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CLIENT'S COST AND ARCHITECT'S CREDIT

BUILDING costs are now about 75 per cent. above pre-war rates and the architect, since the war, has not only had to educate his clients to the new value in building, but he has also had to enlighten those who would criticize without due realization of cost restriction.

A common subject of criticism has been the architect's apparent reluctance to embody labour-saving devices in his small-house design. By labour-saving devices we refer to running water in bedrooms, cupboard fitments and built-in furniture, central heating, and up-to-date kitchen equipment. Another subject of attack has been an æsthetic one—the almost box-like character of so many small houses, the almost entire absence of ornament or decorative material. Defence of such criticisms has at last become rather uncalled for. A large proportion of the community have now come into direct, or indirect, contact with the problem of the small house and its limitations of cost, and the public are at last enlightened. They realize that the real labour-saving house is only within the means of persons who can afford servants. They realize also that the use of good decorative materials and craftsmanship is only within the means of people who can afford fine furniture. But this enlightenment has become just a little blinding in its brilliance, and a new kind of injustice is being done to the architect in the matter of criticism which demands serious attention. The public, understanding that for economic reasons the architect cannot bring his art into full play, begins to question whether his professional services are worth having under such conditions. It is now widely realized that the plain shell of a small house is an exact science, calling no longer for any single individual's attention for the solution of a special problem. All the pioneer work has been done. Almost every variety of plan, good, bad, and indifferent, has been published, and is accessible to public, architect, and builder. There is, therefore, a prevalent resignation throughout the country that these new small houses, whether built singly or in numbers, must unavoidably look like boxes and must avoid beauty as something extravagant. In other words, the public, owing to the architect's vigorous post-war defence to criticism, can no longer associate beauty with low cost. There have been designed on the contrary many exceedingly successful small houses within limits of strict economy, but perhaps where the architect has shown the greatest creative ability has been in the handling of large numbers of houses in the mass.

This art of layout is very often unappreciated by the public who, perhaps, compares such work to a child playing with his toy bricks, each house representing one of the units. In the arrangement of all these small units of housing lies a very great source of beauty for the competent designer. Individual houses, which by themselves would possess no special architectural beauty, when welded together into terrace, cul-de-sac, or quadrangle, can acquire an astonishing amount of charm completely dissociating themselves from the post-war idea of rigid economic conditions. Though far too few, there are many happy examples today of these model housing layouts created by architects. But so disarming is their beauty that many local authorities turn aside from their example. They fear putting themselves in the hands of a competent architect in place of their own surveyor or engineer lest they be involved in high costs for their housing schemes. Now that an economic beauty is within their reach, they are too faint-hearted to inquire the cost of beauty. It is unfortunate that figures are very difficult to obtain for many of these housing schemes designed by surveyors and engineers. The closeness with which such figures are guarded may well arouse suspicion. We feel absolutely confident that if challenged the best schemes by architects would win the day on economic as well as æsthetic ground. Since the war the architect has groaned under the injustice of criticism in circumstances of unrealized cost restrictions. The pendulum has now swung back a little too far. The architect today is suffering for having so overcome criticism that the cost restriction is not realized as having been a factor. The beauty he is now creating is falsely associated with extravagance. We published last week the housing scheme at Weybridge, which might well afford a concrete example of unjust criticism. The scheme is so harmonious in its setting, yet possesses such charming variety that even to the expert it is difficult to realize that its plans are recognized standard types and that its total cost is well within the range of today's economic restrictions. Its actual cost was £49,305 6s. 9d. for one hundred houses, inclusive of drainage, water supply, gas and electric supply and connections, formation of open spaces, gates, fences, paths, tree planting, grass, and sheds.

The scheme should be a stimulating example to all rural authorities; but its very charm and beauty must not be allowed to lead the critic astray in the matter of cost.

NEWS AND TOPICS

At last the cat is out of the bag regarding the Weir "steel" house. In the JOURNAL for the last two years we have pointed out the technical imperfections of Lord Weir's creation, and have suggested that the Government was backing the wrong horse in spending public money upon a curious erection, really made of light timber, that had been christened a "steel" house because it was covered with thin sheets of this metal. However, a few days ago it was revealed that Lord Weir had offered the whole of his factory at Cardonald to the Glasgow Corporation on certain conditions. In his letter it is stated very clearly that he does not expect to receive any further orders from the Government. If the hopes expressed by Sir John Gilmour, Secretary of State for Scotland, had in any way been realized, we should not thus have seen Lord Weir abandoned by his friends. As it is, nearly a million pounds of public money has been spent, in spite of the almost unanimous warnings of technical experts, and in disregard of the stubborn refusal of Scottish local authorities to accept any gifts of public money to put up the Weir house. I have discussed the matter with several Lord Provosts and discovered that this refusal was not due to political or trade union prejudice, but that they and their shrewd colleagues had realized the imperfections of the Weir structure. This was admittedly framed to meet an emergency, and it is inconceivable that Glasgow Corporation will indulge in the rash experiment of taking over the factory on the proposed conditions.

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A friend who was present at the ceremony to inaugurate the Guild of the British Institute in Paris last week, tells me that the work of reconstruction of a rather ugly Parisian house has been most cleverly carried out from the designs of M. Chatenay, the architect to the British Embassy, who is to be associated with Mr. Edward Warren in the carrying out of the College of Residence at the Cité Universitaire. The building of the Guild has on the topmost new story a library, supposed to be designed in Jacobean style, with oak shelving and panelling. It is distinctly pleasing in appearance, although from the British point of view it seemed unnecessary to scrape the plaster ceiling in order that it might imitate blocks of stone.

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A conference took place a few days ago between members of the Council for the Preservation of Rural England and Mr. Samuel Wallrock, the president for 1927 of the Incorporated Society of Auctioneers and Landed Property Agents, who has been leading the opposition to the proposal to dezone a residential area at Stanmore. This professional body, supported by other organizations, has determined to press the Government to amend part of the town-planning procedure. They insist that where any proposal is made affecting the character of zones incorporated in an approved preliminary statement, the proposed changes should be advertised in a local newspaper at the cost of the potential users of the land. There is also an important proposal that, if accepted, will be of considerable value in the preservation of beauty spots. It is suggested that appeals by third parties may be allowed to the Minister, even after the passing of the preliminary statement.

The chairman of the Thames Conservancy Board has pictured for us the alternatives in connection with our great waterway; in the one case he shows the tidal bore of the North Sea spring tide invading London, spreading terror and destruction in its wake and polluting the river bed with silt, and in the other case he shows a scene of idyllic serenity with the Thames as a lovely lake, a "beautiful reach of water from Tilbury to Teddington, always clean, always deep. . . ." Floating cafés along the embankment, houseboats at the Temple, and a fast motor-boat service beween London Bridge and Richmond are visualized as the possibilities of this radiant dream. The cost of the barrage by which this magical alteration is to be brought about is estimated at from eight to ten million pounds, and in comparison with the cost of the fireworks let off between 1914 and 1918 such sums are hardly worthy of mention. To give to London a river "always clean, always deep," with possibilities of safe navigation by fleets of dainty craft would be cheap at a cost of twenty millions, in place of ten, and let no one condemn Lord Desborough's fine idea just because it seems almost too good to be true.

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But something more than a lump sum payment is really necessary to buy the safe serenity, the cleanliness, the tranquil depth, and the peaceful jollity in the houseboats and floating cafés. The great argument advanced in favour of the Thames barrage scheme when it was first proposed in 1902-1903 was that the "necessity for constant dredging would be abolished," and if that result would really be attained, a very considerable expense in prime cost would be justified on that score alone. A moment's reflection ought to suffice to show that no such results would follow from the erection of a barrage connecting Tilbury and Gravesend. In regard to deposits of silt thrown down by the sea on the bed of the Thames, they might be supposed to be confined to the estuary after the erection of Lord Desborough's dam, but dredging would still be required to keep the channels clear up to the lock gates in its central portion. On the upstream side of the barrage there would still be the solid matter brought down by the river and its tributaries, the discharge of sewers and factories, and the casual pollution that goes on unheeded at the rubbish tips, where filth of all descriptions is still blown into the water in the operation of emptying it from open dustcarts to open lighters. A walk along the south-west pavement of Waterloo Bridge will reveal the fact that there are other things to be done beside the erection of a ten-million-pound barrage before the Thames in London will be a fit place for houseboats and floating cafés, for right in the midst of London the defilement of the Thames is proceeding every working day in the year.

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Now, as regards the safety of Londoners from death by flood; the barrage has been proposed as a sure bulwark against inrushing waters into the Thames under the pressure of abnormal tides in the upheaved North Sea, and under certain favourable conditions it might prove itself a real defence. But what guarantee have we that these favourable conditions will obtain in the time of emergency? We have had a sorry experience of the inability of our authorities to maintain the river valley free from floods, even in its higher reaches remote from the interference from the North Sea and its alleged "tidal waves." The desire to escape the duty of dredging and other routine performances of river management has been all too evident in recent

times, and it has been made a feature of the proposed scheme that the necessity of dredging will be minimized. Actually, whether a barrage is built at Tilbury or elsewhere, or is not built at all, the real safety of Londoners from flooding by the Thames will depend upon the daily and hourly vigilance of those who manage the flow of the river by dredging and by adjusting such weirs and sluices as have been constructed to aid them in their partial control of the products of rain and snowfall. And in the late emergency such vigilance proved inadequate even to send a timely warning.

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If executed, Lord Desborough's scheme may be found in time to afford some of the advantages he claims for it; it will not give them all, for without continual supervision and routine works, to say nothing of the abolition of open rubbish tips and the diversion of sewage outfalls, the reach will not long remain "always clean, always deep." But the point is, can the authorities, who have failed so signally to get rid of the flood waters in general, be acknowledged as experts in their proposed gigantic scheme? Had they been able to claim that their levelheadedness had met the needs of the case on the night of the London flood, or to show that the river had been kept dredged to an adequate degree, and its walls retained in efficient strength, support might be forthcoming to give practical form to their pleasant dreams of an improved London. As it is, they have failed to show themselves able to maintain, or to cause to be maintained, the little dams along the river edge. Can they be trusted with the construction and maintenance of an immense new dam from Tilbury to Gravesend? Have they the face to ask the British public to say: "Well done, good and faithful servant; thou hast been faithful over a few things, I will make thee ruler over many things. . ."? Are we as soft as all that?

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It is a pleasing feature of American psychology that whatever attribution of motive is made to a piece of work its purposefulness shall never be overlooked. The American may build for money or for pride; he may build wisely or not too well, but if his building has no soul he is desolate. It may happen that the purpose may not emerge until the completion of the work, but that is of little account if it does, in fact, emerge. Architecture, life, morality must each have its purpose, so that the soul of the American shall be touched by the soul of the respective arts and so response be made. That which is haphazard lacks the first essential of success, and is therefore bound to be a failure at least comparative. So that this loss of mental and emotional energy shall at least be reduced, if not wholly evaded, the American Library Association is issuing a series of brochures called "Reading with a Purpose," designed to point out what it is desirable to do in working up a subject from books. Among them is an excellent and lively contribution on *Architecture*, by Lewis Mumford. It is a very attractive piece of writing, well calculated to stir the imagination of one drawn to the subject. On its practical side it gives a purposeful list of books for the beginner, quite short, in which W. R. Lethaby's *Form in Civilization* is included. The books are named because of their wide outlook and the sanity of their conclusions.

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Mr. Neville Chamberlain is, on February 1, to lay the foundation-stone for the new nine-story flats, designed by Mr. G. H. Topham Forrest, the chief architect to the L.C.C. These flats will be the highest ever erected in London by a municipal authority, and will take the place of a number of insanitary dwellings in the unsavoury district of Ossulton Street, St. Pancras. The architectural details of these flats have already been described, and the scheme has been approved by the Ministry of Health. But the officials of other Government departments are by no means so sure of the wisdom of this departure. Experts in the Home Office and the Air Ministry, who are especially concerned with questions affecting the safety of Londoners in case of air raids in future wars, cannot look with favour on the concentration of over 3,000 people in one of the danger zones close to the main line stations of King's Cross and of St. Pancras. Since Mr. Nevinson wrote two remarkable articles in THE ARCHITECTS' JOURNAL on the menace to buildings from the air, there has been a "hush-hush" censorship imposed by the Government, for diplomatic reasons, on any talk of possible air dangers. But Mr. Nevinson, if anything, underestimated the peril, and it is said that hundreds of thousands of pounds are now to be expended on putting up buildings that would inevitably be in serious danger should any hostile attacks be made upon London from the air. A modern air bomb with delay-action fuse, weighing two or three tons, would easily penetrate from the roof to the basement of Mr. Forrest's flats, and would there explode. The death roll might be prodigious in such circumstances. I understand that responsible persons have indicated these dangers to Colonel Levita, the chairman of the L.C.C. Housing Committee, but that they have been dismissed as fantastic. There is, however, good reason for stating that there is an increasing body of expert opinion which considers that the modern architect must consider air perils when planning industrial buildings in Europe. In this case the L.C.C. are gambling on no more wars in England.

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Before the business of the night began at the R.I.B.A. on Monday, Mr. Stanley Hall, the honorary secretary, moved that the regrets of the Institute for the loss of Thomas Hardy be entered on the minutes. The president's (Mr. Walter Tapper's) address was the "presidential address to students." More than sixty years ago Thomas Hardy himself had been a student (he won the Essay Prize in 1863), and I fell awondering whether he had ever sat here as on a night like this listening to similar words. I wondered, too, whether any other like young Hardy was here tonight. Who knew? Who knew? The president's address was full of looking's back—to the days before the big schools; and he exhorted the masters of schools to encourage the students to found themselves in the best traditions of the past. "There was no better way of learning the traditions of the art than of measuring, not merely to make a record of it but to master its meaning." The masters of elementary and secondary and public schools could also lead people into the right channels. For example, Eton and Winchester. The history of England was architecturally expressed on their walls. Did the masters call attention to this? Or, again, in the village schools, were the children taught to be observant of the beautiful cottage architecture that so many villages possessed? Then, too, from the universities many often became trustees of the lovely churches up and down the country. Would these buildings have suffered as they had if the study of the fine arts had formed part of such men's general education?

ASTRAGAL

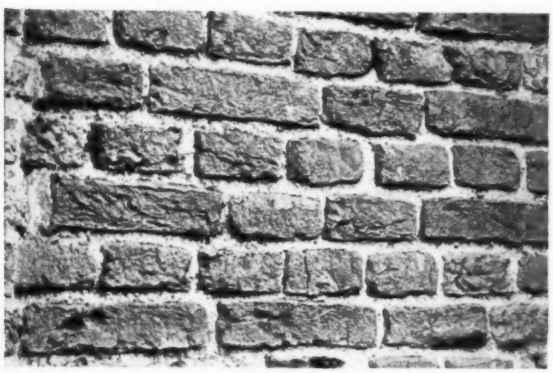
AT THE PARTING OF THE WAYS: i

[BY NATHANIEL LLOYD]

THE R.I.B.A. is now considering a matter, apparently trifling, but really of the first importance. Their decision will have more effect upon the architectural and building amenities of England than will that upon any other question that is likely to come before them during the present generation. I refer to the proposed revision of standard brick sizes and the definition of good brickwork.

The "R.I.B.A. Standard Sizes of Bricks" was drawn up in 1904; it represents the views of the associations concerned at that time, but it does not represent present practice. It defines "for all classes of walling bricks, both machine and hand-made," the dimensions of bricks to an eighth and even to a sixteenth of an inch; the thickness of joints to a sixteenth of an inch, and illustrates these by scale diagrams showing bed joints $\frac{5}{16}$ in. thick and cross joints $\frac{1}{4}$ in. thick. Four courses are to rise exactly 12 in. and perpends to be kept strictly. In short, dimensions intended to secure some regularity in *brick sizes* throughout the country have actually set up a standard for *brickwork*, which, though no doubt acceptable to those concerned in 1904, is now obsolete and harmful to the cause of good building. In view of this, the Council of the R.I.B.A. have asked the Science Committee to draw up terms of reference and agenda for a conference to be held some time in the future. A subcommittee of the Science Standing Committee has drawn up terms of reference which have been referred to the allied architectural societies, and it is likely therefore that the comments from the societies will cause the proposed terms of reference to be modified. Having regard to the importance of any decision respecting the material of which more buildings are constructed than of any other, it may be interesting to record some facts and, in light of these, to make some suggestions.

The conference of associations in 1904 were particularly conscious of inconveniences which had arisen where bricks of different dimensions, obtained from several makers, had to be used together on large works. Whether such a position now occurs sufficiently often to be worthy of consideration is doubtful. Where solid walls are built with facing bricks and common brick backing, material differences in dimensions would prove inconvenient and costly, but this is usually anticipated when choosing bricks: a more simple way than by national standardization. Out of London and a few large cities, cavity walls are usual, and differences in dimensions between bricks used for the outer and inner skins are relatively unimportant. A factor which may have influenced the associations is the occasional tendency of brickmakers to produce a brick smaller than normal, with a view to keeping down costs of manufacture. Occasionally one does find bricks (common brick) of scanty dimensions, but this practice (though a serious one in the eighteenth century*) is now scarcely worthy of consideration.



Detail of Tudor brickwork, c. 1536. The reds vary in shades and depth of colour. The bricks vary in shape and outline. The brick faces have rough texture, owing to use of coarse sand, containing pebbles, for moulding. Bricks measure approximately 9×4½×2 in., but all dimensions vary considerably. Four courses rise 10½ in.

The 1904 conference seems to have arrived at the sizes determined by some sort of compromise, and, while the sizes are reasonable, there can be no reason for adhering to them if better dimensions can be ascertained. It would occupy too much space here to give any history of brick sizes in England. They seem to have been settled by custom, and legislators appear to have been influenced by whatever was the current practice in and about London. One finds thicker bricks quite near London, and the use of these has long been current in the northern counties. Charming eighteenth-century houses in Rodney Street, Liverpool, are built of red bricks of fairly good texture, measuring $9\frac{1}{2}\times4\frac{1}{2}\times3$ in., with $\frac{1}{2}$ in. joints, so that four courses rise 14 in. I cannot trace any attempt to find out in a methodical, scientific way what is the best size for brick from an economic point of view. Brickmakers tell us that not only does a thick brick take more material than a thin one, but also that it presents problems of drying and burning from which a thin brick is entirely free. It may often happen that brick buyers think that thick bricks (even at slightly greater cost than thin ones) will prove economical, on the assumption that a bricklayer will lay as many of them as he would of a thinner brick in the same time, but I can imagine that a properly organized test might surprise them. If bricklayers and their union executives would concur in making such tests, the outcome of these might prove satisfactory to all parties. The following facts regarding bricklayers' output are suggestive:

BRICKLAYING OUTPUT IN ENGLAND AT VARIOUS DATES

Compiled from contemporary price books

The following show the output reckoned to be done by one bricklayer and his labourer, taking one kind of work with another, but excluding special works, such as gauged work, tuck pointing, etc., but including fronts with common joints. The working hours daily were ten, but men had to erect their own scaffolding:

In 1667: 1,000 bricks daily.
1703: 1,000.
1,200-1,500, by exceptional men.
1734: As in 1703.
1749: 1,000.
1,500, if all common, rough walling.
1835: 1,000.

* "Inconveniences have arisen to the public by frauds committed in lessening the size of bricks under their usual proportion, without diminution in price." Preamble 17 Geo. III, c. 42.

Extraordinary numbers of bricks have been laid in an hour of sustained and concentrated effort: In 1924, Christopher Hull laid 844 in an hour at Tretton; John Wood, 879, Scarboro'; 1927, William Milnes, 1,121, Sheffield.

These records were all on rough, common walling, in long, straight runs, two (if not all three) on 9 in. work. The work was of the class which would afterwards be roughcast.

