those who only pass the outside of them. This from Mr. Galsworthy's novel, *The Silver Spoon*: "Never going inside any church except St. Paul's, he derived a sort of strength from their outsides—churches were solid and stood back, and didn't seem to care what people thought of them." Churches, particularly Wren's City churches, are, indeed, towers of strength, though they are also humane and friendly in their gracious beauty. It is impossible to look at Bow steeple without feeling some of the kindly magic which was packed into the building by the mind of its designer.

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The old question of the use of architecture in pictorial art comes up again prominently at two current exhibitions: that of Edward Wadsworth's at the Leicester Galleries, and that of Romilly Fedden's at Walker's Galleries. Wadsworth takes architecture and shipping, appropriates them, makes them his own and the world well lost. He is heedless of how they look to other people; all he is conrespect for their subjects which is entirely praiseworthy. They are never merely picturesque. Antwerp, the cathedral and the quays; Malines, Provins, Mentone, Venice, Arles, Moret are among the places depicted in this collection of over eighty drawings.

In October of every year the Architectural Association has its exhibition of Members' Holiday Sketches, and every October it has something new to show. In a place where there is a continuous flow of young blood, this is not surprising; but it is interesting to follow the work of individuals from the time of their admission to the school right up to their departure into the outer (and perhaps colder) world. At present there is a very definite leaning towards Mr. Walter Bayes's methods of using flat, pungent tones; the resolution of perspective into clean, flat washes

tones; the resolution of perspective into clean, flat washes denoting planes is almost bewildering, and, because of its newness to the interpretation of things architectural, diabolically clever. That confused medley of tones and colours which confused the architectural sketches of the early part of this century has almost disappeared; the interpretations of one doctrine are manifold but the spirit is elemental. One hears on all sides that such and such a sketch is "good, but pure trickery," and one is left wondering which is the rule when so many expressions of it seem so natural and so true. But, if this "trickery" be a vice, then Mr. Yerbury is surely to suffer in the hereafter, for his photographs show, as they always do, that he lives in a world of compositions far too good for this common life.

ASTRAGAL

#### ARRANGEMENTS

#### WEDNESDAY, NOVEMBER 10

The Architecture Club (at the Savoy Hotel). 7.30 p.m. Annual Dinner.

#### FRIDAY, NOVEMBER 12

At the Royal Technical College Architectural Craftsmen's Society, Glasgow. 7.45 p.m. James Macaulay, F.F.S., F.S.I., on Some Aspects of Regional Planning.

#### MONDAY, NOVEMBER 15

At the Royal Institute of British Architects. 8.0 p.m. General Meeting. H. V. Lanchester, F.R.I.B.A., on Bridges and Traffic.

#### TUESDAY, NOVEMBER 16

At the Royal Institute of British Architetls. 7.30 p.m. Howard Robertson, F.R.I.B.A., on Good and Bad Buildings.

#### THURSDAY, NOVEMBER 18

The Design and Industries Association (at Kettner's Restaurant). 8.0 p.m. Annual Dinner. Sir Lawrence Weaver, K.B.E., Hon. A.R.I.B.A., in the chair.

#### MONDAY, NOVEMBER 22

At the Architectural Association. 7.0 p.m. Walter Bayes A.R.W.S., on the Decoration of Walls from the Painter's point of view.

#### FRIDAY, NOVEMBER 26

At the Royal Technical College Architectural Craftsmen's Society. 7.45 p.m. W. Basil Scott, M.I.STRUCT.E., on Constructional Steelwork.

Malines. By Romilly Fedden.

cerned with is how they look to him. How his pictures look to others does not seem to concern him. In point of fact they look wonderful and they are wonderful. He has a new vision. On the other hand, Romilly Fedden makes his buildings look like they do to most people. His vision is entirely normal. He does not stylize, but produces charming and well-drawn pictures in watercolour which are true and sincere renderings in the traditional manner. They have an individuality of their own; they have a style of their own, good composition and a

## THE DEFENCE UNION

## [BY H. J. BIRNSTINGL]

IMPORTANT events in the history of a nation or of an organization often take place with little outward show or comment. Sometimes this may be due to the fact that those responsible for bringing them about are, as it were, ahead of their times, and sometimes to the fact that no one foresees the far-reaching effect which they are destined to have in the future. Certain it is that the formation of a Defence Union will be one of the most important events in the history of the architectural profession, and yet the scheme to launch it seems to have aroused less interest than one would have expected; certainly less interest than a matter of such immense import merits.

The dangers which attend the reputation, the financial resources, the peace of mind, of the architect in the ordinary pursuit of his vocation are manifold and really terrible to contemplate, and it is, perhaps, as well that the individual architect is often enough quite unaware of the perils which beset him until he is suddenly unfortunate enough to find himself drawn into litigation, and thrown entirely upon his own resources, possibly to fight a rich and remorseless clien.

Without entering into any details-for it is the general principle with which we are concerned, and with which, at the moment, all architects should be concerned-the Defence Union propose to indemnify its members against these risks for the sum of three guineas a year, and not only against these risks, but also to assist them in the recovery of fees in actions of libel and slander, and in actions in defence of copyright. Here is a form of insurance which it behoves every architect in the country to consider with the utmost care. As ordinary citizens one presumes that many architects insure their lives; that most architects insure their houses against fire, and the contents of their houses against fire, loss, and theft; that they insure their motorcars, in fact, that they regard insurance of these things as a matter of course, and never question the wisdom of the expenditure. Yet how many of them insure their very livelihood-for it may amount to nothing less-against attack? If a man refrain from insuring his house and its contents the risks that he runs are at least known risks; his house is razed to the ground, and his loss is one thousand, two thousand, three thousand pounds, as the case may be; but an action is brought against him for professional neglect, or his claim for fees is countered-as is so often the case-with the charge of professional neglect, and the potential losses in costs, damages, reputation, peace of mind and health are absolutely unknown. He may leave the court ruined in purse, mind, and body, and this is no lurid exaggeration, it is an incontrovertible statement of fact. Moreover, these dangers constitute an inheritance from which his heirs cannot escape, for within a certain period after his demise his estate becomes liable for claims for professional neglect.

Nowadays any individual can insure himself against wellnigh any contingency; against his wife presenting him with twins, or against bad weather on his holiday, yet it is only now that the opportunity is occurring for architects satisfactorily to insure themselves at a modest sum against all the risks to which they are constantly subjected. That strength lies in the combination of those having similar interests is an axiom that needs no stressing to-day, since it is one of the principles of modern social organization. Those, therefore, who persist in maintaining an attitude of aloofness and isolation, even if they themselves are willing to face the unknown risks of their calling, are acting, not only contrary to their own interests, but also contrary to the interests of the profession as a whole.

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The Defence Union scheme is designed to meet the needs of the average practising architect, and any architect who thinks that because his practice is a modest one he is immune from risk is living in a fool's paradise; as well, indeed, might he argue that because he drives a small car he is less liable to meet with an accident.

The architectural profession is one of the last to adopt a Defence Union. Doctors, dentists, teachers, all of whom are less in need of mutual protection, have, nevertheless, adopted protective measures. Unfortunately, it would seem that architects are particularly slow in taking combined action. They are apathetic, and apathy is an irksome quality to encounter in a body of men; far worse, indeed, than hostility, for hostility at least denotes interest and keenness and begets publicity and action. It is action above all which is wanted now; action on the part of every member of the profession; not, be it noted, merely by every member of the R.I.B.A., for the Defence Union is not limited to members of the Institute, it is not, indeed, "run" by the Institute, although it has the full backing and approval of that body.

The response to the circulars of the Defence Union has been disappointing, and this is due to the fact that so many adopt an attitude of idle benevolence. When the scheme is fairly going, they argue, we will come into it. But, unfortunately, they wont, for the simple reason that the scheme never will get going unless they immediately apply for membership. Without a thousand initial subscribers the scheme will not fructify. Thus, through sheer inertia, an opportunity may be lost of acquiring benefits for the entire profession of architects, benefits the value, nay, the necessity, for which have long since been realized by other bodies of professional men.

# AUTHORITY AND LIBERTY IN ARCHITECTURE

#### [BY ARTHUR J. PENTY]

#### V: THE OUTLOOK

VV E have seen that so far from it being true that the Gothic revival was responsible for breaking up the orderly development of architecture, it was itself the first step towards the re-creation of the traditions of architecture that had been thoughtlessly destroyed by the pedantry that accompanied the Classical revival in the latter half of the eighteenth century; and that although architecture during the nineteenth century periodically lost its way there was, on the whole, a progressive and steady improvement in design until the early years of the present century, when reaction set in under the mistaken notion that the Classical revival in America was entirely a consequence

of the Beaux Arts training, and owed nothing to English influence. Such being the case it is clear the Classical School have misled the profession, and it is urgent we should retrace our steps to the extent, at any rate, of recognizing the validity of the inspiration of the nineties, or, in other words, return must be made to the spirit of experiment and discovery that animated that decade. For it is just this spirit that is missing in English architecture to-day. And yet, as we have seen, there is a world of difference in the spirit in which such experiments can be made. One of them is to accept tradition in some sense or other as the starting point, and the other is to break with it as completely as possible on the assumption that not until the break is absolute can architecture ever be assimilated to modern life.

It is important that we should be clear as to the implications of these rival philosophies or policies, for nowadays we are clearly at the parting of the ways again. The reaction against the tyranny of the authority of Classic has already begun. It was much in evidence in the discussions at the International Congress on Architectural Education; it inspired the Paris Exhibition; and it is to be seen in the designs of Adelaide House and its offspring. Opinion may very well be divided as to what all this portends, especially the latter, for Adelaide House is the influence that is likely to affect the course of architecture in this country. Viewed from one angle Adelaide House suggests Egyptian design. From another it is a revival of New Art, for in it Sir John Burnett has thrown overboard all the conventional trimmings and paraphernalia, and relied for his effect entirely on the use of abstract form which has little relation to tradition. The practical demonstration of such an approach to the problem of design cannot be otherwise than influential at a time when the authority of Classic is losing its hold. It is possible that it may foreshadow the form which the reaction against Classic will take. For Adelaide House is a type of design to which students trained exclusively in the Classic traditions could easily take. To design in such a manner a sense of logical form is required and little else, and this is just the faculty that the training in the schools has fostered.

Though it is true to say that Adelaide House is a revival of New Art, it is a revival with a difference. The difference appears to be this, that whereas the exponents of New Art in the nineties looked forward to the creation of a new style by following structural necessity, this new school does not regard structural integrity as the basis of architecture, but follows the Renaissance idea of looking upon architecture and construction as largely separate propositions, putting its trust entirely in logical form; since from the Renaissance point of view architecture is less something growing out of construction than something superimposed upon it. Thus we see the difference between the New Art of the nineties and that of to-day is the difference between an internal and external approach. But perhaps this difference is more apparent than real, for as both begin by making a complete break with the past, or will be supposed to have done, they will, I imagine, be followed by similar results. For having turned their backs upon tradition they will come to regard it as a point of honour that their work should not resemble that of the past in any particular. At all costs they will come to demand originality, not in the only sense in which any architect can be really original, that is, by going back to origins and building up his design step by step from

first principles, but in the sense of producing something entirely new and without precedent. In this way an atmosphere will be created in which design will tend to become more and more self-conscious, peculiar, and eccentric. There can be no doubt as to the reality of this danger. For history teaches us that a generation that has paid excessive regard to authority and precedent may, when once the spell is broken and authority relaxes, rush to the opposite extreme of liberty and licence. There is a danger, therefore, that as the Classic School sought to suppress the spirit of experiment and discovery in the interests of order, that the position may be completely reversed, and the interests of order sacrificed on the altar of a spurious originality.

Up to a certain point the spirit of experiment and discovery is good, and is to be encouraged. But if it is to be finally fruitful it is necessary to recognize that it is only valid within limits. Those limits are set by tradition, which stands in the same relation to design as language does to speech, for like it, it is a medium of expression. Language gradually changes over long periods of time, not as the result of any conscious effort to change, but because people come to think and feel differently about things. It is the same with styles of architecture which in the past were not deliberate creations, but gradual growths. A master of language is not a man who sets out to invent new words, but one who enriches a language by the way he uses those already existing. For the same reason an architect is not called upon to create a new style, to invent new proportions, mouldings, and other details. On the contrary, he should be content to use those already existing. In the hands of a man of genius such details will tend to become transformed. They will tend to become something different from what they were before, and lesser men will be able to travel on the road he makes. It is, therefore, important to distinguish between genuine and spurious originality. The first test of genuine originality in an architect is that he does not begin by repudiating tradition, under the mistaken notion that it hampers individual expression, but frankly accepts it as the necessary basis of design while ready to depart from it when a better way presents itself or to incorporate in the chosen tradition elements borrowed from other styles. This is the natural way of working. It was the method of the past, and it is possible to-day for the architect who has made himself familiar with a variety of styles and entered into their spirit. It is possible for the architect to pick and choose from different styles, and to produce work which, though it bears the general impress of tradition, is vet new in the sense that it does not conform to the standards of any particular style, provided he has sufficiently analysed styles as to understand their relation to each other. For after all the divisions between styles are to a very large extent arbitrary; when clearly understood they are seen to merge into each other. The best way to attain to such a comprehension of style is to begin by approaching all styles from the point of view of construction and material (though architecture cannot be explained entirely in such terms), for in construction and material is to be found the common ground on which all styles meet. Such an approach introduces us to a conception of architecture that is at once new and distinctive, not because it has turned its back on the styles, but because the mastery of them enables the architect to transcend the limitations of the historical styles, to see the barriers which separate

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the styles as arbitrary and accidental, and to work for their removal by the application of the solvent of knowledge and understanding.

Viewed in this light it would not be the right policy to carry rebellion against the authority of Classic architecture to the point of repudiating either it or tradition in the interests of modernism, but to take an interest in other styles. The next step for those whose education has been exclusively Classic would be to study the vernacular Renaissance. Having come to see the superiority of the vernacular over the academic Renaissance they should move on to the study of transitional work-Jacobean and Elizabethan. Great discrimination would here have to be used, for though Elizabethan and Jacobean architecture are full of ideas which are capable of development, there is a great deal in them that is entirely indefensible, bad and meretricious, and it is necessary to put the brake on. Elizabethan is a mixed style. It is partly a product of Gothic tradition and partly a result of German, Flemish, and Italian influences. The German element should be entirely eliminated, for it does not reflect what is really fine in German workthe big roofs and grouping which are worthy of studybut consists entirely of strap ornament and filigree work adapted from pattern books, and for the most part used without rhyme or reason. But it is different with the Flemish and Italian influences in Elizabethan work which, on the whole, were good. Such being the case it would be profitable for the student to study these influences at their source. After familiarizing himself with our vernacular tradition he could pass on to the study of Gothic, Flemish, and Italian work to enrich and refine his work, but not before. For if study is to be profitable it must be systematic. Indiscriminate sketching should be discouraged for it leads to indigestion. The important thing is that knowledge should be organic. Styles should not be studied from the sketchmanship, but from the three-dimensional point of view, remembering always that the key to the picturesque is to be found in the roof plans. There is logic in the picturesque as there is in more formal architecture, but it is not the logic of symmetry, but of the principle of growth; and it is a higher form of logic, too. As to details, the important things to know about every style are the various units from which designs are built up, the simple things which repeat-details of windows, doors, eaves, the sizes of bricks and joints and window-panes, the pitch of roofs and width of spans. A student who collected details of such things from successive periods, noting the changes they underwent, would have gone a long way towards mastering the problem of style. He would note that as the various styles from the Middle Ages onwards succeed each other the units increase in size. The window-panes get larger, the bricks increase in thickness, the roof spans get wider, and he would see that this fact is the key to the succeeding phases of the Renaissance vernacular and academic-for the changes in the other details are involved in the increased size of the units. They follow logically from it. And once this was grasped he would understand why architecture died at the end of the eighteenth century. It died because, as the units increased in size, architecture lost its adaptability, and losing adaptability it could not survive. Yet the Classical School to-day vainly imagine they can revive architecture by promoting the big scale.

The study of vernacular architecture introduces us to the crafts. Design continues to be abstract so far as

general arrangement is concerned, but not in regard to detail where it becomes related to the peculiar qualities of different materials, and is more closely related to construction. This different conception of the nature of architecture involves a different approach to the problem of design, which difference may very well be illustrated by the different methods of combining brick and stone in the vernacular and academic Renaissance. The vernacular builders always began by designing a structure of brick and then proceeded to add stone to heighten the effect, to give emphasis, as it were, by using material of a lighter colour. But the academic architects of the Renaissance began at the other end. They began with stone and columns, and then filled in the plain wall surfaces between their features with brickwork. The result is that in academic architecture brick and stone are never combined satisfactorily. They never fuse, as it were. The failure is the consequence of a wrong approach. If brick and stone are to be used in combination it is necessary to begin with brick and windows not with stone and columns. The way of the architect who sees the fundamental importance of vernacular traditions is to make mastery of craft traditions and simple buildings his first objective, and to make general ideas dependent upon a mastery of detail.

