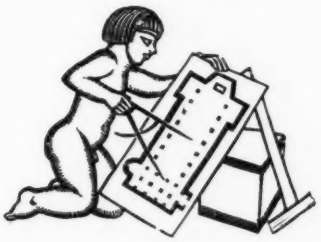
# THE ARCHITECTS' JOURNAL

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CHRISTIAN BARMAN, *Editor*

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

*By gracious permission of His Majesty the King.*

## RENDERINGS OF ARCHITECTURE

*Selected and annotated by Dr. Tancred Borenius.*

xl : Bartholomaeus van Bassen (d. 1652).
The King of Bohemia Dining in Public.

*Bartholomaeus van Bassen was both a practising architect and a painter of architectural subjects ; at some time between 1624 and 1639 he came to England, where he stayed for a considerable length of time. In the gallery at Hampton Court there are two very similar pictures by him, one representing Charles I and his Queen dining in public, accompanied by Prince Charles, and the other the present painting, in which he has represented Frederick, King of Bohemia, and his Queen, Elizabeth, the daughter of James I, at table. The letters F E surmounted by a crown, which may be seen on the ceiling near the end of the room, give a clue to the subject. The picture is equally interesting as a record of the style of interior decoration of that time and as a rendering of a characteristic court function.*—[Hampton Court, No. 317.]

THE ARCHITECTS' JOURNAL

*Wednesday, October 20th, 1926*

# ARCHITECTURE OF THE BRITISH EMPIRE

The Exhibition of "Colonial" architecture now being held at the galleries of the Royal Institute of British Architects suggests the question: Can we look at the buildings here pictorially displayed before us and say: "In the lands where these buildings were erected no other flag could fly except the British flag, because the buildings themselves proclaim that in style and character they are British?" If the empire is to remain a political reality it is a matter of imperial importance that the answer to this question should be in the affirmative; for architecture is one of the chief symbols of civilization, and if the constituent parts of the empire are held together by certain common ideals of civilization, they must also exhibit certain common characteristics in their architecture. Now the Dominions and Colonies of the British Empire may for the purpose of the present inquiry, be divided into two classes—those in which the British race comprises almost the total population of the area, and those in which this race, although dominant politically, is greatly out-numbered by the natives; and the latter class may again be subdivided into territorial possessions where there already exists a fully developed civilization alien to our own, and those where the natives are comparatively uncivilized and thus have no style of architecture worthy to exercise a cultural influence upon our own. In the first group are Canada, Australia and New Zealand; in the first division of the second group are South Africa, Rhodesia, the Gold Coast, Sierra Leone and many other outposts of empire in tropical lands; while in the last category are India (not represented at the present Exhibition), Singapore and Hong Kong.

Let us first consider Canada, Australia and New Zealand. These countries have a population predominantly British in character, so it might be supposed that English traditions in architecture would be entirely triumphant; but those who would like to see this stylistic allegiance to the Mother Country are obliged to recognize that certain obstacles lie in the way of its complete realization, because in the case of Canada the proximity of America has to be reckoned upon, while even Australia and New Zealand are geographically nearer to the United States than they are to the British Isles. Yet the visitor to the R.I.B.A. Exhibition must be struck by the surprising extent to which these Dominions have remained constant to the forms of architecture indigenous to this country, and have declined to yield themselves whole-heartedly to the architectural idiom that our American cousins are making their own. The "skyscraper" has as yet made little headway either in Canada or Australia, while in these Dominions most of the streets seem to retain a certain Anglo-Saxon homeliness which is becoming ever rarer in the United States; and their classic architecture is still in the main English Classic and their Gothic architecture English Gothic.

In South Africa the Anglo-Saxon influence is stronger still, owing perhaps to the powerful example of a few great practitioners, who themselves received their technical education in England, and have established a directive authority over architectural developments, not only in what used to be known as the Cape Colony, but in the Transvaal as well. Here the negro population have not themselves produced an architectural style of any consequence, so no arguments can be brought forward in favour of making concessions to the artistic predilections of the natives; but in Singapore and Hong Kong the case is different, and one looks with curiosity to see whether any of the formal conventions of Malayan or Chinese architecture are receiving recognition in the buildings which Englishmen are erecting in those places. At the R.I.B.A. Exhibition the tendency to modify the style of the dominant race in order to bring its architecture into an intimate æsthetic relationship with the buildings erected by the natives is not much in evidence, and it must be said that the decision to plant characteristically English buildings in these distant lands is a wise one, and has a political justification inasmuch as it helps to establish the reality of British rule if the natives can see the visual arts being practised in a British manner. An Englishman does not adopt native dress when he goes to the tropics, nor need he adopt native architecture. The question arises, however, How far is his style of building suitable for the various climates of the colonies? An inspection of the designs exhibited at the R.I.B.A. will show that quite five-sixths of the buildings belong to that classic tradition which originally arose in the south of Europe. The classic style has proved itself to be extraordinarily adaptable to buildings of various functions and in various climes. Gothic architecture has not the same degree of adaptability, but interesting examples of this manner of building are shown at the Exhibition. Perhaps the selecting committee were predominantly of conservative temperament; but whether this be so or not, little evidence of architectural innovation is shown in the designs here exhibited. Visitors to the Exhibition, however, will see some very brilliant compositions in the recognized styles, and will appreciate the high level of competence and technical efficiency attained by architects in the Dominions and Colonies of the British Empire.

# NEWS AND TOPICS

LIVERPOOL'S CIVIC WEEK—MISS ADSHEAD'S MURAL WORK—THE HOUSES OF PARLIAMENT—BRIGHTER LONDON—AN ALL-STEEL BARN—A CHANCE FOR THE NATIVE ARTS.

THE Liverpool Civic Week which opened last Saturday is an event of great architectural importance inasmuch as it symbolizes a new public interest in urban architecture as well as in the social and industrial aspects of the city. On the opening day there was an historical pageant in five episodes: civic liberties, transport, charity, health and religion, and also a transport and trades procession. On Monday the Cathedral organ was dedicated, while on Tuesday the Atlantic liners were on view. During the week the great factories will be open to the public and the commerce and industries of the city will be exhibited. In fact, the civic spirit is very much alive in Liverpool. As Professor Reilly remarked in his recent presidential address to the Architectural Society of that city, "To help us in our endeavours we in Liverpool are, perhaps, more fortunately situated than any other town in the kingdom. Our city has a noble site, and for a modern English commercial town already has more than its share of noble buildings. We have practising among us a group of the keenest and best-equipped architects to be found anywhere. Our university has placed architecture in the forefront of its studies, and the leading citizens of our town have a long-standing tradition of culture. We have a newspaper ready to serve our art, and thereby serve the town, and, finally, and most important of all, we have a city council full of enterprise and not afraid of gigantic undertakings for the public good."

* * *

Professor Reilly's address, however, contained much more than a eulogy on the city and citizens of Liverpool. It was in the nature of a confession of architectural faith, and contained a powerful plea for more order and beauty in our cities. In tackling the problem of modern street architecture he laments that nowadays the great landlords seem to have little interest in the appearance of the new buildings erected on their estates. "One supposes," he says, "that landlords exist to-day, for one still hears of them receiving rent. They are too modest, however, to do anything else. They no longer dictate what shall be erected on their estates. They hide behind agents, and any shaped building seems to satisfy them." As most of the landlords are now unable or unwilling to exercise a formative influence on civic architecture, Professor Reilly urges that architects should take upon themselves the responsibility of guarding the amenities of our towns, and reminds us that "architects more than any other citizens are interested in the general appearance of their city. They are interested in it as a whole, yet in practice they are restricted to a building here and a building there. They have no way of showing their general interest and of laying their views before the authorities. Yet presumably they are the people who know, and who have the most right to be heard." In emphasizing the need for this collaboration between architects in the achievement of great schemes of urban buildings, Professor Reilly is doing a great service to architecture. As he finely says, it is the duty of architects "to soften the vulgarities of the age, and to give a noble aspect to all its serious enterprises."

* * *

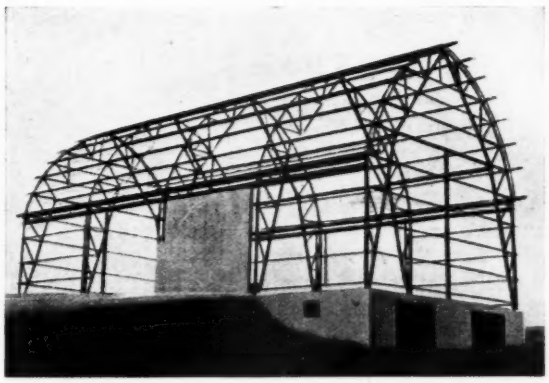
One of the most interesting of the smaller exhibitions held from time to time in the galleries of the Royal Institute of British Architects recently gave Londoners an opportunity of seeing some of the work of that gifted artist, Miss Mary Adshead, who showed a scheme for the decoration of a dining-room in Professor Reilly's house in Liverpool. The daughter of Professor Adshead, who himself, in addition to his architectural attainments, is an accomplished water-colourist, Miss Adshead combines the study of architecture and painting and is a mural decorator of remarkable distinction. In the scheme here exhibited the four walls of the room are entirely covered by a delightful panorama, "a tropical fancy," which, although its subject is given elements of humour, has a truly decorative quality, and is delineated with rare skill of draughtsmanship. At a time when decorative artists are few and far between it is especially pleasant to be able to welcome the appearance of an executant of such promise.

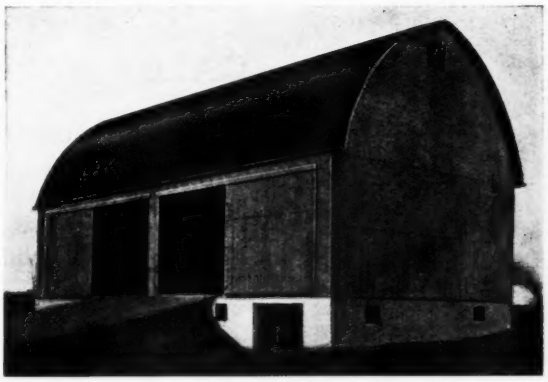
* * *

The removal of dangerous portions of the stonework of the Houses of Parliament still continues, and men are often to be seen on the upper parts of the building lifting the projecting crockets which have cracked free from their beds and are ready to fall. The pinnacles that have already suffered from this process of denudation look old and weatherworn (one would almost say "careworn"), for the Houses of Parliament have not grown old gracefully, in the mellow way that most of Sir Christopher Wren's Portland stone steeples have done. Permanence in stone is all the more important in London because a stone building goes through a long period in which its surfaces are picking up soot before the weather begins to clean out highlights and add an accidental beauty to the architect's work. The first signs of this coloration on the walls of the Houses of Parliament may be detected on a bright day, and very welcome they are, for the work needs variety of tone to enliven the dull uniformity of the panelled surfaces. It is something of a tragedy that this charm of colour should only make its appearance just prior to the treatment of the stonework and the almost inevitable return to monotony of effect.

* * *

The *Evening News* would have us believe that London house-fronts will be made brighter by placing comic decorative objects in front of the brick piers between their windows. Under a photograph which showed an earthenware cat in the act of chasing an earthenware bird is published the legend, "this decorative idea is becoming popular in London." Now, whatever may be said about the decorative possibilities of such informal and grotesque *appliqué* ornaments, they do possess one characteristic fitness for popularity which good sober architecture lacks in England. Such trivialities score because it is possible to make small-talk about them, whereas architecture proper is condemned either to silence or to serious discussion in long and unfamiliar words. Even that master of technicalities, Mr. Rudyard Kipling, generally steers clear of the technicalities.





*The All-Steel Barn.*

of architecture which come to us from abroad and seem strange to our lips, so bashful are we in the pronunciation of doubtful words. Even the dictionary seems to have qualms and, evidently overcome with shyness, defines "Colonnade" as "a series of open columns disposed in a circle." Americans, who will take the risk of pronouncing foreign words, and even pride themselves on this accomplishment, naturally think and talk about architecture as a subject of general interest in a way that untravelled Englishmen will not even dream of.

* * *

Is the farmer's wooden barn, one of the last strongholds of old farm traditions and methods, now to be replaced by all-steel structures? A steel barn has made its appearance without a piece of wood in its construction. Purlin posts, braces, rafters and beams are all steel. It is fireproof, and fire is the most dreaded of farm hazards. It is lightning-proof, and practically 90 per cent. of barn fires originate from without. It is practically weather-proof, and the life of the barn, if the steelwork and corrugated sheathing is kept properly painted, is unlimited. Even the windows are fireproof, the sash being made of steel and glazed with $\frac{1}{4}$ in. ribbed wire glass.