What impresses one most about these is not the results of intensive efforts, but the assistance afforded by carefully placing materials and by the number of labourers who helped with materials. These suggest that organization of bricklaying has not yet reached the limits of its possibilities.

[*To be concluded*]

Tudor brickwork, c. 1500. English bond, but somewhat irregular. Such a wall surface shows brick at its best, and compares favourably with the meretricious "neatness" of brickwork in accordance with the "Standard Specification."

A NOTABLE HOSPITAL SCHEME

[BY E. B. MUSMAN]

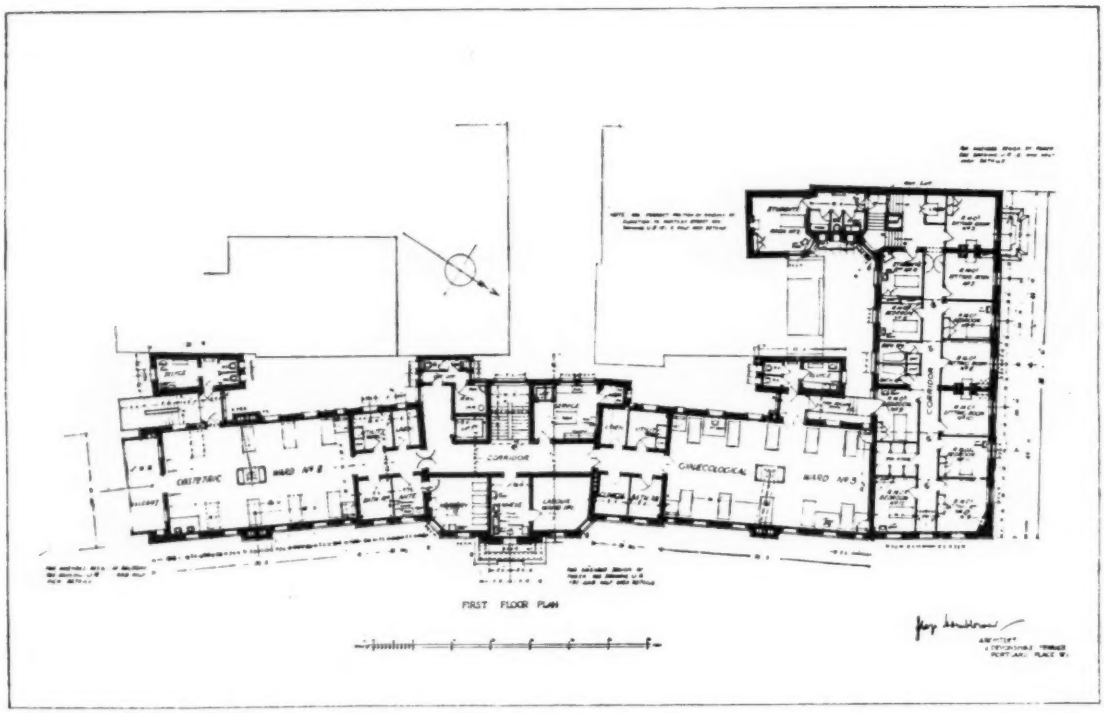
IN 1920 the Rockefeller Foundation's Trustees selected University College Hospital for a grant, which was given to the Medical School and College. The sum of money so provided was to be allocated not only for the purpose of furthering medical research and education, but also for providing certain new buildings and for reconstructing considerable parts of the existing hospital. The donation was made without conditions, and was so large as to allow the hospital authorities a free hand in the development of their work. It was made, however, in the interest of medical progress in general rather than for the benefit of a particular section of a particular community, so the Foundation considered that the sum needed to endow the beds of the new obstetric hospital should be collected in the British Empire and should not form part of an American gift. The work of reconstruction of the old hospital buildings and the design and erection of the new buildings, comprising an obstetric hospital and residents' quarters, was entrusted to the late Mr. Paul Waterhouse, P.R.I.B.A., and Mr. George Hornblower, F.R.I.B.A., who agreed to divide the work between them.

The splendid hospital, which is the subject of this article, was carried out to the design and under the supervision of Mr. Hornblower, who has succeeded in creating a building which has been aptly described by Sir George Blacker as being the finest and most complete hospital of its kind in the kingdom—Sir Arthur Keith has also referred to it in similar terms. The new buildings form an annexe to University College Hospital and occupy an L-shaped site on the west side of Huntley Street, having frontages to Huntley Street of 225 ft., to Pancras Street of 52 ft., and to University Street of 92 ft. This position was decided upon as being the nearest available to the parent hospital, and a new covered way, or tunnel, is provided under Huntley Street which gives direct access under cover to both the nurses' home and the main hospital. There is also a short frontage on the west side to Mortimer Market, which has made it possible to arrange access for tradespeople and for stretcher-cases at a convenient central point of the building. In order to secure the proper orientation for the hospital it was necessary to close and build over a "right-of-way" which ran from Mortimer Market to Huntley Street; and the consent of the St. Pancras Borough Council for this essential preliminary was fortunately readily accorded.

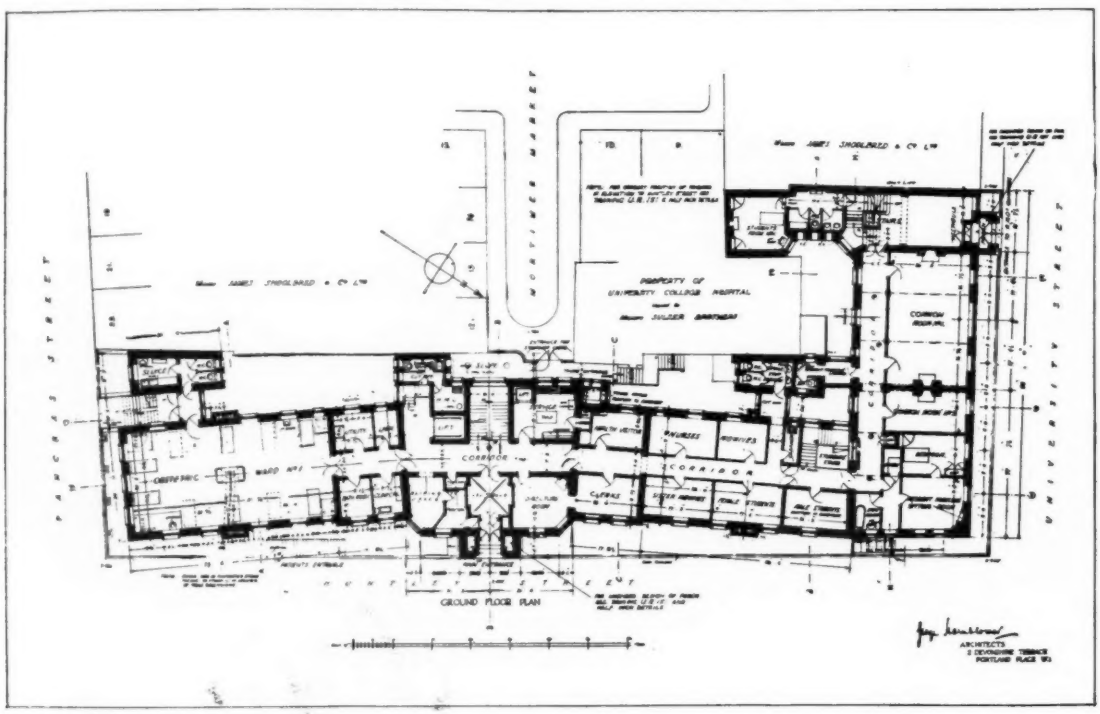
There are thirty gynæcological and thirty obstetric beds,

The new obstetric block, University College Hospital, London. By George Hornblower. The north and east fronts.

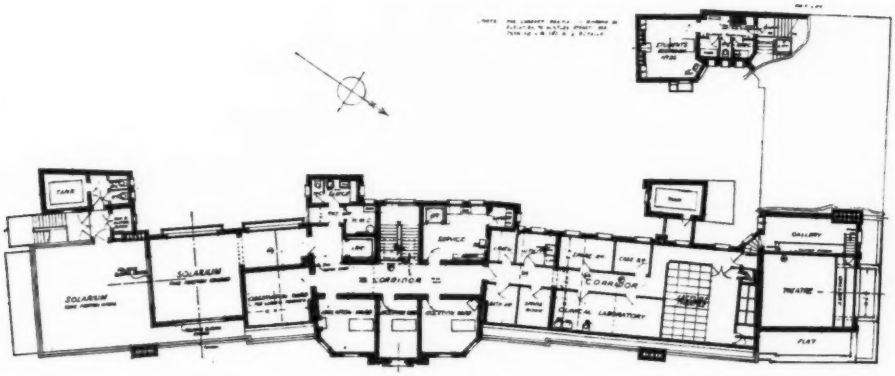
The new obstetric block, University College Hospital, London. By George Hornblower. Left, the main entrance to the hospital, viewed from nurses' home. Right, entrance doorway to the residents' quarters.



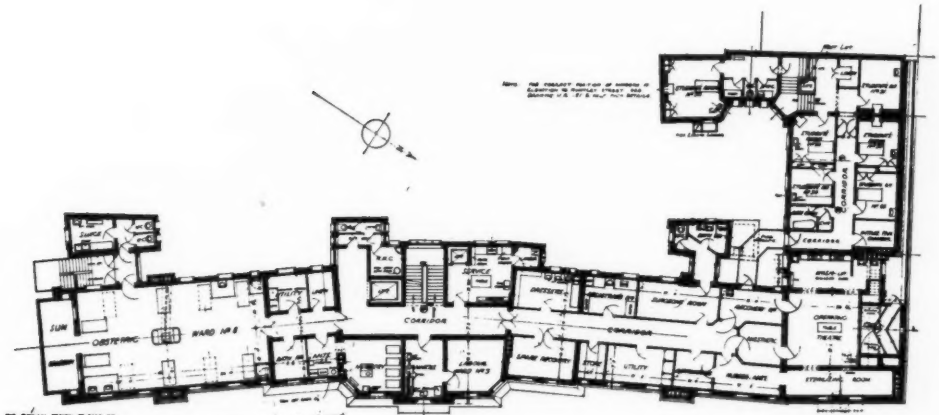
and accommodation is provided on the premises for maternity students on duty and for a resident senior member of the medical staff. As will be seen from the plans, Mr. Hornblower has made the most of an awkward site by setting back the wards to ensure greater quiet and to secure sufficient depth in the restricted area for the provision of labour wards and nurseries, etc. There is a direct simplicity in the plan which is even more apparent in the building itself than on paper, and the manner in which light and air have been obtained to the fullest possible extent is in every way admirable. The buildings are self-supporting in the real sense; the walls being solidly built with the



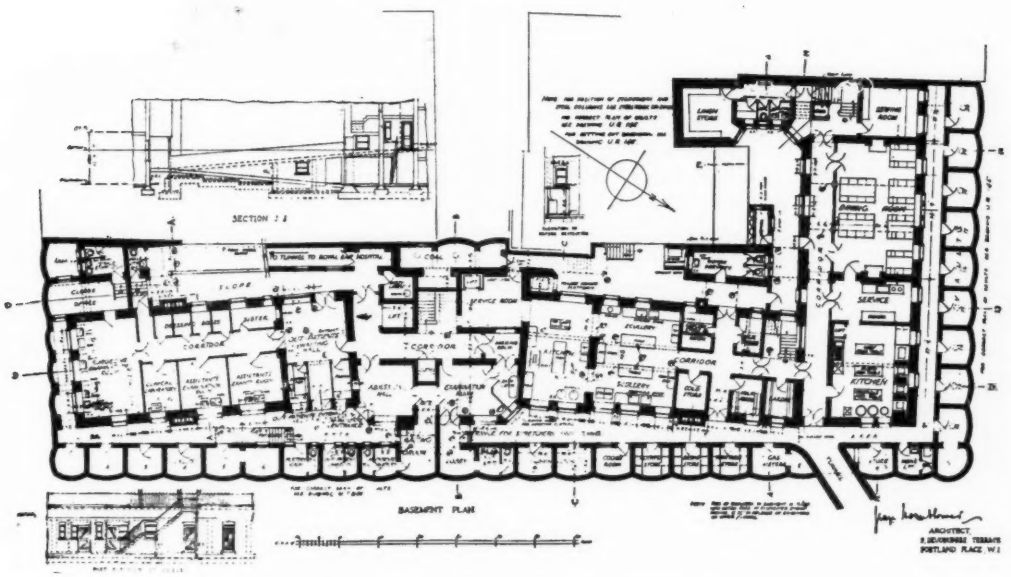
The new obstetric block, University College Hospital, London. By George Hornblower. This and facing page, the plans.



FIFTH FLOOR PLAN.



FOURTH FLOOR PLAN
& FIFTH FLOOR PLAN OF QUARTERS



BASEMENT PLAN

ARCHITECT
3 DEVONSHIRE TERRACE
PORTLAND PLACE W.1

minimum of constructional steelwork, rounded corners have been adopted to an extent not hitherto done in such buildings, and all salient angles have been avoided.

The heating is effected by the panel system (the small pipes being concealed in the plaster of the ceilings and walls) and forms part of the heating installation to the main University College Hospital. Great difficulties had to be overcome owing to the isolated sites of the various blocks, both old and new, and pipe tunnels had to be constructed to bridge over without disturbing the large sewers passing down the various streets.

The total contents of the new buildings are about 1,000,000 cub. ft.

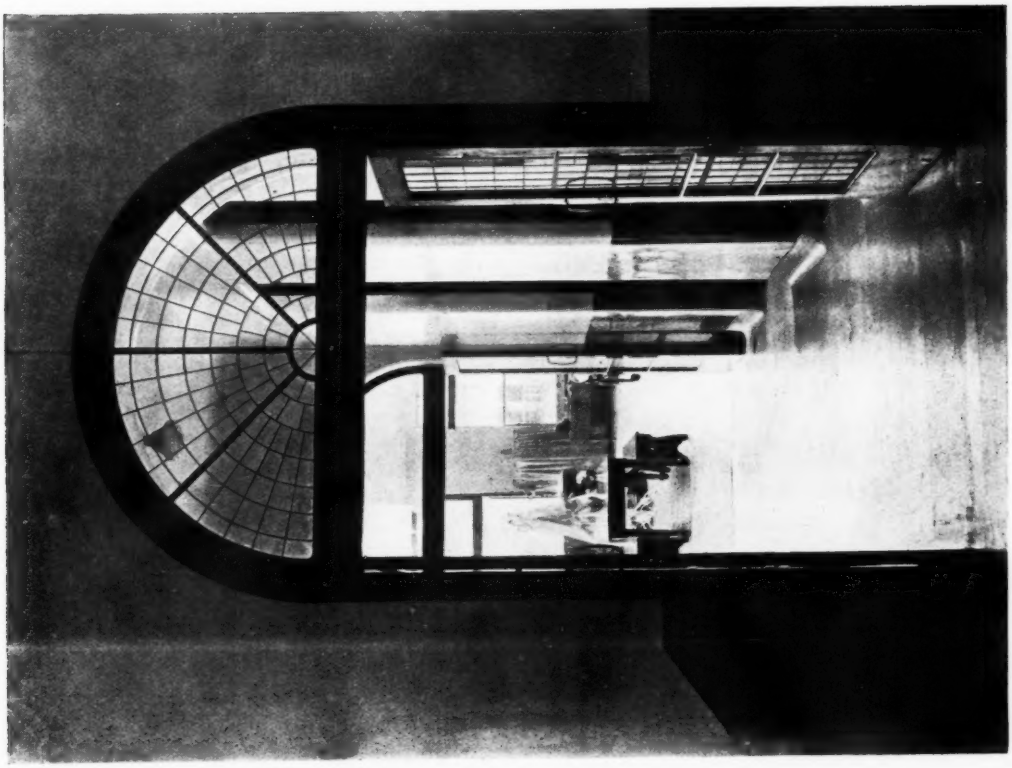
Unfortunately, owing to the narrowness of the adjoining roads and the cramped nature of the site, one has difficulty in obtaining a really comprehensive view of the elevations, which are restrained in character and eminently suited to their purpose. On the south side there are a range of sun balconies which form an interesting feature.

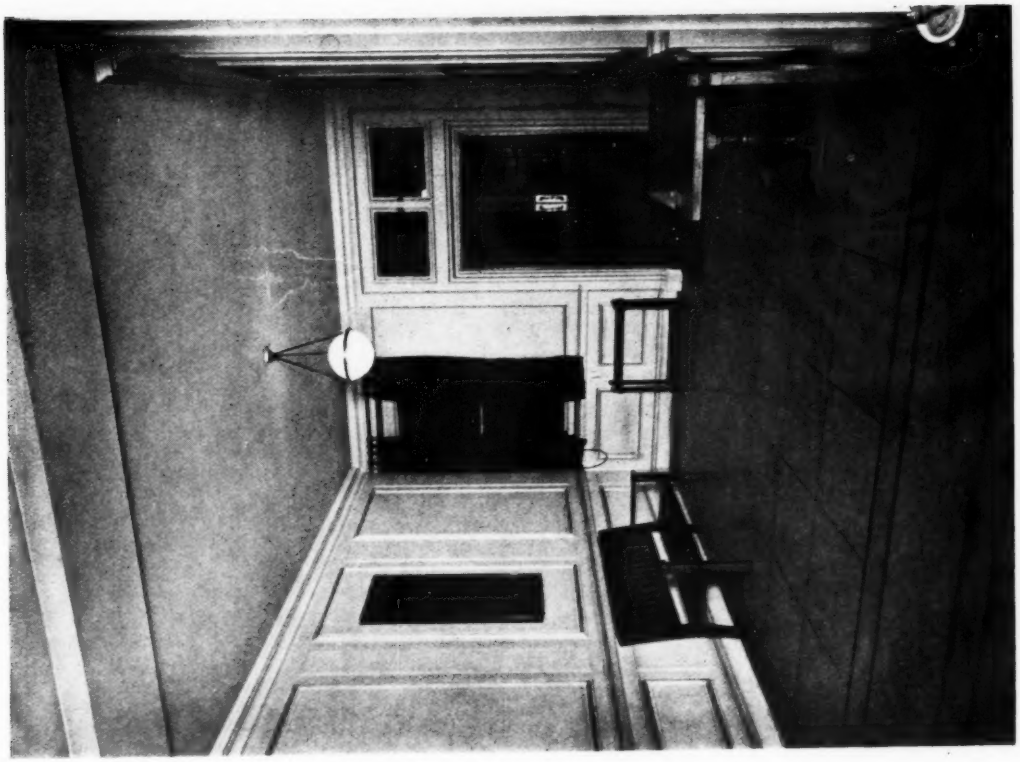
The new obstetric block, University College Hospital, London. By George Hornblower. A view from the south-east.

The buildings, consisting of a basement, ground, and five floors, provide the following accommodation:

At the south end of the basement floor is an out-patients' department comprising a waiting-room, three examination rooms, clinical laboratory, dispensary, sisters' office, dressing-boxes, clerks' office, etc. The department is reached directly from Huntley Street by a separate patients' stair and also by a casualty slope of easy gradient, this latter being provided on the west side of the building for stretcher-cases. The centre part of the basement floor is occupied by the admission hall for in-patients, with the necessary waiting-room, examination room, bath, and dressing-rooms, etc. The patients' lift and main staircase are also placed here. The northern portion of the basement floor is devoted to the kitchen department, which has the walls lined throughout with non-crazing tiles, and the floors laid with special red tiles. A large service room adjoins, with a lift direct therefrom to the service rooms on each of the upper floors. The kitchen department has its cold store, milk, grocery, and other stores, and other essential offices conveniently grouped near kitchen and scullery, and a number of watertight vaults are provided under the footpaths for storing reserves of hardware, crockery, etc. The whole of the basement floors are kept entirely free from pipe or other trenches to avoid all possibility of harbouring vermin of any kind. The basement is well lighted from the adjoining yards and areas, and is adequately ventilated by a system of ducts connected with upcast shafts having electrically-driven fans in special chambers at the top of the buildings. A stair for easy access to the various floors is provided for the use of students arriving from the other buildings by way of the tunnel.