But this simple natural approach to the problem of design is not recognized in most of our schools where the idea obtains that the right method of architectural education is to teach the student the elaborate forms of monumental architecture before he is made familiar with the design of simple buildings, on the assumption that if the student is first taught to do the big things simply and directly he will, when he comes to do the little thing, do it with distinction. Unfortunately for this theory it does not appear to be supported by evidence. We are all, I imagine, painfully familiar with students trained on this method who can make a show of designing palaces in the grandiose manner, and yet have no notion of how to build a cottage: and it seems in general impossible for them to learn, for having been taught to regard architecture as the profession of the superman, and imagining themselves as of the elect they appear to think it beneath their dignity to give their thought to mere building, and are, in consequence, unable to concentrate on simple things sufficiently to master them, with the result that they remain for ever vague about how simple things are done; their thoughts lack precision, and this prevents them from ever rising above mediocrity where even monumental (hateful word) work is concerned. The truth is students who have been trained exclusively in the grand manner swallow architecture without tasting it. They are apt to remain facile draughtsmen with a love of pompous effects to the end, and never get at grips with the real problems of design. I cannot agree with those who say "You cannot enlarge the cottage into a palace," if by that they mean that vernacular traditions cannot be the foundation upon which to build the higher forms of architecture, for this is just what was done when architecture was in a really healthy condition. In all such ages there was no artificial division between architecture and building which were recognized to be finally one and the same thing. The same style was used for the cottage and the palace, the castle and the church. It is to such a conception of architecture that we must returnthe conception which everywhere obtained until academic pedantry broke up the unity of architecture.

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## CURRENT ARCHITECTURE SECTION



#### KING GEORGE V SCHOOL, SOUTHPORT

## [BY J. E. CONNAUGHT]

THE competition for the new Secondary School for Boys considerable local importance, for the new school is at Southport was one of the important architectural events of 1920. Mr. Maurice Webb was the assessor, and Messrs. Granger and Leathart were placed first. The building was opened last month, and the event was one of some

certainly the most important and most imposing educational building in the borough of Southport. The site chosen for the competition adjoined the municipal golf links in Park Road, but this was subsequently changed for the site



King George V Secondary School for Boys, Southport. By W. F. Granger and J. R. Leathart. Above, the south front from Scarisbrick New Road. Below, a detail of the central administrative portion of the south front.





on which the building now stands in Scarisbrick New Road. The building which has just been opened, and to which the illustrations accompanying this article refer, is the central block only of a large scheme which contains three sections. This main central block contains the administration offices, assembly hall, classrooms to accommodate 600 boys,

laboratories, library, art section, cloakrooms, changing-rooms, and heating chamber. The second section will include the dining hall and kitchen, and the handicraft workshops. The third section will comprise a swimming bath and a gymnasium. The conditions of the competition required a system of common rooms and house common



King George V Secondary School for Boys, Southport. By W. F. Granger and J. R. Leathart. Above, the first-floor plan. Below, the ground-floor plan.

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rooms, and these are incorporated with the present building. In the laboratory suite is included a large top-lit lecture theatre with stepped seating.

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Educational bodies are gradually realizing the potential value of the cinematograph, and the committee of King

George V School have made provision for cinematograph exhibitions to be given in the assembly hall, which is equipped with a cinema projection box. The assembly hall is fitted with tip-up seats and has a seating accommodation of 600. It has generous retiring room accommodation,



King George V Secondary School for Boys, Southport. By W. F. Granger and J. R. Leathart. The assembly hall. Above, looking from the stage. Below, looking towards the stage.

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making it, with its excellent staging, suitable for theatrical perfomances and concerts.

The ground floor is axially planned. In the centre are the reception offices, head master and secretary's rooms, the assembly hall, lecture room, and heating chamber. On either side are the senior and junior boys' lavatories, changing-rooms, and classrooms, and laboratories, ranged round their drill courtyards. A feature of the organization is the "House" system, and by means of folding partitions in several of the classrooms space is available for the meetings and activities of the different "Houses." The first floor contains further classrooms, music rooms, and the library. The general treatment of the elevations is a bold combination of brick and stone and low-pitched pantile roof. The massing of the parts is extremely effective. The ends of the main elevation are well enclosed with broad wall surfaces, and the central projection is skilfully broken up and composed. The approach, too, with its broad avenue and central flag mast, is most effective. At

the rear the flues from the heating chambers are worked into pleasant features, and rise on either side of a low projecting central feature.

Ideas in connection with school planning and equipment have undergone radical changes in recent years; indeed, the design of schools and hospitals is in a constant state of flux as medical science advances. With regard to schools, the matter which, perhaps, has had the greatest influence in recent years is the growing appreciation of the value of sunlight, and particularly of the ultra-violet rays, and it is possible that the day is not far distant when every school will be equipped with its violet-ray lamps. Meanwhile, however, a glance at the elevations of King George V School shows how the need for sunlight is being met, and a comparison between it and the sombre "Gothic" schools of half a century ago shows what an advance has been made.

[For the names of the contractors and some of the subcontractors see page 578.]



King George V Secondary School for Boys, Southport. By W. F. Granger and J. R. Leathart. Above, the north front from the playing fields. The single story is the laboratory block. Below, the head master's house.

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## A NEW GARDEN VILLAGE IN KENT

#### [BY J. F. MCRAE]

EVER since the year 1589, when Sir John Spielman erected a paper-mill at Dartford, the charming county of Kent has pursued papermaking as one of its chief industries. Tate's mill in Hertfordshire perhaps preceded it, but to-day many lorry-loads of printing paper borne on huge reels, each labelled " three miles of paper for the Daily So-andso," lumber up heavily from Kent to feed the rapacious maws of rotary printing machines in " the Street of Adventure" and thereabouts. Much more pictorial are the fleets of red-sailed barges frequently to be seen riding at anchor below London Bridge, with their cargoes of paper shipped from the ancient town of Sittingbourne, where Chaucer-pilgrims on their way to Canterbury, or monarchs en route for the Continent, were wont to stay awhile for rest and refreshment. Road-borne or riverborne, these supplies of paper are always goodly to gaze upon. True, they may have much potentiality for incalculable mischief, but they are also the motive power of civilization, which cynics declare to be a synonymous term.

Yet many of the horrors of civilization are mitigated if

not wholly averted by the modern sentiment of humanity that marks its latest phase. Nowadays it is the publicist's avowed aim not merely "to make life safe for democracy," but to make life passably pleasant. Hence the agonized

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> Above, Kemsley Garden Village, Sittingbourne. By Thomas Adams and Longstreth Thompson, in collaboration with T. H. Mawson and Sons. A bird's - eye view.

call for housing betterment, while risks from industrial accident and disease have been studiously eliminated, or at least minimized. Let it be granted quite cheerfully that all the modern amelioration of the worker's lot is not due to unalloyed benevolence, but must be partly ascribed to an enlightened and calculated industrial policy. It is apparently a reverberation of the industrial reform of which Robert Owen made such a glorious failure more than a century and a quarter ago, demonstrating "how far high failure overleaps the bounds of low success." Bournville and Port Sunlight are, after all, but versions of New Lanark and Ralahine—" revised, corrected, and considerably augmented." And Kemsley Garden Village is a still more up-to-date instance.

But to urge that the Welfare Movement "pays" is by no means to challenge unanswerably its basis of benevolence. Allowing a full discount for mixed motives there still remains much that must in fairness be placed to the account of humane sympathy and good feeling—a residue of pure kind-heartedness. To speak sneeringly of "philanthropy and five per cent." is very

cheap sarcasm; it miscalculates the rate of interest, and lays exaggerated stress on sordid business motive.

Nobody knowing anything of the entirely honourable history of the firm of Edward Lloyd Ltd. as touching their





Kemsley Garden Village, Sittingbourne, Kent. By Thomas Adams and Longstreth Thompson, in collaboration with T. H. Mawson and Sons. The lay-out plan.

relations with their employees would dare to insinuate mean motives for the provision of a garden village in which to house the firm's papermaking operatives. Undoubtedly, Messrs. Edward Lloyd are as fully aware as the Cadburys and the Leverhulmes of the high psychological value and importance of happy and healthy environment, and its stimulating effect on both the quantity and the quality of the workers' output. All three firms, and others having a similarly keen sense of their obligations, merit at least the praise that should be ungrudgingly accorded to courageous action following upon enlightened If consequently such firms, providing superior vision. labour conditions, obtain superior service, they are merely reaping as they have sown, and none may grudge them their harvesting garner.

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A hundred years ago, when paper was made from rag pulp by a primitive and innocuous hand process, the industry was less depressing in its effects on the health and spirits of the operatives; but when machinery was introduced, with its unwholesome concomitants of superheating, of vapour-saturated and dust-laden atmosphere, of the use of powerful and malodorous chemicals for macerating vegetable fibres from Africa or from Spain, and for mingling these with wood-pulp boards from Scandinavia or from Canada, it became necessary to provide more hygienic buildings for the workers.

Messrs. Edward Lloyd's new paper-mill which is about to be built at Kemsley Garden Village, Sittingbourne, is no doubt planned in accordance with the very latest advices. It is at all events set in the midst of most pleasant surroundings, and Messrs. Adams and Thompson have made excellent use of a splendid opportunity to lay out a model industrial village, comely enough to the eye, yet no mere show-place, but evidently planned with utmost

care for the health and well-being of its fortunate inhabitants that are or are to be. The site chosen for the village is a very attractive one upon the top and south slope of Kemsley Down, conveniently near the new mill, yet sufficiently removed from it to keep the industrial and residential portions of the scheme quite distinct.

The lay-out has been designed to take full advantage of the opportunities that the site affords. In the centre of the village is a wide, open green, sloping down the hillside, and affording a magnificent view of Old Milton Church and the country beyond. Other smaller greens have been placed at suitable points, while the low-lying level ground at the foot of the slope has been reserved for spacious playing-fields. Provision has also been made within the village for tennis-courts and bowling-greens, and for children's playgrounds.

The roads generally have been planned to run parallel to the contours, in order to secure economy in their construction, and also in the construction and drainage of the houses. The carriageways are constructed of reinforced concrete, and the footways of artificial stone flags, bordered by strips of gravel and separated from the roadway by grass margins in which a variety of flowering trees will be planted. In order to keep heavy traffic out of the village a separate road has been planned, giving direct access from the main road to the mill.

When completed the village will contain approximately 750 houses, providing for a population of nearly 3,500 persons. The present scheme includes a first instalment of 176 houses, comprising four grades adapted to the requirements of the different classes of tenants. The accommodation in the first grade includes a living-room, parlour, and three bedrooms, with an upstairs bathroom and the usual offices, while the fourth grade has, in addition, a separate

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kitchen and an additional bedroom. The houses are of several different designs, and are grouped in pairs and blocks of three, four, and nine; they are carried out both in brick and roughcast, with tiled roofs. Sites have been reserved in the square—which marks the junction of the

two principal roads in the village—for an inn or club and a number of shops.

All the public-utility services will be undertaken as part of the scheme. Water is obtained from the 24-in. main supply to the paper-mill, and will be pumped into a



Kemsley Garden Village, Sittingbourne, Kent. By Thomas Adams and Longstreth Thompson, in collaboration with T. H. Mawson and Sons. Above, road No. 3, from west end. Below, road No. 2, looking west.



reinforced-concrete water-tower, whence it will be distributed to the houses and to the necessary fire hydrants. Electric light is supplied both for lighting the houses and the streets from the generating station at the new mill.

A sewage-disposal works is being installed in a suitable position to deal with the foul sewage, while the surface water will be separately discharged into a neighbouring stream. The disposal works is of especial interest, inasmuch as it has been decided to adopt the activated sludge principle of purification. The lay-out plan has been prepared and the work carried out under the supervision of Mr. Longstreth Thompson, of Messrs. Adams and Thompson, FF.S.I., MM.T.P.I., town - planning consultants, of 121 Victoria Street, Westminster. Messrs. T. H. Mawson and Sons have collaborated with Messrs. Adams and Thompson in connection with the design of the houses, and Messrs. A. P. I. Cotterell and Son in connection with the design and construction of the water supply, sewerage, and sewage disposal.



Kemsley Garden Village, Sittingbourne, Kent. By Thomas Adams and Longstreth Thompson, in collaboration with T. H. Mawson and Sons. Above, Mansard houses, at the junction of roads 2 and 3. Below, Wilson's house, grade 3, block 31.

# TRIBULATIONS OF EARLY PRACTICE : ii

## [BY KARSHISH]

#### iv: BUILDERS

BEFORE we introduce our architect to the building operations it will be well to introduce him to the persons with whom he will there contend. I say "contend" because although the relations of the architect to the builder and his workpeople are usually those of friendly partnership and mutual respect and goodfellowship, yet the elemental basis of those relations is contest, always. It is well that our architect should not be misled, by any suavity of the struggle or screnity pervading the field of battle, into forgetting this; or he will be likely to relax the discipline which should control his operations, take things for granted, accept appearances, assume this, and suppose the other, and so establish just that happy-go-lucky, free-and-easy conduct of affairs which invites confusion and leads to those big and little disasters which his attendant imp is ever on tiptoes to bring about if he can.

The person of first importance, when building operations are begun, and who fills the architect's eye next only to the client, is, of course, the builder. It is a remarkable fact that although the public has lightly given the builder a bad name-just as it affects to regard all building as the multiplication of eyesores-there are few architects who can readily recall any to whom they cannot give a good one. Not only so, but there is scarcely an architect who has pursued his business conscientiously and his art with enthusiasm, who, at the end of his career, does not look back upon his associations with builders and their workpeople as among his happiest memories, and recall those associations with an abiding satisfaction and a deep thankfulness. After a varied experience extending over many years I hold the opinion that there is no body of men which is so consistently reputable or which has a higher tradition of honesty and fair dealing than the private builders; and that the best qualities of our race are nowhere more conspicuous than among them and their workpeople. I say this with the conviction that established architects, far and wide, will endorse the opinion and be glad to see the acknowledgment made. The tradition of craftsmanship still lingers in the building trade in all parts of the country, and where it is found these men will be found, and where they are the tradition lives. The thing has, however, to be sought for, and I acknowledge with regret that in some old-established firms the sons who inherit are sorry substitutes for the grand men, their fathers, who preceded them. Let us then inquire how the builder, our architect will have need of, may be recognized. In this inquiry we will adopt the method of ticking off those kinds which, for one reason or another, are not the most suitable for the particular class of building in view. First, as our architect is supposed to be building a small private house, and not a large hotel or other big undertaking, he will not require the services of those building companies who chiefly operate as general contractors and financiers of building operations and organizers of subcontractors and specialists, and are specially equipped to deal with vast projects calling for the most efficient machinery and plant and highly specialized methods.

Among the types of builder our architect will be wise to spy out and avoid is the man, not uncommon in the provinces, who is respected for his capacity and fair dealing, and whose business includes erecting houses for sale, on his own account, and building direct for private owners without intervention of architect or surveyor. The objection to an architect employing such men has nothing to do with the interests of the work, but concerns the architect's private welfare, and, indirectly, the interests and peace of mind of his client. The danger is that any such builder

may embody in work he is doing direct for a building owner, or as a speculation of his own, ideas copied from designs he has executed for architects. He may adapt their detail drawings to his own needs, and misapply, squander, vulgarize, and discredit in a dozen new buildings, or additions to old ones, features and devices, constructional dodges and ingenuities of planning and arrangement, which distinguish conspicuous performances of skilled architects in the neighbourhood. This is a great hardship, not only to the architects who have their feathers pulled out to deck scarecrows, but to the owners of the houses whose designs are thus grimaced; and it is also inimical to the best interests of architecture. It might be supposed that such builders would be boycotted by architects and their mischievous activities brought to an end; but in the remote provinces there are few among those who claim to be architects who have any knowledge or ideas which are not the common property of all who engage in building, and thus an architect who seeks a builder in the country may, if he is not wary, catch a tartar.

The possible injury to the architect may, however, go far beyond anything above described. Let it be supposed that he is commissioned by a friend to build him a house of nine bedrooms on a site in the country a dozen miles from a large watering-place with scattered suburbs. The architect wishes to identify the house with the rural traditions of the locality, and gets in touch with a builder who satisfies these needs. We will suppose that this builder has inherited the business from his father. His office is in a village street, and he employs a group of workmen who have worked continuously for his firm for a large number of years, and who are respected members of the communities of neighbouring villages in which they live. None of them belong to any union, they are paid a little more than the union rates, and the builder employs no foreman, but dodges about from one job to another on a motor-bicycle, and sometimes takes off his coat and lends the plasterers a hand, for he has been apprenticed to that trade. He has worked under the direction of architects of standing, but his chief activities are putting up small villaesque houses, either on his own account for sale, or, at a price, for building owners. These houses are to be pictured as abject in design, tasteless, and showy, with no merit except that they are built in a straightforward way. This little builder, we will assume, is, in fact, of the right sort, although his ideas have been sophisticated by the proximity of the suburbs of a town; and the architect in the furtherance of his idea for the house elects to face the added trouble of getting the building erected to his intention; by this man, rather than go farther afield and secure the services of a more experienced builder; and he agrees to a contract price with him without recourse to competitive tenders. In this he finds his judgment to be sound. He drills willing and interested bricklayers and tilers into making an effect with the facings and roofs; schools the joiners into getting a particular texture into the ledged doors and oak window frames, and overlooks them in the clinching of nails which have been made under his direction by the blacksmith in the yard; and he particularly supervises the oak latches and plaited leather laces which are to operate them; introduces the plasterers to the use of a felt-faced float, and so on. The builder and his men are interested to make the house the success it proves to be; and some years later the owner, we may suppose, has no difficulty in finding a delighted buyer at a satisfactory price. So far all is well.