* * *

The structural steel was delivered ready for bolting on the premises. Only four men were needed for the erection work, without a foreman, and no framing was necessary on the ground. The steel frame is of the three-hinge arch type with trusses supported at three points only, centre and bottom on each side. There are no interior posts or inside obstructions such as are usually found in barns. Overall the structure measures 36 ft. by 72 ft., and the haymow rises 34 ft. to the hay carrier. Thus easy access is gained for handling hay through the side. Four 14 ft. by 16 ft. entrance doors, each weighing approximately 800 lbs., are supported by sliding door hangers. As will be seen from the accompanying photographs, the sloping roof construction makes it impossible for snow to accumulate and shorten the life of the covering. It also obviates the need of special provision in design to compensate snow loads. After the framework had been erected the barn was covered with 22-gauge corrugated copper alloy sheet steel. The sheets were riveted together with a 10 in. longitudinal lap and two corrugations on the side to exclude moisture. Below the cement floor of the barn is a cement basement or stock stable 13 ft. high.

Outside the Town Hall at Damme, near Bruges, are to be seen two stones. Inhabitants will tell you that they are two stones left over from the building by an architect very nicely versed in matters of calculation. And so, apropos of a note last week, when I said no architect or quantity surveyor could estimate such things, a correspondent reminds me of these two stones. But of them I was well aware, and I forbore mentioning them because they are not stones left over from the building, but, I believe, stones once slung across the shoulders of female scolds when being paraded through the streets.

* * *

A queer situation has been described to me by the director of a firm of mosaic workers. Again and again it has been found impossible to train English workmen in the art of laying mosaic, and Italians have usually been employed. From a variety of causes the number of Italian workmen in this country has decreased, and the Ministry of Labour now allows only a small number of alien workers to be taken on afresh. A new attitude has been adopted by the Ministry, and I am told regulations are proposed for limiting to a definite figure any further numbers of Italian mosaic workers, with a view, after that, of stopping the engagement of men from Italy altogether. The requisite number of workers in the trade would be kept up by the apprenticeship of British-born youths. Twenty-five is suggested as the number to be brought over, and even these only on the condition that for every skilled worker employed one British-born youth shall be taken in apprenticeship. It would therefore be only a matter of years before the Italian workers disappeared. When it was pointed out that the trade must inevitably suffer—that mosaic work would in all probability be killed—the reply was given that that would be all to the good—it would give native arts a chance. At this last, we cannot wonder too long. Is there any "native" art practised in England to-day—any art that was practised before mosaic work came with the Romans? If such a ban had been placed upon all but English arts and crafts a thousand years ago, we might still be dwelling in wooden huts, many of the English cathedrals would not have been built, Wren would have had a harder fight to build St. Paul's than he had. If the foreign workmanship were to be abstracted from all the edifices of the country, it might bring most of them down about our ears; it would certainly rob them of half their glory.

ASTRAGAL

# CAIUS GABRIEL CIBBER

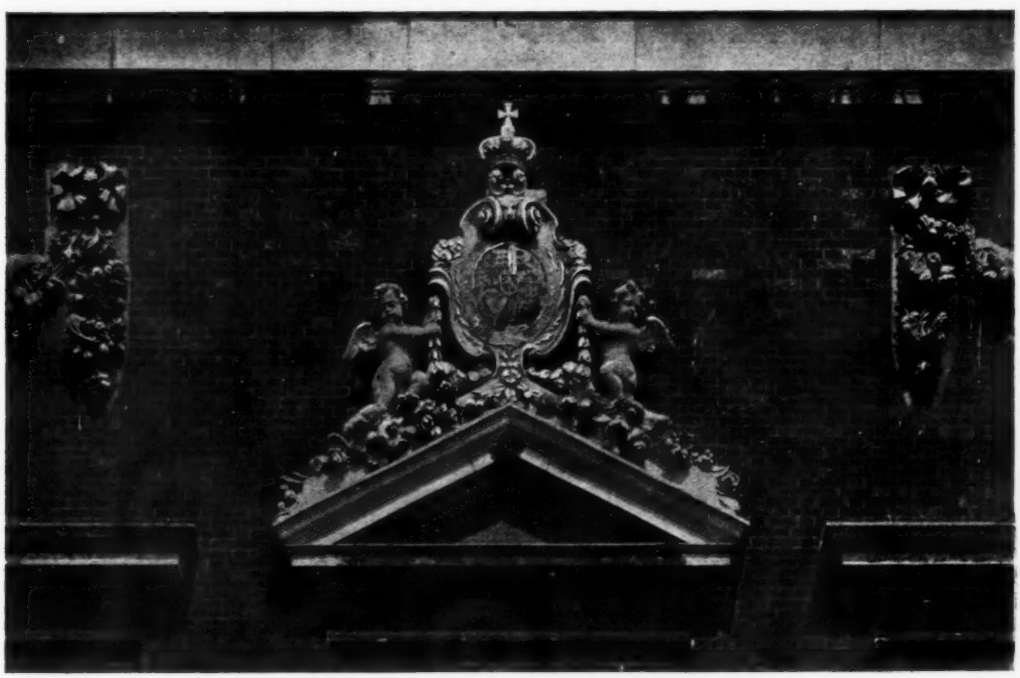
[ BY C. CAMPBELL CROWTHER ]

ENGLISH sculpture is a curiously neglected study. In proportion as it emerges from the fog of medieval anonymity to group itself around distinguishable personalities, so the tendency to dismiss it with a generalization increases. Why this should be is not very apparent, unless it is that the bridging of the gap left by the Reformation was mainly the work of foreigners, and that their disciples were hybridly inspired. Because a history of Dutch and Flemish sculpture in the eighteenth century might be edited from English examples alone, seems to be excuse enough for delving no farther into the foundations of the native article. But the result is a scant justice to its æsthetic origins. The case of Caius Gabriel Cibber is one in question. His Danish birth has doubtless been the cause of his having to wait so long for a monograph; standard treatises dismiss him with a vague murmur of Denmark and Baroque—

*Two marble urns made for the gardens at Hampton Court, but now removed to Windsor Castle. The one on the left is by Cibber, the other by Edward Pierce.*

a feeble apology for glozing over one of the many alien interludes in the formation of a national taste. Nor has Mr. Harold Faber, for all his devotion to a sculptor and a Dane, risen adequately to the occasion. There is in his treatise much comparisonbetween Cibber and his English contemporaries, particularly Edward Pierce (in passing, Mr. Faber, is it Pierce or Pearce? Consistency is even more precious than accuracy) — but little beyond a foreword on Danish woodcarving to relate Cibber historically to his art. One could well have spared the pages of quotation from contemporary account-books for something more than a passing mention of Michelangelo and Bernini.

For it is as a medium of Baroque influence on English plastic art that Cibber claims our attention. His Danish origin is hardly to the point, except for those who see a peculiar significance in the filtration of Latin values through a northern intelligence; there is, even at his most Berninesque, a Teutonic restraint about Cibber. Mr. Faber thinks it possible that he actually studied under Bernini during the years he passed at Rome at the Danish king's expense, but as far as the meagre survivals of his work, prior to the celebrated relief on the pedestal of the Monument, are a criterion, they indicate the exercise of a relative conservatism until he was well into middle age; his Bedlam figures, now in the Guildhall, are a frank imitation of Michelangelo, and show that as late as 1680 he was still loyal to a purer tradition of realism than that of Bernini. Indeed, it is not until 1677, that one finds an example of his work that is wholly of its own



*Top left, the statue of Apollo. Top right, Pallas Athene, on the grand staircase at Chatsworth. Both are by Cibber. Bottom, Cibber's carved armorial bearings on the south front of Hampton Court.*

*Above, centre, the statue of Faith on the altar at Chatsworth. Right (Ceres) and left (Diana), two of Cibber's statues on the south front of Hampton Court.*

*Below, the Sackville Monument, Withyham Church, Sussex. The kneeling statue of Richard, fifth Earl of Dorset, and father of the youth commemorated in this great work.*

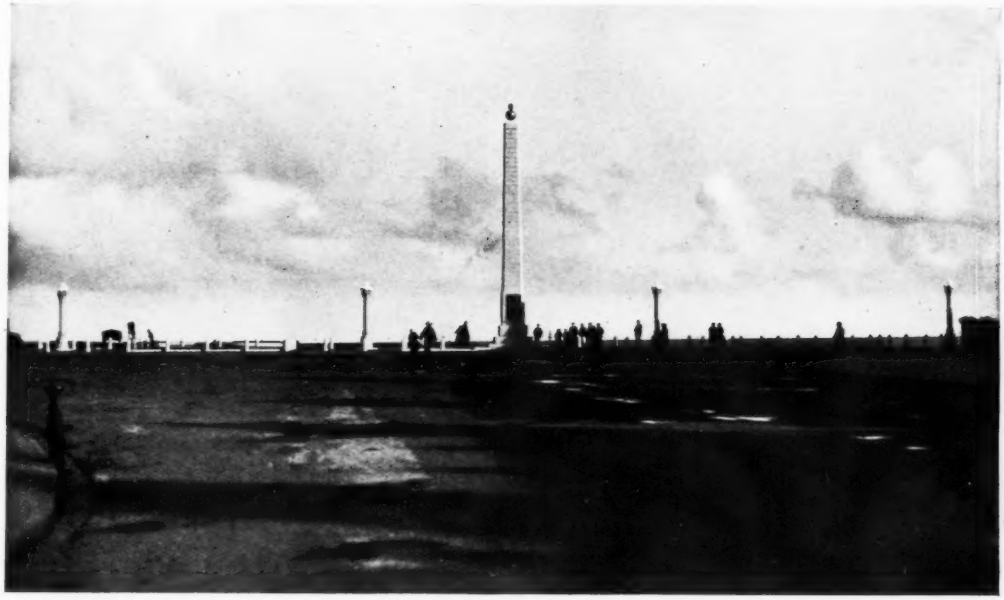
period. The Sackville monument at Withyham is Baroque at its best—startling, as it was meant to be, but well within the functional limits of marble. The exaggerated chiaroscuro of ultra-Berninism does not appear for another ten years or more in the altar-figures at Chatsworth. This slow maturing of the Baroque in Cibber suggests that he was a pupil of some conservative rival of Bernini rather than of Bernini himself. The development of a " Sturm und Drang " phase in Cibber coincides with the nascent Whiggism which tended more and more to express its purse-pride in plastic monstrosities, and it was not for one who had sampled the hospitality of the King's Bench Prison to look the gift-horse of patronage in the mouth, the more so as he was obviously familiar with Italian Baroque and its aptness to the flocculent grandiosity of the time.

But even in the Chatsworth period there was a restraint about his Berninism. Perhaps owing to his less volatile Scandinavian make-up, Cibber always stopped short of that complete distortion of the medium which made the Berninesques override all consideration of grain and texture. In the nude, this restraint tends to sentimentalism, as in the garden figures at Chatsworth. It is as though he had striven after a mean between the classic and the realistic, with the usual tepidity of compromise. They are definitely transitional; one can already detect in them the future vogue of classicism, while in their lingering naturalism they are curiously premonitory of the early stages of anti-classical revolt in the fifties.

There is, in fact, a certain hesitancy in Cibber's commitment to the school of Bernini. If he accepted its traditions as regards the draped figure, one has only to compare the " Faith " with the " Apollo " to realize how far he was removed from their brutal naturalization of the nude. Cibber's real hankerings are most apparent in his decorative ideas. His work at Hampton Court was among his last. The marble urn, now at Windsor, compares more than favourably as to form and detail with its rather dully pretentious contemporary by Pierce. The coat of arms, on the other hand, need not be taken too seriously; it has an obvious flavour of Gibbons, his collaborator in the decorations, and was necessarily part of a co-operative scheme. There is, however, little of the period in this genre which will compare with him —at least upon English soil.

*Caius Gabriel Cibber.* By Harold Faber. Clarendon Press, 31s. 6d.