The ground floor has its main entrance in the centre of the Huntley Street façade. This entrance is provided with a porch from which is reached a hall with a porter's office adjoining. The main staircase directly faces the hall, and is lighted from the west by large windows on every landing. The lift is near the stair, but is specially placed so as to be out of the way of draughts. A waiting-space for visitors





The new obstetric block, University College Hospital, London. By George Hornblower. Left, entrance hall, residents' quarters. Right, view in south corridor of hospital, looking towards a ward.

and a telephone box are provided. The south end of the ground floor is devoted to a ward for obstetric patients, adjoining which are a clinical laboratory, bath, utility, linen, and sluice rooms, H.M.C., and the other usual accommodation for patients and staff. At the north end of the ground floor is provided an office for the director, one for his clerks, service room with larder, rooms for the health visitor, sister-in-charge, nurses, midwives, and students (the latter adjoining their stairs), cleaners' room, lavatories, etc.

The first floor provides on the south an obstetric ward similar to that on the ground floor, with similar bath, utility, etc., accommodation, and having also a large sun balcony at the south end, on to which patients can be wheeled in their beds. The north end of this floor contains a ward for gynæcological cases, planned to receive ten patients, and having its own series of bath, linen, sluice, and utility rooms, and a clinical laboratory. The centre part of this floor provides a nursery and ante-room, a labour ward with annexe containing the necessary sinks, lavatories, sterilizers, etc., and a service room with larder, lift, etc. Other necessary accommodation is also provided in a central position.

The second and third floors are substantially a repetition of the first floor, excepting that on the third floor instead of a labour ward a large clinical laboratory is provided.

On the fourth floor the south end is again occupied by an obstetric ward, with its adjuncts much as on the floors below. The central portion of the building provides a nursery with its ante-room, a labour ward and annexe, service room, etc., whilst the whole of the north wing is occupied by the main theatre flat, comprising an operating theatre, with its wash-up, annexe, sterilizing annexe, anæsthetizing and recovery rooms, a spare recovery room, and surgeons', nurses', registrar's, students' and dressers' rooms, sisters' store, etc. There are two galleries for students' use, one provided at the floor level immediately below the north window of the theatre, and the other at a higher level on one side, with a plate-glass front cutting it off from the theatre. The whole of the floors of the theatre flat have marble terrazzo paving, and all the walls of the theatre and its annexes to a height of 8 ft. are surfaced with a light green Biancola marble finish, with the object of reducing glare to a minimum.

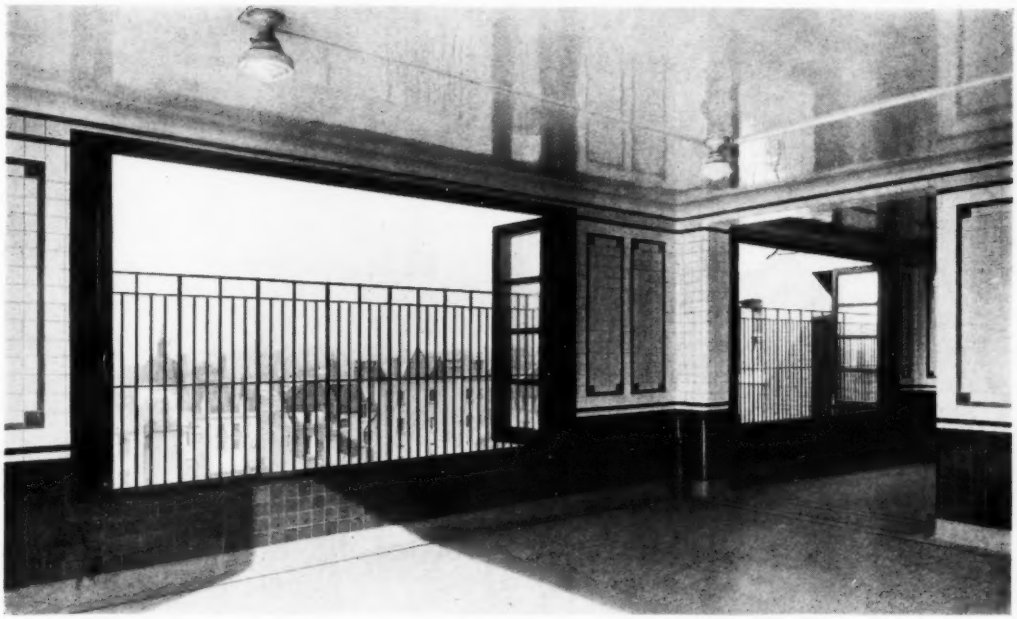
The fifth floor provides a lecture theatre, clinical laboratories, case-book room, etc., an observation ward, and three isolation wards, with service room and larder, sluice room, bath, and linen rooms, and a utility room, whilst the south end of this floor is devoted to a large solarium or sun room, with an extensive roof garden adjoining. The solarium has non-crazing tiles on the walls and the ceiling has a restful blue finish. The whole of the windows are arranged to open the full height and width of their respective openings whenever the weather will permit.

Above the fifth floor, on a floor contained within the fireproof roof space, are the tank rooms and fan chambers: tank rooms are also provided on the top floor of each sanitary tower.

The hospital is planned to accommodate ten patients in each of the five gynæcological wards and six in each obstetric ward; this gives a total provision of beds for sixty patients, exclusive of the solarium and the single-bed wards. Each obstetric ward is planned, however, to receive, if necessary, ten instead of six patients on occasion.

The basement of the resident medical officers' and students' quarters provides a complete kitchen department

The new obstetric block, University College Hospital, London. By George Hornblower. View in solarium showing folding doors closed.



The new obstetric block, University College Hospital, London. By George Hornblower. View in solarium annexe, showing windows open.

for the service of the building, arranged of sufficient capacity to serve also for the new Royal Ear Hospital, easy access to that building being contrived by means of a tunnel provided below the casualty slope of the obstetric hospital. This tunnel has its walls and ceiling lined with white glazed non-crazing tiles, and is well lighted throughout. Adjoining the kitchen department, with a service room intervening, is a large dining-room for residents and students, and there are also large linen stores and repairing rooms, bicycle store, lavatories, etc.

The ground floor of the residents' quarters provides a large common-room and a smaller one for seniors, both panelled in oak to a height of 7 ft. 6 in. At the north-east angle of the building a suite of rooms for the resident physician is arranged. The main entrance to the residents' quarters is by a porch at the end of the building nearest to Tottenham Court Road, the staircase being also at that end. There is an alternative entrance at the east end by way of the tunnel and stairs previously referred to.

There are five floors above the ground floor; these floors provide twenty sitting-rooms for resident medical officers, twenty bedrooms for resident medical officers, and sixteen students' rooms, with a sufficiency of bath, box and linen rooms, lavatories, etc.

Both buildings are built throughout of hard London stock bricks in cement mortar, with Staffordshire blue bricks for the more heavily loaded piers. The walls are faced with Lawrence's Bracknell red bricks, darker red bricks from the same source being used for the ground story walls. Brown Portland stone is used for the two entrance porches, and sparingly elsewhere, the remainder of the moulded work, string courses, etc., being provided by the Empire Stone Company. The roofs are of steel and concrete construction, and are covered with green Tilberthwaite slates. The windows of the wards and their adjuncts are of the Austral type. Those in the basement are in teak frames and are specially designed to prevent the various apartments being overlooked from the streets.

Special care has been taken to avoid fittings needing much cleaning and polishing. Vitreous china taps are used throughout, and the door furniture, including the various large protective plates, are all of a special homogeneous white metal which is easily kept clean with an occasional rubbing. A dirty linen chute has been installed constructed of glazed stoneware, and properly ventilated. It has branches at each floor level, and a flushing apparatus operates from above the top floor. In this connection it is interesting to note that the dirty linen shoot which at one time was much in use in this country was ultimately abandoned as insanitary. In the United States of America the chute has been revived as a labour saver and rendered hygienic by the introduction of means of cleansing, and it now seems likely in consequence to have a new vogue in this country.

The contractors for the whole of the work were Messrs. Walter Lawrence and Son, Ltd., under the personal supervision of Sir Walter Lawrence and Mr. B. T. Rice Pyle, two of the directors of the firm. It is interesting to note that the total cost, after taking into account authorized extra works, did not exceed the contract amount, a fact which reflects great credit on both architect and contractor, and one which shows how carefully every detail has been studied and the forethought which is required to provide for everything necessary in a building of such a highly-complicated and technical nature. The cubic contents are approximately 1,000,000 cub. ft., and on the basis of the finished cost the price per cubic foot worked out at approximately 2s. 4d. The contract sum was £108,794, and the finished cost of the building was £117,651 11s.; the additional cost over and above the contract sum was, however, more than covered by authorization given to the architect by the Hospital Committee; in other words, a considerable saving was effected.

The new obstetric block, University College Hospital, London. By George Hornblower. Above, juniors' common-room, residents' quarters. Below, fireplace in juniors' common-room.

The new obstetric block, University College Hospital, London. By George Hornblower. Above, large operating theatre, looking north. Below, a ward.

WORKING UP A BILL OF QUANTITIES: ii

[BY ARTHUR J. WILLIS]

ORDER IN THE ABSTRACT AND BILL

REASON for Systematic Order. Order in the abstract and bill is an important consideration. It may appear to some that if an item is in the bill somewhere so that it gets priced its exact position is unimportant. This may be generally so from the strict contract point of view, but even then its position may sometimes affect its legal interpretation. A well-arranged bill, however—apart from the satisfaction it should give to its authors—facilitates easy reference both for the estimator in pricing and the surveyor when dealing with variations.

General Rules for Order. The general order of billing is governed by six rules (not without exceptions):

A: Trades are divided into sections.

B: Within each section the order followed is cubes, supers, runs, numbers.

C: Labour items precede labour and material items within each subdivision of rule B.

D: Timber is classified within each subdivision of rule B, in order of thicknesses, the thinnest first.

E: Except as mentioned in rules C and D, items within each subdivision of rule B are placed in their approximate order of value, the cheapest first.

F: Provisional sums come last in the section to which they apply or are cognate.

Subdivision of Trades. The customary division of trades into sections is set out in Appendix I, but as the nature of buildings varies so the sections which will be found in any particular bill will vary. A labourer's cottage is not likely to have marble or fibrous plaster, an office building may have steel casements, throughout, in which case no wood windows would appear in the bill. Again a cottage may have no "Mason" bill at all. There may be a little slate shelving which would not justify a special trade to itself and would be billed in the bricklayer. Unusual items may arise for which a special section must be made, and it may even be difficult to decide to which trade they should be allotted.

Relation of Order in Abstract and Bill. The order of the abstract should follow approximately the order in the bill. It is not, however, essential that each item should exactly be in its final place. The important point to bear in mind is that the items should be so arranged that the biller can pick out the correct order quickly. For example, in abstracting deal frames an arrangement such as the following is clear and easy to bill from:

4×2 reb. and rod^{d} frame

46.0 126 5×2 do.

94.0 136 4×2 sq. frame

146.0 137

4½×3 reb. and mo. frame

17.0 128 6×3 2ce rod^{d} frame

43.0 130 4½×3 2ce reb. and 2ce mo. trans.

5.0 130

It will be seen from the above example that bearing in mind that all frames 2 in. thick will be together and precede all those 3 in. thick a system of grouping has been adopted, all frames 2 in. thick being grouped together and abstracted in the order in which they are met with in going through the dimensions. The biller can quickly look through the group and pick out the correct order within the group. This grouping system saves a good deal of space on the abstract and makes it compact without being crowded. Its disadvantage is that one must foresee if there are to be any deductions, and where these are likely to occur provision must be made thus:

1 in. grano. pavg.

467.6 46 Ddt. 1½ in. do.

94.3 50 1046.0 52 Ddt.

48.6 53

Though the items within the group need not be in their final order, the various groups should be properly arranged, e.g. the biller having dealt with 2 in., 3 in., and 4 in. frames must not turn over the sheet of abstract and find 2½ in. frames on the back. It sometimes happens that through lack of foresight or through some unexpected circumstances it is not possible to find room for an item or group of items in its proper place. Either an extra sheet should be inserted, or, if a vacant space is available elsewhere, it should be abstracted there. In any case, a note should be put on the abstract in the proper place to call the biller's attention to what has been done.

FORM AND ARRANGEMENT IN THE BILL

Precision. The biller must always bear in mind that he is preparing what is in most cases a contract document. He must therefore be precise and leave nothing to the imagination, and at the same time must produce a document capable of easy reference.

Clearness of Descriptions. To make the descriptions in the bill complete and clear must be the constant aim of the biller. The descriptions generally should have been written by the taker-off, but in practice it is found that items which commonly occur are only briefly described, the full descriptions being left to the worker-up; moreover, it is often necessary to co-ordinate the descriptions of two or more takers-off. This latter is an important function, as two takers-off, even if trained in the same office and accustomed to the same methods, are certain in some cases to measure the same thing in slightly different ways; or by slightly different descriptions make it difficult to determine whether two measurements refer to the same item. The worker-up must therefore understand what he writes and not merely be a copyist. Careful punctuation will often make a long description much clearer and save the estimator much time, which would otherwise be spent in trying to understand its meaning. Long descriptions are often unavoidable, but if they are well expressed and provided with the necessary stops their meaning will be quickly grasped by the estimator.

Consistency. Consistency is a virtue difficult to attain when the work of writing a bill is divided amongst a number of people. It goes against the grain to see the same word spelt in different ways, or the same item with different descriptions in different parts of the bill. Even if one man writes the whole bill these discrepancies arise, and when the billing is divided between two or more, as is more usual, they are more difficult to check. The only way is to have a regular rule in the office about words which have two spellings, e.g. lintol, labour, etc., and to have the bill carefully read through as a whole. In these days of hustle the ideal is not easy to attain, but it remains the ideal, nevertheless. Actual mistakes in spelling ought not to appear though they occasionally do, a very common one being the word riveted, which is constantly being written with two t's. All these points may seem petty, as a bill of quantities is not meant to be a literary masterpiece, but slovenliness is only the first step towards inaccuracy.

Ditto. The use of the word "ditto" is a stumbling block to many. It is very difficult again to lay down definite rules for its use as there are bound to be exceptions, but, generally speaking,

the word "ditto" carries everything in the previous item except another "ditto," e.g.:

7 in. × 1 in. Moulded skirting including grounds and backings.
7 in. × 1 in. ditto plugged
7 in. × 1 in. ditto do. to old wall
7 in. × 1 in. ditto do. do. in short lengths.

It is obvious in this case the size 7 in. × 1 in. is not carried by the word ditto. It may here be noted that the size should be repeated each time to ensure clearness and to facilitate similar items of different sizes being grouped together. Each "ditto" has its own specific meaning and refers to a definite word or phrase obvious to the reader. One occasionally sees a string of half a dozen meaningless dittos which have been inserted on the principle that there is safety in numbers, when one ditto would have been sufficient. An example may be given which is an exception to the general ditto rule given above, but in which it is still quite clear what the word represents:

9 in. lengths 2½ in. × 1 in. moulded picture rail including two mitres.
9 in. lengths 2½ in. × 1 in. ditto including one mitre and one fitted end.

In this example the word "including" is the key word, and its repetition in the second item indicates that the word "ditto" does not carry with it anything following the repeated word. If it is borne in mind that each "ditto" (like every other word in the bill) must be necessary and mean something definite, there should be no difficulty.

Headings. The use of headings is a great help to ready reference, but they must be systematically written. The joiner bill is especially suitable for such classification. Headings should be repeated at the top of each page, so that on looking at any page it is easy to see under what heading the items follow. When items under a heading end and the following items cannot be classified, a note should be put (End of .....). The average mason bill (stone and all labour) for any large work is hopelessly confusing at first sight, presenting pages and pages of varying descriptions, and, even if written in good order, a good deal of study is required before the system of arrangement can be discovered. Some sort of classification is called for, and the following headings might be employed:

Plain work.
Sunk work.
Moulded work.
Tracery.
Boasting for carver.

The above is, perhaps, the best form of classification as the estimator could, if he wished, price each class of work at a different price without much searching. Sometimes it is more convenient to classify according to the descriptions of the stone, in which case a clearer bill results if the description of stone is put first and the labours afterwards, e.g.:

Plinth plain.
Ditto do. returned at quoins.
Ditto moulded.
Ditto do. returned and mitred at quoins.
Panel plain.
Ditto with sunk margin.

This system has the merit of conciseness as it does not necessitate the repetition of descriptions in several sections. Now that it is usual for an estimator to price all the stone at one price, which he estimates by a general reference to the labours and an examination of the drawings, it is not so necessary to keep all plain work, sunk work, etc., together. Headings should always be used where items of such a nature occur that prices suitable for similar items of general work are not suitable for the particular work in question, as, for instance, manholes, underpinning, or fittings measured in detail. If a heading is made "The following in No. 15 manholes," or "The following in No. 10 cupboard fittings 5 ft. 0 in. × 8 ft. 0 in. and 15 in. deep," the estimator is given a much better idea of the nature of the work than if the items were promiscuously scattered through the bill.

Order of Scantlings. It is important in describing such items as concrete or stone lintols, string courses, etc., to give the depth on bed first before the height. Such a description as "12 in. × 6 in. cast concrete moulded band course" implies that the moulded face is the 6 in.; if a 6 in. × 12 in. band course is meant, a serious claim may arise for an extra. In the case of timber, some surveyors, to emphasize the fact that timber of the same thickness is grouped together, give the thickness of the timber as the first dimension, e.g. 1 in. × 7 in. moulded skirting, etc. This is excellent in theory, but, owing to the common custom of describing as 4 in. × 2 in., 7 in. × 1 in., etc., the biller is apt to slip into the latter order. To prevent inconsistency it is better to keep to the usual order and not attempt to put the thickness first. The question of which is the moulded face does not arise, as moulding as applied to timber is by custom applied to an arris with a reasonable margin on either side, except where the description (e.g. cornice) implies otherwise. A piece of, say, 7 in. × 1½ in. moulded on the wide surface would have to be specially so described, just as a fully moulded handrail must be distinguished from one having just the two arrises moulded.

PRELIMINARIES AND PREAMBLES

Preliminaries. The preliminary items and general clauses are usually drafted from previous bills adapted as required for the bill in question. This is too often done in a slipshod way without any consideration of the unity of the Preliminary Bill. Before such a bill is passed, each clause should be taken in turn and the question asked: "Does this really apply to this job?" Finally, one must ask: "Is there anything else that ought to be inserted?" Items which are sometimes required and sometimes not included:

Clerk of works' office.
Hoardings.
Gantry.
District surveyor's fees.
Fire insurance.
Consulting engineer's fees.

If they are not considered every time, it may happen that they will be overlooked when they should be inserted. The form of contract should be stated and the contractor referred thereto, in which case it is not necessary to repeat the conditions of contract, but only to mention how the blanks will be filled in (i.e. as regards time of completion, period of maintenance, methods of payment, etc.). It is a common fault to find long clauses merely copied out of the form of contract, when all that is necessary is to refer the contractor to the document, which, if it is not a form he knows, he can see when he looks at the drawings. Similar clauses in the Preliminary Bill should be grouped together. The definition of provisional sums and p.c. items must be quite clear on such matters as carriage, cartage, etc. It is not reasonable to ask the contractor to add railway carriage to a p.c. sum unless it is stated where from. It is much better that the p.c. sum should be the price delivered to the nearest station and the contractor told to add for cartage from station. In London work the p.c. sum should be the price delivered to site, as London merchants will deliver direct by van, and if goods should be ordered from a provincial firm the cost of delivery from the London station should be treated as part of the p.c. price. The estimator will then know where he is and not have to puzzle over such terms as "special carriage," which have no definite meaning.