The next episode, we may imagine, is that the architect goes down a year later to visit his client, who is also his friend, and finds that a block of three cottages has been built in the field adjoining the house by his host. The plan is obviously the work of a competent designer, and has probably been lifted from some book and drawn out for the builder by a draughtsman. For the rest the block reproduces outwardly all the characteristic features by which the architect sought to give individuality to his design for the house. The facings, tiling, eaves, windows, doors, dormers, and chimneys, all follow the detail drawings and instructions referring to that building.

A couple of years later the architect again goes down and is able to admire a block comprising garage, aviary, garden house, potting and tool places, and so forth, erected on the site he had assigned for it when the owner should feel disposed to build. This building has been erected by the builder. It has been designed by a competent person employed by the builder to do so, and it flatters the house with which it is grouped and from which it is distant 60 ft., by exactly reproducing all appropriate and applicable features.

The last occasion (but one) upon which our architect has reason to congratulate himself on the disinterested forethought which led him to employ and instruct this builder is, three years later, after his client, swollen in affluence, has bought the remains of a thirteenth-century conventual building which, reinforced by an Elizabethan wing, has gradually lapsed through the centuries from mansion to homestead, and from homestead to farm and semi-ruin. Its treasured vaults, refectory, Elizabethan panelled walls, and thirteenth-century canopied open hearths have been adapted, extended, restored, and fitted, and completed to the needs of a modern house by his friend the builder, who again pays him the homage of an apt and grateful pupil by reproducing the ideas presented to him when he built the original house. We may finally suppose that the last episode of the history is when the architect sees, in a professional journal, drawings and photographs of a barn, well known to him, which has been converted into a pair of cottages; and when he observes that the builder has subscribed himself as architect of the work jointly with a firm of qualified London practitioners.

These suppositions will seem extravagant, and the warning they convey over-accentuated. I acknowledge that, as a flight of imagination, the picture presented of the hardships our architect must be prepared to face is highly coloured: it happens, however, that the above history is no flight of imagination, but an exact account of events which have befallen one architect in England since the war. The architect referred to also had the satisfaction of hearing that one of the specialists he had employed in the original house (all of whom, it appears, were engaged on the subsequent building) had spread the news that he had been "sacked' ' by his client. Of the client's share in the injury thus done to an architect, who suffered only by his conscientious concern for his employer's interests, it can only be said that a client is free to act as this one did so long as his sense of what is just and seemly is so attenuated as to enable him to do so; and that the architect can only solace himself by taking no notice of the ill-usage, and, if he is ever again approached by that same client, by excusing himself with such pungent and devastating explanations as he cares to hand out.

There are two other kinds of builders whom our architect must be able to identify and to avoid, namely, the thoroughly stupid, who is rare, and the ignorant, who generally flourishes. The former is an honest, well-meaning man who exists in the remote provinces, and is often a kind of glorified handyman employed pottering with farms and out-buildings on the large private estates near the village where he lives. He is quite incapable of properly organizing any work. The ignorant builder springs up, as and where nettles grow, on the confines of the meaner suburbs of large towns where the broken hedges hold aloft old trousers and rusty kettles to the witness of the nauseated heavens. He is ignorant because, though energetic, his whole life is taken up in struggling to earn a living by shoddy and makeshift work. Such men are incapable of building properly because they have never adjusted their minds to any conception of proper building: and even were it possible to give them a right idea of the business, the ingrained habits of their workpeople would present continual stumbling-blocks. Our architect, if he would be secure, must meet and know his man, and view work he has done and is doing; or he must secure a confidential commendation of the man from accredited architects who are known to him or to his friends.

Now that we have eliminated the unfit, let us consider the large body of private builders whom our architect may confidently entrust with any work for which he is responsible. I make the reservation "private builder," because it is mainly from him that the architect can expect personal identity with the interests of the work. The fact that there are limited companies who carry on the traditions of the private founder they have succeeded does not affect this general truth. Private builders are distinguishable by the size of their businesses and the elaboration of their organization. Except for works of special significance and high cost, our architect should banish any preference he may feel for the large over the small builder. A builder whose office is behind a glazed partition in his joiner's shop, and whose "yard" consists of converted stables and a top-lighted loft reached by a ladder, is often capable of carrying out important work in the best manner. To employ a builder who may never go on to the works at all, or, if so, then only as a sedate act of courtesy, as he might attend the christening of the architect's baby, is very far from satisfactory. In such a case it is the builder's manager who is, to all practical intents, the builder, and often he has neither the free discretion nor the personal relation to, nor concern for, the success of the enterprise that the principal would have. Besides this, the manager will be likely to have been trained in the office, whereas in house building the man at the head of affairs is better equipped when, like many small builders, he has been trained in the yard and about the works, or even on the scaffold among the men. It is characteristic of him to have about him foremen and tradesmen who have been the mainstay of their masters for many years. and whom they have known as they know their brothers; and it is among such men that our architect will most readily get material wrought in a workmanlike and intelligent way and be able to avail himself of the special capacities of individuals--of a bricklayer, for instance, in building fireplaces and coved niches. He will learn to understand and esteem these sterling members of the building trade, of whom I propose to give a more intimate account.

[To be continued]

#### CORRESPONDENCE

## THE ARCHITECTS' DEFENCE UNION

To the Editor of THE ARCHITECTS' JOURNAL

Sir,-As chairman of the R.I.B.A. Practice Standing Committee which is responsible for initiating the Architects' Defence Union, I shall be obliged if you will afford me the hospitality of your columns in order to make known, as widely as possible, the fact that the proposal was unanimously approved at a meeting of architects and surveyors held at the R.I.B.A. on October 18 last, and that at the same meeting the acting committee was authorized to proceed with the task of carrying it into effect. As a result of these far-reaching decisions, the architects of the country have at last brought themselves into line with the members of the medical and other professions, by determining-in like manner-to protect themselves against the heavy risks and onerous liabilities which are daily encountered in the exercise of their professional duties. The very real security and substantial benefits obtainable under the policies of the Architects' Defence Union-for an annual subscription of £3 3s .- are extended to all architects and surveyors practising in the United Kingdom, and are by no means confined to those belonging to particular societies. Seeing that the combined membership of these two professions numbers close on fourteen thousand, the financial stability of the Union would appear to be assured. I would add that full particulars of the scheme will be sent to any practising architect or surveyor on application to the Secretary, Architects' Defence Union, No. 9 Conduit Street, W.1. J. DOUGLAS SCOTT

# A WARNING TO ARCHITECTS

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—Will you kindly insett in your JOURNAL a warning to architects against assisting strangers who claim that they belong to the profession, but can produce no credentials. I should like to suggest that these persons should be referred to the Architects' Benevolent Society, who will inquire into their claims. I understand that a man has been going round asking for help and stating that he is connected with the Society, and his record, which we have, is not a good one. W. HILTON NASH.

Hon. Treasurer, ArchiteEls' Benevolent Society.

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# PRESENT-DAY BUILDING CONSTRUCTION: iv

## [ BY WILLIAM HARVEY ]

#### PLASTER: I: THE PLASTERER IN THE SMALL HOUSE

It would be extremely difficult to define the normal practice of English plaster-work at the present time. The methods employed and the results obtained vary widely on different buildings, and no generally accepted standard of execution is recognizable. An expenditure of extra plastering on the exterior of a house often means parsimony in the interior; two-coat work may be substituted for the orthodox three, or a higher proportion of sand may be used in response to the desire to economize. These matters, which only involve a few alterations in the wording of the typed documents in the architect's office, may mean a great deal of difference in carrying out the work, and in its appearance and lasting properties when it has been executed. A change from proposed three-coat work to two-coat work after the joinery for the door-linings has been prepared implies an unusually thick first, or " rendering " coat on the walls to make up the thickness of two coats (the rendering and floating coats) and, unless the weather is exceptionally mild and the material particularly well matured, shrinkage cracks are practically certain to occur, even if the thick and slow-drying layer of material does not part company with the plaster-work upon the weather is not sufficiently recognized by architects, and for every specification which requires plaster to be kept protected from the attacks of frost, many could be found without any such clause. The builder generally endeavours to arrange that the windows shall be hung and glazed before plastering operations are commenced in order that he may control, to some extent at least, the temperature of the building. A violent draught, which would dry the plaster too quickly, has to be avoided, as well as frost, if the best and most permanent results are hoped for. A factor which enters into the consideration whether economy can safely be permitted to dictate a reduction of three coats to two is the prospect of the plaster being ultimately covered over with wall-paper, and a plastered surface that is expected to be hidden in the finished work is often a patchwork of different colours where different batches of assorted sand have been used indiscriminately in different parts of the wall. One oldfashioned village builder who insisted on using three coats where two were specified, and took infinite pains to secure an ample supply of lime putty and washed sand to complete the whole building without a patch, found, after all his self-sacrifice, the decorations cut out of the contract. The unusually fine and

wall in large slabs. This state of affairs is anything but pleasant, and imposes upon the architect the responsibility for either condemning the work, or finding some way of persuading the semi-plastic mass to remain in position. If the lime is good and has been well mixed with clean, sharp sand, it may stand the process of pressing back upon the wall surface with the float, though the plasterer may dislike making the experiment, particularly at a time when he can obtain another more straightforward job elsewhere.

The dependence of



uniform finish he had obtained with the woodfloat made the idea of covering his beautiful plaster with wall-paper altogether preposterous !

Above, figure one. Lime, sand, and hair mixed on the ground by means of the "Larry" or "Poney" seen in the foreground. At the back of the mass of mortar a box has been constructed, with planks shored up with sand, to contain pure lime putty. Below, figure two. The lime putty matured and in use. It is cut out of the box with a shovel and knocked up in small quantities as required.

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This delightful example of present-day building construction was inspired partly by the wish to make a good job and partly by the fear that the hard, smooth bricks (of which the walls were built) would shed the thick rendering coat before it dried if only two coats were used. The rendering coat actually liberally applied was gauged with Portland cement, and spread as thinly as possible, so that it had ample sticking power in proportion to its weight. Although the plastering was done in frosty weather, not a crack was to be found in the work in the following autumn.

The difficulties and uncertainties which attend upon plastering in unsuitable weather are miniTHE ARCHITECTS' JOURNAL for November 10, 1926



Figure three. Using the steel "laying trowel" to form the Portland cement rendering coat on the window reveals. By using this trowel a reasonably straight angle is obtainable.

mized where the materials are chosen in the light of experience of what is best to meet any special emergency. The tyrannous control of the specification and the building contract tends to put a stumbling-block in the way of useful as well as of fraudulent substitutions, and it is not every builder who cares to go to the trouble and expense of improving upon his instructions in this to contain the lime putty for the finishing coat, as it was imperative that this should show clean and white in the interior, since no added decorations were expected to be used. The lime was delivered to the site in large lumps in its "quick," "hot," or "unslaked" condition, and mixed with water in the galvanized corrugated iron tank in the right-hand lower corner of the photo-





Left, figure four. Cutting out irregularities from the edge of the plastered surface where it adjoins brickwork purposely left to show in the interior. Right, figure five. Working up a texture on the lime putty finishing coat with the "wooden float." The edges are trimmed and the smudges cleaned off as separate operations.

manner, though the addition of an extra proportion of water to the sand and lime is usual where the wall surfaces are known to be excessively porous. The way that the lime is run, mixed, and tempered differs very considerably on different jobs. Figure one shows the mortar for the rendering coat made up on the ground in defiance of the instruction contained in the specification that it should be mixed on a boarded platform, but in this special case the ground had already become hardened by the mixing on it of all the mortar used in building the walls of the house. The wooden box formed of pieces of plank seen on the right of the photograph has been prepared

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Careful sieving and a period for mellowing are both useful, for lime matured is far more pleasant to work than crude, newly-run material, however free it may be from hot "kernels." Once the box, or bin, is full of putty it is covered with planks and a tarpaulin to keep out the dirt and to keep in the heat, which favours the complete slaking of every particle. Newly-run putty is best covered for another reason: for, while it is still hot, it is caustic enough to do damage to one's eyes, and at the same time its pure white colour makes it seen, an attractive sort of mud for children to fling about, so that it is best kept where they will not see it and be tempted to get into trouble. The exact moment at which to add the hair to the lime for use in the pricking up coat on lathing is a matter upon which different plasterers have different views. It is very much easier to mix when the hot lime is newlyrun, and is in a liquid state rather resembling new milk, but, according to old and experienced plasterers, the heat of the lime, or its chemical action (the word "heat" has both meanings), destroys the hair, making it brittle and quite useless for its purpose. The good old-fashioned way is to add the hair some days after the lime has turned to putty, in spite of the severe labour involved, since the "knocking up" mellows the material. Probably the addition of the hair as soon as the heat of the lime is spent would be a reasonably safe course to pursue.

A later stage in the operation of preparing material for plastering is shown in figure two. The planks covering the putty have been removed and some of it has already been cut out for use. The way the wooden box is put together, with its planks held in position by some sand piled up against them, can be seen on the right of the photograph. Why use nails which will have to be drawn again at the end of the job and which might rust and discolour the white putty? Between the corner of the putty box and the corrugatediron tank is the pile of "kernels" sieved out of the lime. It is just so much rubbish to be dug into the garden. Heaps of lime mortar and of lime mortar gauged with Portland cement to form lime-cement compo have just been mixed on the site of the old mortar pile, now used up and showing the layer of mortar crust above the surface of the ground. The wooden tripod to the right serves to support the hod while it is being filled from the heaps of

mortar. Behind the tripod is the wooden hut in which lime and cement are stored under cover from the damp which whould prematurely "slake" the one and "set" the other.

Figure three shows the plasterer at work preparing the Portland cement and sand rendering coat on the brick reveals of a window. The steel "laying" trowel is being used to obtain a reasonably straight angle without going to the trouble of setting up temporary wooden screeds which is the practice adopted by some plasterers. The rendering

coat is purposely left rough to afford a key to the finishing coat of Keene's cement, which has been specified for these salient A stiff dash of Portland cement has also been angles. employed in the rendering coat of the reinforced concrete lintel which spans the range of windows and returns continuously around the walls and partitions just below the underside of the joists of the first floor. The quick-setting properties of the Portland cement are useful in holding the rendering coat up to the smooth and non-porous surface of the lintel which has been cast in situ in a wooden shuttering. In figure four the plasterer is seen trimming up the lower edge of the lintel where it adjoins a part of the wall which is being left as a panel of brick facings around a brick-built fireplace. Comparison with the ragged edge of the lintel shown in figure three reveals his method of obtaining a uniform regular line. Having persuaded the rendering coat to adhere to the lintel, he did not immediately knock it off again in his attempts to tidy up its edges, but waited until the initial set had given it a certain amount of stability before returning and tidving things up. How the joiner's grounds control the thickness of the plaster on a wall or partition may be seen in figure four. The rendering coat of lime, sand, and hair has been brought out to the line of the wooden ground provided for the skirting, and the rather excessive thickness has brought about the shrinkage and tendency to part company with the wall, remarked upon earlier in this article. Pushing in the cracks has proved sufficient cure for the trouble, however, thanks to the use of good materials and plenty of long, clean hair. The use of two-coat work justifies itself in this instance by the fact that the finished surface is still perfect, but the trouble and anxiety caused by the cracks and the excessive shrinkage of the rendering coat at a time when plasterers were scarce are not conducive to the repetition of this alleged economy.

The plasterer is shown in figure five at work on the finishing coat of one of the reinforced concrete lintels. A slightly roughened surface texture is being produced with the help of a small wooden float, and with this coat also the general surface is first brought into the desired condition before the edges are trimmed up. The undulating line at the bottom of the lintel was straightened, and the lime smudges cleaned from the timbers and the brickwork as separate operations after the finishing coat was safely in position and its surface texture neatly and uniformly attended to. The kind of temporary support used by the plasterer at his work is plainly shown in the photograph, which also shows how the reinforced concrete lintels were made to overhang, corbel fashion, to give greater strength to the lintel.

Economy in plaster and decoration is one object of the experiment of utilizing brick facings inside a building, but the fine colour of the bricks themselves was the principal reason for this rather unusual course, which has also the advantage of presenting a hard washable surface instead of one that demands

repair and repainting whenever it becomes discoloured with use. Another modern economy in the use of plaster is shown in figure six, where the ceiling is being made of wall boards nailed up to the under sides of the ceiling joists. In figures four and five the ceiling shown is

Figure six. Cutting out wall board for nailing up to the joists in place of lath and plaster. The joints are made to "butt" and are covered with strips of the same material.



also formed of wall board, but with the ceiling placed above the joists and under the floor boards. Joiners cut and fit the slabs of fibrous material, but it is typical of building work at the present day that substitutes for the old normal building materials should be made use of together with those materials. The joints of the sheets are covered with strips of the same substance nailed up in position to the ceiling joists, or to wooden fixing strips specially provided for the purpose.

The idea that cracks and shrinkage defects will be avoided by using substitutes for plaster ceilings is not altogether correct. These slabs of thin compressed fibre are tenacious, but have a tendency to sag between their nail holds. In common with plaster ceilings under wooden joists, they move with the shrinkage of the timbers and open cracks between ceiling and wall along those sides of the room which are parallel to the line of the joists. Another defect which applies to the same walls in our modern buildings is the crumbling away of the upper edge of the plaster on the wall. The sagging of the small and sappy timbers brings the ceiling down on the edge of the vertical plaster which has not strength enough in its green state to hold up both ceiling and joist, and cracks in a very similar way to an overburdened piece of stone bursting under the application of excessive pressure. The remedy would seem to be to use only sound joists of sufficient strength and perfect seasoning, combined with thoroughly hard, sound plaster on wall and ceiling. And these things are only exceptionally found in the building construction of any period.