CURRENT
ARCHITECTURE
SECTION



# RECENT ARCHITECTURE IN NORTH WALES

[ BY LIONEL B. BUDDEN ]

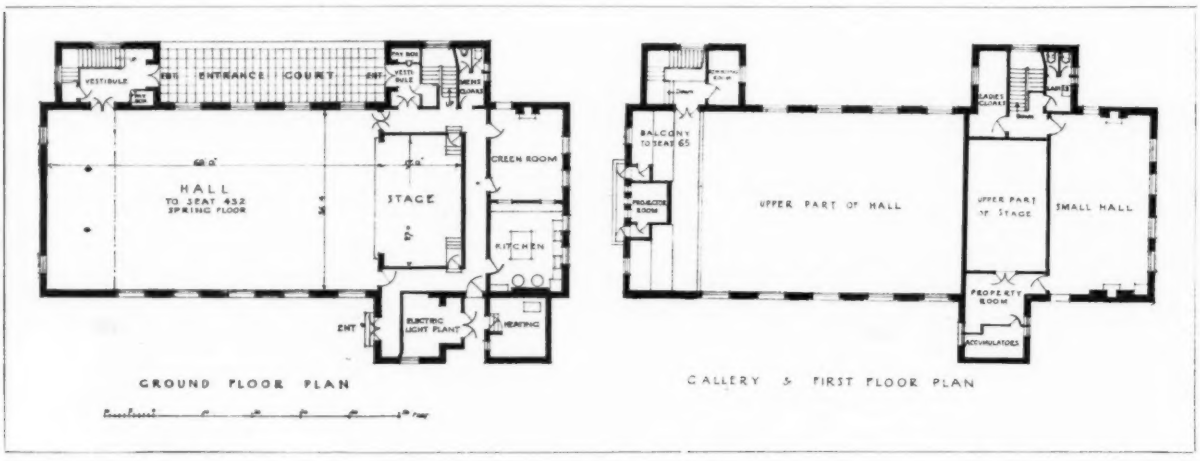
LIKE the rest of Great Britain, North Wales has suffered much from the general decline of architecture which occurred in the nineteenth century. It has, indeed, actually suffered more from the results of sheer bad building. For not only has a lower level of degradation been reached, but in North Wales more of the finest scenery has been spoiled. The damage has not been done, as in England, through the industrial exploitation of large areas. That process has been confined to a few comparatively small districts, and even in these its consequences are being mitigated by the steadily increasing use of electric power. It is the kind of buildings erected during the last seventy years all over the country, in every rural and urban part of it, that has done so much to injure the land. Trivial standards of gentility and "cheerfulness," particularly in domestic architecture, have done more than anything else to stultify the natural beauty of Wales. We in England cannot claim to be immune from this kind of thing ourselves. The English countryside has been subject to a double onslaught. Our Victorian forefathers created the Black Country and the nightmare towns of the north. We in our age are witnessing the second attack—a formless deposit of pebble-dashed houses and pink-roofed bungalows over wide tracts of unprotected country. But with us, more by good fortune than good management, considerable areas remain almost untouched. In Wales scarcely a valley, a mountainside, or a remote bay has escaped the infection of suburban building.

*Above, Llandudno War Memorial. By S. C. Foulkes.*

Though the apologists of Wales point out fairly enough that not all the horrors of their country's chapel and domestic architecture are the work of Welshmen, the fact remains that it is the Welsh themselves who have done more than anyone else to disfigure the face of their own land. The bulk of the building work has been in their own hands; and they have delegated it mainly to the speculative builder who has made of it what he would. And so we have *Cambrian Villa*, in feldspar and red-pressed brick, dotted over the grey hillsides of slate and stone country, confronting Snowden, gazing across the Menai Straits and the Irish Sea, or starting up amazingly in the midst of lonely moors. That one fatal type of dwelling in terraces, detached or semi-detached, houses indifferently the quarry manager or the workman, the lodging-house keeper or the farmer. With the village chapel in red, purple, and yellow, the villa residence constitutes the major body of Welsh building to-day. Until recently the qualified architect has been given very little opportunity of demonstrating that something better might be done. The little that he was able to do towards the recapture of authentic traditions, and of some sort of fitness in the use of materials, was not enough to leaven building practice as a whole. But the beginning of a change is now apparent. In increasing numbers

architects are being entrusted with work that formerly was the preserve of the local contractor. They are being called in to lay out and control housing schemes, and once more in public buildings and private houses local needs and local characteristics are being appropriately interpreted.

One of the first definite signs that a new and better phase was opening occurred some years before the war, when a competition was held for the development of the sea-front at Prestatyn. That competition was won by Messrs. Abercrombie, Shepheard, and Bower, who produced a scheme which, if it had been carried out in its entirety, would have made Prestatyn a more agreeable place than any of its rival resorts. The fact, however, that something of the project did materialize was a good omen in itself. A pavilion and bathing pool, just completed from the designs of Messrs. Easton and Robertson, have marked a second step forward in the same place. There could hardly be a greater contrast than between what has hitherto been understood by the terms pavilion and open-air swimming bath at Welsh seaside resorts, and this charming composition with its formally enclosed stretch of water, its paved court-yard, the simple lines of its light arcades, its pleasant proportions, and general air of attractive gaiety. Set amongst sandhills, the limewashed brickwork of its walls accords happily with its environment, and the effect of it all is precisely right in its position on the sea-front. The

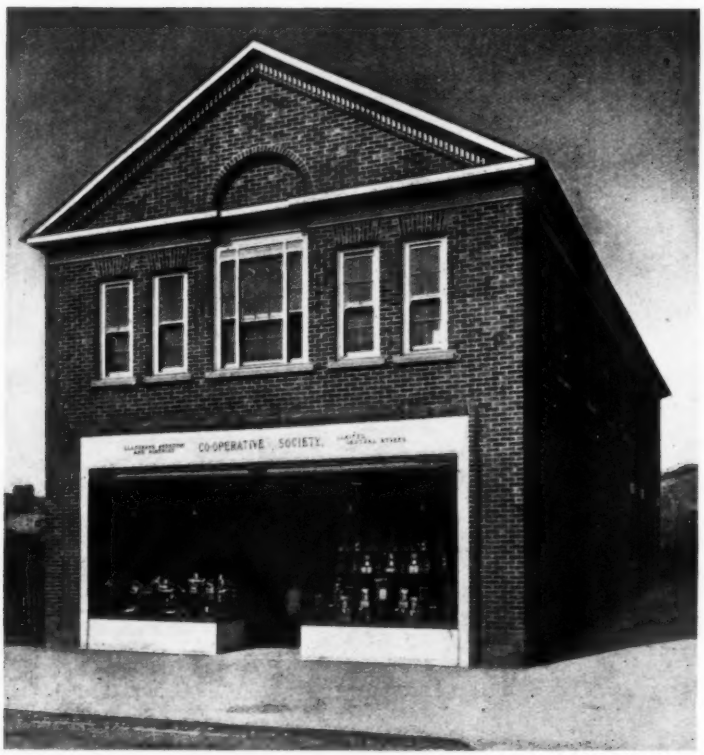



*The Robert Davies Memorial Hall, Mostyn. By Grayson and Barnish.*

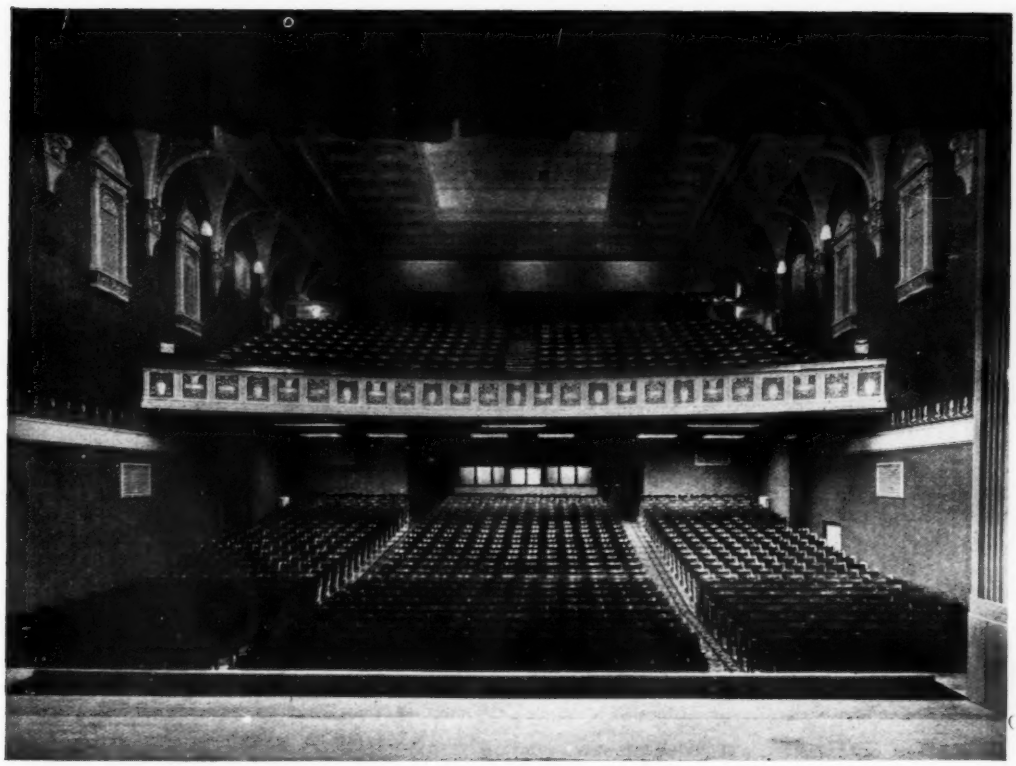
bungalow and cottage architecture of Prestatyn has also been raised to a higher plane by examples which Messrs. Easton and Robertson have handled as successfully as they have their pavilion.

At Wrexham a housing scheme, comprising some 600 houses, is being carried out by Messrs. Lockwood, Abercrombie, and Saxon. It covers 60 acres of the Acton Park, many fine trees of which have been preserved and made features of the scheme. A main avenue, 50 ft. wide, is the backbone of the plan. This avenue is intersected

*The Robert Davies Memorial Hall, Mostyn. By Grayson and Barnish.*




*Above, a row of shops, Princess Road, Old Colwyn. By S. C. Foulkes.*
*Below, Co-operative Stores, Llandudno Junction. By S. C. Foulkes.*



*The Queen's Theatre, Rhyl. By S. C. Foulkes. Above, a detail of the auditorium. Below, the auditorium from the proscenium arch.*

*House near Flint. By W. B. Edwards. Above, the main front. Below, a detail of the entrance.*

midway by a new broad road leading directly to the town. Radial roads give access to the remainder of the park, whilst from the central avenue branch-roads and *culs-de-sac* are set off so as to allow of the most effective and economical disposition of the various types of houses. These latter, of which about two hundred have been erected up to the present (some under the Addison, others under the Wheatley scheme), include both the parlour- and non-parlour type, with some eight to ten varieties of plan. As a model of what site-planning under such circumstances should be, and of how dwellings of the particular kind required should be designed, this scheme is, as far as the writer knows, unique in North Wales. It must influence the way in which similar areas are to be developed in the future, because it is clearly the right solution at once of the practical and of the æsthetic problems of the special subject. Neither the nature of the surrounding country nor the proximity of the site to Wrexham would have justified a picturesque, romantic treatment of the lay-out or of the houses themselves. At the same time a rigidly formal arrangement and an urban architectural expression would have been equally unsuitable. The plan strikes a just balance between formality and informality, which is echoed in the grouping of the houses. Their façades, faced with rustic brick, their hipped and flat-pitched roofs covered with grey Welsh slates, are regular in design, but produce no impression of monotony; they are so varied in their relationship to each other as to be more than sufficiently interesting.

In Wales, as in England, the bulk of the surviving work erected prior to the nineteenth century is Georgian of one kind or another. Most of the older parts that now exist of any long-established Welsh town or village show this incontestably. Medieval and Elizabethan cottages and manor-houses form a small minority, though that fact is not appreciated as it should be, and we have in consequence innumerable misguided attempts to pick up the threads of Welsh architectural tradition at their slightest and weakest points. The architects who are now giving a positive direction to Welsh architecture have appreciated the fact. The Georgian inspiration which underlies Messrs. Lock-


*Williams Deacon's Bank, Colwyn Bay. By S. C. Foulkes.*

wood, Abercrombie, and Saxon's work at Wrexham has also determined the character of other significant examples. Along the Deeside, in particular, it is evident in the Robert Davies Memorial Hall at Mostyn, by Messrs. Grayson and Barnish, and in a number of Mr. W. B. Edwards's houses in and about Flint. The former appears even better in reality than it does in illustration, and stands out conspicuously in a somewhat depressing setting. And Mr. Edwards's domestic work in its sobriety and good taste is equally welcome in these parts.