Spot Items. The billing of "spot items" (i.e. items to price which the estimator must visit the site) is usually best done by the taker-off. The time taken in billing is comparatively short, and the work is much easier for the man who has the actual premises in his mind's eye. However, it sometimes happens that these are abstracted and billed in the ordinary way. The worker-up should have the drawings in front of him and follow each item thereon, arranging the items floor by floor and room by room, in an order

convenient to the estimator who will go over the building to price out this bill. Too much must not be left to the magic words "make good," which should only be used without qualification when it is obvious to what they refer. The actual spot items should be preceded by a brief preamble according to their nature. There should be a clause such as "Materials used are to be as described hereafter under each trade." A clause, moreover, saying that "All making good to brickwork is to be in hard stocks in cement mortar properly bonded to the existing work" will save a lot of repetition in the items that follow.

Preambles. The preambles to each trade will be written in a similar way to the Preliminary Bill, and the same questions should be asked to avoid faults due to copying descriptions from previous bills. Again, descriptions may be out of date; "rent" laths have been practically unobtainable since the war except at exorbitant prices, yet rent laths are sometimes carelessly specified. The specification of timber is another pitfall; old descriptions are copied requiring timber from certain Baltic ports which have practically ceased to export. In ordinary building work it is quite unnecessary to give a long specification of cast iron, when, in effect, the only cast-iron goods which the builder has to supply are eaves, gutters, rainwater pipes and, perhaps, coal-plates and similar articles. There is now such a wide choice of reputable firms engaged in the manufacture of castings that a specification that the cast iron is to be "true in line and section, free from defects, and obtained from an approved manufacturer" should be sufficient for all ordinary cases. A point which is not always clearly expressed is whether the thicknesses given of timber are "nominal" or "finished." This should always be stated; and if "nominal," the allowance for sawn and wrot. faces respectively should be mentioned. It is usually uneconomical to describe timber by finished sizes, e.g. a frame described as $4\frac{1}{2}$ in. × 3 in. (finished) cannot be made out of $4\frac{5}{8}$ in. × $3\frac{1}{8}$ in. stuff, this not being a stock size. It will usually be equally satisfactory to specify $4\frac{1}{2}$ in. × 3 in. (nominal), the loss of $\frac{1}{16}$ in. on each wrot. face being for practical purposes immaterial. However, having decided which way thicknesses are to be described, the biller must be consistent, and if for any special reason there is a departure from the rule laid down it must be clearly stated.

[*To be continued*]

SOCIETIES AND SCHOOLS

Garden Design and Planning

An international exhibition of garden design and conference of garden planning, organized by the Council of the Royal Horticultural Society, is to be held from October 17 to 24. The R.I.B.A. and the Royal Society of British Sculptors are acting in co-operation and have appointed representatives on the General Committee. The General Committee of the exhibition and conference consists of: Sir William Lawrence, Bt. (chairman); Messrs. E. Cheal, F. J. Chittenden, F.L.S., V.M.H., R. Cory, Mark Fenwick, J.P., G. H. Jenkins, F.R.I.B.A. (representing the R.S.B.A.), E. P. Mawson, F.R.I.B.A., M.T.P.I., W. Reynolds-Stephens, P.R.B.S. (representing the R.S.B.S.), H. Avray Tipping, R. W. Wallace, J.P., V.M.H., Sir Lawrence Weaver, K.B.E., and Mr. E. White, V.M.H.

The exhibition will be divided into four sections:

1: "Retrospective Historical Section up to 1850," with a subcommittee consisting of Messrs. H. Avray Tipping (chairman), E. Hudson, and C. Hussey.

2: "Garden Planning for Town and Country," with a subcommittee consisting of Messrs. Mark Fenwick, J.P. (chairman), L. Pearson, F.R.I.B.A., R. Cory, Hon. R. James, and Mr. Guy Fenwick.

3: "Sculpture for Gardens and its Setting," with a subcommittee consisting of Messrs. W. Reynolds-Stephens, P.R.B.S. (chairman), Gilbert Bayes, F.R.B.S., and W. Reid Dick, A.R.A., F.R.B.S.

4: "Public Parks and Gardens," with a subcommittee consisting of Messrs. E. White, V.M.H. (chairman), W. W. Pettigrew, V.M.H., R. W. Wallace, J.P., V.M.H., and E. P. Mawson, F.R.I.B.A., M.T.P.I.

And a Conference Committee consisting of Sir William Lawrence, Bt., Sir Lawrence Weaver, K.B.E., and Mr. F. J. Chittenden, F.L.S., V.M.H.

The exhibition will be one of selected plans, designs, models, and garden sculpture. The Council asks all gardening designers and persons interested in garden planning and who may wish to exhibit or take part in the conference to communicate with the secretary of the Royal Horticultural Society, Vincent Square, S.W.1. Eminent garden designers and architects of the Dominions and of foreign countries are being invited to send representative examples of their country's work for exhibition and to take part in the conference. The exhibition and conference will be held in the society's new hall.

A Paris Housing Congress

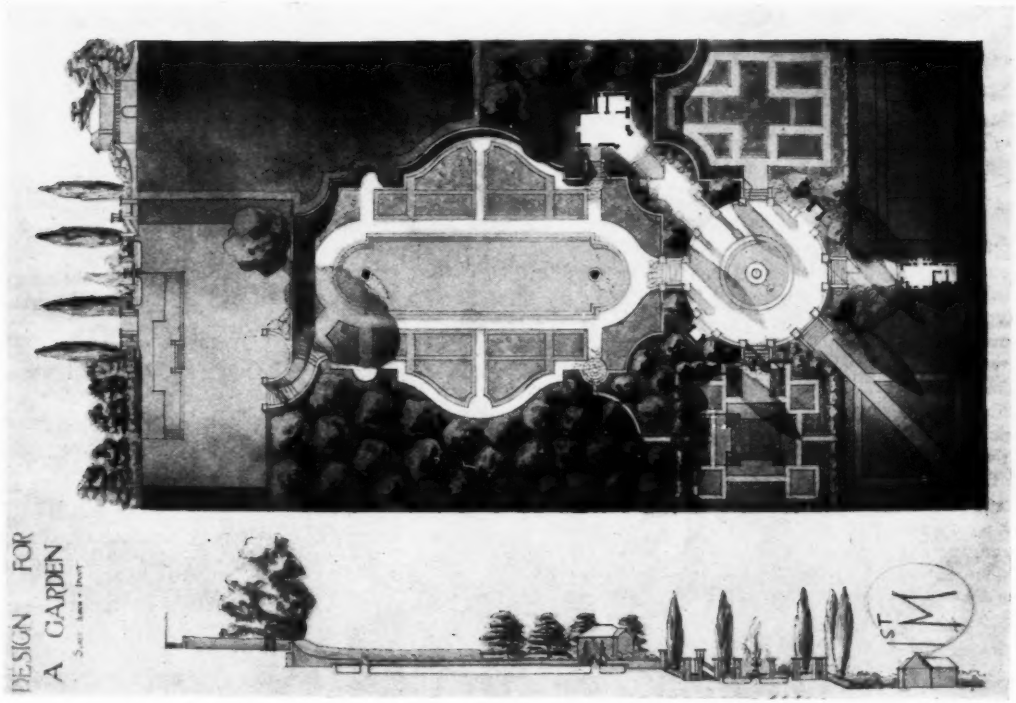
An International Housing and Town Planning Congress will be held in Paris, from July 2 to 8, under the auspices of the president of the Municipal Council of Paris and the president of the General Council of the Department of the Seine. The congress has been arranged by the International Federation for Housing and Town Planning. The principal subjects for discussion will include building costs, rural housing, housing of the very poor, mass and density of buildings in relation to open spaces and traffic facilities, and legal and practical difficulties in carrying out town and regional plans. Paris, as is well known, is of great interest from the point of view of town planning, both because of its historical development and the improvement schemes that have been carried out from time to time since the period of Napoleon III. Great efforts have been made in France (particularly in Paris and the Department of the Seine) during the last few years to cope with the housing shortage. Arrangements are being made for congress delegates to take part in study tours of Paris, combined with visits to the housing schemes and garden suburbs in Paris and the Department, that will enable them to see what has been achieved in housing. These will take place during the congress week. During the following week there will be visits to provincial centres of interest from a town planning or historical point of view. Particulars regarding these arrangements will be contained in the official invitation that will be sent. During the period of the congress there will be an exhibition dealing with housing, town planning, and social welfare. M. Paul Strauss, formerly the French Minister of Health, will be at the head of those responsible for organizing the exhibition. It will contain a selected International Housing and Town Planning Section organized by the Federation, and arrangements will be made so that all congress delegates will be enabled to visit the exhibition.

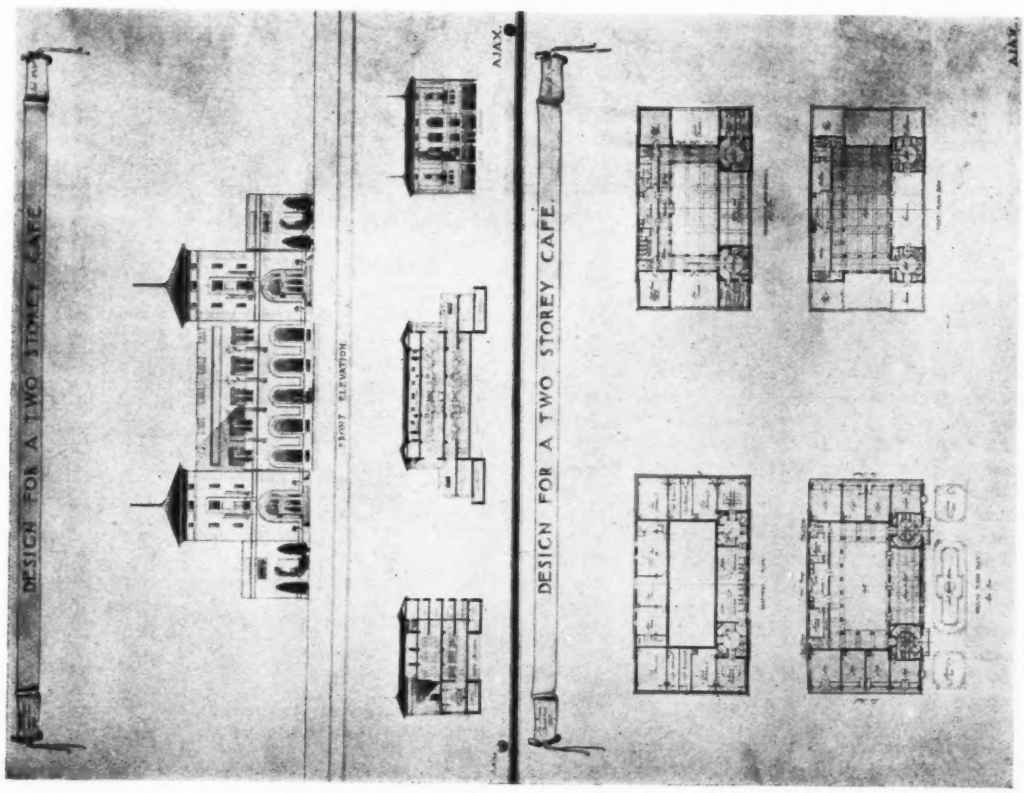
The Regent Street Polytechnic School of Architecture

In the annual exhibition of the Regent Street Polytechnic School of Architecture a very large collection of drawings was displayed, showing not so much the outstanding merit of one or two selected students as indicating the work of the average student in the different years. As such the exhibition was of particular interest. The spectator could follow through the early efforts of the first year in simple geometric and block composition, elementary construction, cast drawings, and colour composition; the second year's Greek and Roman compositions, sketch designs, and simple design subjects; the third year's more advanced design and working drawings; and the evening and senior students' work for the R.I.B.A. prizes and examinations.

The curriculum—thus illustrated in the drawings themselves—is certainly inclusive and thorough.

A design subject set for the third year (and illustrated in this issue) was a garden layout. The site was a sloping one, with an existing house off the main axis of the site, and the design of a summer-house was to be included in the scheme. The summer-house was afterwards worked out to eighth scale and half inch working drawings on linen. Another interesting feature of the exhibition was the work of the Polytechnic Architecture Club, an association run on *atelier* lines by old students.





Two designs exhibited at the Regent Street Polytechnic School of Architecture. Left, the winning design. Bossom Gold Medal. A two-storey café. By A. M. Gale. Right, layout for a garden. By W. J. Smith.

CORRESPONDENCE

THE GREATER LONDON REGIONAL PLANNING COMMITTEE

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—Owing to my absence abroad I have only just seen the paragraph in your issue of December 28 over the signature of Astragal, referring to the chairmanship and secretaryship of the Greater London Regional Planning Committee.

The objections raised by the writer to these appointments are, I think, due to a misconception of the functions and purposes of the committee. Were it the duty of the chairman " to devote himself to all the necessary details of preparing a London plan " I could certainly not have accepted the post. To my mind, however, the work of the committee—for some time to come, at any rate—will be rather of the nature of an inquiry and, covering as it does so large and varied a sphere, will, it is hoped, be split up among sections which will have the assistance of representatives of other bodies outside the committee.

A technical subcommittee has already been appointed and the technical work which is required will be under its control. When the actual preparation of a plan is taken in hand, no doubt an expert town planner will be employed, but much preliminary work has to be done before that stage is reached.

Astragal is mistaken in supposing that the scheme, when prepared, " will be sent to the Ministry of Health for criticism and sanction." Regional plans, being of an advisory nature, do not require the approval of the Ministry, and therefore the writer's criticism of Mr. Montagu Harris's position in this respect falls to the ground. The question whether or not it would have been better to start with a wholly independent full-time paid secretary is a matter of opinion, but the close connection with the Ministry has great advantages, especially in the initiatory stages of the committee's activities. I agree with every word your correspondent says about the wide experience, knowledge, and courtesy possessed by Mr. Montagu Harris, to whom the committee will owe much in the important preliminary stages and in starting the work of the various subcommittees. The time may come when, the nature of the problem to be considered having been worked out, it will be made evident that a complete independent staff will be required; but that time is not yet.

BANISTER FLETCHER
Chairman of the Greater London Regional Planning Committee.

DEFECTS IN BRICKS AND MORTAR

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—The article under the above heading in your issue for January 4 will interest many whose study of bricks and mortar has been in the field of practical work, rather than the laboratory, but who have arrived at similar conclusions concerning the erosion of brickwork and masonry surfaces by the crystallization of saline solutions. Striking examples of such destruction can be seen in the buildings that front the sea in almost all of our coast towns. Wherever porous bricks or stone are exposed to the salt spray, they are disintegrated by the crystallization of the salt in the surface pores, which bursts off the thin outer shells of these pores. It is noticeable, however, that it is the softer stones and under-burnt bricks which suffer, whereas thoroughly vitrified bricks seem immune, probably owing to their lesser absorptiveness, and also to the greater strength of the material forming the shells of the pores, which therefore offer more resistance to the disruptive effect of the crystallization.

The problem is a most serious one in countries where the soil is strongly alkaline, for instance, Egypt and in Canada. In the latter Dominion it was found, some years ago, that sewers formed of good concrete with walls over 4 in. thick had actually been perforated by this disruptive action.

The salts which give rise to efflorescence upon the surfaces of brick walls do not always have their origin in the mortar used for the joints; they sometimes are in the original substance of the bricks. Wherever they are, however, they cannot come to the surface unless they are carried there, in solution, by water. As a rule it is the moisture of construction which, in drying outwards to the faces of new walls, carries with it these salts, and then, evaporating, leaves them upon the surface as a growth of fluffy crystals. Many clerks of works feel a glow of satisfaction when this efflorescence appears upon the surface of brickwork that they have supervised, for it is evidence that the walls had been thoroughly flushed up, and in the majority of cases, when this moisture of construction has fully dried out, the efflorescence disappears and does not recur.

All the evidence goes to show that efflorescence or disruption by internal crystallization, can only occur when the salts can be liberated from their original source, by solution in water, and carried by the water into the substance of porous materials. This is proved by the fact that efflorescence never forms upon the surface of waterproofed cement mortar, even when this is rendered upon the surface of a wall which previously had been badly affected. What does happen, sometimes, is that a continued deposition of crystals in the surface pores of the wall to which the waterproofed cement rendering has been applied will actually push off the outer skin of the bricks or stones, and thus detach the rendering which, when removed, will show still adhering to its back surface the thin skin of each brick or stone that has parted company with its parent substance.

The admixture of trass with lime and cement mortar is, I understand, a frequent practice on the Continent, where it is a native material, but the advantages would not seem sufficient to compensate for the cost of its importation to this country to make it a popular material of construction.

There is a lot of rule-of-thumb practice in our building work, but much of it is founded upon good tradition, and many fine specimens of brickwork, built by former generations, are evidence that, given good, sound, well-burnt bricks, there is no great danger of their disruption by the absorption of free lime from the joints, whether these be of lime mortar or made with Portland cement and sand.

L. E. WALKER

AN ARCHITECT'S CAR

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—With regard to the car which we designed, and which was illustrated in your issue for January 11, we think that it is only fair that the name of the body-makers should be mentioned. They were Messrs. The Union Motor Car Co., Ltd., 36 Ethelburgha Street, Battersea, and any success contained by the final result is, in great measure, due to their skill and open-mindedness. They are fully accustomed to experimental work and take a very great interest in it. One of the difficulties which we have found, and probably most architects find, with industrial concerns, is the fact that the majority are anxious to avoid undertaking anything a little out of the ordinary, and will frequently quote absurd and prohibitive prices.

R. A. DUNCAN (for Percy Tubbs, Son and Duncan).

COMPETITION CALENDAR

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

January 31. Municipal Offices, Shops, etc., in Narrow Street, Peterborough, for the City Council. Assessor: Sir R. Blomfield, R.A. Premiums: 500 guineas, 250 guineas, and 150 guineas. Particulars from Mr. W. H. A. Court, A.M.I.C.E., City Engineer and Surveyor. Deposit £1 1s.

March 10. Senior School at Kirkdale, Southport. Assessor, Professor S. D. Adshead. Premiums of £100, £75, and £50. Particulars from Director of Education, Municipal Buildings, Southport. Deposit 10s. 6d.

2 *One usually associates wall-slating with all that is ugly in form, colour, and texture, as usually done with large slates, which are given little lap. This house, of 1815 period, shows how good and comely wall-slating may be. The slates are about the width of plain tiles, but vary slightly, which helps the general effect. Of several ways in which the external angles might have been treated, mitreing has been chosen, and it has been well and neatly done. The workman also has avoided with some skill the use of small pieces, when cutting for the arches ; in doing which, the variety of widths would assist him. The treatment of the low-pitched roof, its deep eaves and moulded fascia, are admirable, and show how flat pitches may be successfully handled. One might almost venture the comprehensive statement that the lower the pitch is, the deeper the eaves should be.*—[NATHANIEL LLOYD.]

ENGLISH PRECEDENT

LAW REPORTS

ASSESSMENT APPEALS. CLAIM FOR PROFESSIONAL SERVICES

Brewerton v. *The Bleachers' Association. King's Bench Division. Before Mr. Justice Acton*

This action was tried before his lordship at the Manchester assizes, and his judgment was delivered in London. All the facts appear from the judgment.