#### [To be continued]

#### SOCIETIES AND SCHOOLS

#### The R.I.B.A.

The Council of the R.I.B.A. has informed the London County Council that it has been decided to add to the interest of the award for the best building of the year completed within a radius of four miles from Charing Cross by affixing a suitable tablet to each building chosen for the honour. The personnel of the jury making the award will also be strengthened by the addition of one representative each of the City Corporation, the London County Council, and the Metropolitan Boroughs Standing Joint Committee. The General Purposes Committee of the County Council recommend that their archite*c* shall be appointed as their representative on the jury.

#### The South Wales Institute of ArchiteEls

Under the auspices of the South Wales Institute of Architects Central (Cardiff) Branch and the Institute of Builders, South Wales Branch, Mr. William Haywood, F.R.I.B.A., delivered The chairman was a lecture on Advisory Art Committees. Mr. Harry Teather, F.R.I.B.A., and the lecture was given at the Engineers' Institute, Cardiff. Mr. Haywood confessed that Cathays Park, with its civic buildings, was the envy of many towns in England. Even his own city of Birmingham had lately sent a deputation to Cardiff to study this civic centre as a model for their own. It was a magnificent start, he said, and with that behind it Cardiff should go far. Explaining how electric illumination could be used to make or mar a city's charm, the lecturer displayed a picture of the artistic light effects in Broadway, New York, which fully justified his assertion that illumination properly used could bring colour and romance into life, and add vivacity to the streets. That Cardiff could be made more alluring at night by artistic illumination in, say, Cathays Park, was a vision he left the audience to conjure for themselves.

#### Association of Architects, Surveyors, and Technical Assistants

The fifth annual convention of delegates of the Association of Architects, Surveyors, and Technical Assistants was held at Kettering under the presidency of Mr. E. Fiander Etchells. Delegates representing the branches of the Association were present from every part of the country. The President said that during the coming year the Association must continue to do all in its power to improve the status of the Association, and members councils and committees must adapt themselves to changing conditions. It was desirable that the Association should do what it could to have recognized the chief engineer or chief architect. and each man, having served his pupilage, should become an architect, standing as a man in his own right and name, and architects' assistants become architects by virtue of their training. He hoped the Association would be able to get the architects employed by the big organizations recognized as architects. Their immediate task must be to strengthen and consolidate the status of every grade and every position. The con-vention confirmed the election of the following officers and council for 1926 and 1927 : President, Mr. E. Fiander Etchells, HON.A.R.I.B.A. Vice-Presidents: Messrs. A. Cunes, L.R.I.B.A. (Devon), T. H. Patching (Lancashire), H. R. Surridge (Leicester and Northants), J. G. Marr, A.R.I.B.A. (Scotland). Trustees: Messrs. J. W. Denington, L.R.I.B.A., C. Pickford, L.R.I.B.A., R. G. Strachan, F.S.I. General Treasurer: Mr. C. G. Wright. Chairman of Council: Major Arthur S. Hinckley. Vice-Chairman of Council: John Batty, A.R.I.B.A. Members of Council: Messrs. P. W. Dawnay, J. W. Denington, L.K.I.B.A., J. W. M. Dudding, R. G. Forbes, A.R.I.B.A., J. A. Gould, C. H. Holden, A. M. Laurie, E. G. Lynde, C. McLachlan. A.R I.B.A., A. Seymour Reeves, L.R.I.B.A., S. Sanders.

Under the sweeping changes which the convention made in the administration of the Association is one which will increase the size of the executive council to permit direct representation thereon of provincial members, an innovation which will add to the strength and standing of the council. The delegates were concerned with the lack of regulations and adequate supervision of office premises, and have addressed the following resolution to the Government: "That this National Convention of Delegates, representing the Association of Architects, Surveyors, and Technical Assistants, views with disquietude the absence of any regulations for office premises, in so far as they concern cubic space per person, underground offices, ventilation, sanitation, cleanliness, and hours of juvenile employees, and would strongly urge the Government to initiate such legislation as would tend to improve the low standard prevalent in many industrial centres."

#### The Northern Polytechnic School of Architecture

The Northern Polytechnic School of Architecture (Holloway, London, N.7) have sent us a copy of the prospectus of their day and evening classes for the session 1926-1927. The school is recognized by the R.I.B.A. The principal is Mr. Reginald S. Clay, B.A. (CANTAB.), D.SC. (LOND.), the head of the department Mr. T. P. Bennett, F.R.I.B.A., and the chief lecturer and assistant head is Mr. H. J. Axten, A.R.I.B.A. Students desiring to enter the day school are expected to pass an examination in the following subjects: English composition, freehand drawing, mathematics, geometry, geography, history, one language other than English. Prizes are awarded annually for the best work in various sections, and special prizes are offered annually by members of the profession interested in the work of the school. The school diploma is awarded to all students who successfully complete the course of three years and obtain a satisfactory pass in the term examinations. Exemption from the R.I.B.A. intermediate examination is granted to students who complete the full three years' course in the school, and obtain a first- or second-class pass in the school examination. In the evening school of architecture prizes are also awarded annually for the best work in various sections. Special prizes are also offered annually by members of the profession interested in the work of the school. The school diploma is awarded to all students who successfully complete a five years' course and obtain a satisfactory pass in the school examinations. The course of study is arranged so that it will enable students to sit for the R.I.B.A. examinations during or at the end of their training. During the session the following special lectures will be given: November 29, "Legal Liabilities of Architects and Builders," by Mr. William E. Watson, Barrister-at-Law, F.R.I.B.A. Thursday, February 3, "Design and Construction of Shops," by Mr. Keith A. Braden, A.R.I.B.A. Monday, February 28, "Some Problems in Housing," by Major Harry Barnes, V.P.R.I.B.A. These lectures will be given at 7 p.m. They are open to all students and to the public on presentation of visiting card.



10, 1926 WORKING DRAWINGS SUPPLEMENT TO THE ARCHITECTS' JOURNAL FOR NOVEMBER





## WORKING DRAWINGS SUPPLEMENT TO THE ARCHITEC



# E ARCHITECTS' JOURNAL FOR NOVEMBER 10, 1926



HEADQUARTERS, SOCIETY OF FRIENDS, ENDSLEIGH GARDENS, EUSTON ROAD. BY HUBERT LIDBETTER.



#### ARCHITECTURE'S INDEBTEDNESS TO THE COMPETITION

MR. GUY DAWBER, in his presidential address to the R.I.B.A., commended the competition as possessing the merit of advancing the standard of architectural practice. One may justifiably emphasize this point, and in doing so one cannot do better than quote M. César Daly's affirmation, in the year 1861, that "we require the competition as indispensable for ascertaining periodically and definitely the direction of architectural ideas." In this remark we see expressed the view that by competitive methods a pronounced influence may be exercised on the architecture of the day. It is worth while to examine the validity of this view, and to form an opinion as to its conformity with the facts. Though at first doubts will obtrude themselves, owing to the large proportion of competitive designs that fail to exhibit outstanding architectural quality, these must not be allowed to outweigh the other considerations, which may tend to tip the beam in the opposite direction. It must be borne in mind that architecture is an art of a very complex type; and that though in its perfected expression the component factors are welded together, it is possible by analysis to separate them, and by so doing to see what place each of them takes in the evolution of a design.

This course will enlighten us as to the factors in good design on which competitive methods exercise the most influence, and help us to distinguish them from others which are comparatively unaffected. Probably the first and most fundamental requirement of architecture is that buildings should be organic, not merely from the aspect of practical convenience, but more par-ticularly from that of expressing this fitness by the "pattern" of the plan and the grouping of the masses. The competition has played an important part in raising the standard of this basic requirement-so essential to all others which together govern the conception of a design. It is only necessary to follow the developments of æsthetic planning and massing in the designs of the last fifty or sixty years to see the strides that have been made. In doing so we must recollect that there have been many influences in recent years tending to operate in the contrary direction. Requirements are year by year becoming more complicated, and this fact is the reverse of favourable to architectural composition on broad lines. These complications are dealt with as they arise, and yet architectural planning has advanced and not gone back, as might have been expected. This is in large measure due to competitive methods, in that these emphasize the necessity for clear and expressive planning and massing. The complicated and intricate plan stands no chance under these conditions, while one with well-defined axial lines, and a proper massing of the principal and subsidiary features, is almost certain to secure favourable notice.

With regard to the other components of design, we find them less emphatically influenced by competitive studies. A vigorous general conception on sound lines will, even if somewhat crude in detail, inevitably carry the day against one displaying a superior delicacy in form and "colour" if the latter is less satisfactory in its general scheme. Not that these latter qualities are in any way superfluous, but merely that it cannot be claimed that they tend to be much advantaged by the competition system. Probably, apart from the tendency to more intensive study that the competition evokes, these qualities, as well as those involving refinements and delicacies of proportion, would be but little affected were competitions no longer given a place in our professional practice. These qualities are somewhat lacking in British architecture generally at the present time, so that it is quite conceivable that their subordinate position in competitive work is merely characteristic of the normal artistic standard. The claim that competitive designs have acted beneficially and have helped to improve the architectural standards, even if only in certain directions, may be regarded as established, and the claim is a comparatively modest one when the facts are reviewed. But even this is somewhat more than is postulated in our text from César Daly, who does not tell us that the competition will evoke better architecture, but merely that its purpose is to ascertain "the direction of architectural ideas." Naturally, the assumption is that these ideas are of value, and the main point is not that the competition necessarily produces the finest work, but that it accelerates architectural movement by opening the door to all who have ideas to contribute, and by this acceleration there is a clear gain in the development of artistic technique.

The competition is necessary in order to put the architect in some measure on an equal footing with other artists who can offer their completed works to the public. The architect can only reach this goal with the aid of a client; and by far the fairest and most effective way of enabling him to secure this client, and to display the embodiment of his ideas in an actual structure, is the public competition.

SENESCHAL

## COMPETITION CALENDAR

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

- November 30. a: Design for a house costing £1,500; b: design for a house costing £850. Assessors, Messrs. E. Guy Dawber, P.R.I.B.A., Louis de Soissons, F.R.I.B.A., and C. W. Miskin. Premiums in each section: First, £150; second, £100; third, £50. Particulars from the secretary, Daily Mail Ideal Houses Competition, 130 Fleet Street, E.C.4. The prize-winning £1,500 house will be erected and completely furnished and equipped at the 1927 Daily Mail Ideal Home Exhibition at Olympia to be held next March.
- January 3. Academy, Perth. Open to Architects practising in Scotland. Assessor, Mr. James D. Cairns. Premiums: £100 and £50. Particulars from Mr. R. Martin Bates, Education Offices, Perth. Deposit £1 18.
- January 8. Town Hall Extensions and Public Library Building, Manchester. Assessors, Messrs. T. R. Milburn, Robert Atkinson, and Ralph Knott. Particulars from Mr. P. M. Heath, Town Clerk. Deposit £1 1s.
- No date. Incorporated Architects in Scotland: 1: Rowand Anderson Medal and £100; City Art Gallery and Museum; 2: Rutland Prize (£50) for Study of Materials and Construction; 3: Prize (£10 to £15) for 3rd year Students in Scotland; 4: Maintenance Scholarship, £50 per annum for 3 years. Particulars from Secretary of the Incorporation, 15 Rutland Square, Edinburgh.

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

- January 15. Designs for complete modern furniture for a, a double bedroom, b, a drawing-room, c, sitting hall, d, dining-room. Assessors, the Countess of Oxford and Asquith, the Lady Islington, Sir Frank Baines, C.V.O., C.B.L., F.R.LBA. (Director of H.M. Office of Works), Messrs. H. Clifford Smith, F.S.A. (Department of Woodwork, Victoria and Albert Museum), F. V. Burridge, O.B.E., R.E., A.R.C.A. (Principal of the Central School of Arts and Crafts), P. Morley Horder, F.S.A., Philip Tilden, Percy A. Wells (Principal of the Cabinet Department, Shoreditch Technical College), Holbrook Jackson (Editorial Director, The National Trade Press, Ltd.), and Captain Edward W. Gregory (Editor, The Furnishing Trades' Organizer). For the preliminary adjudication there are 200 guineas in prizes, and for the final 300 guineas. Particulars from the Editor, The Furnishing Trades' Organizer, Regent House, Kingsway, London, W.C.2. An exhibition of prints and drawings of modern furniture and decoration will be held in the Gallery of Carlton House, Great Queen Street, W.C.2, from November 15 to 27 inclusive.
- Junuary 25. Conference Hall, for League of Nations, Geneva. 100,000 Swiss francs to be divided among architects submitting best plans. Sir John Burnet, R. A., British representative on jury of assessors.
- No date. Town Hall and Library, Leith. Assessor, Sir George Washington Browne, R.S.A. Particulars from the City Chambers, Edinburgh.

# THE WEEK'S BUILDING NEWS

#### Housing at Coulsdon

Sixty more Council houses are to be built at Coulsdon.

#### Housing at Ramsgate

The Council has approved the erection of 100 houses on the Margate Road site.

## Housing at Stockport

The Ministry of Health has sanctioned the extension of the Council's scheme to include a further hundred houses.

#### The Staines Bridge Scheme

The Staines Rural District Council has decided to urge the Middlesex County Council to proceed with a new road and bridge across the River Crane.

#### A Dover Hotel as Flats

The Burlington Hotel, Dover, which contains some 300 rooms, and which has been lying empty for some time, has been sold for conversion into residential flats.

#### The Latymer Road Mission

Princess Arthur of Connaught has promised to open the new wing of the Latymer Road Mission on Thursday afternoon, December 2.

## Tuberculosis Dispensary for Battersea

Southlands College, High Street, Battersea, is to be converted into a tuberculosis dispensary, baths, and washhouses at a cost of about  $\pounds 20,000$ .

#### Wandsworth Road Repairs

The Wandsworth Borough Council is to borrow  $\pounds 42,000$  from the L.C.C. for repair works in Streatham, Tooting, Balham, and Brixton Hill.

#### Housing at Chertsey

The Chertsey Urban District Council has obtained the sanction of the Ministry of Health to the borrowing of  $\pounds_{15,400}$  in connection with the No. 2 Pyrcroft housing scheme.

#### Burlington Arcade

Burlington Arcade, Piccadilly, sold at auction for £330,000, is to remain just as it is, and will not go into the hands of the housebreakers to make room for another new London building.

#### Another Housing Scheme for Birkenhead

The purchase of the Royden estate by the Birkenhead Corporation has been sanctioned by the Ministry of Health. The Corporation contemplates building another 600 houses at the north end of the town.

#### Electricity Station for Hitchin

Plans submitted by the North Metropolitan Electric Power Company for a proposed control house and sub-station adjoining Cambridge Road have been approved by the Hitchin Urban District Council.

#### Proposed New Racecourse for London

A sum of money has been put up by a syndicate for the provision of a new racecourse near London. The amount involved is about  $\pounds$ 60,000. A site near Croydon has been selected. Negotiations for the acquisition of the land are in progress.

#### A Wapping Housing Scheme

Instructions have been given by the L.C.C. Housing Committee to prepare the working drawings and specifications for the Prusom Street housing scheme on the Wapping estate.

#### More Houses for Guildford

The Guildford Rural District Council has decided to apply to the Ministry of Health for sanction to borrow  $\pounds$  10,000 for the crection of twelve cottages at Pirbright, three at Puttenham, and six at West Horslev.

#### Spalding's New Bridge

It was reported at a meeting of the Holland County Council that the Ministry of Transport would contribute  $\pounds_{19,802}$  towards the cost of the new road and bridge at Spalding. The county surveyor believed it would take about nine months to complete the construction of the bridge. The new road is nearly finished.

#### St. Mary's Church, Leicester

St. Mary's Church, Leicester, is being largely altered and enriched in preparation for becoming the Cathedral for the new Diocese of Leicester. A citizen of Leicester has recently given  $\pounds_{4,000}$  towards the necessary alterations, and Lord Waring has presented the Episcopal Throne and the Stalls for the Cathedral Chapter.

#### Housing at Newcastle

It is estimated that of the  $63\frac{1}{2}$  acres of land on the Cheney's Farm estate, purchased by the Newcastle City Council, 45 acres will be available for building purposes, after allowing for roads and open spaces. Twelve houses have already been erected on this estate, nineteen are in course of erection, and certificates have been issued for a further thirty-eight houses.

#### A Big London Scheme

The Marylebone Borough Council has prepared a comprehensive scheme for clearing and reconstructing the Carlisle Street slum area at a cost of  $\pounds 1,150,000$ . The property affected is situate on the west of Edgware Road and north of Marylebone Road, and adjoins some of the best residential parts of the West End of London. The scheme affects 563 premises and 1,475 families, representing about 5,000 persons.

#### A New School for Leeds

"The last word in elementary schools" is the description given by Alderman Leslie Owen, chairman of the Leeds Education Committee, of the school to be erected on the Hawksworth estate. The school is built to accommodate 576 children, and provision is made in the scheme for another building for infants as soon as the child population of the new suburb justifies it.