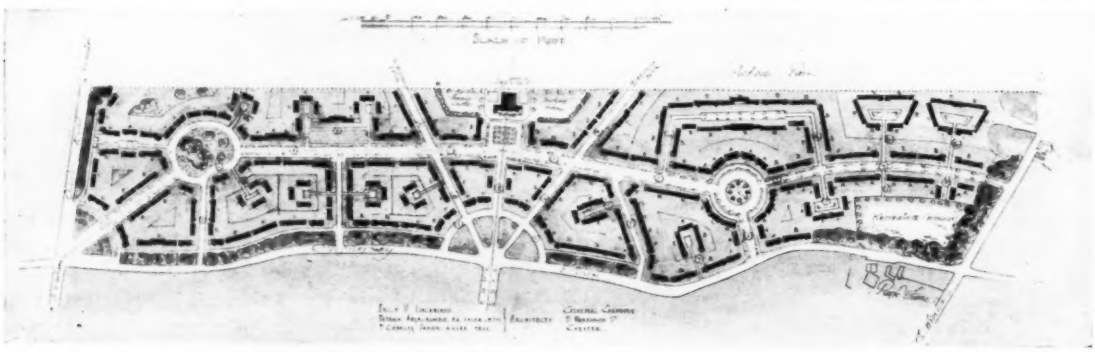
Both here and at Wrexham, brick has been legitimately used by the architects as a facing material. For both are clay districts. It has been one of the gravest misfortunes for North Wales that cheap transit has resulted in brick as a facing material—usually of the most offensive red-pressed kind—being thrust into any place which can be reached by railway or motor-road, altogether regardless of the geological formation of the locality or of the local building

tradition. As a consequence, the most austere and noble scenery is defaced a hundred times over by scarlet ulcerations that never heal, but remain for ever raw wounds on the landscape. What can practicably be done with these irruptions of foreign matter in rocky, low-toned country, it is not easy to suggest. On the score of cost alone they cannot be destroyed out of hand and replaced *en masse* by stone buildings. Probably the most effective temporary expedient would be the colour-washing of the more glaring cases. If the owners of Welsh estates would, as they very easily could, insist in the future on local geological conditions being observed, we should have no more brick-faced architecture in stone districts, and ultimately the dignity and beauty of the country would be restored.

Of late years some of the very best work in North Wales has been done by Mr. S. C. Foulkes, of Colwyn Bay. His practice has covered a considerable area, so that the influence of what he has already done can be detected in many directions. He is the architect of such buildings as the Colwyn Bay and West Denbighshire Hospital, the Williams Deacon's Bank and a concert theatre, both at Colwyn Bay, the Children's Home, Llandudno Junction, and the Llandudno War Memorial, besides commercial and domestic buildings of various kinds. Everything that he has designed is carefully studied and shows a fastidious judgment. In his West Denbighshire Hospital he has been remarkably successful in giving a dignified and urbane form to a subject that is usually treated as if it were a barracks or a factory. Another architect whose practice extends over the more southern part of Carnarvonshire, Mr. R. D. Jones, of Pwllheli and Port Madoc, is developing in that region the really valuable traditions, of which places like Tremadoc are still the record.

This selection of the work of particular architects is, of course, purely arbitrary. No mention has been made of the achievements of Mr. Clough Williams-Ellis, for example, including his most interesting experiment at Port Meirion, nor of such important new buildings as Mr. Wilkinson's Post Office at Colwyn Bay, and other notable examples. In a survey necessarily restricted in length, it has not been possible to do more than attempt to indicate the existence of a new and encouraging movement in Welsh architecture.

[The names of the contractors and some of the sub-contractors of the buildings illustrated appear on page 490.]



*Wrexham Housing Scheme, Acton Park. By Philip H. Lockwood, Patrick Abercrombie, and F. Charles Saxon. Above, an open space. Below, the lay-out.*

## SOANE'S BANK OF ENGLAND

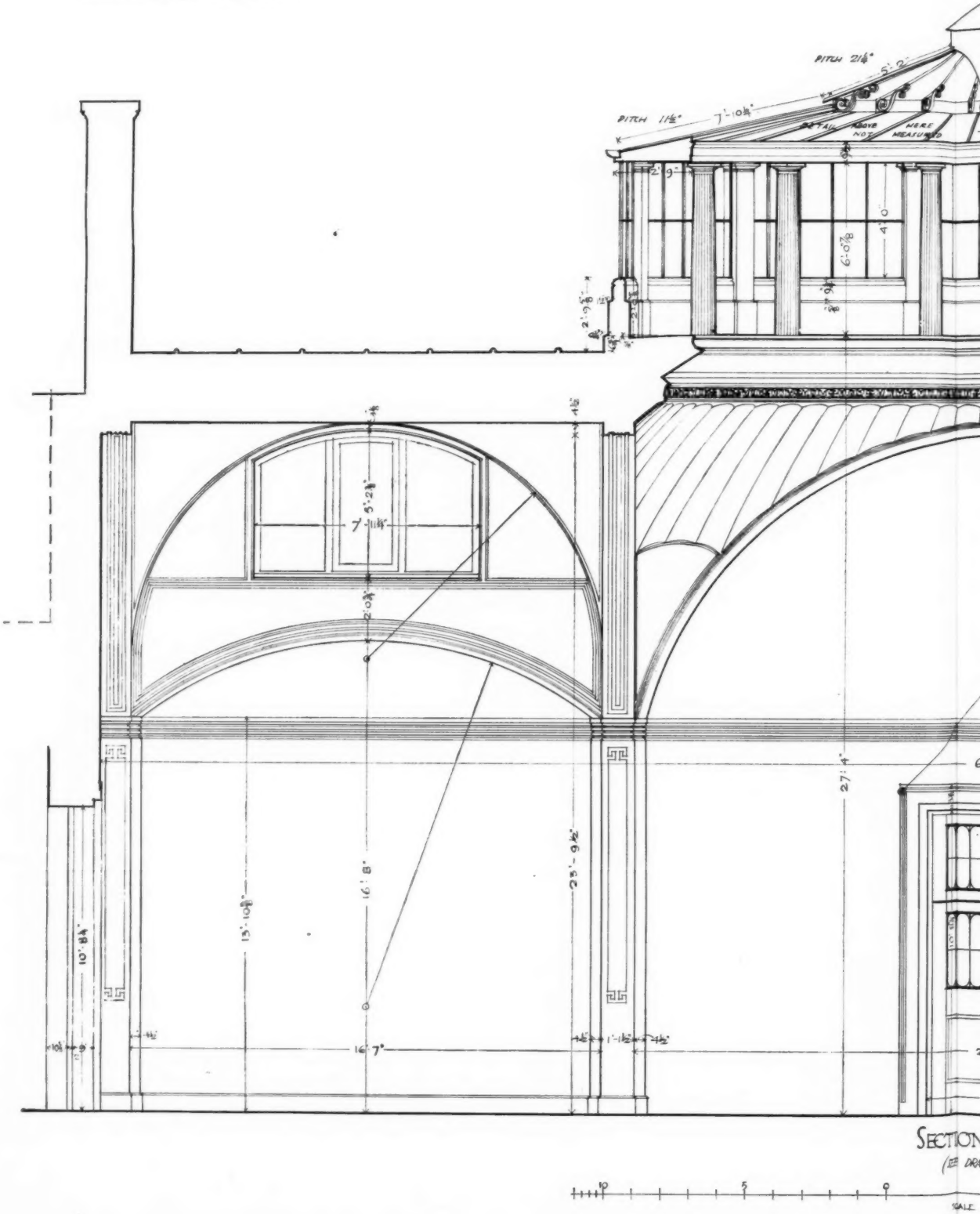
### ii: THE OLD SHUTTING ROOM

*b: Long Section*

*The restraint in decoration, which was the key-note of this room, is here very marked. The walls, except for a band of incised lines carried round at springing level, were bare, painted surfaces, compelling the eye to rise to the panelled soffits of the side vaults. The shallow fluting of the dome gave height, which was further accentuated by the slender Doric columns of the lantern. It is interesting to note that the main stone piers were worked to brick sizes, as were those in the Bank Stock Office, a fact which might be traced to early upbringing, Soane's father having been a bricklayer by trade.*—[H. ROOKSBY STEELE.]

# HALF INCH SCALE SECTION OF OLD SHUTTING ROOM

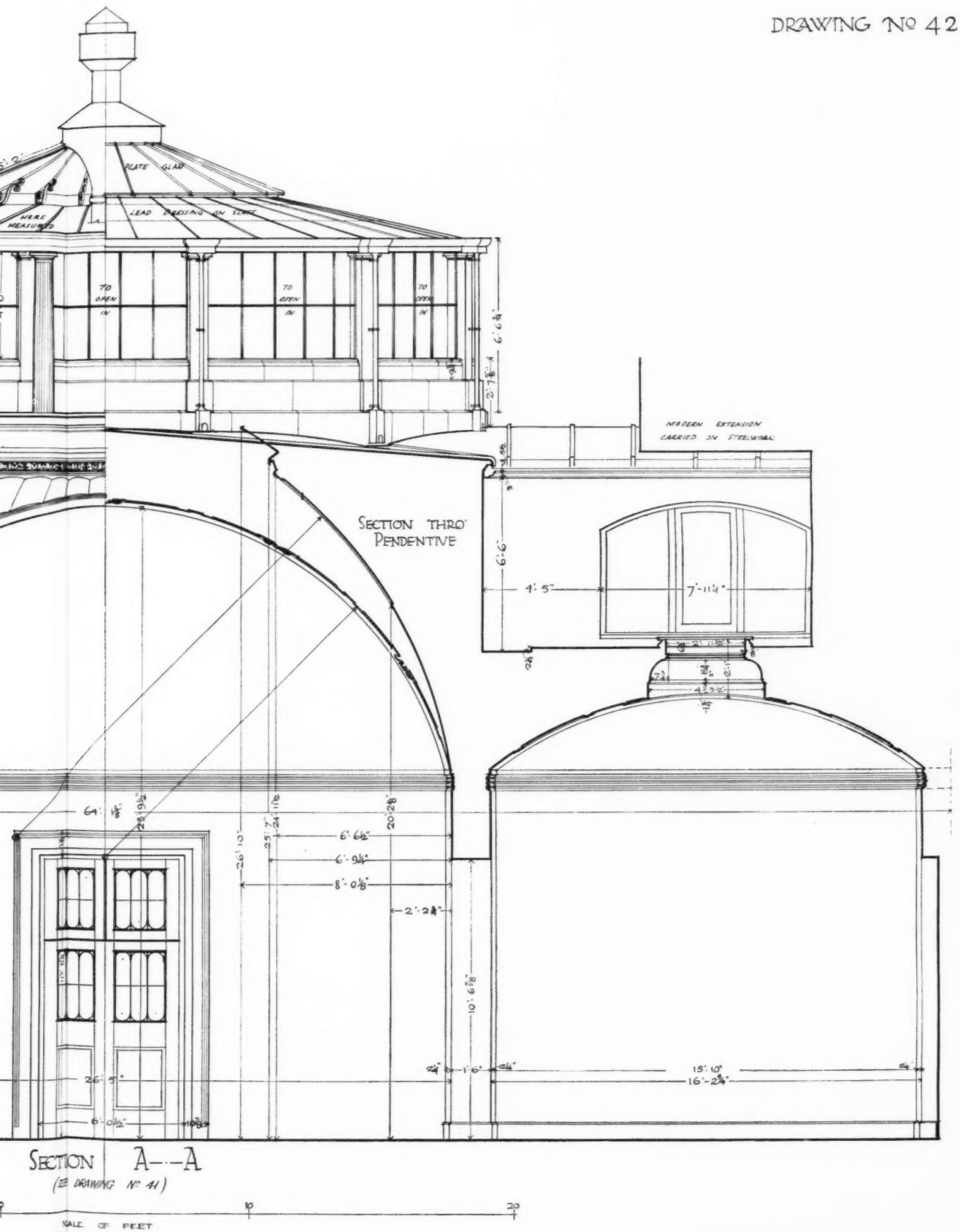
F.W. TROUP, F.S.A. F.R.I.B.A.
14 GRAYS INN SQUARE. W.C.1.
DRAWN BY HOWARD D. ARCHER.