His lordship said the action was brought by Mr. Joseph Brewerton, a surveyor and valuer, of Manchester, against the Bleachers' Association, also of Manchester, to recover fees for professional services rendered to the defendants in connection with certain assessment appeals in the Bury Union. The plaintiff was a valuer of great experience and eminence, especially in rating cases. The defendants were the owners of a number of works in the Bury Union. It appeared that early in 1921 it became known that the Assessment Committee of the Union was proposing to revise the assessments and issue a new valuation list. The defendants thereupon consulted the plaintiff, who had acted as their expert adviser previously. The new valuation list was deposited in February 1921. It showed a very great increase in the assessments, and brought in process machinery which had not previously been included. This had the effect of greatly increasing the valuation of works and factories within the Union and created a good deal of alarm and consternation among the ratepayers. The defendants at once got into communication with plaintiff, who agreed to accept as remuneration 75 per cent. of the first year's saving consequent on any reduction obtained in the assessments, with out-of-pocket expenses. Subsequently he consented to reduce the 75 to 50 per cent., because he was confident of being able to get the unreasonably high valuations substantially reduced. Process machinery was excluded from the valuation list deposited in 1922, but plaintiff was not satisfied, continued his work and got further substantial reductions. There was an appeal to sessions, four test cases being heard. At the hearing of the appeals plaintiff was one of the principal witnesses, and he won the appeals.

His lordship came to the conclusion that the appeals were directed and initiated by the plaintiff, and that they resulted in substantial reductions in the assessments. It had been submitted on behalf of the defendants that he was not instrumental in securing the reductions in the 1921 list, as the Assessment Committee of their own accord, before the plaintiff had an opportunity of influencing their minds, determined to exclude process machinery.

His lordship said in his opinion, taking into consideration that plaintiff had been fostering and organizing opposition to the new valuation list from the outset, that he advised and settled the first notices of objection, that he repeatedly saw and conferred with the Assessment Committee's valuer and argued before the committee and was instrumental to a substantial extent in bringing about the reduction in the first valuation list, the plaintiff was entitled to succeed, and he entered judgment in the plaintiff's favour for an agreed sum of £1,967 and costs.

On the application of Mr. Eastham, K.C., for the defendants, his lordship granted leave to appeal.

Mr. Cyril Atkinson, K.C., appeared for the plaintiff.

A NOTABLE HOSPITAL SCHEME

The general contractors for the new Obstetric Hospital and residents' quarters at University College Hospital, illustrated on pages 160 to 169, were Messrs. Walter Lawrence and Son, Ltd., of London, who also executed the panelling in the common-room, together with the mantelpieces which were made to the architect's design. The sub-contractors were as follows: Empire Stone Co., exterior moulded work, string courses, etc., and stairs; Ewart & Co., copper to dormers; The Fawcett Construction Co., Ltd., girders and steelwork, and fireproof floors; J. P. White and Sons, doors; Light Steelwork Co., south balconies, emergency stairs, and ladders; J. Starkie Gardner & Co., railings, gates, and ornamental ironwork; a special Crane bath of American manufacture was provided for the bathroom adjoining the in-patients' examination room in the basement, and Shanks & Co., Ltd., supplied the remainder of the baths, and all the lavatory basins and other sanitary fittings; Bratt Colbran & Co., double ward fires and some of the stoves and mantelpieces; Edmundson's Electricity Corporation, Ltd., electric lighting; Richard Crittall and Son, panel system of heating; Smith, Major and Stevens, Ltd., patients' and other lifts; James Slater (Engineers), Ltd., kitchens; Art Pavements and Decorations, Ltd., terrazzo floors and Biancola wall linings; Camden Tile Co., Ltd., non-crazing wall tiling and other floor pavings.

147 LEADENHALL STREET

In our issue for January 11 it was stated that the new building at 147 Leadenhall Street, London, was erected for Messrs. Grace & Co., of New York. This is incorrect. The building was built for Messrs. Grace Brothers & Co. Ltd., of London.

OBITUARY

Mr. R. Percy Sellon

It is with deep regret that we announce the death of Mr. R. Percy Sellon, of Albury Edge, Merstham, Surrey. He was well known in the electrical industry, in which he held many important positions. He was for many years managing director of the Brush Electrical Company, of Loughborough, in its earlier days. He was a director of the County of London Electric Supply Company, the Bournemouth and Poole Electricity Supply Company, and the Richmond Electric Light and Power Company, as well as Johnson, Matthey & Co., Ltd. He was also a director of the Otis Elevator Co., Ltd., the London branch of the Otis Elevator Company of New York, which afterwards was amalgamated with R. Waygood & Co., Ltd., when he still retained a seat on the board of the company under its new name—Waygood-Otis Ltd. His death will be deeply felt, as he was a man who endeared himself to all who knew him, and his sage counsel on the boards of the various companies will be missed.

NEW INVENTIONS

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

LATEST PATENT APPLICATIONS

32912. Beardmore, A. Pressing-machine for roofing, &c., tiles. December 6.

33224. British Thomson-Houston Co., Ltd. Water heaters. December 8.

32921. Carson, N. B. Reinforced concrete structures. December 6.

33243. Hadfield, G. H. Coloured building-material. December 8.

33230. Molia, E. Chimneys. December 8.

SPECIFICATIONS PUBLISHED

281443. British Fibrocement Works, Ltd., Buxton, G. H., and Ashman, H. W. Roofing tiles, sheets, plates, or the like.

281485. Higgs and Hill, Ltd., and Nevin, F. S. Cutting-machine for partition slabs, floor tiles, and the like.

ABSTRACT PUBLISHED

279313. Chamberlain, W. Y., Holywood, Co. Down, Ireland. Protecting wooden structures.

TRADE NOTES

THE accompanying illustration shows the interior of the chapel, Russell School, Ballards, near Croydon, of which the architects were Sir Aston Webb and Son, R.A., FF.R.I.B.A. It is one of the many buildings by well-known architects illustrated in a new booklet just issued by the May Construction Company to outline the general principles of procedure it is necessary to follow in order to obtain correct acoustics in any type of building. In the chapel at Russell School acoustic plaster was used on the north and south walls and in the side panels of the barrel ceiling. The classrooms and the dining hall were also treated, and the head master writes in a letter, reproduced in the booklet, that the acoustics are entirely successful. In this building there were three distinct problems, all with different conditions and requirements: the small classrooms for speech only, the large dining hall for both speech and music, and the chapel, in which music was the main essential. As the letter clearly indicates, all these were successfully solved by the proper use of sound-absorbing materials. There are seven chapters in the booklet dealing with theory and practice, the need for acoustical treatment in all types of buildings, the causes of defective acoustics, the control of echo and reverberation, the absorption of noise, sound-absorbing materials, and the transmission of sound and vibration.

Those interested in the manufacture and distribution of "Dependability Cement," should read the last brochure published by the Portland Cement Selling and Distributing Co. It is full of interesting information concerning the history and uses of cement, and shows how the unique location of the three big manufacturing centres of the "Red Triangle" organization, situated in the North, Midlands and South, makes it possible to organize a network of distributive centres covering the whole country. "Right Across England" is the slogan of the "Red Triangle" organization, and the words have a very real significance for all large and small users of cement. Each of the three production centres, "England" brand in the North, "Greaves" brand in the Midlands, and "Holborough" brand in the South, is located near canal or river, thus having direct access to an economical and useful method of transport. In each case private sidings served by the principal railways are available, and all possess adequate fleets of motor-lorries for fast road transport. The works are equipped with the most modern machinery, enabling continuous production. No matter in what remote part of the country cement is required the transport resources of the "Red Triangle" organization make it possible to deliver supplies of the finest grade cements, up to any quantity, in the shortest possible time. A copy of the brochure will be sent, free of charge, on applicaton to the Portland Cement Selling and Distributing Co., Ship House, Buckingham Gate, S.W.1.

Many readers who have listened to Professor Cramp's wireless talks from Birmingham on "One Hundred Years of Electrical Engineering," and heard his reference to the Teletype printing telegraph machines, may wonder what sort of machine it is that has found extensive use in the postal services and business houses of England and America. Actually the Teletype is something of a cross between a typewriter, which it rather resembles in size and general make-up, and a telegraph machine, and it combines the functions of each—it has a typewriter keyboard as in an ordinary typewriter, but instead of only producing the typed copy on its own paper or tape, it actually causes a similar machine at the other end of the telegraph line to print exactly the same message in printed characters and at exactly the same instant. To see the printed message pouring out with uncanny accuracy from one of these little machines, which is receiving its messages over a single telegraph wire from some unseen fellow machine, perhaps in the next room or maybe some hundreds of miles away, gives one an insight into the marvels of the printing telegraph world. In regard to speed it is claimed that the machine will exceed the average speed of a typist, and at a demonstration some time ago at the London offices of the Standard Telephones and Cables Limited a speed of sixty words per minute was obtained.

The chapel, Russell School, Ballards, near Croydon. By Sir Aston Webb and Son.

READERS' QUERIES

A STIFFENED COLLAR-BEAM ROOF

G. writes : " How can I find out the required scantlings to a stiffened collar-beam truss, as shown on the accompanying sketch ? "

The stresses in the timbers of a roof of this type are really indeterminate, or are determinate only after several assumptions have been made which may not represent accurately the behaviour of the structure after erection. The scantlings of the timbers and the strength of the walls and buttresses should be provided in a generous spirit if distortion is to be avoided. The actual course of decay observed in historical roofs includes a process of deflection in the lower segments of the rafters and an outward bending or overturning of the side walls. The two symptoms of decay are interdependent—continuous and progressive sagging of the rafters pushing out the walls, and movement in the walls permitting of further sagging of the rafters, and so on. The only safe course is to calculate the walls and their buttresses as if they were supporting an arch thrust due to the resultant of roof load and wind, for although the timbers may be given some tensile value by means of straps and bolts, adjustments of the roof truss under its load, and consequent upon shrinkage of the timbers, slacken the fastenings and set up the initial step in a long series of small but progressive distortions.

Theoretically, the reactions in the walls due to the resultant of load and wind are proportioned inversely as their distances from the path of the resultant; practically speaking, the leeward buttress may be required to resist the damaging effect of the whole, unless the windward buttresses are provided with efficient tensile reinforcement near their outer faces. In the example shown, an opportunity to add effective reinforcement is provided by the positions of eaves, pole-plate, and wall-plate. These may be tied together and anchored down to the foundation of the buttress. Granted that the windward buttresses are made capable of pulling their weight, by means of a 1½ in. diam. bolt or its equivalent, the leeward buttresses may be calculated on the assumption that they only receive their share of the total pressure as compression. They must be given ample foundations disposed symmetrically about the centre of pressure upon the base. Assuming the resultant of the roof load and wind to be divided into two reactions, of which the leeward reaction is equal to a force of 10,050 lb. acting in a line joining the point where axis lines of collar and principal rafter meet to the point where the corbel projects from the wall; and assuming that the weight of the wall is 5,625 lb. and the weight of the buttress 6,750 lb., the line of pressures comes approximately 1 ft. within the outer edge of the buttress at its base. This is not within the middle third of the base, but, the loads not being excessive, the matter can be adjusted by spreading the foundations symmetrically about the centre of pressure, if greater weight cannot be given to the wall and the buttress. If the windward side of the roof is not tied down, and if the lower curved stiffener cannot be depended on to support the weight and thrust of the roof, the sizes of wall and buttress must be increased. Increase in the thickness of wall would be welcome in any case.

The point at which the thrust of the roof meets the wall actually depends upon the efficiency of the lower curved stiffener and upon the rigidity of its connection with the lower segment of the principal rafter. If it is in working order, it will transmit the thrust at a low and favourable point where the corbel projects from the wall; if it fails, the thrust is applied by the rafter foot at a higher and less favourable point; and in a recent failure of a stiffened collar-beam roof the lower curved stiffeners were found to have opened in tension at the joints, and the spreading of the rafter feet burst the walls. The lower stiffeners should not be cut to a vertical line against the wall, but should be substantial timbers forming the feet of the roof. They are struts in compression between their seatings on the corbel and their junction with the principal rafter, and must be capable of bearing 10,050 lb. with a length of 6 ft. They are also liable to part company with the foot of the principal as it sags and as they shrink with age, and provision of adequate bolts or straps must be made to meet this tendency. The underside of the timber being curved weakens it considerably, even supposing a suitable knee is found to permit of the fibres being made continuous, and allowance must be made for bolt-holes and loss of bearing area at the joints. Appearances suggest that the width of the stiffener can hardly be made less than 6 in., and if this thickness is accepted, the size shown on the diagram (6 in. at the narrowest part) should suffice for a roof in English oak. This also determines the size of the upper curved stiffener, and the thickness of the curved struts and upper collar above the main collar-beam. These would be about 6 in.×8 in. or 6 in.×9 in. Pieces with suitable grain must be selected.

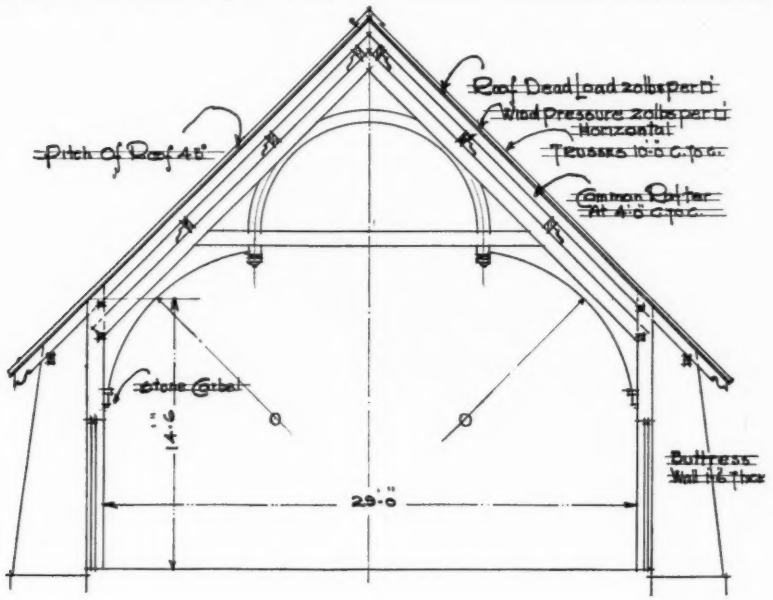
The main collar and principals may be 12 in.×9 in., connected with straps and bolts, for it is not advisable to weaken the principals by large tenons just where they will be likely to be most heavily stressed. Purlins should not be less than 10 in. in depth, or they will sag noticeably in course of time. About 10 in.×6 in. might be used, with curved 10 in.×6 in. wind-braces in the slope of the roof under the common rafters to give them support against deflecting in the direction of their narrow width, and to keep the roof as a whole from racking over against one of its gables.

The common rafters are marked on the diagram " At 4 ft. *c* to *c*," but as this would make them hit and miss with the principal rafters, this may not be seriously intended. If spaced at this distance apart they would require to be 6 in.×4 in. or 6 in.×6 in., or wider, if an old flat effect is aimed for.

The corbel must be strong enough to stand the pressure of the lower curved stiffener, which will be liable to bring a maximum of stress upon the projecting part of it when the principal rafter sags. The corbel is doing useful work in applying the thrusts on the safe inner edge of the wall, but care must be taken to see that it is not overburdened.

The wall-plates are often replaced with pole-plates in genuine Gothic roofs, and these are supported on the tops of the timbers of the roofs, where they are better ventilated than if they are embedded in the wall, and where they also act as cornices in the interior. One or both feet of the roof should be supported on rollers until the full load of roof covering is applied.

W. H.



THE WEEK'S BUILDING NEWS

Plans passed by the SOUTHWARK B.C.: Tenement houses, Horsley Street, Arnside Street, and Queen's Row, for Messrs. Cluttons, 180 Brixton Road; alterations, Spicers premises, Red Cross Street, for Mr. F. W. Troup, F.R.I.B.A.

*

Plans passed by the REDDITCH U.D.C.: Extensions, premises in Evesham Street, for Alcester Co-operative Society; four houses, Plymouth Road, for Mr. E. L. Lewis; alterations, Picture House, Alcester Street, for Messrs. Smith and Booth.

*

The SHIPLEY U.D.C. is to prepare a complete scheme for the modernization of the public baths.

*

The L.C.C. has passed plans, submitted by Messrs. Young and Hall, for the erection of buildings for the Western Ophthalmic Hospital at the corner of MARYLEBONE Road and Circus Street.

*

The HULL Corporation has asked a subcommittee to report in regard to the height and design of the elevation of the buildings to be erected in the new street from Paragon Station to Beverley Road.

*

The HULL Education Committee has authorized the preparation of plans for the erection of an elementary school for 1,320 children at Anlaby Road, West Hull.

*

The EASTBOURNE Corporation has passed plans for the People's Refreshment House Association for the erection of a hotel at Victoria Drive.

*

The EASTBOURNE Corporation has obtained sanction to borrow £4,000 for further housing subsidies.

*

The EASTBOURNE Corporation is considering the possibilities of developing the town as a centre of civil aviation for Sussex.

*

The GLOSSOP Corporation is seeking sanction to grant another twenty housing subsidies.

*

The SOUTH SHIELDS Corporation has passed plans submitted by Messrs. Henderson and Woolgar for the layout of an estate off Prince Edward Road.

*

Plans passed by the FINCHLEY U.D.C.: Six houses, Essex Park, for Mr. A. Ibbotson; new road on Fursby estate, for Mr. P. D. Walker; new road, Hampstead Garden Suburb, for Oakwood Tenants, Ltd.; four houses, Leopold Road, for Mr. W. A. Taylor; six houses, Nether Street, for Mr. W. T. Haward.

The city architect of BRADFORD has been instructed to prepare plans and estimates for the erection of additional accommodation at the College of Arts and Crafts.

*

The city architect of BRADFORD has prepared plans for eight shops and houses, and twenty-two houses on the Lower Grange estate, and tenders are to be obtained for their erection.

*

The BRADFORD Corporation has appointed a committee to select a site at Listerhills for the erection of a branch library.

*

Plans passed by the BRADFORD Corporation: Four houses, Kingston Grove, for Mr. A. Robinson; ten houses, Second Avenue, for Messrs. J. H. Pitchers and Son; nine houses, Holly Bank Road, for Messrs. Calvert and Goodwin; four bungalows, Ennerdale Road, for Mr. E. A. Gadie; four houses, Moore Avenue, for Messrs. Shepherd Bros. and Brown; four houses, Bylands Grove, for Messrs. Holdsworth Bros.; five bungalows, Hawes Road, for Mr. J. Priestley.

*

The BURTON-ON-TRENT Corporation is to prepare a scheme for the erection of houses at Old Winshill.

*

Plans passed by the WESTMINSTER City Council: Flats, Exhibition Road, for Messrs. T. P. Bennett and Son; alterations, "Queen's Head," Great Peter Street, for Messrs. Berney and Son; garages, Stanford Mews, for Central Motor Co. (London), Ltd.; alterations and additions, 170 Regent Street, for Messrs. Bywaters and Sons, Ltd.; building over Metropolitan Railway at St. James's Park Station, for Mr. G. Vernon.

*

Messrs. Browett, Taylor, Robertson and Morgan, of Lincoln's Inn Fields, are to erect buildings on a site in Tufton Street, abutting on Marsham Street, WESTMINSTER.

*

The SOUTH SHIELDS Corporation is arranging terms with the L.N.E.R. for the reconstruction of Dean Road bridge.

*

On behalf of Mr. R. F. Finn, plans have been prepared by Mr. F. W. Newby, architect, for the layout of a shopping centre at The Ridgeway, SOUTH SHIELDS.

*

The PLYMOUTH Corporation has approved a scheme for reconditioning the Castle Street unhealthy area.

*

The PLYMOUTH Corporation Housing Committee has passed a scheme for the erection of 236 additional non-parlour houses on the Prospect estate.