## The Birmingham Stock Exchange

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Operations have commenced on Birmingham's new Stock Exchange. The new building, which is to be completed by the end of next year, will cost nearly £50,000. The site covers an area of 2,572 sq. ft., and the building will have seven floors, in addition to the basement, the total height above street level reaching 80 ft. The exchange room will occupy practically one-half of the site on the ground floor and second floor. The rest of the space on these two floors will be taken up by a large telephone room, a telegraph office, a members' room, a committee room, and secretary's offices. In the basement there will be a large settling room, strong-room, and various storerooms.

## KING GEORGE V SCHOOL, SOUTHPORT

Following are the names of the clerk of works, general foreman, contractors, and some of the sub-contractors for King George V School, Southport, illustrated on pages 563 to 566 :

General contractors: Messrs. William Moss and Sons, Ltd., London, Liverpool, and Loughborough. Clerk of works: Mr. W. Cowper. General foreman: Mr. W. Bird. Contract price: £60,000. Subcontractors: Redpath, Brown & Co., Ltd., Manchester, structural steel; Pearson Bros. and Campbell, Liverpool, reinforced concrete and artificial stone; The Dorking Brick Co., Ltd., Dorking, facing bricks; Roberts, Adlard & Co., Ltd., London, slates and special roofings; E. B. Burgess & Co., Liverpool, wood-block flooring; G. N. Haden and Sons, Ltd., London, central heating, boilers, electric wiring, ventilation, and bells; Bratt Colbran & Co., London, grates; Higgins and Griffiths, Ltd., London, electric light fixtures; Morrison, Ingram & Co., Ltd., Cornbrook, Manches-ter, sanitary fittings; James Gibbons, Ltd., Wolverhampton, door and window furniture; Westminster Guild, Ltd., Westminster, and Henry Hope and Sons Ltd., Smethwick, Birmingham, casements; John Tanner and Son, Liverpool, plaster and decorative plaster; John Stubbs and Sons, Liverpool, wall tiling; North of England School Furnishing Co., Ltd., Darlington, school fittings; Lockerbie and Wilkinson, Ltd., Tipton (Staffs), cloakroom fittings; United Water Softeners, Ltd., London, water-softening plant.

#### THE ARCHITECTS' JOURNAL for November 10, 1926

## LAW REPORTS

#### WHAT IS GOOD TENANTABLE REPAIR?

#### Shepherd's Dairies, Ltd. v. Payne. Chancery Division. Before Mr. Justice Romer

This action raised the interesting point of what is "good tenantable repair." The plaintiffs were Shepherd's Dairies, of Week Street, Maidstone, and they brought their action against Mr. H. Payne for specific performance.

Sir Thomas Hughes, K.C., and Mr. Turnbull appeared for the plaintiffs, and Mr. Farwell, K.C., and Mr. Mold for the defendant.

Sir Thomas said the action by the plaintiffs was for specific performance of an alleged agreement by the defendant, a chemist, of 25 Week Street, Maidstone, to grant a new lease of 23 Week Street, under an option contained in a former lease. Plaintiffs said that they had exercised their option and were entitled to the extension of the term. Defendant, in his defence, said that there were certain conditions applicable to the extension of the option, and defendant alleged that these were not complied with, and he set up a counterclaim for possession.

Continuing, Sir Thomas said the defendant was the owner of three houses in Week Street, the one he occupied, the one the plaintiffs had, and another. They were upwards of 300 years old and required a great deal of repair from time to time. No. 25 Week Street was occupied by the defendant, No. 23 by the plaintiffs, and No. 21 had been recently occupied by a tobacconist. The lease in question in this case was granted in June 1910 to Shepherds, Ltd., and was for 131 years from September 1910, so that the term ended There were numerous in March 1924. covenants in the lease, including one to keep the premises in good and tenantable repair, and also an option of renewal for 7½ years, carrying the lease to Michaelmas 1931. In December 1913, there was an assignment of the lease by Shepherds, Ltd., to the plaintiffs with the lessor's consent. Everything went smoothly till September 1923, when notice was given by the plaintiffs to exercise their option. A good deal then depended upon whether the premises were put in good tenantable repair and whether certain of the conditions had been waived

Counsel said his case was that the covenant in question had to be construed having regard to the age and condition of the premises, and in the case of houses of the age of these it was extremely difficult to say whether the covenant had been fulfilled or not. As regards good tenantable repair his case would be that the plaintiffs had done all that was necessary to entitle them to the extension of their lease. A great deal of the dispute raged around the repairs and possession of two rooms at the top of plaintiffs' premises. Sir Thomas said the rooms were in possession of the defendant, and he had boarded up the door leading to the rooms and had knocked an entrance from his own rooms. On the other hand, defendant said the plaintiffs used a cellar of his as a store.

His lordship observed that the rent of the premises under the lease was £100 a year. That seemed a very low rent.

Sir Thomas: Yes, it is undoubtedly below the market price.

Mr. John Charles Corben, of R. Corben and Sons, builders, of Maidstone, said certain repairs had been done, and before the lease expired the premises were put into a perfectly good tenantable repair.

Other evidence was given for the plaintiffs. Mr. Farwell, K.C., contended that certain repairs which should have been done had not been done to the premises.

Mr. Wm. J. Jennings, architect, of Canterbury, said he saw the premises last May, and he had considered the covenant in the case. In his opinion the premises were not in such a condition that a reasonablyminded man would take them, without having certain repairs done.

Other evidence was given for the defendant.

Mr. Farwell submitted that it was a condition precedent to the granting of the renewal that the premises should be put in tenantable repair. This, he submitted, the plaintiffs had failed to do.

His lordship, in giving judgment, reviewed the facts of the case. In order, said his lordship, to entitle the plaintiffs to a renewal of the lease it was, in his opinion, incumbent upon them to show that on March 25, 1924, the covenants as to repair had been complied with. In his opinion the covenants would not be complied with by performance after the tenancy. The good sense of the thing required that the condition precedent should have been performed by the expiration of the tenancy. The tenant could not keep the lessor in a condition of uncertainty as to whether he was obliged to grant the renewal or not. The defendant was right in his first contention. Then the plaintiffs said: "Be that so, at the expiration of the old tenancy the premises were, in fact, put in a state of good and tenantable repair." Plaintiffs had plenty of time before the expiration of the lease to do all the repairs. They did some, but not all. He came to the conclusion that there was no waiver here by the defendant, that the premises were not in good and tenantable repair on March 25, 1924. Plaintiffs' action failed, and was dismissed with costs. As to the counterclaim, that failed as the defendant had received rent from the plaintiffs. The result was that the plaintiffs will remain in possession till March 1928, at the original rent. The counterclaim would be dismissed with costs.

ACQUISITION OF LAND ACT

#### London County Council v. Hunt. King's Bench Division. Before the Lord Chief Justice and Justices Avory and Salter

This case came before the Court for their opinion on certain points by a referee appointed by the Minister of Health. Mrs. Hunt, who was the owner of a house in Stockton Street, Bermondsey, made a claim against the London County Council under the Acquisition of Land, Assessment of Compensation Act, 1919, for compensation in regard to her property acquired for improvement under the Housing Acts.

Mr. D. Allen, for L.C.C., said the claimant claimed £850, but the sum was reduced to  $\pounds_{285}$ , as the Act stipulated that compensation was only to be paid on the basis of the value of the site free or cleared of buildings. It was then found that the house overlapped a new building line made by the local authority, and consequently the area of land available for development was a great deal less, and the result was that because of the provision of Section 46 of the Housing Act, 1925, and the relative provisions of the London Building Act, 1894, the value was assessed at  $f_{.57}$ . The new building line was made that the road might be widened, and the L.C.C. argued that, as a great deal of the site was cut off by the new building line and merged into the road, the amount to be paid as comsation was that which represented the value of the site that was left as being available for the improvement proposed.

The Lord Chief Justice pointed out that the claimant could have pulled down the old building and have crected a new one up to the old building line.

The points raised by the referee were : (1) Whether the London Building Act 1894, has any application to the system of compensation under Section 46 of the Housing Act, 1925; (2) whether I am entitled to award compensation under the provisions of Section 46 of the Housing Act, 1925, and to assume that the whole of the land now covered by buildings is available under Section 13 (subsection 5) of the London Building Act, 1894, for a new building to be built upon it, or whether I can assume that the external wall of any new building is to be set back to the new building line 20 ft. from the centre of the roadway as required by the building bylaws in force in the district; and (3) whether in assessing compensation I am entitled to take into consideration the prior existence of buildings on the site.

After legal argument the Court answered the questions as follows: (1) Yes; (2) yes, in so far as the first part was concerned, viz.: the referee was entitled, in awarding the compensation under the provisions of the Act, to assume that the whole of the land now covered by buildings, under the provisions of Section 13 of the London Building Act, 1894, was available for a new building to be built upon it. These replies disposed of the last question.

# THE ARCHITECTS' JOURNAL for November 10, 1926

# RATES OF WAGES

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A A	ABERDARE	S. Wales & M. S. Wales & M.	8 1 1	. d. 8		d. 34 29	A	E. Glamor- ganshire &	S. Wales & M.	8. 0 1	d. 8	s. d. 1 34	A <sub>3</sub>	NANTWICH Neath	N.W. Counties S. Wales & M.	8. 1	61 8	s. 1 1	d. 2 31
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Ci A B	Aldeburgh Altrincham Appleby	E. Counties N.W. Counties N.W. Counties	1 1	4 8 4 1	$     \begin{array}{c}       1 & 0 \\       1 & 3 \\       1 & 0     \end{array} $		As A	Filey Fleetwood	Yorks N.W. Counties	1	61 8	$     \begin{array}{c}       1 & 2 \\       1 & 3 \\       1 & 3 \\       1 & 3 \\       \end{array} $	A A B	North Staffs. North Shields Norwich	Mid. Counties N.E. Coast E. Counties	1	8 8 6	1 1	31 31 31
A A	Ashton-un- der-Lyne	N.W. Counties	î	8	1 3	ł	Ba A Ba	Folkestone Frodsham Frome	S. Counties N.W. Counties S.W. Counties	1	11 8 11	$   \begin{array}{c}     1 & 0 \\     1 & 3 \\     1 & 0 \\     1 & 0 \\   \end{array} $	A A	Nottingham Nuncaton	Mid. Counties Mid. Counties	1	88	1	31
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A B,	Barry Basingstoke	S. Wales & M. S.W. Counties	1	841	$   \begin{array}{c}     1 & 3 \\     1 & 0 \\     1 & 1   \end{array} $		B1	Guildford	S. Counties	î.	51	1 11	A3 A	Peterborough Plymouth	Mid. Counties S.W. Counties	1	61	1	231
AB	Batley Bedford	Yorkshire E. Counties	111	8 6	1 3 1 1	4-1-1-2-4	A A1	Hanley	Yorkshire Mid. Counties	1	871	1 31	AB	Pontypridd Portsmouth	S. Wales & M. S. Counties	1 1	886	1 1	31
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A	Blackburn Blackpool	N.W. Counties N.W. Counties	1	88	$   \begin{array}{c}     1 & 3 \\     1 & 3   \end{array} $	1	A	Howden Huddersfield	N.E. Coast Yorkshire	1 1	8	1 34	B A <sub>3</sub>	Reigate	S. Counties Mid. Counties	111	51 61	1	14 2
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As	Buxton	N.W. Counties	î	61	1 2		AB	Immingham Ipswich	Mid. Counties E. Counties	1 8	8	1	B B <sub>1</sub>	South'pton Southend-on-	S. Counties E. Counties	1	6 54	1	1111
B B	CAMBRIDGE	E. Counties	1	6	1 1	341	C1	Isle of Wight	S. Counties	1 -	1	1 01	A A	Southport S. Shields	N.W. Counties N.E. Coast	11	88	11	31
A	Cardiff Carlisle	S. Wales & M. N.W. Counties	11	13.08	1 3 1 3	Clored and a	A	JARROW	N.E. Coast	1 8	8	1 31	A2 A	Stafford Stockport	Mid. Counties N.W. Counties N.E. Coast	1	-2.2	1	2333
Ba A.	Carmarthen Carnarvon Carnforth	S. Wales & M. N.W. Counties	1	6 5 7 1	$   \begin{array}{c}     1 \\     1 \\     1 \\     1 \\     2   \end{array} $	3	A Ba	Kendal	Yorkshire N.W. Counties		855	$1 3 \frac{1}{1} 1 \frac{1}{1}$	A	Tees Stoke-on-	Mid. Counties	1	8	1	31
A B <sub>1</sub>	Castleford Chatham	Yorkshire S. Counties	1	8 1	1 3 1 1	4-44-44	B <sup>2</sup> A <sub>3</sub>	Kettering Kiddermin-	Mid. Counties Mid. Counties	1 6	5	$     \begin{array}{c}       1 \\       1 \\       1 \\       2     \end{array} $	BA	Stroud Sunderland	S.W. Counties N.E. Coast	1	51 8	1	11
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Ba A	Cirencester Clitheroe	S. Counties N.W. Counties	1	058		1	AA	Leeds Leek	Yorkshire Mid. Counties	1 8	8	1 31	A	Teeside Dist. Todmorden	N.E. Counties Yorkshire	111	88	1	34
A A B.	Clydebank Coalville	Scotland Mid. Counties E. Counties	1	8 8 51	$   \begin{array}{c}     1 & 3 \\     1 & 3 \\     1 & 1   \end{array} $		A A Ba	Leigh Lewes	N.W. Counties S. Counties		5	$     \begin{array}{c}       1 & 3 \\       1 & 3 \\       1 & 3 \\       1 & 0 \\       1 & 0 \\       1   \end{array} $	A <sub>2</sub> B <sub>1</sub>	Torquay Tunbridge Wells	S.W. Counties S. Counties	11	51	11	21
A B1	Colne Colwyn Bay	N.W. Counties N.W. Counties	1	8	1 3 1 1		A <sub>3</sub> A	Lichfield Lincoln	Mid. Counties Mid. Counties	1 6	6 I 8	1 2 1 31	A A	Tunstall Tyne District	Mid. Counties N.E. Coast	11	8 8	1	34
A B <sub>1</sub> A	Conway Coventry	N.E. Coast N.W. Counties Mid. Counties	1	8 51 8	$   \begin{array}{c}     1 & 3 \\     1 & 1 \\     1 & 3   \end{array} $		BA	Llandudno Llanelly	N.W. Counties S. Wales & M.		6	1 13 1 31	A	WAKE-	Yorkshire	1	8	1	31
As As	Crewe Cumberland	N.W. Counties	1	61			4	London (12 m Do. (12-1)	iles radius) 5 miles radius) Mid. Counties		91	$1 4\frac{1}{2}$ 1 4 1 21	A <sub>2</sub>	Walsall	Mid. Counties N.W. Counties	1	78	1	21234
	DABLINGTON	N.E. Coast	1	8	1 3		A	Lough- borough	Mid. Counties	1 8	3	1 31	A <sub>3</sub> B	Warwick Welling-	Mid. Counties Mid. Counties	1	61 6	1	211
A Ba	Darwen Deal	N.W. Counties S. Counties	1	8			A	Luton Lytham	E. Counties N.W. Counties		8	$1 14 \\ 1 3\frac{1}{4}$	A	West Bromwich	Mid. Counties	1	8	1	31
B1 A A	Denbigh Derby Dewsbury	N.W. Counties Mid. Counties Yorkshire	1	51 8 8	$     \begin{array}{c}       1 \\       1 \\       1 \\       1 \\       3     \end{array} $		A1	MACCLES- FIELD	N.W. Counties	1 7	7 8	1 2 1	B As	Weston-s-Mar Whitby	eS.W. Counties Yorkshire N.W. Counties	1	6 61 8	1	12 2 1
BA	Didcot Doncaster	S. Counties Yorkshire	1	68	1 1 1 3		B As	Maidstone Malvern	S. Counties Mid. Counties	1 4	5	$   \begin{array}{c}     1 \\     1 \\     1 \\     2 \\     1 \\     2 \\     1 \\     2 \\     1 \\   \end{array} $	A B <sub>9</sub>	Wigan Winchester	N.W. Counties S. Counties	1	85	1	31
	Dorchester Driffield Droitwich	S.W. Counties Yorks Mid. Counties	1	6	$     \begin{array}{c}       1 & 0 \\       1 & 2 \\       1 & 2     \end{array} $	ż	A A Ba	Mansfield Margate	Mid. Counties S. Counties			$   \begin{array}{c}     1 & 3 \\     1 & 3 \\     1 & 3 \\     1 & 0 \\   \end{array} $	BA	Windsor Wolver	S. Counties Mid. Counties	1	6 8	1	13
A <sub>2</sub> A	Dudley Dundee	Mid. Counties Scotland	1	789	$   \begin{array}{c}     1 & 2 \\     1 & 3 \\     1 & 3   \end{array} $		A <sub>3</sub> A	Matlock Merthyr	Mid. Counties S. Wales & M.	1 6		$12^{1}$ $131^{1}$	A <sub>3</sub> A	Worcester Worksop	Mid. Counties Yorkshire	1	61	1	231
A	F	N.E. COast	1	0	1 3	1	A A <sub>3</sub>	brough Middlewich	N.W. Counties	1 6	5 H	1 2	A1 B	Wrexham Wycombe	N.W. Counties S. Counties	1	6	1	27
B1	EAST- BOURNE Ebbw Volo	S. Counties	1	6	11	1	A	Monmouth S. and E. Gla-	S. Wales & M.	1 8	3	1 31	Ba	YARMOUTH Vervil	E. Counties S.W. Counties	1	51	1	11
A	Edinburgh	Scotland Plasterers, 1e 94	1	8	1 3		A1	Morecambe	N.W. Counties	1	71	1 22	A	York	Yorkshire terers, 1s, 81d.	1	8	1	31
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Broken brick or stone, 2 in., per yd. . £0 11 6 Thames ballast, per yd. . . 0 13 0 Pil gravel, per yd. . . 0 18 0 Pil sand, per yd. . . 0 14 6 Washed sand . . 0 15 6 Screened ballast or gravel, add 10 per cent. per yd. Clinker, breeze, etc., priese according to locality. Portland cement, per ton . . . 2 19 0 Lias lime, per ton . . . . 2 10 0 Sacks charged extra at 1s. 9d. each and credited ven returned at 1s. 6d. Transport hire per day: Cart and horse £1 3 0 Trailer . £0 15 0 3-ton motor lorry 3 15 0 Steam roller 4 5 0 Steam lorry, 5-ton 4 0 0 Water cart 1 5 0 EXCAVATING and throwing out in or dinary earth not exceeding 6 ft. deep, basis price, per yd. cube. . 0 3 0 Exceeding 6 ft., but under 12 ft., add 30 per cent. In stiff clay, add 30 per cent. In underpinning, add 100 per cent. In order including balsting, add 225 per cent. In ock, including blasting, add 225 per cent. If basketed out, add 80 per cent. to 150 per cent. Headings, including timbering, add 400 per cent. RETURN, fill, and ram, ordinary carth, per yd. SPREAD and level, including wheeling, per yd. €0 2 4 0 2 4 per yd. . . . . 0 2 4 PLANKING, per ft. sup. . . 0 0 5 DO, over 10 ft. deep, add for each 5 ft. depth 

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 DO. In Hentored Concrete Work, and 20 per cent.