SECTION
(½ DRA

SCALE

DRAWING No 42:




SOANE'S BANK OF ENGLAND. MEASURED DRAWINGS OF THE INTERIORS. (*ii*) THE OLD SHUTTING ROOM. (*b*): LONG SECTION

# TRIBULATIONS OF EARLY PRACTICE: ii

[BY KARSHISH]

## i: FACING RESPONSIBILITY

Our architect has now made all secure in preparation for his first voyage, and the time has come for him to put to sea. I use the metaphor, not as a mere literary flourish, but advisedly, for it provides an analogy to the conditions with which our architect is faced: first, as when a ship leaves harbour, he is strung up with apprehensions of the conditions he will find outside; and, secondly, he is acutely aware that he is in command for the first time and of the responsibility which rests upon his shoulders. As to the conditions at sea he will speedily feel at home in his surroundings and learn to spy out the shoals and rocks and to recognize the approach of bad weather; but how to keep his course and, above all, how to support the responsibilities of his position, is a more difficult matter. It has already been said that the sense of inadequacy which overshadows an architect when he first sets up in practice is, in the main, due to this new condition of responsibility with which previous experience has given him no opportunity of familiarizing himself, and from which he has in a particularly thorough way, always before been sheltered; but, as the full onus of this responsibility bears upon him only when the actual business of building is in hand, it has seemed well to consider the question when his ship fairly leaves port. Our architect has to be prepared for a particularly exacting kind of responsibility. He is in command, to continue the metaphor, of everyone on board; even the owner yields to his authority on all questions of seamanship and navigation; and, because all are thus under his orders, our architect finds himself responsible not only for what he himself does or directs, or omits to do or direct, but also for all that is done or left undone by those under his orders and by their servants, and even by others over whom he has no direct control or right of command; and he is responsible also for the discretion reposed in all these people and for the soundness of their judgment. This it will be perceived is a full measure of responsibility. Its nature is well displayed in a story which a certain officer in high command never tired of telling, although some of his juniors became very tired of hearing it.

Many years before the war the General commanding the district inspected a fortress and barracks on the South Coast. He arrived on the scene with his staff, like a cock attended by hens [I must tell the story in my own way, "please"], and was received by the officer in charge, a Colonel of the R.G.A., who proceeded to introduce the members of his own staff: "Major Pinkeye is responsible for our gunnery, sir; Major Coldhash, our general maintenance officer, is in charge of the fabric; Capt. Gumboil is my A.D.C.—all official correspondence is dealt with by him; Capt. Bugwash is our commissariat; and Capt. Rawtail our ordnance officer; Capt. Gripes is in command of the laundries; Capt. Honk of the piggeries and hen runs."

"Well, and what do *you* do, Colonel?" the General asked.

"I, sir, take the whole of the blame."

To take the whole of the blame is the essence of the architect's responsibility. He is not so much accountable for giving the right orders at the right times and in the right way as for those orders being completely obeyed and carried to effect. If, for instance, our architect has specified a special pigment for green paint so that the doors and jalousies will not fade out nor turn blue, and has also called the builder's attention to the requirement and approved a definite brand of paint; and if, further, by some oversight of the builder or deceit of the merchant or indolence of the foreman or shiftiness of the painters, our architect is misled when inspecting the works, and bad paint afterwards reveals itself, then our architect is responsible; it is he who has to take the blame. He may not know that he is legally or consider that he is even morally responsible. I am merely calling attention to the fact that it was his business to see that the house was finished with fadeless green paint, and that this has not been done. He may have most excellent excuses to offer, and his client may frankly accept them; nevertheless, he has failed where a more experienced, energetic, masterful, conscientious or discerning man would not have failed, and he is painfully conscious of this. The circumstance that our architect has been specially concerned not to fail in the matter makes his sense of failure the more poignant; and if he is the right sort of man he will want to curse himself nearly as ardently as he curses those by whose defections he has been humiliated.

The architect's responsibilities, in fact, though much less in kind than those of a soldier, are more exacting in degree, for whereas an officer commands those who have no other ambition than to obey his orders and give effect to his wishes, the architect commands many whose interests and desires are opposed to his, and whom he can only keep closely to their duty by sharp-eyed supervision and the compulsion of carefully constructed contracts rigidly upheld. Until our architect has had the experience he will not realize the wasteful folly with which a certain kind of man will persist in devices for avoiding obligations when at far less cost and trouble he might honestly meet them; nor how slow such men are to learn that bluff and subterfuge does not pay. The unlucky fact is, as our architect will come to know, that in certain fields these things *do* pay, so that the estimate of profits and, consequently, the prices tendered, are often based on an intention to avoid the letter of the contract. The strong position of such men subsists in the hesitation of the architect to condemn work. He is reluctant to exercise his authority unfairly; and to adjudicate between different standards of materials and workmanship, or on the ability of any particular builder to do better, is no easy task; but in addition to this the condemnation of work is likely to hold up other work and lead to delay and confusion. The reader may well wonder how, among these refractory conditions, any architect satisfies the demands of his investing responsibility. The solution lies in an energetic mind disciplined by a good office organization, and in that kind of capacity, sometimes called "gumption," which enables a man to recognize the character of those he is dealing with; to avoid employing men in whom he discerns qualities he distrusts; and to enforce his authority in such firm and exact ways that those under his direction thoroughly understand what is expected of them and realize that they can only disappoint that expectation at their peril.

This is the crude material aspect of the matter; but there is another and stronger influence for smooth working which, as I believe, specially distinguishes the practice of architecture, and makes the architect's work that sustaining joy and source of life-long happiness which, when rightly approached, it unquestionably is. I have already said—and it is quite likely I shall say it again—that the calling of the private builder, and particularly in the provinces, is still dignified by that spirit of craftsmanship which makes men delight in work for the work's sake. Those with whom we are supposing he will be chiefly concerned, namely, builders, reputable specialists and craftsmen, respond to fair dealing, an atmosphere of integrity, and to conscientiousness and devotion to his work on the part of the architect; and he also will find that relationships of common enthusiasm and of mutual respect and esteem are set up which, though they do not prevent errors, oversights, and misunderstandings, or in the least leave the architect's attendant imp—before mentioned—unemployed, go far to safeguard misfortunes of that kind and to secure that when they befall they will be faced manfully and not slyly and evasively.

I have above sketched the extremes of the standards of trade and the spirit of craftsmanship as they exist in the business of erecting buildings; but it is to be understood that these two principles will be found freely mingled: integrity may characterize a commercial firm, roguery a private builder; the traveller of a rubbishy firm of merchants may be an honourable man and staunch to his word; the foreman of a good builder, shifty, and not

to be depended on. Our architect has to learn to recognize the sort of man he is dealing with; he has to get things properly done by everyone, somehow, and the methods by which he attains his end must be adequate to the needs of widely differing circumstances and orders of men. In building, what is sauce for the goose is by no means sauce for the gander. To one builder, merchant, specialist or craftsman, our architect may speak over the telephone, knowing that his intentions are understood and that integrity, capacity, and conscientiousness will secure that the thing directed to be done will be properly and punctually executed. To another he must write exactly worded instructions, and then observe that those instructions are duly acknowledged: and, further, closely scrutinize the acknowledgment to make sure that some turn of phrase does not confuse the right sense of the matter either from sloppiness, denseness of understanding or a sly intention of evasion. He must then continue to hold the business in mind and make inquiry from time to time to learn what has actually been done, knowing that, in this particular quarter, promises mean nothing; and he must again scrutinize the reply he gets for ambiguities of wording devised with a deceitful purpose to hide a meaning other than what seems; for the refinements of what is called "the commercial style of correspondence" are sometimes directed to disguising misrepresentation and evasion by quibbles and ambiguities. Our architect must, in addition, at the right times examine or test the materials and inspect the workmanship to satisfy himself that things are going right. Such preoccupations as these are usual rather than exceptional, and when it is remembered that in the ordinary course of even a small practice such daily cares are multiplied perhaps twenty times over, it will be clear that our architect has got to learn to keep his wits about him.

The foregoing picture of the demands the conduct of his practice will make upon our architect may be startling, but it is not overcoloured and, in the respect that it shows only a restricted view of the field of his eventual activities, it is inadequate. He may take heart, however, in the reflection that most difficulties are more formidable to contemplate than to grapple, and that many worse men than he have made successfully the journey upon which he has embarked. Any one who should show how our architect may face the main problem with confidence and dispose of its difficulties with efficiency, if not with ease, instead of groping his way to a halting solution through months of confusion, anxiety, and stress, would deserve thanks. Let me say, then, that *I* shall be deserving of those thanks if I can succeed in creating in the reader a vivid idea of the actual obstructive facts, and then depict to him the particular disciplined, orderly habits of thought by which they may be demolished. To this end I propose to supplement the outside view, already given, of our architect's responsibilities, with an intimate private view of his inwards, so that the nature of the preoccupations which those responsibilities provoke may be understood; and I then propose to describe the principles of office organization by which his preoccupations may be banished and his mind left free to concentrate upon his essential work—namely, all that is comprehended, in the widest sense, by the word design. Let us, therefore, picture a typical morning in the early months of our architect's career and peer at what we may reasonably imagine to be his thoughts; and, in order that the picture may be comprehensive, we will suppose that his practice already emits a low hum: he employs a junior draughtsman named Pinker, and a typist-tracer, boy clerk named Wagg; and that in addition to directing the building of his first house he is making contract drawings for a second, and preparing sketch designs for a block of cottages. A dear old friend of his childhood, Miss Naggle, has also written to ask what his charges will be because an acquaintance of hers is thinking of building a bungalow and would much rather it was built by an architect than by a builder if the cost will not be more than £500.

Since the above was written, a prospectus for an "Architects' Defence Union" has come under my notice which gives various grounds upon which architects have actually been held liable for damages. I will quote from them here because, though they are unduly disconcerting—practical good sense and common fairness usually tempering such hardships to the architect—they exhibit the exacting nature of the responsibility which it has been my purpose here to display.

Dry-rot arising in floors six years after the completion of the contract, owing to neglect on the part of the clerk of works or to unauthorized alteration of the drawings by him.

Wrong advice as to the cost of building a house and its value when built.

Dry-rot arising in properly ventilated floors where shavings had been left under them.

Damage done to mural paintings owing to faulty backings.

To the contractor where the latter is sued owing to the building having fallen owing to faulty design.

For wrongful use of adjoining owner's property, such as driving a nail into his wall or encroaching on his property.

If extra works are necessitated through omissions in the drawings and specification or through lack of examination of the sub-soil of the site.

For delay in delivering the drawings to the contractor so that he could not complete the building within the contract time.

To these there might be added such an imaginary instance as the following: If an architect specifies that every cubic yard of rough stuff is to be made up with ten pounds of long well-beaten cowhair, and demands to see the cowhair, and examines it and approves of it; and if then, through the slackness of the builder and the drunkenness of the foreman and the ignorance of the labourer put on haphazard as "mudman," and the scamping of a plasterer who wants to get the job finished to go to a football match, the kitchen ceiling is rendered without hair, but with a hurried gauging with cement, and afterwards falls and kills the cook—then, *the architect is guilty of manslaughter.*

This is a hypothetical case, but it would seem to be good law for the architect would be liable in a civil action for damages. It should be borne in mind that in the words of a judge, "it is not the business of the Courts to mete out justice, but to administer the law." Thus an innocent man was once sentenced to be hanged for theft. He broke out of gaol and remained in hiding until his innocence was established by the confession of the real culprit, who had been taken for another offence. He was then, it is said, convicted of prison-breaking, and hanged for that. This happened many years ago, but the moral, that the law is sometimes a bit too much for the lawyers, holds good to this day. Our architect may, however, fortify himself by bearing in mind that, whatever else he may suffer, he can engage in the practice of architecture without danger of being actually hanged.

[*To be continued*]

## NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of His Majesty's Stationery Office, by our own patent expert. All inquiries concerning inventions, patents, 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.]

### SPECIFICATIONS PUBLISHED

258661. Stephenson, A., and Allen-Liversedge, Ltd. Manufacture of lime.

258668. Crittall Manufacturing Co., Ltd., and Crittall, W. F. Metal-frame windows.

258676. Jones, E. P., and Middleton, J. H. Grabs for lifting or hoisting.

237269. Knapen, A. Method of ventilation.

258705. Crimmins, J. Brick-making machine tables and clay cutters thereon.

### ABSTRACT PUBLISHED

256673. Farnsworth, A. W., and Thorpe, T. H. Ridge tiles.

# TALKS TO STUDENTS OF ARCHITECTURE

[ BY W. S. PURCHON ]

## VI: DRAUGHTSMANSHIP AND DESIGN

THE beginnings of draughtsmanship are to be found in freehand drawing, in plane and solid geometry, and in the rudiments of perspective; and you will be well advised if, during your first year of professional work, you develop along architectural lines the studies of these subjects. The ability to draw freehand can be cultivated in many ways, each of which will help you with other sections of your studies. For example, as part of your work in historical architecture you should study typical ornament of various periods. If you do this by making sketches from actual examples in old buildings and in museums and from casts, you will obtain excellent practice in freehand drawing and acquire useful knowledge, particularly if you note against each sketch you make the building from which it is taken, the approximate date, and other appropriate comments. This ability to draw freehand should be developed along two main lines, one leading towards the sketching of complete buildings and groups of buildings, and the other leading through the antique to life drawing. For the latter direction you should work, if possible, in a studio at some art teaching institution. You will also get useful guidance from Vanderpoel's *The Human Figure*.