The PLYMOUTH Corporation is to erect sixteen houses, comprising thirty-two flats, at North Prospect, for the accommodation of small families.

*

The PLYMOUTH Corporation is seeking sanction to grant a further 200 housing subsidies.

*

The borough engineer of PLYMOUTH has been asked to prepare a comprehensive scheme for the improvement of the Devonport branch library.

*

The PLYMOUTH Corporation Housing Committee has obtained seven acres at Weston Hill for housing purposes.

*

The Ministry of Health has sanctioned the scheme of the PLYMOUTH Corporation for the extension of the smallpox hospital at Lee Mill.

*

Plans passed by the PLYMOUTH Corporation: Five houses, Stangray Avenue, for Messrs. White and Jackson; assembly hall, 28-32 Mutley Plans, for Mr. J. R. Randall; six bungalows, Coleridge Road, for Mr. J. Rendle; four houses, Burnham Park Road, for Mr. E. J. Manning; three bungalows, Saltash Passage, for Mr. J. T. Northcott; ten houses, Glenavon Road, for Mr. G. H. Webber.

*

Plans passed by the TORQUAY Corporation: Two houses, Warberry Vale estate, for Mr. P. Perkins; flats, Lower Warberry Road, for Mr. J. P. Moore; alterations. 47-49 South Street, for Messrs. Reed & Co.; two bungalows, Shiphay Lane, for Mr. J. Stoneman; four houses, Leys Road, for Chelston Building Company; four houses, Livermead, for Gower Construction Company.

*

The WARRINGTON Corporation is being asked to consider the erection of houses by direct labour.

*

Plans passed by the WARRINGTON Corporation: Pattern store, Stafford Road, for Ferrous Light Castings, Ltd.; shop and house, Manchester Road, for Mr. D. Cooper; two shops and houses, Egerton Avenue, for Mr. D. Cooper.

*

The PRESTWICH U.D.C. has now agreed to plans submitted by Mr. D. Tebbitt for the erection of a cinema, dance hall, and shops in Bury New Road.

*

Plans passed by the PRESTWICH U.D.C.: Twenty houses, Butterstile Lane, for Messrs. G. Benson and Son; extensions, Myrtle Grove Works, for Messrs. J. and H. Bleackley, Ltd.; four houses, Heywood Road, for Messrs. E. and S. Street, Ltd.; four houses, Park Road, for Mr. J. L. Edwards.

Plans passed by the WEYMOUTH Corporation: Storage depot, Newstead Road, for Shell-Mex, Ltd.; lavatory accommodation, Royal Hotel, Gloucester Row, for Messrs. Crickmay and Sons; two houses, Coronation Road, for Messrs. S. Jackman and Sons; two houses, Dorchester Road, for Mr. E. W. Puffett; lavatories, Portmore House School, Buxton Road, for Messrs. Halton and Cartwright; alterations and additions, Adelaide Hotel, Abbotsbury Road, for Messrs. Groves, Ltd.; alterations and additions, Crown Hotel, St. Thomas Street, for Messrs. Crickmay and Sons.

*

The WEYMOUTH Corporation has arranged to consider the provision of a public library in association with proposals shortly to be made by the Education Committee for the provision of office accommodation.

*

Plans passed by the HASTINGS Corporation: Eight houses, Berlin Road, for Mr. F. Bowcock, architect; store, offices, and flat, Gas Works Yard, for Messrs. H. Ward and Sons, architects; shops, Wellington Place, for Messrs. F. W. Woolworth & Co.; servants' dining hall, Buchanan Hospital, Springfield Road, for Messrs. H. Ward and Son; additions, oil depot, Ore Station, for British Petroleum Co., Ltd.; additions, Hastings Brickworks, Broomgrove, for Mr. R. E. Philp; two houses, Seddlescombe Road, for Mr. H. M. Jeffrey, architect; additions, 4 High Street, for Mr. J. Hunt, architect; alterations, 43 Wellington Square, for Mr. L. Towner, architect; garage, Old London Road, for Mr. Harold Burleigh, architect; flats, Chapel Park Road, for Messrs. Callow and Callow, architects.

*

The HASTINGS Corporation is promoting a Bill to obtain powers for the construction of waterworks.

*

The WAKEFIELD Corporation Housing Committee is to meet the Yorkshire Congregational Union regarding the selection of a site on the Lupset estate for the erection of a church.

*

The WAKEFIELD Corporation has decided to enclose 15 acres for the hospital and sanatorium, and let off the rest of the land till it is required for the hospital scheme.

*

Plans passed by the SOUTH SHIELDS Corporation: Alterations, Customs House Tavern, Commercial Road, for Newcastle Breweries, Ltd.; alterations, premises, corner of Stoddart Street and Brinkburn Street, for Messrs. R. Summerbell and Son; alterations, Ship Inn, Sunderland Road, Harton, for Messrs. T. A. Page and Son.

*

The borough engineer of WORTHING is to prepare plans for the erection of baths on the Beach House estate and for the extension of the baths at Heene Road.

The Postmaster-General is acquiring a site in Union Place, WORTHING, for the erection of a post office.

*

East Preston U.D.C. is proposing to acquire premises in LITTLEHAMPTON for offices for the council and the guardians.

*

The HORSHAM U.D.C. has prepared schemes for slum clearances at New Street, Queen Street, and Normandy.

*

The HORSHAM U.D.C. has decided to erect seventy-two houses on the Roffey estate.

*

The warden of the local branch of Toc H is acquiring a site in Faraday Road, WIMBLEDON, for the erection of a club.

*

The WIMBLEDON Corporation has obtained sanction for a loan of £200,000 for housing purposes.

*

The WIMBLEDON Corporation has approved the scheme submitted by Mr. Brocklesby, F.R.I.B.A., for the development of the Drax estate at Copse Hill.

*

The WIMBLEDON Corporation has appointed a committee to consider the provision of branch libraries throughout the borough.

*

The SHEFFIELD Corporation has obtained sanction to grant another 100 housing subsidies.

*

The SHEFFIELD Corporation Housing Committee recommends the use of allotment land on the Longley estate for housing, it being reported that there is room for at least ninety-five houses.

*

Plans passed by the LLANDUDNO U.D.C.: Four houses, Park Avenue, for Mr. Sutcliffe; two houses, The Oval, for Mr. W. T. Evans; alterations, corner of Mostyn Street and St. George's Place, for Messrs. Montague Burton, Ltd.; alterations and additions, Royal Hotel, Church Walks, for Llandudno Hotels, Ltd.

*

The BARKING TOWN U.D.C. is seeking sanction for a loan of £10,000 for further housing subsidies.

*

The BARKING TOWN U.D.C. is seeking sanction from the Ministry of Health for the erection by direct labour of houses on the Parsons Row improvement area.

*

The LEEDS Watch Committee is submitting to the Home Office plans for alterations to the Bridewell Town Hall.

*

The LEEDS Corporation is seeking sanction to borrow £41,000 for the construction of a section of the ring road from Elland Road to Dewsbury Road, the construction of a new bridge under the L.N.E.R. and new culverts.

The BARNSLEY Corporation is inquiring if the neighbouring authorities are prepared to join in the scheme for the proposed extensions at Kendray Hospital.

*

The BARNSLEY Corporation is applying for sanction for a loan of £14,500 for the purchase of property for the clearance of the western area improvement scheme.

*

The BARNSLEY Corporation has asked the borough engineer to prepare plans and estimates for the erection of houses for the Wilthorpe scheme.

*

The BARNSLEY Corporation Housing Committee is to hold a special meeting to decide upon the types of houses to be erected on the Burton Grange site.

*

Plans passed by WOKING U.D.C.: Two bungalows, Apers Avenue, for Mr. E. Ricks; two houses, Snelgar Road, for Mr. G. James; twenty-one flats, Monument Road, for Mr. W. Shipwright: additions, garage, Victoria Road, for Aldershot Traction Co., Ltd.

*

The EAST HAM Corporation is in negotiation for land for another housing scheme, and also considering the possibilities of acquiring sites outside the borough.

*

The EAST HAM Corporation is sending a deputation to the Board of Control to discuss proposals for the provision of mental hospital accommodation.

*

The borough engineer of EAST HAM has prepared an amended scheme for improvements and filtration plant at the central baths at a cost of £18,000.

*

Plans passed by the EAST HAM Corporation: Fifty-two garages, Kennard Street, for Messrs. W. Harris, Ltd.; thirteen houses, Shaftesbury Road, for Mr. H. W. Binns; bank, Green Street, for Messrs. Whinney, Son and Austin Hall.

*

Plans passed by the OXFORD Corporation: Alterations, Pembroke College, for the Bursar; additions, 8-9 Rewley Road, for Messrs. Stevens & Co.; alterations, "Apollo" public-house, St. Aldates Street, for Messrs. Morland & Co., Ltd.; ten houses, Golden Road, for Mr. A. G. Simmons.

*

The OXFORD Corporation is negotiating for land at Swinford required for the construction of a reservoir.

*

The OXFORD Corporation is approaching the county council in order to hasten the selection of a site for the erection of the proposed joint mental hospital.

*

The OXFORD Corporation is discussing with the Underhill's Hide and Skin Company an alternative site for the erection of a hide and skin market.

RATES OF WAGES

			I	II
			s. d.	s. d.
A	ABERDARE	S. Wales & M.	1 8	1 2½
A₁	Abergavenny	S. Wales & M.	1 7½	1 2½
B	Abingdon ..	S. Counties	1 6	1 1½
A	Accrington	N.W. Counties	1 8	1 3½
A₂	Addlestone	S. Counties	1 6½	1 2
A	Adlington ..	N.W. Counties	1 8	1 3½
A	Airdrie ..	Scotland	*1 8	1 3½
C₁	Aldeburgh	E. Counties	1 4	1 0½
A	Altrincham	N.W. Counties	1 8	1 3½
B₂	Appleby ..	N.W. Counties	1 4½	1 0½
A	Ashton-under-Lyne	N.W. Counties	1 8	1 3½
A₂	Atherstone	Mid. Counties	1 6½	1 2
B₂	Aylesbury ..	S. Counties	1 4½	1 0½
B₂	BANBURY	S. Counties	1 4½	1 0½
B₂	Bangor ..	N.W. Counties	1 5	1 1
A	Barnard Castle	N.E. Coast	1 8	1 3½
A	Barnsley ..	Yorkshire	1 8	1 3½
B₁	Barnstaple	S.W. Counties	1 5½	1 1½
A	Barrow ..	N.W. Counties	1 8	1 3½
A	Barry ..	S. Wales & M.	1 8	1 3½
B₂	Basingstoke	S.W. Counties	1 4½	1 0½
B	Bath ..	S.W. Counties	1 6	1 1½
A	Batley ..	Yorkshire	1 8	1 3½
B	Bedford ..	E. Counties	1 6	1 1½
A₂	Berwick-on-Tweed	N.E. Coast	1 7	1 2½
A₂	Bewdley ..	Mid. Counties	1 7	1 2½
B₂	Bicester ..	Mid. Counties	1 4½	1 0½
A	Birkenhead	N.W. Counties	*1 10	1 4½
A	Birmingham	Mid. Counties	1 8	1 3½
A	Bishop Auckland	N.E. Coast	1 8	1 3½
A	Blackburn	N.W. Counties	1 8	1 3½
A	Blackpool	N.W. Counties	1 8	1 3½
A	Blyth ..	N.E. Coast	1 8	1 3½
B₂	Bognor ..	S. Counties	1 4½	1 0½
A	Bolton ..	N.W. Counties	1 8	1 3½
A₂	Boston ..	Mid. Counties	1 6½	1 2
B₁	Bournemouth	S. Counties	1 6	1 1½
B₂	Bovey Tracey	S.W. Counties	1 5	1 1
A	Bradford ..	Yorkshire	1 8	1 3½
A₂	Brentwood	E. Counties	1 7	1 2½
A	Bridgend ..	S. Wales & M.	1 8	1 3½
B₂	Bridgwater	S.W. Counties	1 5	1 1
A₁	Bridlington	Yorkshire	1 7½	1 2½
A	Brighouse	Yorkshire	1 8	1 3½
B₁	Brighton ..	S. Counties	1 6	1 1½
A	Bristol ..	S.W. Counties	1 8	1 3½
B₂	Brixham ..	S.W. Counties	1 4½	1 0½
A₂	Bromsgrove	Mid. Counties	1 7	1 2½
C	Bromyard ..	Mid. Counties	1 4	1 0½
A	Burnley ..	N.W. Counties	1 8	1 3½
A	Burslem ..	Mid. Counties	1 8	1 3½
A₂	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury ..	N.W. Counties	1 8	1 3½
A₁	Buxton ..	N.W. Counties	1 7½	1 2½
B	CAMBRIDGE	E. Counties	1 6	1 1½
B₂	Canterbury	S. Counties	1 4½	1 0½
A	Cardiff ..	S. Wales & M.	1 8	1 3½
A	Carlisle ..	N.W. Counties	1 8	1 3½
B	Carmarthen	S. Wales & M.	1 6	1 1½
B₂	Carnarvon	N.W. Counties	1 5	1 1
A₁	Carnforth ..	N.W. Counties	1 7½	1 2½
A	Castleford	Yorkshire	1 8	1 3½
B₁	Chatham ..	S. Counties	1 5½	1 1½
B₁	Chelmsford	E. Counties	1 5½	1 1½
A₂	Cheltenham	S.W. Counties	1 6½	1 2
A	Chester ..	N.W. Counties	1 8	1 3½
A	Chesterfield	Mid. Counties	*1 8	1 3½
B₂	Chichester	S. Counties	1 4½	1 0½
A	Chorley ..	N.W. Counties	1 8	1 3½
B₂	Cirencester	S. Counties	1 5	1 1
A	Clitheroe ..	N.W. Counties	1 8	1 3½
A	Clydebank	Scotland	1 8	1 3½
A	Coalville ..	Mid. Counties	1 8	1 3½
B₁	Colchester ..	E. Counties	1 5½	1 1½
A	Colne ..	N.W. Counties	1 8	1 3½
A₂	Colwyn Bay	N.W. Counties	1 6½	1 2
A	Consett ..	N.E. Coast	1 8	1 3½
A₂	Conway ..	N.W. Counties	1 6½	1 2
A	Coventry ..	Mid. Counties	1 8	1 3½
A₂	Crewe ..	N.W. Counties	1 6½	1 2
A₂	Cumberland	.....	1 6½	1 2
A	DARLINGTON	N.E. Coast	1 8	1 3½
A	Darwen ..	N.W. Counties	1 8	1 3½
B₂	Deal ..	S. Counties	1 4½	1 0½
A₂	Denbigh ..	N.W. Counties	1 6½	1 2
A	Derby ..	Mid. Counties	1 8	1 3½
A	Dewsbury ..	Yorkshire	1 8	1 3½
B	Didcot ..	S. Counties	1 6	1 1½
A	Doncaster	Yorkshire	1 8	1 3½
C₁	Dorchester	S.W. Counties	1 4	1 0½
A₂	Driffield ..	Yorks	1 6½	1 2
A₂	Droitwich ..	Mid. Counties	1 6½	1 2
A₁	Dudley ..	Mid. Counties	1 7½	1 2½
A	Dundee ..	Scotland	1 8	1 3½
A	Durham ..	N.E. Coast	1 8	1 3½
B₁	EASTBOURNE	S. Counties	1 6	1 1½
A	Ebbw Vale	S. Wales & M.	1 8	1 3½
A	Edinburgh	Scotland	1 8	1 3½
A	E. Glamorganshire & Monmouthshire	S. Wales & M.	1 8	1 3½
B	Exeter ..	S.W. Counties	*1 7	1 2½
B₂	Exmouth ..	S.W. Counties	1 5	1 1
B	FELIXSTOWE	E. Counties	1 6	1 1½
A₂	Filey ..	Yorks	1 6½	1 2
A	Fleetwood ..	N.W. Counties	1 8	1 3½
B₂	Folkestone	S. Counties	1 5	1 1
A	Frodsham ..	N.W. Counties	1 8	1 3½
B₂	Frome ..	S.W. Counties	1 4½	1 0½
A	GATESHEAD	N.E. Coast	1 8	1 3½
B₁	Gillingham	S. Counties	1 5½	1 1½
A₂	Gloucester	S.W. Counties	1 6½	1 2
A₂	Goole ..	Yorkshire	1 7	1 2½
B	Gosport ..	S. Counties	1 6	1 1½
A₂	Grantham	Mid. Counties	1 6½	1 2
A₁	Gravesend	S. Counties	1 7½	1 2½
A	Greenock ..	Scotland	*1 8	1 3½
A	Grimsby ..	Yorkshire	1 8	1 3½
B₁	Guildford ..	S. Counties	1 5½	1 1½
A	HALIFAX ..	Yorkshire	1 8	1 3½
A	Hanley ..	Mid. Counties	1 8	1 3½
A	Harrogate	Yorkshire	1 8	1 3½
A	Hartlepools	N.E. Coast	1 8	1 3½
B₂	Harwich ..	E. Counties	1 5	1 1
B₂	Hastings ..	S. Counties	1 4½	1 0½
B₁	Hatfield ..	S. Counties	1 5½	1 1½
B	Hereford ..	S. W. Counties	1 6	1 1½
B	Hertford ..	E. Counties	1 5½	1 1½
A₁	Heysham ..	N.W. Counties	1 7½	1 2½
A	Howden ..	N.E. Coast	1 8	1 3½
A	Huddersfield	Yorkshire	1 8	1 3½
A	Hull ..	Yorkshire	1 8	1 3½
A	ILKLEY ..	Yorkshire	1 8	1 3½
A	Immingham	Mid. Counties	1 8	1 3½
B	Ipswich ..	E. Counties	1 6	1 1½
C₁	Isle of Wight	S. Counties	1 4	1 0½
A	JARROW ..	N.E. Coast	1 8	1 3½
A	KEIGHLEY	Yorkshire	1 8	1 3½
B₁	Kendal ..	N.W. Counties	1 5½	1 1½
B₁	Keswick ..	N.W. Counties	1 5½	1 1½
B	Kettering ..	Mid. Counties	1 6	1 1½
A₂	Kidderminster	Mid. Counties	1 7	1 2½
B₂	King's Lynn	E. Counties	1 5	1 1
A	LANCASTER	N.W. Counties	1 8	1 3½
A₂	Leamington	Mid. Counties	1 7	1 2½
A	Leeds ..	Yorkshire	1 8	1 3½
A	Leek ..	Mid. Counties	1 8	1 3½
A	Leicester ..	Mid. Counties	1 8	1 3½
A	Leigh ..	N.W. Counties	1 8	1 3½
B₂	Lewes ..	S. Counties	1 4½	1 0½
A₂	Lichfield ..	Mid. Counties	1 6½	1 2
A	Lincoln ..	Mid. Counties	1 8	1 3½
A	Liverpool ..	N.W. Counties	*1 10	1 4½
A₂	Llandudno	N.W. Counties	1 6½	1 2
A	Llanelly ..	S. Wales & M.	1 8	1 3½
	London (12 miles radius)		1 9½	1 4½
	Do. (12-15 miles radius)		1 9	1 4
A	Long Eaton	Mid. Counties	1 8	1 3½
A	Loughborough	Mid. Counties	1 8	1 3½
B	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 8	1 3½
A₁	MACCLESFIELD	N.W. Counties	1 7½	1 2½
B	Maidstone	S. Counties	1 5½	1 1½
A₂	Malvern ..	Mid. Counties	1 6½	1 2
A	Manchester	N.W. Counties	1 8	1 3½
A	Mansfield ..	Mid. Counties	1 8	1 3½
B₂	Margate ..	S. Counties	1 4½	1 0½
A₂	Matlock ..	Mid. Counties	1 6½	1 2
A	Merthyr ..	S. Wales & M.	1 8	1 3½
A	Middlesbrough	N.E. Coast	1 8	1 3½
A₂	Middlewich	N.W. Counties	1 6½	1 2
B₂	Minehead ..	S.W. Counties	1 5	1 1
A	Monmouth	S. Wales & M.	1 8	1 3½
	S. and E. Glamorganshire			
A₁	Morecambe	N.W. Counties	1 7½	1 2½
A₂	NANTWICH	N.W. Counties	1 6½	1 2
A	Neath ..	S. Wales & M.	1 8	1 3½
A	Nelson ..	N.W. Counties	1 8	1 3½
A	Newcastle ..	N.E. Coast	1 8	1 3½
A	Newport ..	S. Wales & M.	1 8	1 3½
A	Normanton	Yorkshire	1 8	1 3½
A₂	Northampton	Mid. Counties	1 7	1 2½
A	North Staffs.	Mid. Counties	1 8	1 3½
A	North Shields	N.E. Coast	1 8	1 3½
A₂	Norwich ..	E. Counties	1 6½	1 2
A	Nottingham	Mid. Counties	1 8	1 3½
A	Nuneaton ..	Mid. Counties	1 8	1 3½
B	OAKHAM ..	Mid. Counties	1 5½	1 1½
A	Oldham ..	N.W. Counties	1 8	1 3½
A₂	Oswestry ..	Mid. Counties	1 6½	1 2
B	Oxford ..	S. Counties	1 6	1 1½
A	PAISLEY ..	Scotland	*1 8	1 3½
C	Pembroke	S. Wales & M.	1 4½	1 0½
A	Perth ..	Scotland	*1 8	1 3
A₂	Peterborough	Mid. Counties	1 6½	1 2
A	Plymouth	S.W. Counties	*1 8	1 3½
A	Pontefract	Yorkshire	1 8	1 3½
A	Pontypridd	S. Wales & M.	1 8	1 3½
B	Portsmouth	S. Counties	1 6	1 1½
A	Preston ..	N.W. Counties	1 8	1 3½
A	QUEENSFERRY	N.W. Counties	1 8	1 3½
B	READING ..	S. Counties	1 6	1 1½
B	Reigate ..	S. Counties	1 5½	1 1½
A	Retford ..	Mid. Counties	1 6½	1 2
A	Rhondda Valley	S. Wales & M.	1 8	1 3½
A₂	Ripon ..	Yorkshire	1 6½	1 2
A	Rochdale ..	N.W. Counties	1 8	1 3½
B	Rochester	S. Counties	1 5½	1 1½
A₁	Ruabon ..	N.W. Counties	1 7½	1 2½
A₂	Rugby ..	Mid. Counties	1 8	1 3½
A₂	Rugeley ..	Mid. Counties	1 6½	1 2
A	Runcorn ..	N.W. Counties	1 8	1 3½
A₂	ST. ALBANS	E. Counties	1 6½	1 2
A	St. Helens	N.W. Counties	1 8	1 3½
B₂	Salisbury	S.W. Counties	1 4½	1 0½
A₁	Scarborough	Yorkshire	1 7½	1 2½
A	Scunthorpe	Mid. Counties	1 8	1 3½
A	Sheffield ..	Yorkshire	1 8	1 3½
A	Shipley ..	Yorkshire	1 8	1 3½
A₂	Shrewsbury	Mid. Counties	1 6½	1 2
A₂	Skipton ..	Yorkshire	1 7	1 2½
B	Slough ..	S. Counties	1 5½	1 1½
A₂	Solihull ..	Mid. Counties	1 7	1 2½
A₂	South'pton	S. Counties	1 6½	1 2
B₁	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 8	1 3½
A	S. Shields ..	N.E. Coast	1 8	1 3½
A₂	Stafford ..	Mid. Counties	1 7	1 2½
A	Stockport ..	N.W. Counties	1 8	1 3½
A	Stockton-on-Tees	N.E. Coast	1 8	1 3½
A	Stoke-on-Trent	Mid. Counties	1 8	1 3½
B	Stroud ..	S.W. Counties	1 5½	1 1½
A	Sunderland	N.E. Coast	1 8	1 3½
A	Swadlincote	Mid. Counties	1 8	1 3½
A	Swansea ..	S. Wales & M.	1 8	1 3½
B	Swindon ..	S.W. Counties	1 6	1 1½
A₁	TAMWORTH	N.W. Counties	1 7½	1 2½
B₁	Taunton ..	S.W. Counties	1 5½	1 1½
A	Teesside Dist.	N.E. Counties	1 8	1 3½
B	Teignmouth	S.W. Coast	1 6	1 1½
A	Todmorden	Yorkshire	1 8	1 3½
A₂	Torquay ..	S.W. Counties	1 7	1 2½
C	Truro ..	S.W. Counties	1 4	1 0½
B₁	Tunbridge Wells	S. Counties	1 5½	1 1½
A	Tunstall ..	Mid. Counties	1 8	1 3½
A	Tyne District	N.E. Coast	1 8	1 3½
A	WAKEFIELD	Yorkshire	1 8	1 3½
A₁	Walsall ..	Mid. Counties	1 7½	1 2½
A	Warrington	N.W. Counties	1 8	1 3½
A₂	Warwick ..	Mid. Counties	1 7	1 2½
B	Wellingborough	Mid. Counties	1 6	1 1½
A	West Bromwich	Mid. Counties	1 8	1 3½
B	Weston-s-Mare	S.W. Counties	1 6	1 1½
A₂	Whitby ..	Yorkshire	1 7	1 2½
A	Widnes ..	N.W. Counties	1 8	1 3½
A	Wigan ..	N.W. Counties	1 8	1 3½
B₂	Winchester	S. Counties	1 5	1 1
B	Windsor ..	S. Counties	1 6	1 1½
A	Wolverhampton	Mid. Counties	1 8	1 3½
A₂	Worcester ..	Mid. Counties	1 6½	1 2
A₂	Worksop ..	Yorkshire	1 6½	1 2
A₁	Wrexham ..	N.W. Counties	1 7½	1 2½
B	Wycombe ..	S. Counties	1 6	1 1½
B₁	YARMOUTH	E. Counties	1 5½	1 1½
B₂	Yeovil ..	S.W. Counties	1 5	1 1
A	York ..	Yorkshire	1 8	1 3