 Do. In underpinning, add 60 per cent.

 LIAS LIME CONCRETE, per yd. cube

 BREEZE CONCRETE, per yd. cube

 Do. in lintels, etc., per ft. cube

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#### DRAINER

LABOURER, 1s. 4]d. per hour; TIMBERMAN, 1s. 6d. per hour; BRICKLAYER, 1s. 9]d. per hour; PLUMBER, 1s. 9]d. per hour; WATCHMAN, 7s. 6d. per shift.

Stoneware pipes.	tested	quali	11. 4	in.,			
per ud.					£0	1	3
DO. 6 in., per ud.					0	2	8
DO. 9 in., per ud.					0	3	65
Cast-iron pipes.	coated	1. 9 fl	. leng	ths.			
4 in., per yd.					0	6	9
DO. 6 in., per yd.					0	9	2
Portland cement	and si	and, se	e "Es	rara	tor	" ab	ore.
Lead for caulking.	percu	rt			£2	5	6
Gaskin, per lb.					0	0	51
STONEWARE DRAI tested pipes, 4 i	NS. jo n., pel	inted i eft.	n cen	ent.	0	4	3
DO. 6 in., per ft.					0	5	0
po. 9 in., per ft.					0	7	9
CAST-IRON DRAIL	vs, je	ointed	in k	ad,			
4 in., per ft			•	•	0	9	0
DO. 6 in., per ft.					0	11	0
NoteThese pr	ices i	nelude	digg	ing	and	fill	ling

or normal depths, and are average prices. Fittings in Stoneware and Iron according to ype. See Trade Lists. type

#### BRICKLAYER

BRICKLAYER, 1s. 940	1. p	er hou	r;	LABO	URI	ER.
1s. 41d. per hour ; SCAL	FOL	DER 1	8. 521	d. per	· ho	ur.
London stocks, per M.				24	15	0
Flettons, per M.				2	18	0
Staffordshire blue, per J.	1.			- 9	10	- 0
Firebricks, 21 in., per M	1.			11	3	- 0
Glazed salt, white, and i	cory	stretch	ers.			
per M				23	0	- 0
Do headers, per M.				23	10	0

Colours, extra, per M.				£5	10	(
Seconds, less, per M.		: .		1	0	- (
Cement and sand, see	* Exca	vator	abou	e.		
Mired line montan per ton	ud.			3.2	14	1
Damp course in rolls of	Al in	ner	coll		9	6
DO. 9 in. per roll	Tg in.	, per	000	0	4	ģ
DO. 14 in. per roll				- Ŏ	7	6
DO. 18 in. per roll				0	9	6
BRICKWORK in stone	lime	mor	tar.			
Flettons or equal, pe	r rod			33	0	- 6
DO. in cement do., per	rod			36	0	0
DO. in stocks, add 25 r	per cer	it. per	r rod.			
DO, in blues, add 100 r	er cei	t. ne	r rod.			
po, circular on plan.	add 1	21 00	Pr cer	it. ne	er r	ho
FACINGS, FAIR, DET ft, s	up. et	tra		£0	0	9
bo Red Rubbers, ga	nged	and	set	04.0	0	~
in nutty norft ovtro	agea	terret	ore	0	4	6
to salt white or ivo	ry ob	hore	THOM	0		0
ft sun avtra	ny gu	izeu,	per	0	5	6
Tror Dorverve por #	-		•	0	0	10
We show Detroited	sup.	atra	•	0	0	10
WEATHER FOINTING, po	er It. s	up.e.	xtra	0	0	0
GRANOLITHIC PAVING,	1 111.	, per	ya.		-	
sup.				0	9	0
bo. 1 § in., per yd. sup.	• •		+	0	6	0
Do. 2 in., per yd. sup.				0	7	0
BITUMINOUS DAMP CO	URSE,	ex re	olls,			
per ft. sup				0	0	7
ASPHALT (MASTIC) DAM	IP COL	'R! E,	in.,			
per yd. sup				0	8	0
po. vertical, per yd. su	ip.			0	11	0
SLATE DAMP COURSE, p	er ft.	sup.		0	0	10
ASPHALT ROOFING (M	ASTIC	) in 1	070			-
thicknesses, 7 in., per	vd.			0	8	6
DO. SKIRTING, 6 in.				0	0	11
BREEZE PARTITION B	LOCKS	. set	in	0		**
Cement 11 in per vd	SUD	, see		0	5	2
po bo 3 in.	. oup.		•	0	8	6
Artro Artro tr atão o					- 0	- 0

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

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## MASON MASON, 1s. 91d. per hour ; DO. fixer, 1s. 101d. per

18. 5 d. per hour.	a, per	nou	r; si	AFFO	)LD	ER,
Portland Stone :						
I hubed, per ft. cube	•			<b>光</b> ()	4	6
Basebed, per ft. cube				0	-4	- 7
Buth stone, per ft. cube				0	- 3	- 0
Usual trade extras for la	arge b	locks.			-	-
1 ork paving, av. 2½ in., p	er yd.	sup.		0	6	- 6
1 ork templates sawn, per	ft. cu	be		-0	6	- 9
State shelves, rubbed, 1 in	., per	ft. suj	p.	0	- 2	6
Cement and sand, see "	Exca	rator	," et	c., ab	ove	
HOISTING and setting s	tone,	per	ft.			
cube				£0	2	2
po. for every 10 ft. abo	ve 30	ft., a	dd 1	5 per	ee.	nt.
PLAIN face Portland basi	s, per	ft. st	ip.	£0	2	8
DO. circular, per ft. sup.				0	4	0
SUNK FACE, per ft. sup.				0	3	9
po. circular, per ft. sup.				0	4	10
JOINTS, arch, per ft. sup.				0	2	6
po. sunk, per ft. sup.				0	2	7
DO. DO. circular, per ft. s	sup.			0	4	6
CIRCULAR-CIRCULAR WOF	k, per	ft. su	ip.	1	2	0
PLAIN MOULDING, straig	t, p	er in	ch			
of girth, per ft. 1un				0	1	1
po. circular. do, per ft. r	un			0	1	4

no. circular, do, per ft. run

Add to t 35 per c	he foreent.	er It. st egoing	up. ; prio	es if	in Y	£0 York	sto	one
DO. Man	sfield, 1	21 pe	r cent	t.				
Deduct fo	r Bath.	331	per ce	ent.				
DO. for C	hilmar	5. 5 D	er cer	t.				
SETTING 1	in, slat	e shel	vingi	n ceme	nt			
per ft. s	up.			•		£0	0	6
RUBBED I	ound n	osing	to de	D., per	ft.			
lin						0	0	6
YORK STE	PS, rub	bed T	& R	ft er	ıh	0	0	0
fixed		and A	11			1	0	0
ALAC G		-	• •		0		0	0
A company of the set of	67 B.B. B	2 TE #4	t on b	nrod			19	0

#### SLATER AND TILER

SLATER, 1s. 94d. per hour; TILER, 1s. 94d. per hour; SCAFFOLDER, 1s. 54d. per hour; LABOURER, 1s. 44d. per hour. N.B.-Tiling is often executed as piecework.

Slates, 1st q	nuality.	per	M :					
Portmadoc	Ladie	8.				£14	0	0
Countess						27	0	0
Duchess	•					32	0	0
Clips, lead,	per lb.					0	0	4
Cups, coppe	r, per l	0.				0	2	0
Naus, comp	o, per c	wet.				1	- 6	0
Cement an	d pana	1 000	46 L' m	annitan	"" a	0	1	10
Hand-made	tiles n	er li	Lid	caraor	, e	£5	19	. 0
Machine-me	ade tile	8 710	- 1/	•	•	2.0	10	0
Westmorlan	d slutes	e. lar	ar. ne	rton			ő	0
DO. Peggie	s, per l	lon	0			7	5	0
SLATING, 3	in. gau	uge,	comp	o nails	, Po	rtma	doc	e or
equal:								
Ladies, per	squar	е				£4	- 0	0
Countess, 1	persqu	are				4	5	0
Duchess, p	er squa	are				4	10	0
WESTMORL!	ND, in	dim	inishi	ng cou	rses.			
per squar	e		•			6	5	0
CORNISH DO	., per s	quar	е.			6	3	0
Add, if verti	ical, pe	rsqu	iare a	pprox.		0	13	0
Add, if with	copp	er na	ails, p	er squa	are			
approx.						0	2	6
Double cour	se at e	aves	ner f	tannr	ox	0	1	0
Turve 4 in	gano	0 01	ory 4	th com	1000	0		0
noiled in	hand	c, ci	tilos	orono	(BC			
nanea, m	nana-	mau	e mes	, avera	Re		-	
per square	3 .					ō	6	0
DO., machine	e-made	e DO.	, per s	quare		4	17	0
Vertical Ti	ling, in e.	nelu	ding 1	pointin	g, a	dd 1	38.	0d.
FIXING lead	soaker	s, pe	r doze	en		£0	0	10
STRIPPING O	ld slat	es ar	nd sta	cking f	or			
re-nse an	d clea	ring	91797	surnl	116			
and rubbi	sh nor	sons	120	outh	und	0	10	0
and rubble	su, per	squa	let	· 1		0	10	0
LABOU'R ONF	V 10 18	VING	SINTES	s. DHT 1	11 -			

cluding nails, per square 1 0 0 "Sundries for Asbestos Tiling." Sec

#### CARPENTER AND JOINER

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

-							
Timber, average prices e	at Doe	ks, I.	ondo	m Sta	inda	rd,	
Scandinavian, etc. (equa	il to :	2nds)	:				
$7 \times 3$ , per std.				£20	0	0	
$11 \times 4$ , per std.		*		30	0	0	
Memel or Equal. Sligh	tly les	ss tha	n for	egoin	g.		
Flooring, P.E., 1 in., per	8q.			£1	- 5	0	
DO. T. and G., 1 in., per s	q.			1	5	0	
Planed Boards, 1 in. $\times$	11 in.	, per.	std.	30	0	0	
Wainscot oak, per ft. sup.	of 1	n.		0	2	0	
Mahogany, per ft. sup. of	1 in.	•		- 0	2	0	
DO. Cuba, per ft. sup. of 1	in.			0	3	0	
Teak, per ft. sup. of 1 in.				0	3	0	
po., fl. cube	•	•		0	15	0	
FIR fixed in wall plates, l	intels	s, slee	pers,				
etc., per ft. cube .				0	5	9	
po. framed in floors, ro	ofs, (	te., 1	per				
ft. cube				0	6	3	
DO., framed in trusses, e	tc., in	nelud	ing				
ironwork, per ft. cube				0	7	3	
PITCH PINE, add 331 per	r cent						
FIXING only boarding in	floor	s, roc	ofs.				
etc., per sq				0	13	6	
SARKING FELT laid, 1-ply	, per ;	yd.		0	1	6	
po., 3-ply, per yd				0	1	9	
CENTERING for concrete,	etc.,	inch	Id-				
ing horsing and strikin	g. per	· sq.		3	10	0	
SLATE BATTENING, per sq				0	18	6	

## THE ARCHITECTS' JOURNAL for November 10, 1926

## PRICES CURRENT; continued.

A READS GORDENTS, FORT			
CARPENTER AND JOINER:	cont	inue	ed.
DEAL GUTTER BOARD, 1 in., on firring,			
per sq	£3	ð	0
Moulded casements,1 <sup>‡</sup> in., in 4 sqs.,			
glazing beads and hung, per ft. sup.	0	3	0
DO., DO. 2 in., per ft. sup	0	3	3
DEAL cased frames, oak sills, 2 in.			
d.h. sashes, brass-faced pulleys,			
etc., per ft. sup.	0	4	0
DOORS, 4 pan. sq. b.s., 2 in., per ft. sup.	0	3	6
DO., DO., DO. 1 in., per ft. sup	0	3	0
DO., DO. moulded b.s., 2 in., per ft.			
sup	0	3	9
DO., DO., DO, 11 in., per ft. sup	0	3	3
If in oak multiply 3 times.			
If in mahogany multiply 3 times.			
If in teak multiply 3 times.			
WOOD BLOCK FLOORING, standard			
blocks, laid in mastic herringbone :			
Deal, 1 in., per yd. sup., average .	0	10	0
DO. 11 in., per yd. sup., average .	0	12	0
DO., DO. 11 in. maple blocks	0	15	0
STAIRCASE WORK, DEAL :			
1 in. riser, 11 in. tread, fixed, per ft.			
sup	0	3	6

0

#### PLUMBER

PLUMBER, 1s.  $9 \pm d$ . per hour ; MATE OR LABOURER 1s.  $4 \pm d$ . per hour.