If you are unable to obtain expert guidance in the sketching of buildings you will find Jasper Salwey's *Sketching in Lead Pencil for Architects and Others* and Guptill's *Sketching and Rendering in Pencil* useful books, but before you go far in this direction you should undertake studies in formal perspective. In many of your other studies there is also much freehand work to be done. Keep your eye open for good examples of sketches as reproduced in this JOURNAL and *Pencil Points*, and take any opportunity which arises of seeing good originals.

You should also note the application of geometry to subjects normally associated with architectural drawing and design, such as, for example, Ionic volutes, entasis, and the like. All such geometrical problems you should set out with great care and accuracy, and do not be afraid of using a big scale. If you did not study the rudiments of perspective in your general education, you may be able to attend an evening class in which this subject is taught. There are books which help you with this subject, such as those by Middleton and Lawrence, but you are almost sure to have an assistant in the office who could very rapidly show you the normal method of setting up architectural perspectives. You should then practise setting up perspective views of buildings of various types in outline from different view-points. In this way you will soon realize the type of view you will get from different positions of the observer with regard to the building, and by gradually introducing different features such as arches, curves on plan, columns, etc., you will steadily acquire facility in this manner of presentation.

The preparation of measured drawings will be of great value in your historical studies, will help you to grasp many constructional problems, and will form a most useful step towards design. The first essential is the selection of the right buildings to measure. You will be very well advised to study the measured drawings which win the R.I.B.A. prizes. These are exhibited in various parts of the country annually. You can also see excellent reproductions of measured drawings in the professional journals, in the *Liverpool Architectural Sketch Book*, the *A.A. Sketch Book*, the *Practical Exemplar of Architecture*, and *Standard Examples of Architectural Details*. In making measured drawings there will be certain freehand drawings to be made in the preliminary stages of the work. These are particularly important, and should be done neatly and carefully, either in a sketch book of large size, or on standard-sized paper, which can be filed. Measure the building thoroughly, do not guess anything, and do not assume that features which appear similar are actually so. The only safe method is to set up your scale drawings on the spot, including half-inch and full-size drawings. All the drawings which are afterwards to be re-drawn as finished drawings should be set up to scale on the spot, so that nothing will be left to imagination afterwards.

For preliminary work on the Orders, you will find Esquie's *Orders*, and Cross and Munby's *Plates* useful for the Renaissance period, and Spier's *Orders* for the ancient examples. It will save you much trouble if you set up all your drawings of these on the basis of twelve parts to a module. Give yourself plenty of practice in setting up each of the Orders to scale, assuming a dimension for a particular part, in one case diameter of column, in another height of column, total height, or height of entablature alone. When you have had a little practice in doing this with the help of your books, set yourself similar problems to work from memory with a time limit. This should not be limited to the drawing of the Orders, but applied to each branch of your work, history of architecture, theory of design, architectural construction, and calculations of structures alike.

In sketching plans of buildings approximately to scale in your historical studies, you should keep as far as possible to a uniform scale. Study good examples of lettering, particularly Roman, and keep to one or two types of good, clear lettering in all your work. Useful books are those by Johnston, Payne, Brown, and Seaby.

In rendering designs bear in mind that any shadows shown must be accurately cast. Start your studies of the casting of shadows with the simple examples shown in Cross and Munby's *Plates*, and follow up these exercises with the more difficult ones in Mr. Goodwin's book on *Architectural Shades and Shadows*. For the actual rendering get all the personal help you possibly can, and follow this up by a study of Magonigle's book, and by an examination of reproductions of good drawings, but mainly by taking every opportunity which offers of seeing the originals.

If you are studying your history of architecture and architectural construction in the ways I have suggested, and if you have worked systematically at the orders, and at sketching and measuring worthy buildings with an eye all the time on your main purpose, you will have made a good start, particularly if you have developed the methods of memory drawing which have been mentioned. W. G. Newton's little book, *Prelude to Architecture*, gives you, in a simple and fascinating way, an introduction to the subject, and should be followed up by Howard Robertson's *Principles of Architectural Composition*. Gaudet's book is a big one, and is in French, so you will probably have to fall back on *Architectural Composition*, by Curtis. Van Pelt's book on this subject is smaller, but useful, and Beverley Robinson's *Architectural Composition* is out of print, though you may find a copy of it in a library. Stratton's *Elements of Form* is a different type of book, but should be studied thoroughly, while Varon's *Indication* will also be found very helpful to you in your early efforts at design. Connect your studies of the theory of design as thoroughly as you can with your history of architecture, applying your design theory to your historical studies, and using historical examples to illustrate your studies in design.

Make a special effort to study the requirements of modern buildings and the designs by the leading architects as reproduced in this JOURNAL. When the results of a competition are published, go through the plans and the published criticisms. Keep in touch with the work done by the best students by studying reproductions, and whenever you get the chance, the originals of their work. Work out as many designs as you possibly can, and get someone to criticize your efforts.

If you stick at your work and take opportunities and make others for improving your knowledge and ability you will get through your exams. in due course. But do not stop at that. Keep your eye on the R.I.B.A. prizes. After your Intermediate, have a shot at the Tite, and see how you stand, and keep on working at this and the other student competitions. If you do not pull off a prize you will still gain by the efforts you have made, and will never regret them in later years.

# BUILDING AND DECORATIVE TIMBERS

[ BY G. A. T. MIDDLETON ]

## VI: INDIAN AND BURMESE TIMBERS

Of all the great forest areas within the British Empire, India alone has possessed a well-organized forest service for any length of time. As a result it is a district, and a very great district, from which present and future supplies can be depended upon with regularity, and with official guarantee of quality. In addition to the already well-known timbers, many which have been but little introduced into the English market are now available, with their characteristics thoroughly established. Almost all are hardwoods, and of these, teak is by far the best known. It grows to a good size, the logs varying from 10 in. to 30 in. square, and from 23 to 50 ft. in length. It occurs over a vast district, stretching right across India and Burma, and is known by many different names locally. While not so beautiful as oak, this wood possesses such high qualities that for many purposes it is supplanting oak, and quite recently the writer saw some being worked up for window sills in the ordinary course of a builder's business. It is by no means difficult to work, and, for a sound hardwood, it is only moderately heavy (about 41 lb. per cubic foot). It neither swells, shrinks, nor warps appreciably. It contains an essential oil which renders it highly resistant alike to alterations both of temperature and of damp and dryness, and to the attacks of either fungus or insects, and at the same time tends to preserve iron and steel hinges and fastenings. It is one of the most permanently lasting of all known woods, so that for high-class work of almost all descriptions it is difficult to surpass. Fortunately, it is a wood which is easily recognized, owing to its oily feel, and its distinctive, but by no means unpleasant, odour which, like that of fresh oak, is never likely to be mistaken once it has been recognized. Its colour (except the narrow white sapwood) is a golden yellow, which darkens through various shades of brown as time passes, till at length it becomes almost black, like old oak. Unfortunately, logs are always heart-shaken, and the preservative essential oil sometimes congeals in the shakes, forming a hard substance which resists edge-tools. Taking it altogether, it is the best weather-resisting timber known, and of considerable beauty also when the medullary rays are exposed.

Padouk, of which two slightly different species are found in the Andaman Islands and in Burma respectively, is also known in England as a first-class wood. The heartwood is red (that from the Andamans being the brighter in tint), the figure is handsome, and the numerous medullary rays are very fine, uniform, and equidistant. It is heavier than teak, varying from 48 to 50 lb. per cubic foot, and it is both strong and durable, and has a fine, hard, and smooth texture. It works well, it does not warp or split (though the finer members of delicate mouldings are apt to chip), and takes an excellent polish, which well repays the labour involved. Probably, in building work, it is most suited (and most used) for shop fronts and counters, for high-class bank and office fittings; and for parquet flooring, where the effect of its rich colour when worked in patterns in combination with light-coloured woods is very striking. It also forms a good veneer, though it is more generally used solid. The usual sizes of imported logs vary from 18 to 20 in. square, and from 16 to 23 ft. in length.

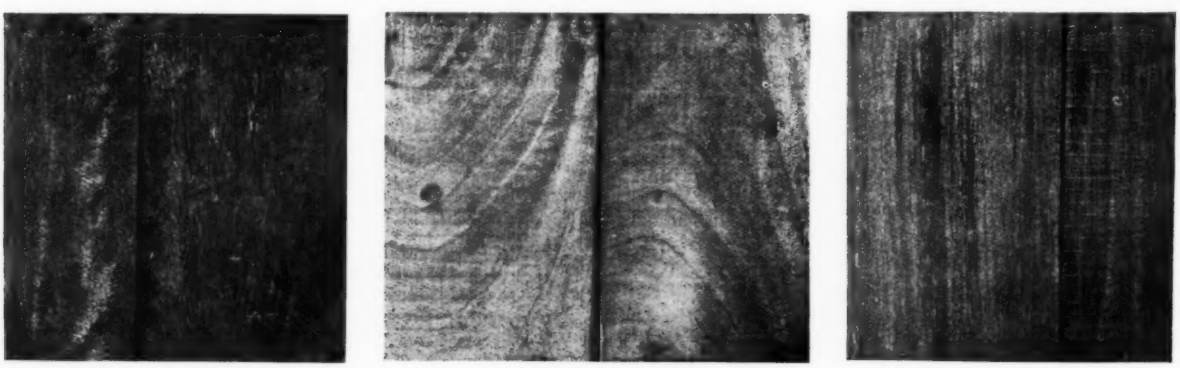
Eng or In, marketed as eng teak, though it is quite distinct, comes almost wholly from Burma. As a cheaper substitute for teak it is permissible, being straight-grained, hard, and of similar colour. But whereas teak contains a preservative oil, that contained in eng is destructive of iron fastenings, and the timber is not so durable. It is much used in India for building work and for interior decorative work.

Gurjan, though botanically nearly allied to eng, is again different, though its colour is similar; and it can be used for similar purposes. It is the more durable, more valuable, and more handsome timber. It is an excellent decorative wood, and is most useful for parquet flooring, staircases and sills, and for superior joinery generally. After seasoning it weighs about 50 lb. per cubic foot, but unseasoned it is so heavy that it will not float in water. The grain is slightly interlocking, and, possibly in consequence, it has a high modulus of elasticity. The interlock shows as regular broad shiny bands on a radially-cut longitudinal section, and the medullary rays are of two kinds, broad and fine, occurring alternately. The wood is very oily, and takes a good polish.

Indian laurel or asna, also known as Indian black walnut, and by a host of different native names, grows freely in most parts of India and Burma, where it is largely used for house-building and furniture. Its colour varies from light to very dark brown; and it is variegated with streaks of a darker colour, making it extremely beautiful for decorative purposes, such as bank and office fittings, and figured (veneered) panelling. It looks best when finished with a dull wax polish. Extremely durable when artificially seasoned, it does not season readily by natural means, and it is liable to cup shakes when it is cut tangentially.

Blackwood or Bombay rosewood grows in most parts of India, but not in Burma. It is of a distinctive deep purplish colour with black streaks, and the narrow sapwood is yellow. It is hard and durable, and takes a fine, smooth finish and polish, but it is difficult to work. It is used more in cabinet-making than in building.

Pyangado, after teak, is the most important timber of Burma (where it is known as ironwood). It also grows largely in South India. It is a resinous wood, very durable and strong, and is also very heavy (57 lb. per cubic foot), and difficult to work, becoming even harder with age. In fact, it can only be sawn easily when it is green or partially seasoned. Consequently it is not likely to be



*Left, Gurjan. Centre, Satinwood. Right, Indian rosewood.*

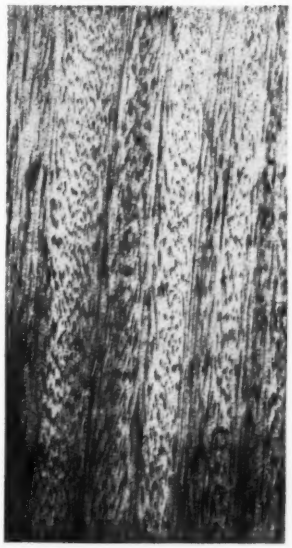
*Left, Chuglam. Centre, Deodar cedar. Right, Pyangado.*

used much in England, in spite of its high qualities and beauty of both its brown colour and its grain of wavy, twisted fibres.