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

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

PRICES CURRENT

EXCAVATOR AND CONCRETOR

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

*

Broken brick or stone, 2 in., per yd.				£0	11 6
Thames ballast, per yd.				0	11 0
Pit gravel, per yd.				0	18 0
Pit sand, per yd.				0	14 6
Washed sand				0	15 0
Screened ballast or gravel, add 10 per cent. per yd.					
Clinker, breeze, etc., prices according to locality.					
Portland cement, per ton				£2	19 0
Lias lime, per ton				2	10 0
Sacks charged extra at 1s. 9d. each and credited when returned at 1s. 6d.					
Transport hire per day:					
Cart and horse	£1 3 0	*Trailer*		£0	15 0
3-ton motor lorry	3 15 0	*Steam roller*		4	5 0
Steam lorry, 5-ton	4 0 0	*Water cart*		1	5 0

*

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

Exceeding 6 ft., but under 12 ft., add 30 per cent.

In stiff clay, add 30 per cent.

In underpinning, add 100 per cent.

In rock, including blasting, add 225 per cent.

If basketed out, add 80 per cent. to 150 per cent.

Headings, including timbering, add 400 per cent.

RETURN, fill, and ram, ordinary earth, per yd.	£0	1 6
SPREAD and level, including wheeling, per yd.	0	1 6
FILLING into carts and carting away to a shoot or deposit, per yd. cube	0	10 6
TRIMMING earth to slopes, per yd. sup.	0	0 6
HACKING up old grano. or similar paving, per yd. sup.	0	1 3
PLANKING to excavations, per ft. sup.	0	0 5
DO. over 10 ft. deep, add for each 5 ft. in depth, 30 per cent.		
IF left in, add to above prices, per ft. cube	0	2 0
HARDCORE, 2 in. ring, filled and rammed, 4 in. thick, per yd. sup.	0	2 1
DO. 6 in. thick, per yd. sup.	0	2 10
PUDDLING, per yd. cube	1	10 0
CEMENT CONCRETE, 4-2-1, per yd. cube	2	3 0
DO. 6-2-1, per yd. cube	1	18 0
DO. in upper floors, add 15 per cent.		
DO. in reinforced-concrete work, add 20 per cent.		
DO. in underpinning, add 60 per cent.		
LIAS-LIME CONCRETE, per yd. cube	£1	16 0
BREEZE CONCRETE, per yd. cube	1	7 0
DO. in lintels, etc., per ft. cube	0	1 6
CEMENT concrete 4–2–1 in lintels packed around reinforcement, per ft. cube	0	3 9
FINE concrete benching to bottom of manholes, per ft. cube	0	2 6
FINISHING surface of concrete spade face, per yd. sup.	0	0 9

DRAINER

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

*

Stoneware pipes, tested quality, 4 in., per ft.	£0	0 10
DO. *6 in., per ft.*	0	1 3
DO. *9 in., per ft.*	0	2 3
Cast-iron pipes, coated, 9 ft. lengths, 4 in., per yd.	0	5 6
DO. *6 in., per yd.*	0	8 6
Portland cement and sand, see "Excavator" above.		
Lead for caulking, per cwt.	£2	5 6
Gaskin, per lb.	0	0 4½

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STONEWARE DRAINS, jointed in cement, tested pipes, 4 in., per ft.	0	4 3
DO. 6 in., per ft.	0	5 0
DO. 9 in., per ft.	0	7 9
CAST-IRON DRAINS, jointed in lead, 4 in., per ft.	0	8 0
DO. 6 in., per ft.	0	10 0

Note.—These prices include digging concrete bed and filling for normal depths, and are average prices.

Fittings in Stoneware and Iron according to type. *See* Trade Lists.

BRICKLAYER

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

*

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

BRICKWORK in stone lime mortar, Flettons or equal, per rod	£33	0 0
DO. in cement do., per rod	36	0 0
DO. in stocks, add 25 per cent. per rod.		
DO. in blues, add 100 per cent. per rod.		
DO. circular on plan, add 12½ per cent. per rod.		
DO. in backing to masonry, add 12½ per cent. per rod.		
DO. in raising on old walls, etc., add 12½ per cent. per rod.		
DO. in underpinning, add 20 per cent. per rod.		
HALF-BRICK walls in stocks in cement mortar (1–3), per ft. sup.	£0	1 0
BEDDING plates in cement mortar, per ft. run	0	0 3
BEDDING window or door frames, per ft. run	0	0 3
LEAVING chases 2½ in. deep for edges of concrete floors not exceeding 6 in. thick, per ft. run	0	0 2
CUTTING do. in old walls in cement, per ft. run	0	0 4
CUTTING, toothing and bonding new work to old (labour and materials), per ft. sup.	0	0 7
TERRA-COTTA flue pipes 9 in. diameter, jointed in fireclay, including all cuttings, per ft. run	0	3 6
DO. 14 ft. by 9 in. do., per ft. run	0	6 0
FLAUNCHING chimney pots, each	0	2 0
CUTTING and pinning ends of timbers, etc., in cement	0	1 0
FACINGS fair, per ft. sup. extra	0	0 3
DO. picked stocks, per ft. sup. extra	0	0 7
DO. red rubbers gauged and set in putty, per ft. sup. extra	0	4 9
DO. in salt white or ivory glazed, per ft. sup. extra	0	5 6
TUCK pointing, per ft. sup. extra	0	0 10
WEATHER pointing, do. do.	0	0 3
TILE creasing with cement fillet each side per ft. run	0	0 6
GRANOLITHIC PAVING, 1 in., per yd. sup.	0	5 0
DO. 1½ in., per yd. sup.	0	6 0
DO. 2 in., per yd. sup.	0	7 0
If coloured with red oxide, per yd. sup.	0	1 0
If finished with carborundum, per yd. sup.	0	0 6
If in small quantities in finishing to steps, etc., per ft. sup.	0	1 4
Jointing new grano, paving to old, per ft. run	0	0 4
Extra for dishing grano, or cement paving around gullies, each	0	1 6
BITUMINOUS DAMP COURSE, ex rolls, per ft. sup.	0	0 7
ASPHALT (MASTIC) DAMP COURSE, ½ in., per yd. sup.	0	8 0
DO. vertical, per yd. sup.	0	11 0
SLATE DAMP COURSE, per ft. sup.	0	0 10
ASPHALT ROOFING (MASTIC) in two thicknesses, ¾ in., per yd.	0	8 6
DO. SKIRTING, 6 in.	0	0 11
BREEZE PARTITION BLOCKS, set in cement, 1½ in. per yd. sup.	0	5 3
DO. DO. 3 in.	0	6 6
BREEZE fixing bricks, extra for each	0	0 3

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

MASON

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

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

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

HALF SAWING, per ft. sup.	£0	1 0
Add to the foregoing prices, if in York stone, 35 per cent.		
DO. Mansfield, 12½ per cent.		
Deduct for Bath, 33⅓ per cent.		
DO. for Chilmark, 5 per cent.		
SETTING 1 in. slate shelving in cement, per ft. sup.	£0	0 6
RUBBED round nosing to do., per ft. lin.	0	0 6
YORK STEPS, rubbed T. & R., ft. cub. fixed	1	9 0
YORK SILLS, W. & T., ft. cub. fixed	1	13 0
ARTIFICIAL stone paving, 2 in. thick, per ft. sup.	0	1 6
DO. 2½ in. thick, per ft. sup.	0	1 9

SLATER AND TILER

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

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

*

Slates, 1st quality, per 1,200:

Portmadoc Ladies			£14	0 0
Countess			27	0 0
Duchess			32	0 0
Old Delabole	*Med.*	*Grey*	*Med.*	*Green*
24 in. × 12 in.	£42	11 3	£45	1 0
20 in. × 10 in.	31	4 3	33	0 6
16 in. × 10 in.	20	18 0	22	4 9
14 in. × 8 in.	12	1 0	12	16 3
Green Randoms per ton			8	3 9
Grey-green do., per ton			7	3 9
Green peggies, 12 in. to 8 in. long, per ton			6	3 9
In 4-ton truck loads, delivered Nine Elms station.				
Clips, lead, per lb.			£0	0 6
Clips, copper, per lb.			0	2 0
Nails, compo, per cwt.			1	6 0
Nails, copper, per lb.			0	1 10
Cement and sand, see "Excavator," etc., above.				
Hand-made tiles, per M.			£5	18 0
Machine-made tiles, per M.			5	8 0
Westmorland slates, large, per ton			9	0 0
DO. *Peggies, per ton*			7	5 0

*

SLATING, 3 in. lap, compo nails, Portmadoc or equal:

Ladies, per square	£4	0 0
Countess, per square	4	5 0
Duchess, per square	4	10 0
WESTMORLAND, in diminishing courses, per square	6	5 0
CORNISH DO., per square	6	3 0
Add, if vertical, per square approx.	0	13 0
Add, if with copper nails, per square approx.	0	2 6
Double course at eaves, per ft. approx.	0	1 0

SLATING with Old Delabole slates to a 3 in. lap with copper nails, at per square.

	Med.	*Grey*	*Med.*	*Green*
24 in. × 12 in.	£5	0 0	£5	2 0
20 in. × 10 in.	5	5 0	5	10 0
16 in. × 10 in.	4	15 0	5	1 0
14 in. × 8 in.	4	10 0	4	15 0
Green randoms			6	7 0
Grey-green do.			5	9 0
Green peggies, 12 in. to 8 in. long			4	17 0

TILING, 4 in. gauge, every 4th course nailed, in hand-made tiles, average per square	£5	6 0
DO., machine-made do., per square	4	17 0
Vertical Tiling, including pointing, add 18s. 0d. per square.		
FIXING lead soakers, per dozen	£0	0 10
STRIPPING old slates and stacking for re-use, and clearing away surplus and rubbish, per square	0	10 0
LABOUR only in laying slates, but including nails, per square	1	0 0

See "Sundries for Asbestos Tiling."

CARPENTER AND JOINER

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

*

Timber, average prices at Docks, London Standard Scandinavian, etc. (equal to 2nds):

7 × 3, per std.	£20	0 0
11 × 4, per std.	30	0 0
Memel or Equal. Slightly less than foregoing.		
Flooring, P.E., 1 in., per sq.	£1	5 0
DO. *T. and G., 1 in., per sq.*	1	5 0
Planed boards, 1 in. × 11 in., per std.	30	0 0
Wainscot oak, per ft. sup. of 1 in.	0	1 6
Mahogany, Honduras, per ft. sup. of 1 in.	0	1 4
DO. *Cuba, per ft. sup. of 1 in.*	0	2 6
DO., *African, per ft. sup.*	0	1 3
Teak, per ft. sup. of 1 in.	0	1 6
DO., *ft. cube*	0	15 0

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FIR fixed in wall plates, lintels, sleepers, etc., per ft. cube	0	5 6
DO. framed in floors, roofs, etc., per ft. cube	0	6 6
DO. framed in trusses, etc., including ironwork, per ft. cube	0	7 6
PITCH PINE, add 33⅓ per cent.		
FIXING only boarding in floors, roofs, etc., per sq.	0	13 6
SARKING FELT laid, 1-ply, per yd.	0	1 6
DO. 3-ply, per yd.	0	1 9
CENTERING for concrete, etc., including horsing and striking, per sq.	2	10 0
TURNING pieces to flat or segmental soffits, 4½ in. wide, per ft. run	0	0 4½
DO. 9 in. wide and over per ft. sup.	0	1 2

continued overleaf

CARPENTER AND JOINER: *continued.*

SHUTTERING to face of concrete, per square	£1	10	0
DO. in narrow widths to beams, etc., per ft. sup.	0	0	6
USE and waste of timbers, allow 25 per cent. of above prices.			
SLATE BATTENING, per sq.	£0	12	6
DEAL boarding to flats, 1 in. thick and firrings to falls, per square	2	10	0
STOUT feather-edged tilting fillet to eaves, per ft. run	0	0	6
FEATHER-edged springer to trimmer arches, per ft. run	0	0	4
STOUT herringbone strutting (joists measured in), per ft. run	0	0	6
SOUND boarding, ⅞ in. thick and fillets nailed to sides of joists (joists measured over), per square	2	0	0
RUBEROID or similar quality roofing, one-ply, per yd. sup.	0	2	3
DO., two-ply, per yd. sup.	0	2	6
DO., three-ply, per yd. sup.	0	3	0
TONGUED and grooved flooring, 1¼ in. thick, laid complete with splayed headings, per square	2	5	0
DEAL skirting torus, moulded 1¼ in. thick, including grounds and backings, per ft. sup.	0	1	0
TONGUED and mitred angles to do.	0	0	6
WOOD block flooring standard blocks laid herringbone in mastic :			
Deal 1 in. thick, per yd. sup.	0	10	0
DO. 1¼ in. thick, per yd. sup.	0	12	0
Maple 1¼ in. thick, per yd. sup.	0	15	0
DEAL moulded sashes, 1⅜ in. with moulded bars in small squares, per ft. sup.	0	2	6
DO. 2 in. do., per ft. sup.	0	2	9
DEAL cased frames, oak sills and 2 in. moulded sashes, brass-faced pulleys and iron weights, per ft. sup.	0	4	6
MOULDED horns, extra each	0	0	3
DOORS, 4-panel square both sides, 1⅛ in. thick, per ft. sup.	0	2	6
DO. moulded both sides, per ft. sup.	0	2	9
DO. 2 in. thick, square both sides, per ft. sup.	0	2	9
DO. moulded both sides, per ft. sup.	0	3	0
DO. in 3 panels, moulded both sides, upper panel with diminished stiles with moulded bars for glass, per ft. sup.	0	3	6
If in oak, mahogany or teak, multiply 3 times.			
DEAL frames, 4 in. × 3 in., rebated and beaded per ft. cube	£0	15	0
Add for extra labours, per ft. run	0	0	1
STAIRCASE work :			
DEAL treads 1⅛ in. and risers 1 in., tongued and grooved including fir carriages, per ft. sup.	0	2	6
DEAL wall strings, 1¼ in. thick, moulded, per ft. run	0	2	6
If ramped, per ft. run	0	5	0
SHORT ramps, extra each	0	7	6
ENDS of treads and risers housed to strings, each	0	1	0
2 in. deal mopstick handrail fixed to brackets, per ft. run	0	1	6
4½ in. × 3 in. oak fully moulded handrail, per ft. run	0	5	6
1¼ in. square deal bar balusters, framed in, per ft. run	0	0	6
FITTINGS :			
SHELVES and bearers, 1 in., cross-tongued, per ft. sup.	0	1	6
1¼ in. beaded cupboard fronts, moulded and square, per ft. sup.	0	2	9
TEAK grooved draining boards, 1¼ in. thick and bedding, per ft. sup.	0	4	6
IRONMONGERY :			
Fixing only (including providing screws) :			
TO DEAL—			
Hinges to sashes, per pair	0	1	2
Do. to doors, per pair	0	1	7
Barrel bolts, 9 in., iron, each	0	1	0
Sash fasteners, each	0	1	0
Rim locks, each	0	1	9
Mortice locks, each	0	4	0