DO. drawn pipes, per cut.         2         6         0           DO. sord pipe, per cut.         1         9         6           Copper, sheet, per lb.         1         9         6           Copper, sheet, per lb.         0         1         2           Do. fine, per lb.         0         1         2           Cast-iron pipes, ctc.:         1         0         1         2           L.C.C. soil, 3 in., per yd.         0         4         1         5           Cast-iron pipes, ctc.:         0         2         5         0           L.C.C. soil, 3 in., per yd.         0         2         5         0           Do. 4 in. per yd.         0         2         5         0           Do. 4 in., per yd.         0         1         5         0           MiLLED LEAD and labour in gutters, flashings, etc.         1         9         2         5           Do. 1 in., per ft.         0         2         1         0         2         1           Do. 4 in., per ft.         0         2         5         0         3         3         2         6           LEAD PIPE, fixed, including running joionts, pends, and tacks, in, per ft.         0<	Lead, milled sheet, per cu	rt.			£2	4	6
DO. soil pipe, per cut.         2         8         0           DO. serup, per cut.         1         9         6           Copper, sheet, per lb.         0         1         0           Solder, plumber's, per lb.         0         1         0           Cos, fine, per lb.         0         1         0           Cos, fine, per yd.         0         1         2           Do, fine, per yd.         0         4         1           Do.4 in., per yd.         0         2         0           Do.4 in., per yd.         0         3         3           Gutter, 4 in., H.R., per yd.         0         1         5           Do.4 in., per yd.         0         1         5           Do.4 in., per gd.         0         1         5           Do.4 in., per ft.         0         2         1           Do.4 in., per ft.         0         2         5           Do.1 in., per ft.         0         2         5	po. drawn pipes, per cu	et.			2	6	0
DO. serai, per cwt.         1         9         6           Copper, sheet, per lb.         0         1         0           Solder, plumber's, per lb.         0         1         2           Do. fine, per lb.         0         1         2           Cast-iron pipes, elc.:         1         5         1         5           Cast-iron pipes, elc.:         0         1         5         0           L.C.C. soil, 3 in., per yd.         0         2         5         0           Do. 4 in., per yd.         0         2         5         0           Do. 4 in., per yd.         0         1         5         0           MitLED LEAD and labour in gutters, flashings, etc.         3         12         6           LEAD PIPE, fixed, including running joints, bends, and tacks, § in., per ft.         0         2         1           Do. 4 in., per ft.         0         2         5         0         1         9         9           Castrinos pends, not fick as above, complete, 2§ in, per ft.         0         2         1         0         2         5           Do. 1 in., per ft.         .         0         7         0         2         5           Do. 3 in	DO. soil pipe, per cwt.				2	8	0
Copper, sheet, per lb.       0       1       0         Solder, plumber's, per lb.       0       1       2         Do, fine, per lb.       0       1       5         Cast-iron pipes, etc.:       1       1       5         L.C.C. soil, 3 in., per yd.       0       4       1         Do, 4 in., per yd.       0       2       0         RiW.P., 24 in., per yd.       0       2       0         Do. 3 in., per yd.       0       3       3         Gutter, 4 in., H.R., per yd.       0       1       5         Do. 4 in., per yd.       0       1       5         MILLED LEAD and labour in gutters,       flashings, etc.       3       12         Hashings, etc.       .       0       2       1         Do. 4 in., per ft.       .       0       2       1         Do. 4 in., per ft.       .       0       2       1         Do. 4 in., per ft.       .       0       2       5         Do. 1 in., per ft.       .       0       7       0         Do. 4 in, per ft.       .       0       2       5         Do. 4 in, per ft.       .       0       2	DO. scrap, per cut.				1	9	6
Solder, plumber's, per 10.       0       1       2         Do, fine, per b.       .       0       1       5         Cast-iron pipes, etc.:       .       0       1       5         Cast-iron pipes, etc.:       .       0       1       5         Cast-iron pipes, etc.:       .       0       4       1         LC.C. soil, 3 in., per yd.       .       0       2       0         Do. 3 in., per yd.       .       0       2       5         Do A in., per yd.       .       0       1       5         Butteen LeAD and labour in gutters,       flashings, etc.       .       3       12       6         LEAD PIPE, fixed, including running       joints, bends, and tacks, in., per ft.       0       2       5         Do. 4 in., per ft.       .       .       0       2       5         Do. 1 in., per ft.       .       .       0       2       5         Do. 4 in., per ft.       .       .       0       7       0         Do. 4 in., per ft.       .       .       0       7       0         Do. 4 in., per ft.       .       .       0       2       5         Do.	Copper, sheet, per lb.	•			0	1	0
DO. fine, per flo.       .       .       .       0       1       5         Cast-iron pripes, elc.:       .       .       0       4       1         L.C.C. soil, 3 in., per yd.       .       0       4       1         Do. 4 in., per yd.       .       0       5       0         R.W.P., 24 in., per yd.       .       0       2       0         Do. 3 in., per yd.       .       0       3       3         Gulter, 4 in. H.R., per yd.       .       0       1       5         Do. 4 in., O.G., per yd.       .       0       1       5         Do. 4 in., O.G., per yd.       .       0       1       5         Do. 4 in., per ft.       .       .       0       2       1         Do. 4 in., per ft.       .       .       0       2       1         Do. 1 in., per ft.       .       .       0       4       6         LEAD waste or soil, fixed as above,       .       0       7       0       2       5         Do. 1 in., per ft.       .       .       0       7       0       2       5         Do. 3 in., per ft.       .       .       0	Solder, plumber's, per lb.				0	I	2
Cast-iron pipes, etc.:       0       4       1         L.C.C. solt, 3 in., per yd.       0       5       0         L.C.C. solt, 3 in., per yd.       0       5       0         R.W.P. 2 in., per yd.       0       2       5         Do. 3 in., per yd.       0       2       5         Do. 4 in., per yd.       0       1       5         B.W.P. 2 in., per yd.       0       1       5         Do. 4 in., per yd.       0       1       5         MILLED LEAD and labour in gutters,       flashings, etc.       3       3         Joo. 4 in., per ft.       0       2       5         Do. 1 in., per ft.       0       2       5         Do. 1 in., per ft.       0       2       5         Do. 1 in., per ft.       0       3       3         Do. 1 in., per ft.       0       4       6         LEAD wASTE or soli, fixed as above,       0       7       0         complete, 2 in., per ft.       0       6       6       0         Do. 3 in., per ft.       0       2       5       5       5       0       4       6         Castr-Rox R.W. PIPE, at 24 lb. per       length, join	DO. fine, per lb.				0	1	Э
L.C.C. solt, S. In., per yd.       0       7       0         DO. 4 in., per yd.       0       2       0         B.W. P., 2 in., per yd.       0       2       0         DO. 3 in., per yd.       0       2       0         B.W. P., 2 in., per yd.       0       3       3         Gatter, 4 in., per yd.       0       1       5         DO. 4 in., per yd.       0       1       5         Do. 4 in., O.G., per yd.       0       1       5         MILLED LEAD and labour in gutters, flashings, etc.       3       12       6         LEAD PIPE, flxed, including running joints, bends, and tacks, in., per ft.       0       2       1         DO. 1 in., per ft.       0       3       3       0       4       6         LEAD WASTE OF soil, fixed as above, complete, 2 in., per ft.       0       4       6       0       0.3       3         Do. 4 in., per ft.       0       0       7       0       9       9         CAST-IRON R.W. PIPE, at 24 lb. per length, jointed in red lead, 2 in., per ft.       0       2       5         Do. 3 in., per ft.       0       2       10       2       10         CAST-IRON H.R. GUTTER, fixed, with cauked	Cast-tron pipes, etc. :	đ			0	4	1
BUT Provide Transform $0$ and $1$ and	Do A in ner ud	u.		•	0	5	- ô
DO. 31 m, per yd.       0       2       5         DO. 4 in., per yd.       0       3       3         Gutter, 4 in. H.R., per yd.       0       1       5         DO. 4 in., O.G., per yd.       0       1       5         DO. 4 in., O.G., per yd.       0       1       5         DO. 4 in. O.G., per yd.       0       1       9         MILLED LEAD and labour in gutters, flashings, etc.       3       12       6         LEAD PIPE, flxed, including running joints, bends, and tacks, § in., per ft.       0       2       1         DO. 1 in., per ft.       0       2       5       0       3       3         Do. 1 in., per ft.       0       4       6       0       2       5         DO. 1 in., per ft.       0       4       6       0       9       9         CAST-RON WASTE OR SOIL, fixed as above, complete, 2 in., per ft.       0       2       5       0       1       0       9       9         CAST-RON H.R. WIPE, at 24 lb. per length, jointed in red lead, 2 in., per ft.       0       2       10       0       4       10       3       3         CAST-RON H.R. GUTTER, fixed, with all calles, etc., 4       4       0       2	RWP 91 in ner ud	•		•	0	2	0
$\mathbf{DO}$ , $4$ in, $per$ $pd$ , 0       3       3 $\mathbf{Gutter}$ , $4$ in, $H, H, R.$ , $per yd$ , 0       1       5 $\mathbf{DO}$ , $4$ in, $O.G.$ , $per yd$ ,	DO. 3 in., per ud.			2	õ	2	5
Gutter, 4 in, H. R., per yd.       0       1       5         DO. 4 in, O.G., per yd.       0       1       9         MILLED LEAD and labour in gutters,       flashings, etc.       3       12       6         LEAD PIPE, fixed, including running       joints, bends, and tacks, § in., per ft.       0       2       1         DO. 4 in., per ft.       .       .       0       2       1         Do. 4 in., per ft.       .       .       0       2       1         Do. 4 in., per ft.       .       .       0       3       3         Do. 1 in., per ft.       .       .       0       4       6       0         Do. 3 in., per ft.       .       .       0       7       0       7       0       9       9         CAST-IRON R.W. PIPE, at 24 lb. per       length, jointed in red lead, 2½ in., per ft.       .       0       2       5       Do. 3 in., per ft.       .       0       2       7       Do. 0.4 in., per ft.       .       0       2       10         CAST-IRON R.W. PIPE, fixed with caulked joints and all ears, etc.,       .       0       2       10         CAST-IRON SOLL PIPE, fixed with caulked joints and all ears, etc.,       .       0       <	DO. 4 in., per ud.				0	3	3
Do. 4 in. O.G., per yd.       0       1       9         MILLED LEAD and labour in gutters,       flashings, etc.       3       12       6         LEAD PIPE, fixed, including running       0       1       9         joints, bends, and tacks, $\frac{1}{2}$ in., per ft.       0       2       1         D0. $\frac{1}{4}$ in., per ft.       .       0       2       1         D0. $\frac{1}{4}$ in., per ft.       .       0       2       1         D0. $\frac{1}{4}$ in., per ft.       .       0       2       1         Complete, $\frac{2}{4}$ in., per ft.       .       0       3       3       0       6       0         D0. $\frac{3}{4}$ in., per ft.       .       0       6       0       0       3       1       6       0         D0. $\frac{1}{4}$ in., per ft.       .       .       0       7       0       0       9       9         CAST-IRON R.W. PIPE, at 24 lb. per       length, jointed in red lead, $\frac{2}{4}$ in., per       0       2       1       0       2       1         Do. 4 in., per ft.       .       .       0       2       7       0       3       3       3       3       3       3       3       3       3	Gutter, 4 in. H.R., per ye	1.			0	1	5
MILLED LEAD and labour in gutters, flashings, etc.       3 12         flashings, etc.       3 12         LEAD PIPE, fixed, including running joints, bends, and tacks, § in., per ft.       0 2         Do. § in., per ft.       0 2         Do. 1 in., per ft.       0 3         Do. 1 in., per ft.       0 4         Campos and tacks, § in., per ft.       0 4         Complete, 2§ in., per ft.       0 7         complete, 2§ in., per ft.       0 9         CAST-RON R.W. PIPE, at 24 lb. per length, jointed in red lead, 2§ in., per ft.       0 2         CAST-RON R.W. PIPE, at 24 lb. per length, jointed in red lead, 2§ in., per ft.       0 2         CAST-RON R.W. PIPE, at 24 lb. per length, jointed in red lead, 2§ in., per ft.       0 2         Do. 4 in., per ft.       0 2         CAST-RON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft.       0 2         CAST-RON NOL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.       0 7         Jo. 3 in., per ft.       0       0         Sin., per ft.       0       1         Gast-trans soul, preft.       0       2         Jo. 3 in., per ft.       0       2         Gast-trans soul, preft.       0       2         Jo. 3 in., per ft.       0       2         Bar	DO. 4 in. O.G., per yd.				0	1	9
flashings, etc.       3       12       6         LEAD PIPE, fixed, including running joints, bends, and tacks, $\frac{1}{2}$ in., per ft.       0       2       1         Do. $\frac{1}{4}$ in., per ft.       0       2       5       0       2       5         Do. 1 in., per ft.       0       2       5       0       3       3         Do. 1 in., per ft.       0       4       6       0       4       6       1       6       6       0       0       6       1       6       6       0       0       6       1       0       7       0       0       0       6       0       0       6       0       7       0       0       0       6       0       9       9       CAST-RON R.W. PIPE, at 24 lb. per       1       1       0       2       5       5       5       5       1       3 <t< td=""><td>MILLED LEAD and labou</td><td>ir in</td><td>gutte</td><td>ers,</td><td></td><td></td><td></td></t<>	MILLED LEAD and labou	ir in	gutte	ers,			
LEAD PIPE, fixed, including running joints, bends, and tacks, $\frac{1}{2}$ in., per ft.       0       2       1         Jo. $\frac{1}{4}$ in., per ft.       0       2       5       0       1       0       2       5         Do. 1 in., per ft.       0       3 <t< td=""><td>flashings, etc</td><td></td><td></td><td></td><td>3</td><td>12</td><td>6</td></t<>	flashings, etc				3	12	6
	LEAD PIPE, fixed, inclu-	ding	runn	ing			
Do. $\frac{1}{4}$ in., per ft.       0       2       5         Do. 1 in., per ft.       0       3       3         Do. 1 in., per ft.       0       4       6         complete, $\frac{2}{4}$ in., per ft.       0       4       6         Do. 3 in., per ft.       0       6       0         Do. 4 in., per ft.       0       7       0         Do. 4 in., per ft.       0       9       9         CAST-IRON R.W. PIPE, at 24 lb. per       1       0       2       5         Do. 3 in., per ft.       0       0       2       5         Do. 4 in., per ft.       0       2       5         Do. 3 in., per ft.       0       2       5         Do. 4 in., per ft.       0       2       5         Do. 4 in., per ft.       0       2       10         Do. 4 in., per ft.       0       2       10         CAST-IRON H.R. GUTTER, fixed, with all calles, etc., 4       0       2       10         CAST-IRON SOIL PIPE, fixed with cauked joints and all ears, etc., 4       0       7       0         Jo. 3 In., per ft.       0       0       7       0       6       0         Fixing only:       W.C. PA	joints, bends, and tack	s. lir	. Det	ft.	0	2	1
Do. 1 in., per ft.       0       3       3         Do. 1 in., per ft.       0       4       6         Lead warker or soil, fixed as above,       0       6       0         complete, 2 in., per ft.       0       6       0         Do. 3 in., per ft.       0       7       0         Do. 4 in., per ft.       0       7       0         Per ft.       0       9       9         CAST-IRON R.W. PIPE, at 24 lb. per       length, jointed in red lead, 2 in.,       0       2       5         po. 3 in., per ft.       0       2       10       0       4       10       2       10         Do. 4 in., per ft.       0       2       7       0       2       7         Do. 0.6., 4 in., per ft.       0       2       7       0       2       10         CAST-IRON NOLL PIPE, fixed, with       aulked joints and all ears, etc.,       4       1       1       0       2       10         CAST-IRON SOLE PIPE, fixed with       0       0       0       0       0       1       0         CAST-IRON SOLE PIPE, fixed water waste       0       7       0       0       0       1         Do. 3 lin., pe	DO. 4 in. per ft.				0	2	5
bb. 1 m., per R.       .       .       .       0       4       6       1         bb. 14 in., per R.       .       .       0       4       6       1       6       6       0       0       4       1.       1.       1.       0       7       0       0       0       3       1.       1.       0       7       0       0       0       4       1.       0       7       0       0       0       4       1.       1.       0       7       0       0       0       4       1.       .       0       9       9       CAST-RON R.W. PIPE, at 24 lb. per       1.       1.       0       2       5       0.       2       10       0.       4       in., per ft.       .       0       2       5       0.       3	no lin por ft				0	2	2
DD. 13 III., per II.       0       4       0         LEAD WARTE OF SOIL, fixed as above,       0       6       0         complete, $2\frac{1}{4}$ in., per ft.       0       6       0         DO. 3 in., per ft.       0       7       0         Do. 4 in., per ft.       0       9       9         CART-IRON R.W. PIFE, at 24 lb. per       1       0       2       15         per ft.       0       2       10       0       2       10         Do. 3 in., per ft.       0       2       10       0       2       10         Do. 4 in., per ft.       0       2       10       0       3       3         CART-IRON H.R. GUTTER, fixed, with       0       2       10       0       2       10         CART-IRON NOLL PIPE, fixed with       0       2       10       0       2       10         CART-IRON SOLL PIPE, fixed with       0       6       0       1       0       10       0         CART-IRON SOLL PIPE, fixed with       0       0       0       6       0       1       0       0       1       0       0       1       1       0       1       1       1 <t< td=""><td>bo. 1 m., per n</td><td></td><td>•</td><td></td><td>0</td><td>4</td><td>0</td></t<>	bo. 1 m., per n		•		0	4	0
LEAD WARTE or soil, inxee as above, complete, $2^1$ in., per ft.       0       0       6       0         DO. 3 in., per ft.       0       0       7       0         DO. 4 in., per ft.       0       9       9         CAST-RON R.W. PIPE, at 24 lb. per length, jointed in red lead, $2\frac{1}{2}$ in., per ft.       0       2       5         DO. 3 in., per ft.       0       2       5         DO. 4 in., per ft.       0       2       5         DO. 4 in., per ft.       0       2       7         DO. 4 in., per ft.       0       2       7         DO. 0.6., 4 in., per ft.       0       2       7         DO. 0.6., 4 in., per ft.       0       2       10         CAST-RON NOLL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.       0       7       0         DO. 3 in., per ft.       0       0       6       0         Fixing only:       W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each       2       5       0         BATHS only, with all joints       1       18       0         LAVATORY BASINS only, with all       1       10       0	po. 12 m., per n.		*		0		0
complete, 2 in., per ft.       0       0       0       0       7       0         po. 3 in., per ft.       .       0       9       9         CAST-IRON R.W. PIPE, at 24 lb. per length, jointed in red lead, 2 in., per ft.       0       2       5         po. 3 in., per ft.       .       0       2       5         po. 3 in., per ft.       .       0       2       5         po. 3 in., per ft.       .       0       2       5         po. 3 in., per ft.       .       0       2       5         po. 0.G., 4 in., per ft.       .       0       2       10         CAST-IRON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft.       0       2       10         CAST-IRON SOLL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.       0       7       0         Jo. 3 in., per ft.       .       .       0       7       0         Po. 3 in., per ft.       .       .       0       7       0         Jo. 3 in., per ft.       .       .       0       7       0         W.C. PANS and all joints, P. or S., and including joints to water waste       .       2       5       0         BATHES ONLY, with all joints       . <td>LEAD WASTE OF SOIL, IX</td> <td>eq a</td> <td>s a.po</td> <td>ve,</td> <td></td> <td>-</td> <td>-</td>	LEAD WASTE OF SOIL, IX	eq a	s a.po	ve,		-	-
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	complete, 21 in., per l	t.			0	6	0
DO. 4 in., per ft.       .       .       0       9       9         CAST-IRON R.W. PIPE, at 24 lb. per length, jointed in red lead, 24 in., per ft.       .       .       0       2       5         Do. 3 in., per ft.       .       .       0       2       5         Do. 4 in., per ft.       .       .       0       2       5         Do. 4 in., per ft.       .       .       0       2       5         Do. 4 in., per ft.       .       .       0       2       5         Do. 4 in., per ft.       .       .       0       2       10         Do. 4 in., per ft.       .       .       0       2       10         CAST-IRON H.R. GUTTER, fixed, with caulked joints and all ears, etc., 4 in., per ft.       .       0       2       10         CAST-IRON SOIL FIPE, fixed with caulked joints and all ears, etc.,       .       0       7       0         Jo. 3 in., per ft.       .       .       .       0       7       0         Fixing only:       W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each       .       .       2       5       0         BATHES ONLY, with all joints .       .       1       18       0<	po. 3 in., per ft				0	7	0
CAST-IRON R.W. PIPE, at 24 lb. per length, jointed in red lead, 2½ in., per ft.       0       2       5         DO. 3 in., per ft.       0       2       10         Do. 4 in., per ft.       0       3       3         CAST-IRON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft.       0       2       7         DO. 0.G., 4 in., per ft.       0       2       10         CAST-IRON SOLE PIPE, fixed, with cauked joints and all ears, etc., 4 in., per ft.       0       2       10         Fixing only :       W.C. PANS and all joints, P. or s., and including joints to water waste preventers, each       0       7       0         BATHS only, with all joints .       1       18       0         LAVATORY BASINS only, with all       1       10       0	DO. 4 in., per ft				0	9	9
length, jointed in red lead, 21 in., per ft.       0       2       5         Do. 3 in., per ft.       0       0       2       5         Do. 4 in., per ft.       0       3       3         CAST-IRON H.R. GUTTER, fixed, with all clips, etc 4 in., per ft.       0       2       7         Do. O.G., 4 in., per ft.       0       2       7         CAST-IRON SOIL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.       0       7       0         Do. 3 in., per ft.       0       0       7       0         Fixing only :       W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each       2       5       0         BATHE ONLY, With all joints       1       18       0       18       0         LAVATORY BASINS ONLY, with all       1       10       0	CAST-IRON R.W. PIPE.	at 24	1b.	per			
per ft.       0       2       5         po. 3 in., per ft.       0       2       10         po. 4 in., per ft.       0       2       10         po. 4 in., per ft.       0       3       13         CAST-IRON H.B. GUTTER, fixed, with all clips, etc., 4 in., per ft.       0       2       10         CAST-IRON MOL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.       0       2       10         Pixing only:       0       7       0       6       0         Fixing only:       0       7       0       6       0         W.C. PANS and all joints, p. or s., and including joints to water waste preventers, each       2       5       0         BATHES ONLY, with all joints       1       18       0         LAVATORY BASINS only, with all       1       10       0	length, jointed in rea	d lea	d, 21	in.,			
Do. 3 in., per ft.       0       2 10         Do. 4 in., per ft.       0       3 3         CAST-RON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft.       0       2 7         Do. O.G., 4 in., per ft.       0       2 10         CAST-RON SOLE PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.       0       2 10         CAST-RON SOLE PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.       0       0       7 0         Do. 3 in., per ft.       0       0       6       0         Fixing only :       W.C. PANS and all joints, P. or s., and including joints to water waste preventers, each       1       2       5       0         BATRS only, with all joints .       1       18       0       148       0         LAVATORY BASINS only, with all       joints, on brackets, each       1       10       0	per ft				0	2	5
DO. 4 in., per ft.       0       3       3         CANT-IRON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft.       0       2       7         DO. O.G., 4 in., per ft.       0       2       10         CAST-IRON SOIL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.       0       7       0         DO. 3 in., per ft.       0       7       0       6       0         Fixing only:       W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each       2       5       0         BATHS ONLY, with all joints       1       18       0       18       0         LAVATORY BASINS ONLY, with all       1       10       0	DO. 3 in., per ft.				0	2	10
CAST-IRON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft 0 2 7 DO. O.G., 4 in., per ft 0 2 10 CAST-IRON SOLE PIPE, fixed with caulked joints and all cars, etc., 4 in., per ft 0 7 0 DO. 3 in., per ft 0 6 0 Fixing only : W.C. PANS and all joints, P. or s., and including joints to water waste preventers, each 2 5 0 BATHS only, with all joints 1 18 0 LAVATORY BASINS only, with all joints, on brackets, each 1 10 0	Do. 4 in., per ft.				0	3	3
Cast fillow fills, Gerrink, facel, with all clips, etc., 4 in., per ft.       0       2       7         Do. O.G., 4 in., per ft.       0       2       10         Cast fibors soit. PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.       0       7       0         Jo. 3 in., per ft.       0       6       0       7       0         Fixing only :       W.C. PANS and all joints, P. or s., and including joints to water waste preventers, each       2       5       0         BATHE ONLY, with all joints       1       18       0       18       0         LAVATORY BASINS ONLY, with all joints, on brackets, each       1       10       0	CAST IDON U.D. GUTPPIN	6.	ad a	de la		v	v
an enps, etc., 4 in., per ft 0 2 1 Do. O. G., 4 in., per ft 0 2 10 CAST-IRON SOLL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft 0 7 0 Do. 3 in., per ft 0 6 0 Fixing only: W.C. PANS and all joints, P. or s., and including joints to water waste preventers, each 2 5 0 BATHS only, with all joints 1 18 0 LAVATORY BASINS only, with all joints, on brackets, each	all alling ato the m	a DA	eu, n	nn	0	0	-
DO. O.G., 4 in., per ft.       0       2       10         CAST-RON SOIL PIPE, fixed with       0       10       11         caulked joints and all ears, etc.,       4       11       0       7       0         Join, per ft.       .       .       0       6       0         Fixing only :       W.C. PANS and all joints, P. or s.,       0       6       0         Fixing only :       W.C. PANS and all joints, P. or s.,       2       5       0         BATHS only, with all joints .       .       2       5       0         LAVATORY BASINS only, with all joints .       1       18       0         LAVATORY BASINS only, with all       .       1       10       0	an enps, etc., 4 m., pe	er It.			0	2	(
CAST-HON SOLL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft 0 7 0 DO. 3 in., per ft 0 6 0 Fixing only : W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each 2 5 0 BATHS only, with all joints 1 18 0 LAVATORY BASINS only, with all joints, on brackets, each 1 10 0	DO. O.G., 4 in., per ft.				0	2	10
caulked joints and all ears, etc.,         4 in., per ft.       0         Do. 3 in., per ft.       0         in., per ft.       0         W.C. PANS and all joints, P. or s.,         and including joints to water waste         preventers, each       2         DATRIS only, with all joints       1         LAVATORY BASINS only, with all         joints, on brackets, each       1         ion       1         ion       0         preventers, and       1         1       1         0       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1	CAST-IRON SOIL PIPE,	fixe	sq n	ith			
4 in., per ft.       0       7       0         po. 3 in., per ft.       0       6       0         Fixing only :       0       6       0         W.C. PANS and all joints, p. or s., and including joints to water waste preventers, each       2       5       0         BATHS only, with all joints       1       18       0       18       0         LAVATORY BASINS only, with all joints, on brackets, each       1       10       0	caulked joints and a	all ea	IFS, C	te.,			
DO. 3 in., per ft.       0       6       0         Fixing only:       W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each       2       5       0         BATHS only, with all joints       1       18       0       18       0         LAVATORY BASINS only, with all joints on brackets, each       1       10       0	4 in., per ft.				0	7	0
Fixing only: W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each 2 5 0 BATHS only, with all joints 1 18 0 LAVATORY BASINS only, with all joints, on brackets, each 1 10 0	DO. 3 in., per ft				0	6	0
W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each 2 5 0 BATHS ONLY, with all joints 1 18 0 LAVATORY BASINS ONLY, with all joints, on brackets, each 1 10 0	Fixing only :						
and including joints to water waste preventers, each	W.C. PANS and all joi	ints	P. OF	14			
preventers, each 2 5 0 BATHS only, with all joints 1 18 0 LAVATORY BASINS only, with all joints, on brackets, each 1 10 0	and including jointst	o wei	0.00 1000	ista			
BATHS only, with all joints	magantan and	U w di	CL WE	1010		-	C
LAVATORY BASING ONLY, with all joints 1 18 0 LAVATORY BASING ONLY, with all joints, on brackets, each 1 10 0	preventers, each				2	9	0
LAVATORY BASINS only, with all joints, on brackets, each 1 10 0	BATHS only, with all jo	oints			1	18	- 0
joints, on brackets, each 1 10 0	LAVATORY BASINS OF	nly,	with	all			
	joints, on brackets, ea	ach			1	10	- 0