White chuglam, found in Burma and the Andamans, is another beautiful wood. It is of mottled appearance and a silver-grey colour, and is thought to have a great future. For joinery work it has two great advantages: its colour is permanent in air, even though it may darken slightly; and sharp and clear arrises are obtainable, rendering it suitable for fine mouldings. It also holds well in the joints when mortised. The figure is of great beauty, and it is obtainable in good sizes, free from defects.

Satinwood is of light yellow or cream colour with, as its name implies, a beautiful lustre, making it extremely valuable for decorative purposes. It grows in small quantities only, and of small size.

White mahogany, though really not a mahogany at all, is another extremely beautiful, or even more beautiful, wood, of a pale yellowish-white colour. It resembles a straight-grained mild mahogany in weight and general characteristics. It works easily and well, and affords a smooth, silky surface, which if required will take stains satisfactorily. Its main use in England should be in joinery, in combination and contrast with true mahogany. It is obtainable in long lengths, and in widths to 24 in., either in logs or planks.

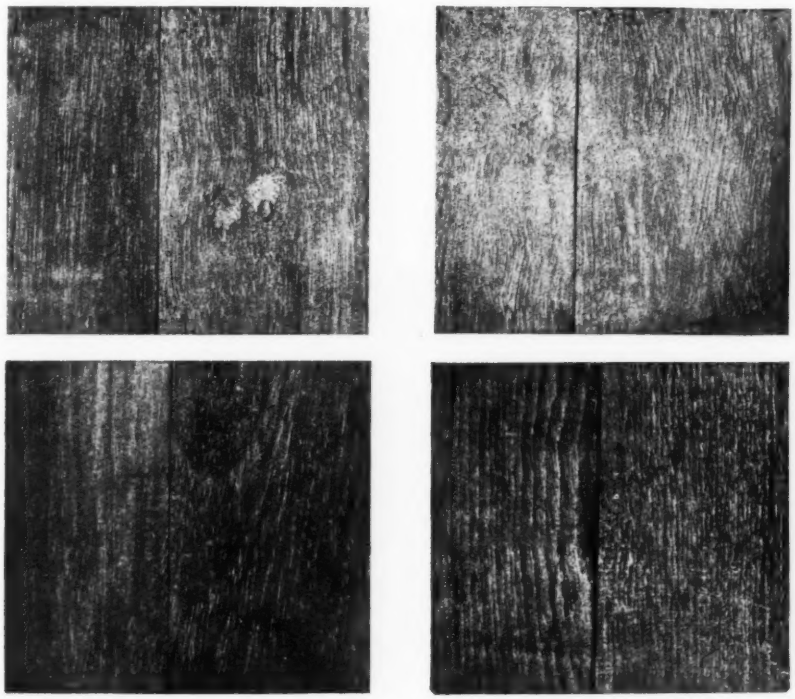


*White mahogany.*

The above are all hardwoods; yet in deodar India possesses at least one high-class soft wood. This is very extensively used, though almost the whole supply is absorbed locally. It contains both resins and preservative oils, rendering it most valuable when thus employed, but these tend to exude, so that it cannot be recommended where appearance has to be considered. It is a strongly-marked cedar, with very distinct annual rings, of which the dark portion is narrow and the light portion extremely broad.

[*To be continued*]

[For information contained in this article and for facilities for obtaining the accompanying illustrations, the author has to thank the Empire Forestry Association and the officials of the Imperial Institute.]



*Top left, Asna or Indian laurel, right, Eng, or In. Bottom left, Padouk, right, Teak.*

# THE COMPETITORS' CLUB

## ANALYSIS AND CRITICISM

It has been impressed on assessors again and again that their decision in any competition is best given in the form of a simple award, without the reasons which governed the selection. Promoters usually prefer this, not wishing to open the door to subsequent arguments from those, found in nearly every public body, who are unable to resist the opportunity for criticism, when a peg is offered to hang it on. At the same time, the simple award, while convenient for the assessor and promoters, diminishes the value of the competition to the competitors, who would often be glad to have a considered criticism of all the designs with a view to guidance in future attempts. It may even be claimed that the authors of the designs showing some definite merit, generally about a third of the whole number, are entitled to a review noting any good points in their designs, and making it clear why these were outweighed by those others which determined the award.

It is obvious that the assessor must have made himself acquainted with these points before forming his views as to which were the factors dominating the problem. Thus it would not be difficult for him to note them down. There is, however, at present no machinery by which his criticisms could be transmitted direct to the competitors. If there were, an assessor might be scared by the possibility of becoming involved in an acrimonious correspondence with one or more competitors who disagreed with his point of view. Until competitors can discipline themselves to take a more tolerant view of the measure of uncertainty inherent in all decisions based on a number of conflicting demands, it is hardly to be expected that assessors will put their heads in the lion's mouth.

As things are, the only alternative by which this desirable form of education can be administered is by a sound analysis of the problem and of its solution in the Press. Too often the review of an important competition is sketchy and inadequate. To be of value it should take as its starting point the fundamental principles on which the decision has been, or ought to have been, made. This demands a careful study of the conditions, and an appreciation of the problem, hardly to be achieved in the time usually allowed to the critic. A course likely to be helpful would be to provide for co-operation between the critic and a competitor who is free from bias in favour of his own solution, if such a one could be found. Better still, if the appointed critic could have a confidential interview with the assessor, he would start off with a clear idea of the standard which influenced the adjudication. There are objections to both these methods, but almost anything would be better than the evasive and superficial descriptions of competitive designs that often take the place of criticism.

It is comprehensible that in the arts of music, painting, or sculpture, which make a purely emotional appeal, critiques should vary widely according to the temperament. But architecture, which is based on service to practical need, must perforce demand logical criticism with a technique which brings the various types of outlook within a given formula. Thus, despite the varied aspects exemplified by differing "schools," there are definite principles to which they can all subscribe, and to which the features of competitive designs can be referred. The buildings for which the competitive method is employed are more generally those in which an orderly, convenient, and economical arrangement is regarded as of first importance. Among the designs which offer this, there is a varying degree of success in the appropriate expression of this arrangement from the architectural standpoint. These two factors usually determine the placing of the designs, and they are both capable of verbal explanation up to a point, which, if not quite conclusive, is very nearly so. Therefore the criticism of such designs is, granted the necessary knowledge and experience, an easy matter compared with that of the more elusive and subtle qualities of architecture, where it transcends the science of building skilfully and economically and passes into the realms of emotional expression.

One of the objections that have been voiced in regard to competitive methods is that the decision must perforce give major importance to practical rather than emotional conceptions. This does not imply that imaginative solutions are handicapped, only that they are restrained within certain limits, the same limits under which the bulk of architectural practice has to be carried on at the present day. Therefore, if anything is at fault it is not the competition as such, but the general attitude towards architecture. While it may be possible to imagine this bettered, so much of interest is still within its scope that, as compared with other occupations, the architect has little to complain of, except when he is so unlucky as to feel the fascination of competitions, while not possessing the exact balance of qualifications calculated to bring him success in these.

SENESCHAL

## COMPETITION CALENDAR

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

*October* 30. New Offices for Scottish Legal Life Assurance Society, Bothwell Street, Glasgow. Assessor, Mr. John Keppie, A.R.S.A., F.R.I.B.A. Particulars from Mr. William Watson, Secretary, 84 Wilson Street, Glasgow, before August 21. Deposit £1 1s.

*November* 30. *a:* Design for a house costing £1,500; *b:* design for a house costing £850. Assessor, Mr. E. Guy Dawber, P.R.I.B.A., together with two others to be appointed by him whose names will be made known later. Premiums in each section: First, £150; second, £100; third, £50. Particulars from the secretary, *Daily Mail* Ideal Houses Competition, 130 Fleet Street, E.C.4. The prize-winning £1,500 house will be erected and completely furnished and equipped at the 1927 *Daily Mail* Ideal Home Exhibition at Olympia to be held next March.

*January* 3, 1927. Academy, Perth. Open to Architects practising in Scotland. Assessor, Mr. James D. Cairns. Premiums: £100 and £50. Particulars from Mr. R. Martin Bates, Education Offices, Perth. Deposit £1 1s.

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

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

*October* 30. Baths and open-air swimming pool for Morecambe Corporation. Applications are invited from architects or engineers who have had experience of similar works, especially sea walls, to take part in a competition limited to six. Premiums: First, £100; second, £50; third, £25. The other three architects will be paid £10 each for their services. The competition will be adjudicated by an architect appointed by the R.I.B.A. Applications, giving full particulars of similar works which have been designed and constructed by the applicant, are to be endorsed "Swimming Pool," and delivered at the Town Clerk's office by October 30.

*No date.* Town Hall and Library, Leith. Assessor, Sir George Washington Browne, R.S.A. Particulars from the City Chambers, Edinburgh.

## COMPETITION NEWS

### *Laying out a Douglas Estate*

A Douglas architect, Mr. W. Alfred Shimmin, has been awarded the first prize in the competition held by the Douglas Corporation for the best plan of a lay-out of the Ballakermeen estate. There were altogether ten plans submitted—seven of them by local surveyors. The second prize has been awarded to Mr. M. A. Pirey, A.R.I.B.A., A.M.T.B.INST., who lives in Preston. In addition to winning first prize, a second plan submitted by Mr. Shimmin has been placed third in order of merit.

## CORRESPONDENCE

### THE R.I.B.A. AND THE NEW SOCIETIES

*To the Editor of* THE ARCHITECTS' JOURNAL

SIR,—Might I be allowed to point out to Unity that about 1912 the R.I.B.A. took in nearly every *soi-disant* architect in the country who cared to apply; that for nearly forty years the Society of Architects has been doing the same, and these gentlemen are now in the Institute; and that since the war the R.I.B.A. has so relaxed its examinations for such, that any really competent architect could hardly fail to pass. Yet Unity writes :—"The known reluctance of the R.I.B.A. to provide facilities for admitting any architect into their membership who had passed the student stage," etc., etc.

Further, for years and years we have all been repeatedly told from every source that Parliament will never sanction a man's living being taken from him, and that if the Institute did not have a clause in the Bill adequately protecting the outside architect, Parliament would itself add one before it passed it. In view of the above, what exactly does Unity want? The R.I.B.A. cannot possibly open its doors much wider and still call itself a body of qualified practitioners.

EQUITY

### NORMAN SHAW AND DOMESTIC ARCHITECTURE

*To the Editor of* THE ARCHITECTS' JOURNAL

SIR,—Mr. Penty has given a very true account of Norman Shaw's influence on the development of architectural tendencies in domestic architecture in the nineteenth century, and it is a pity that any little inaccuracies should creep in ; for instance, "In the fashion he set for the use of sham half-timbering——" On investigation it will be found that Shaw did not set the fashion for half-timbering. It was already there, possibly as the result of Ruskin's teaching, or as a by-shoot of the Gothic revival. If I am asked to give chapter and verse for this assertion, I may have difficulty in finding examples, for some of them have fallen, others have been pulled down; but I can produce samples of half-timbering dating from the sixties which are worse than any degenerations of the eighties or nineties.

Shaw's work shows, as all architects' does, a tendency to picturesqueness and over-elaboration in the earlier stages, simplifying itself as his career went on. The earlier buildings were timbery, and very bad timber at that. I was apprenticed in the yard of Shaw's favourite builder, Birch, and many of the men, and particularly the joiners' foreman, were still there. Nearly all his original drawings for his early work were there also, and I had the free run of them. The details in R. N. S.'s own hand were enormous in quantity, and beautiful in execution, but they were not carpentry but joinery. It was not the tradition of the carpenters who made the timber house of Surrey and Kent in the thirteenth to seventeenth century, but of the joiners who had joined in the nineteenth. Shaw, possibly influenced by his clients, and the difficulty of getting seasoned oak, had a horror of cracks, and everything was built up. Steelwork was used wherever possible. Shaw revelled in the ingenuity with which he could get himself out of difficulties. The greatest of these difficulties was to keep the weather out of half-timbering, which was used more and more sparingly after Pierrepoint.

Shaw's work was not founded on traditional Surrey building, but on a mixture of all his experience of medieval work, a good sprinkling of which was French. He had an instinct for the selection of methods which would not be likely to run him up against the prejudices of his clients. His enormously high chimneys were not likely to smoke, his plans were spacious, his rooms so high that the character of style was strained.