SMITH

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

*

Mild Steel in British standard sections, per ton	£12	10	0
Sheet Steel :			
Flat sheets, black, per ton	19	0	0
DO., *galvd., per ton*	20	0	0
Corrugated sheets, galvd., per ton	20	0	0
Driving screws, galvd., per grs.	0	1	10
Washers, galvd., per grs.	0	1	1
Bolts and nuts per cwt. and up	1	18	0

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MILD STEEL in trusses, etc., erected, per ton	25	10	0
DO., in small sections as reinforcement, per ton	16	10	0
DO., in compounds, per ton	17	0	0
DO., in bar or rod reinforcement, per ton	20	0	0
WROT-IRON in chimney bars, etc., including building in, per cwt.	2	0	0
DO., in light railings and balusters, per cwt.	2	5	0
FIXING only corrugated sheeting, including washers and driving screws, per yd.	0	2	0

PLUMBER

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

*

Lead, milled sheet, per cwt.	£1	13	6
DO. *drawn pipes, per cwt.*	1	14	0
DO. *soil pipe, per cwt.*	1	17	0
DO. *scrap, per cwt.*	1	5	6
Copper, sheet, per lb.	0	1	9
Solder, plumber's, per lb.	0	1	3
DO. *fine, per lb.*	0	1	9
Cast-iron pipes, etc. :			
L.C.C. soil, 3 in., per yd.	0	4	0
DO. *4 in. per yd.*	0	4	9½
R.W.P., 2½ in., per yd.	0	2	2
DO. *3 in., per yd.*	0	2	7
DO. *4 in., per yd.*	0	3	6½
Gutter, 4 in. H.R., per yd.	0	1	6½
DO. *4 in. O.G., per yd.*	0	1	10½

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MILLED LEAD and labour in gutters, flashings, etc.	3	2	6
LEAD PIPE, fixed, including running joints, bends, and tacks, ½ in., per ft.	0	2	0
DO. ⅝ in., per ft.	0	2	3
DO. 1 in., per ft.	0	3	0
DO. 1¼ in., per ft.	0	4	0
LEAD WASTE OR soil, fixed as above, complete, 2½ in., per ft.	0	6	0
DO. 3 in., per ft.	0	7	0
DO. 4 in., per ft.	0	9	9
WIPED soldered joint, ½ in., each	0	2	6
DO. ¾ in., each	0	3	2
DO. 1 in., each	0	3	8
BRASS screw-down stop cock and two soldered joints, ½ in., each	0	11	0
DO. ¾ in., each	0	13	6
CAST-IRON rainwater pipe, jointed in red lead, 2½ in., per ft. run	0	1	7
DO. 3 in., per ft. run	0	2	0
DO. 4 in., per ft. run	0	2	10
CAST-IRON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft.	0	2	0
DO. O.G., 4 in., per ft.	0	2	3
CAST-IRON SOIL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.	0	4	6
DO. 3 in., per ft.	0	3	6
Fixing only :			
W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each	2	5	0
BATHS, with all joints	1	3	6
LAVATORY BASINS only, with all joints, on brackets, each	1	10	0

PLASTERER

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

*

Chalk lime, per ton	£2	17	0
Hair, per cwt.	1	15	0
Sand and cement see "Excavator," etc., above.			
Lime putty, per cwt.	£0	2	9
Hair mortar, per yd.	1	7	0
Fine stuff, per yd.	1	14	0
Sawn laths, per bdl.	0	2	9
Keene's cement, per ton	5	15	0
Sirapite, per ton	3	10	0
DO. *fine, per ton*	3	18	0
Plaster, per ton	3	0	0
DO. *per ton*	3	12	6
DO. *fine, per ton*	5	12	0
Thistle plaster, per ton	3	9	0
Lath nails, per lb.	0	0	4

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LATHING with sawn laths, per yd.	0	1	7
METAL LATHING, per yd.	0	2	3
FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, ⅜ in., per yd.	0	2	4
DO. vertical, per yd.	0	2	7
RENDER, on brickwork, 1 to 3, per yd.	0	2	7
RENDER in Portland and set in fine stuff, per yd.	0	3	3
RENDER, float, and set, trowelled, per yd.	0	2	9
RENDER and set in Sirapite, per yd.	0	2	5
DO. in Thistle plaster, per yd.	0	2	5
EXTRA, if on but not including lathing, any of foregoing, per yd.	0	0	5
EXTRA, if on ceilings, per yd.	0	0	5
ANGLES, rounded Keene's on Portland, per ft. lin.	0	0	6
PLAIN CORNICES, in plaster, per inch girth, including dubbing out, etc., per ft. lin.	0	0	3
WHITE glazed tiling set in Portland and jointed in Parian, per yd., from	1	11	6
FIBROUS PLASTER SLABS, per yd.	0	1	10

GLAZIER

GLAZIER, 1*s.* 8½*d. per hour.*

*

Glass : 4ths in crates :			
Clear, 21 oz.	£0	0	4½
DO. 26 oz.	0	0	5
Cathedral white, per ft.	0	0	7
Polished plate, British ⅛ in., up to 2 ft. sup. per ft.	0	1	6
DO. *4 ft. sup.* ,,	0	2	9
DO. *6 ft. sup.* ,,	0	3	0
DO. *20 ft. sup.* ,,	0	3	7
DO. *45 ft. sup.* ,,	0	3	9
DO. *65 ft. sup.* ,,	0	3	11
DO. *100 ft. sup.* ,,	0	4	4
Rough plate, 3/16 in., per ft.	0	0	6½
DO. *¼ in. per ft.*	0	0	6⅞
Linseed oil putty, per cwt.	0	15	0

*

GLAZING in putty, clear sheet, 21 oz.	0	0	11
DO. 2 oz.	0	1	0
GLAZING in beads, 21 oz., per ft.	£0	1	1
DO. 26 oz., per ft.	0	1	4

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

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

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

PAINTER AND PAPERHANGER

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

*

Genuine white lead, per cwt.	£2	7	6
Linseed oil, raw, per gall.	0	3	6
DO., *boiled, per gall.*	0	3	8
Turpentine, per gall.	0	4	0
Liquid driers, per gall.	0	8	6
Knotting, per gall.	0	18	0
Distemper, washable, in ordinary colours, per cwt., and up	2	5	0
Double size, per firkin	0	3	6
Pumice stone, per lb.	0	0	4½
Single gold leaf (transferable), per book	0	2	0
Varnish, copal, per gall. and up	0	14	0
DO., *flat, per gall.*	1	2	0
DO., *paper, per gall.*	0	16	0
French polish, per gall.	0	17	6
Ready mixed paints, per gall. and up	0	15	0

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LIME WHITING, per yd. sup.	0	0	3
WASH, stop, and whiten, per yd. sup.	0	0	6
DO., and 2 coats distemper with proprietary distemper, per yd. sup.	0	0	9
KNOT, stop, and prime, per yd. sup.	0	0	7
PLAIN PAINTING, including mouldings, and on plaster or joinery, 1st coat, per yd. sup.	0	0	10
DO., subsequent coats, per yd. sup.	0	0	9
DO., enamel coat, per yd. sup.	0	1	2½
BRUSH-GRAIN, and 2 coats varnish, per yd. sup.	0	3	8
FIGURED DO., DO., per yd. sup.	0	5	6
FRENCH POLISHING, per ft. sup.	0	1	2
WAX POLISHING, per ft. sup.	0	0	6
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, yd. sup.	0	1	2
DO., each subsequent coat, per yd. sup.	0	0	11

SUNDRIES

Fibre or wood pulp boardings, according to quality and quantity.
The measured work price is on the same basis . . . per ft. sup. £0 0 2½

FIBRE BOARDINGS, including cutting and waste, fixed on, but not including studs or grounds per ft. sup. . . . from 3d. to	0	0	6
Plaster board, per yd. sup. . from	0	1	7
PLASTER BOARD, fixed as last, per yd. sup. . . . . from	0	2	8
Asbestos sheeting, 5/32 in., grey flat, per yd. sup.	0	2	3
DO., *corrugated, per yd. sup.*	0	3	3
ASBESTOS SHEETING, fixed as last, flat, per yd. sup.	0	4	0
DO., corrugated, per yd. sup.	0	5	0
ASBESTOS slating or tiling on, but not including battens, or boards, plain "diamond" per square, grey	2	15	0
DO., red	3	0	0
Asbestos cement slates or tiles, 5/32 in. punched per M. grey	16	0	0
DO., *red*	18	0	0
ASBESTOS COMPOSITION FLOORING : Laid in two coats, average ¾ in. thick, in plain colour, per yd. sup.	0	7	0
DO., ½ in. thick, suitable for domestic work, unpolished, per yd.	0	6	6
Metal casements for wood frames, domestic sizes, per ft. sup.	0	1	6
DO., *in metal frames, per ft. sup.*	0	1	9
HANGING only metal casement in, but not including wood frames, each	0	2	10
BUILDING in metal casement frames, per ft. sup.	0	0	7

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

PLYWOOD, per ft. sup.

Thickness	3/16 in.			¼ in.			⅜ in.			½ in.		
Qualities ..	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4	9½	7½	—	1 0½	10	—
Figured Oak 1 side	5½	7	—	10	8	—	11½	—	—	1 6	—	—
Plain Oak 1 side	6½	6	—	7½	7	—	9½	—	—	1 0	—	—
Oregon Pine	5	4	—	5½	5	—	6	—	—	—	—	—

0 1 1
0 1 4
.
ual span

0 3 0
l. per ft.

NGER
1s. 4½d.
er hour ;

2 7 6
0 3 6
0 3 8
0 4 0
0 8 6
0 18 0

2 5 0
0 3 6
0 0 4½

0 2 0
0 14 0
2 0
16 0
2 17 6
0 15 0

0 0 3
0 0 6

0 0 9
0 0 7

0 0 10
0 0 9
0 1 2½

0 3 8
0 5 6
0 1 2
0 0 6

0 1 7
0 1 10
0 2 4
0 9 0

0 3 0

0 1 2

0 0 11

0 0 2½

0 0 6

0 1 7

0 2 8

0 2 3
0 3 3

0 4 0
0 5 0

2 15 0
0 0 0

0 0 0
0 0 0

0 7 0

0 6 6

0 1 6
0 1 9

0 2 10

0 0 7

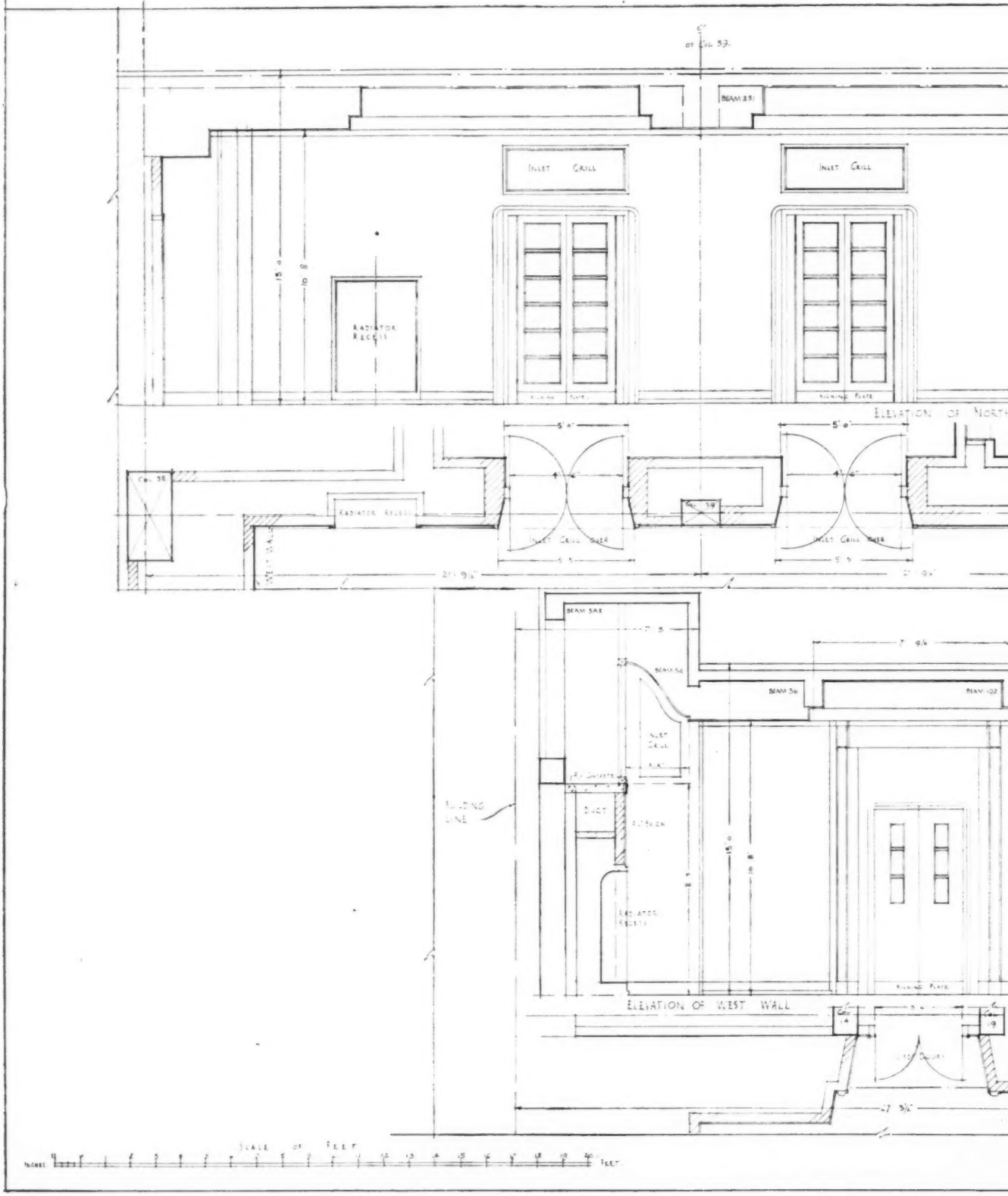
½in.
A. A. B.
d. d. d.
8½ 7 6
8 7 6

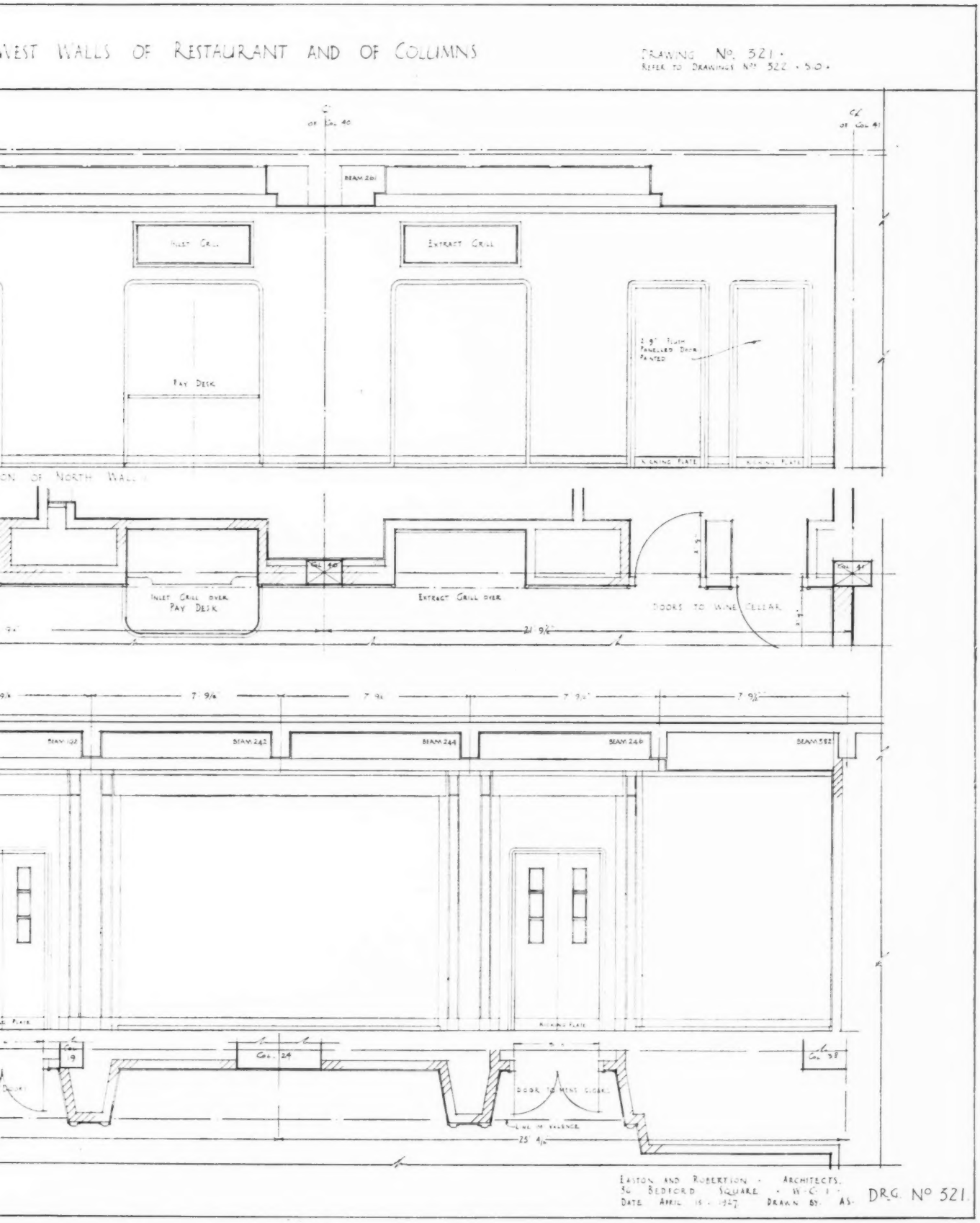
0½ 10 –

6 – –

0 – –
– – –

ROYAL HORTICULTURAL HALL WESTMINSTER. DETAILS OF NORTH AND WEST WAL





THE ROYAL HORTICULTURAL HALL, WESTMINSTER. BY EASTON AND ROBERTSON. DETAILS OF NORTH AND WEST WALLS OF RESTAURANT, AND OF COLUMNS.