#### PLASTERER

PLASTERER, 1s. 9<sup>1</sup>/<sub>2</sub>d, per hour (plus allowances in London only); LABOURER, 1s. 4<sup>1</sup>/<sub>2</sub>d, per hour.

Chalk lime, per ton	L				£2 1	17	
Hair, per cut.					0 1	18	
Sand and cement	8ee *	' Exc	avator	," etc	c., abe	pre.	
Lime putty, per cu	t.				£0	2	
Hair mortar, per y	d.				1	7	
Fine stuff. per yd.					1 1	14	
Sawn laths, per bdi	l.				0	2	
Keene's cement, pe.	r ton				5 3	15	
Sirapite, per ton					3	10	
DO. fine, per ton					3	18	
Plaster, per ton					3	0	
DO. per ton .					3	12	
DO. fine, per ton					5 1	12	

ine	ed.	Thistle plaster, per ton Lath nails, per lb	£3 0	9 0	04
5	0	I among with some laths non-val	0	1	-
~	~	EATHING with sawn laths, per yu.	0	1	1
	0	METAL LATHING, per yd	0	2	3
3	0	FLOATING in Cement and Sand, 1 to 3,			
3	3	for tiling or woodblock, 4 in.,			
		per yd	0	2	4
		po. vertical, per yd	0	2	7
4	0	RENDER, on brickwork, 1 to 3, per vd.	0	2	7
3	6	RENDER in Portland and set in fine			
3	0	stuff per vd	0	3	3
		DENDED float and set trowelled	~		
3	9	RENDER, hoat, and set, trowencu,	0		0
3	3	per yu.		-	5
	~	RENDER and set in Sirapite, per yu.	0	-	0
		po. in Thistle plaster, per yd	0	2	Э
		EXTRA, if on but not including lath-			
		ing, any of foregoing, per yd	0	0	5
		EXTRA, if on ceilings, per yd	0	0	5
		ANGLES, rounded Keene's on Port-			
0	0	land, per ft. lin.	0	0	6
2	0	PLAIN CORNICES, in plaster, ner inch			
5	0	girth including dubbing out ate			
		non ft lin	0	0	5
		Winner gland Alling oct in Dartland	0	Q.	9
2	6	white glazed thing set in Portland			
0	0	and jointed in Parlan, per yd.,			
.2	3	from	1	11	- 65

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FIBROUS PLASTER SLABS, per yd. . 0 1 10

#### GLAZIER

## GLAZIER, 1s. 81d. per hour.

0	Glass : 4ths in cro	ates :						
15	Clear, 21 oz.					£0	0	6
0	DO. 26 oz					0	0	71
2	Cathedral white, 1	er ft.				0	0	61
5	Polished plate,	Brilis	h ti	n., u)	p to			
	2 ft. sup					0	2	0
1	DO. 3 ft. sup.					0	2	6
õ –	po. 7 ft. sup.					EF	3	6
0	DO. 25 ft. sup.					0	4	0
5	po. 100 ft. sup.					0	4	6
3	Rough plate, 2, i	n.				63	0	6
5	DO. 1 in., per ft.					0	0	61
9	Linseed oil pully	, per	cut.			0	16	0
6	GLAZING in putty	r, clea	r she	et, 21	oz.	£	) 0	11

	DO. 26 OZ	•	0	1	0
1	GLAZING in beads, 21 oz., per ft.		0	1	1
5	DO. 26 oz., per ft		0	1	4
3	Small sizes slightly less (under 3 ft	. su	p.).		
6	Patent glazing in rough plate, 1s. 6d. to 2s. per ft.	no	rmal	sp	an
0	LEAD LIGHTS, plain, med. sqs. 21 o usual domestic sizes, fixed, per	z., ft.			
9	sup. and up		£0	3	6
	Glazing only, polished plate, 6 <sup>1</sup> / <sub>2</sub> d according to size.	. to	8d. j	per	ft.

#### DECORATOR

 $\begin{array}{c}
 7 \\
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 \end{array}$ PAINTER, 18. 8<sup>1</sup>/<sub>4</sub>d. per hour; LABOURER, 1s. 4<sup>1</sup>/<sub>4</sub>d. per hour; FRENCH POLISHER, 1s. 9d. per hour; PAPERHANGER, 1s. 8<sup>1</sup>/<sub>4</sub>d. per hour. 0

Genuine white lead, per	cut.			£3	11	0	
Linseed oil, raw, per gal	1.			0	3	7	
po., boiled, per gall.				0	3	10	
Turpentine, per gall.				0	6	2	
Liquid driers, per gall.				0	9	6	
Knotting, per gall.				1	+	0	
Distemper, washable, in	ordi	nary	col-		0	0	
ours, per cut., and up		+		2	. 0	U	
Double size, per firkin					3	0	
Fumice stone, per to.				0	0	- 4	
Single gold leaf (tran	sjera	ole),	per	0	1		
Varnish conal per gall	and			0	15	11	
bo flat ner gall	ana	up	•	1	10	0	
bo naper per gall	•		۰	1	- 5	0	
French palish ner gall	•			- 6	10	0	
Ready mired naints ne	r aal	and		- 0	10	6	
rectary marca parmo, pe	gaa	. cerece	ap	0	10	0	
LIME WHITING, per yd.	sup.			0	0	3	
WASH, stop, and whiter	i. per	vd. s	up.	0		6	
po., and 2 coats distem	Der y	with r	aro-				
priotory distompor p	ALE 174	i enn		0		-	
prictary distemptr, p	er ye	I. sup				-	
KNOT, stop, and prime,	ber ?	a. su	p	0	- 0		
PLAIN PAINTING, includ	ing n	nouldi	ings,				
and on plaster or join	lery,	1st ce	nat,				
per yd. sup				0	0	10	
DO., subsequent coats, j	per y	d. suj	p	0	E.	9	
po., enamel coat, per y	d. su	p.		0	1	23	
BRUSH-GRAIN, and 2 c	oats	Varu	ish.			~ .	
mon red ann							

FIGURED DO., DO., per yd. sup	£0	5	6
FRENCH POLISHING, per ft. sup	0	1	2
STRIPPING old paper and preparing,			
per piece	0	1	7
HANGING PAPER, ordinary, per piece .	0	1	10
DO., fine, per piece, and upwards .	0	2	4
VARNISHING PAPER, 1 coat, per piece	0	9	0
CANVAS, strained and fixed, per yd.			
sup	0	3	0
VARNISHING, hard oak, 1st coat, per			
vd. sup	0	1	2
DO., each subsequent coat, per yd.			-
SUD.	0	0	11

#### SMITH

SMITH, weekly rate equals 1s. 94d. per hour; MATE, do. 1s. 4d. per hour; ERECTOR, 1s. 94d. per hour; FITTER, 1s. 94d. per hour; LABOURER, 1s. 4d. per hour.

Mild steel in British standard section	18,			
per ton		£12	10	- 0
Sheet steel :				
Flat sheets, black, per ton .		19	0	- 0
Do., galvd., per ton		23	0	- 0
Corrugated sheets, galvd., per ton		23	- 0	0
Driving screws, galvd., per grs.		0	1	10
Washers, galvd., per grs		0	1	1
Bolts and nuts, per cut. and up		1	18	0
MILD STEEL in trusses, etc., erected	d,			
perton		25	10	0
po. in small sections as reinforc	e •			
ment, per ton		16	10	0
po. in compounds, per ton .	4	17	0	0
po, in har or rod reinforcement, p	er			
ton		90	0	0
Whom show in chimney home of				~
wROT. IRON IN CHIMINEY Dars, etc				
including building in, per cwt.		2	- 0	0
po. in light railings and baluster	S.			
per ewt		2	5	0
FIXING only corrugated sheeting, in	n-			
cluding washers and driving screw	· ·			
non rel	- 9	a	9	0
THE ALL .				

#### SUNDRIES

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riore or wood pulp boardings, accord- ing to quality and quantity. The measured work price is on the same basis per ft. sup.	£0	0	2
FIBRE BOARDINGS, including cutting and waste, fixed on, but not in- cluding studs or grounds, per ft.			
sup from 3d. to	0	0	6
Plaster board, per yd. sup from	0	1	7
Sup	0	2	8
ud. sup.	0	2	3
DO, corrugated, per ud, sup.	0	3	3
ASBESTOS SHEETING, fixed as last,			
flat, per yd. sup	0	4	0
po. corrugated, per yd. sup	0	5	0
Asbestos slating or tiling on, but not including battens, or boards, plain			
"diamond" per square, grey .	2	15	0
Do., red	3	0	0
Asbestos cement slates or tiles, 52 in. punched per M., grey .	16	0	0
DO. red	18	0	0
Asbestos Composition FLOORING : Laid in two coats, average 1 in.		_	
Do. $\frac{1}{2}$ in. thick, suitable for domestic	0	•	0
work, unponshed, per yd	0	0	0
Metal casements for wood frames, domestic sizes, per ft, swp.	0	1	G
DO, in metal frames, per fl, sun.	0	1	9
HANGING only metal easement in hut		-	
not including wood frames, each .	0	2	10
BUILDING in metal casement frames, ner ft. sup.	8	0	7
Waterproofing compounds for cement. Add about 75 per cent. to 100 per cent. to the cost of cement used.	0		
Plywood :			
3 m/m alder, per fl. sup	0	0	2
12 m/m amer. white, per ft. sup.		0	3.
4 m/m ngurea asn, per ft. sup	0	0	5.
ner ft. sun.	0	0	11