But this he did. He broadened out the Gothic movement. All was grist in the way of detail that came to Norman Shaw's mill. Classic details, at first confined to interiors, began to be incorporated; gradually they became solely employed with occasional harkings back to the Gothic tradition. The Queen's Gate house was by no means a sudden outbreak, each of Shaw's houses was a little more Renaissance than the last. And finally he built a house I think called the Chestnuts, which was (unless my memory has played me a trick) white ashlar stone outside and classic in detail throughout.

The trouble in Shaw's time was that the tradition in the crafts was wrong. Such was his enormous enthusiasm and his reliance on the reputation he had made that he could get round the client in nine cases out of ten, but the materials were unobtainable. The bricklayers were tuck pointers; the carpenters were joiners who had just found a new toy, machinery; the plasterers had new cements which they could finish to a glass-like surface, and the glaziers had plate-glass. From all this I could point a moral, but as I feel sure Mr. Penty will do so much more effectively I will leave it to him.

HAROLD FALKNER

## ANNOUNCEMENTS

Mr. H. E. Hawker, F.R.I.B.A., F.S.I., architect and surveyor, of St. Peter's Chambers, Bournemouth, has taken into partnership Mr. William John Mountain, L.R.I.B.A., and Mr. Alfred G. S. Bailey, L.R.I.B.A., who have respectively been associated with him for upwards of twenty years. The style of the firm will be Messrs. H. E. Hawker and Partners, and the practice will be continued at the above address.

The Minister of Health, the Rt. Hon. Neville Chamberlain, M.P., has appointed Mr. E. H. Rhodes, O.B.E., to be an Assistant Secretary to the Ministry of Health, vice Mr. F. L. Turner, C.B., retired. The Parliamentary Secretary to the Ministry of Health, Sir H. Kingsley Wood, M.P., has appointed Mr. A. N. Rucker to be his private secretary; and the Permanent Secretary to the Ministry of Health has appointed Mr. T. H. Sheepshanks to be his private secretary.

## SOCIETIES AND SCHOOLS

### *Cardiff Technical College*

A scholarship covering tuition fees and a maintenance grant of £40 per annum for three years at the Department of Architecture at the Technical College, Cardiff, has been awarded to Mr. Clifford Rosser, of Cardiff. These scholarships, which are open to residents and non-residents of Cardiff, are awarded annually on the results of an examination of about the same standard as matriculation in the following subjects :—English, mathematics, a modern language, physics with mechanics or chemistry, higher mathematics, history, or geography. Candidates must satisfy the Head of the Department of Architecture as to their ability in Elementary Drawing. Further particulars concerning these scholarships will be supplied on application to Mr. W. S. Purchon, M.A., A.R.I B.A. (Head of Dept. of Architecture), The Technical College, Cardiff.

### *Structural Engineers' New President*

To fill the vacancy caused by the death of Sir Charles Ruthen, the Council of the Institution of Structural Engineers have appointed as President Mr. Henry James Deane, consulting engineer, of London. Mr. Deane graduated as Bachelor in Engineering at the University of Sydney, Australia, and is a Member both of the Institution of Civil Engineers and the Institution of Mechanical Engineers. He received his early training on the staff of Sir Benjamin Baker in Australia, and was afterwards with Messrs. Mott and Hay in that country. Coming to England, he was in 1913 appointed Chief Assistant Engineer to the Port of London Authority, from which position he retired in the summer of 1924 in order to commence private practice as a consulting engineer. He became a Vice-President of the Institution of Structural Engineers in 1921. To fill the vacancy

for a Vice-President caused by Mr. Deane's election, the Council have appointed Mr. Ewart S. Andrews, B.SC., A.M.INST.C.E., consulting engineer, a partner in the firm of Messrs. Andrews and Beaumont, consulting engineers, High Holborn. The Membership Committee of the Institution at their first meeting of the Session dealt with 500 applications for membership, and a total of 282 members were elected. The membership of the Institution now stands at 3,000.

## TRADE AND CRAFT

*New Ideas in Central Heating: The Use of Light Copper Tubes* is the title of a new booklet just issued by the Copper and Brass Extended Uses Council. It is an essay written specially for architects, builders, and all interested in houses and house construction, and, as its title implies, its purpose is to call attention to the improvements in central heating technique made possible by the introduction of thin-walled, small-bore copper tubing and compression joints. On the Continent, in America, and the Dominions central heating is largely used to-day, but in this country we have been slow to make use of its many advantages. This is due principally to the Britisher's love for a coal fire to poke. But central heating does not preclude the coal fire. It is perfectly feasible to make the house reasonably warm throughout and to " top up " with a coal fire in any room where it is wished. The bedrooms where formerly only a serious illness or an honoured guest gave the excuse for a fire need no longer be chill or uncomfortable. In the nursery central heating offers peculiar advantages. Central heating may be derived from three sources—warmed air, steam, or hot water—but for domestic dwellings the low-pressure hot-water system is the most generally recommended by the Council in this country. The Council confine their attention to the generally accepted lines of central heating and demonstrate the advantages to be gained in economy of first cost and perfection of service by the introduction of what is claimed to be a proved method of forced circulation. As to the desirability of copper tube as a material for the pipework of central heating installations the Council state that there can be no two opinions. A copy of the booklet, which is full of useful information, can be obtained, price 1s. net., from the Council at 115 Colmore Row, Birmingham.

Metro-Vick House, 74 Waterloo Street, Glasgow, the new building just opened by Metropolitan-Vickers Electrical Co., Ltd., and Metro-Vick Supplies, Ltd., as their headquarters in Scotland, has been erected from the designs of Mr. James T. Thomson, architect, Glasgow. It occupies a square site, and has a frontage to Mains Street as well as to Waterloo Street. There are six floors in the building, and preparation has been made for additions to this number when required. The basement contains the dispatch and receiving department, and is in direct communication with the goods entrance in Mains Street. A service elevator connects with the other floors for conveyance of goods. The main entrance in Waterloo Street is a very interesting feature. The vestibule gives direct access to the showrooms on the ground floor, and to the staircase and elevator. The ground floor consists mainly of showrooms, and there is a large show window area to both streets. A very complete shop window lighting installation has been included, and arrangements have been made to set out a varied scheme of colours for show lighting. It is the intention of the company to invite many of the large stores in Glasgow to use the windows for the display of their goods so that the effect of efficient lighting may be seen under working conditions. On the first floor there is a trade counter with all the necessary furnishings for the sale of goods to the trade. The offices of Metropolitan-Vickers Electrical Co., Ltd., are situated on the second floor. A waiting-room is provided where clients may write letters, stenographic assistance being available. The offices of Metro-Vick Supplies, Ltd., are on the third floor. The remainder of the building is given up to storage accommodation. The stores are floored with Induroleum, manufactured by Messrs. Dockers Brothers, Ltd.

Some of the means by which the rural roads of this country may be made to add to the prosperity of the nation are explained by a writer in a recent issue of the *Roadmaker*. Concerning farming, he points out " co-operative action, in which, we are so often told, lies a great part of the salvation of English farming, depends very largely upon easy communication between farm and farm. The difference between Danish and English farming is very largely the difference between efficient and inefficient marketing. Far too much of the price of English foodstuffs is the cost of getting them from the farm to the table, and a great deal of that cost could be cut by quicker and better transport. Letting rural roads decay is not the way to cut it." The roadmaker's position with regard to rural roads is summarized as follows : " We do not want every lane turned into a Great West Road. But we do want every road, highway or by-way, to be properly foundationed, properly surfaced, and properly drained. We value very highly the peculiarly English charm of the rolling roads that ramble round the shires; and we do not think we can be accused of vandalism if we say that being quagmires in winter and collections of loose stones and dust in summer, adds nothing to that charm. They will not lose it by being made able to play their part in bringing prosperity to the country through which they wind." The *Roadmaker* is issued on behalf of the British Reinforced Concrete Engineering Co., Ltd.

## RECENT ARCHITECTURE IN NORTH WALES

Following are the names of the contractors and some of the sub-contractors of the buildings illustrated on pages 475 to 482 :

War Memorial, Llandudno. General contractors: Messrs. Pattisons. Sub-contractors: Johnson's Reinforced Concrete Engineering Co., Ltd., reinforced concrete; The Bromsgrove Guild, cast-iron lamps.

The Robert Davies Memorial Hall, Mostyn. General contractors: Messrs. Geo. Cash and Sons. Sub-contractors: Musgraves (Liverpool), Ltd., sanitary fittings; Williams Gamon & Co., Ltd., Chester, casements; J. B. Johnson & Co., Ltd., Liverpool, decorative plaster; Birmingham Guild, Ltd., metalwork; J. B. Joyce & Co., Ltd., Whitchurch, turret clocks.

Princess Road Shops, Old Colwyn. General contractor: Mr. S. G. Pritchard, Old Colwyn. Sub-contractors: Leyland & Co., Colwyn Bay, lead lights; Musgraves, Ltd., Liverpool, sanitary fittings.

Co-operative Store, Llandudno Junction. General contractors: Messrs. Jones and Griffiths. Sub-contractors: Ravenhead Brick Co., St. Helens, bricks; Musgraves, Ltd., Liverpool, sanitary fittings; Anselm Odling and Sons, London, marble.

Queen's Theatre, Rhyl. General contractor: Mr. W. William Smith, Prestatyn, N. Wales. Sub-contractors: Engert and Rolfe, Poplar, asphalt; Keith and Blackman Co., Ltd., London, ventilation ; Musgraves, Ltd., Liverpool, sanitary fittings.

Williams Deacon's Bank, Ltd., Colwyn Bay. General contractors: Messrs. Nayer and Sons, Chester. Sub-contractors: Engert and Rolfe, Poplar, asphalt; Bennett and Son, Manchester, strong room and structural steel. The Empire Stone Co., Ltd., London, artificial stone; Musgraves, Ltd., Liverpool, sanitary fittings.

## MR. SOMERS CLARKE'S WILL

Mr. Somers Clarke, Hurstpierpoint, Sussex, ecclesiastical architect, and a Fellow of the Society of Antiquaries, who died in Egypt in August, at one time surveyor of the fabric of St. Paul's Cathedral, and architect to Chichester Cathedral, left £111,829, the net personality being £96,817. He gave such of his books, MSS., prints, drawings, photographs, sketches, and his Egyptian collections as may be selected to the British Museum, others to the Royal Society of Antiquaries, and the remainder to the Brighton Corporation for the Public Library; £2,000 each to the Royal Society of Antiquaries, and the Vicar and Churchwardens of St. Peter's, Brighton, towards extinguishing the debt incurred in the enlargement thereof.

# READERS' QUERIES

### A RETAINING WALL

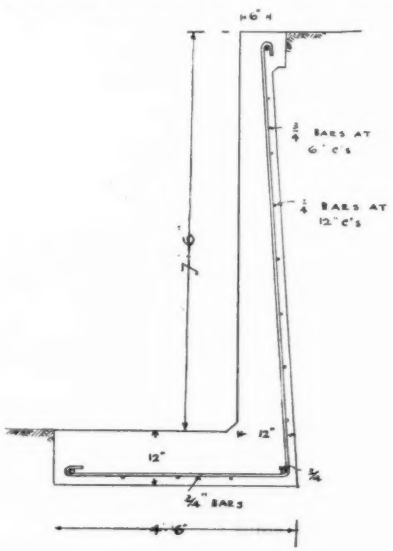
*S. B. writes: "The accompanying sketch shows a design for a retaining wall with the shoe reversed. Are there any radical defects in the wall?*

The design as shown by the sketch suffers from three serious defects. a: The placing of the shoe on the free side of the wall robs it of the weight of earth which should press upon it; and which is calculated upon to give inertia to the thin reinforced concrete wall, such as the old-fashioned solid wall obtained from its much greater mass. b: The whole wall is free to slide out of position in response to the lateral pressure of the sliding wedge of earth, because the one foot edge of the shoe is not deep enough to grip the ground, unless this is of altogether unusual character, and is hard and rocky. Water leaking in under the shallow foundation would tend to float the light wall and render it particularly liable to a series of movements in response to the weather conditions in rainy seasons. c: The junction between the shoe and the upright portion of the wall is not provided with an adequate gusset of concrete, and would be liable to open up hair-cracks on the hidden face of the wall just where moisture could attack the reinforcing bars and corrode them at their weakest part.

The number of weep holes depends upon the character of the soil to be retained and the amount of water it is likely to contain, though a distance of 4 ft. 9 in. apart would comply with the rule which applies to average cases, and requires one weep hole to every four superficial yards of wall surface.

The section shown with the shoe on the free side of the wall is best suited for use in underground tanks where the return walls of the tank may be counted upon to resist the pressure of the earth, and the projecting shoe forms part of the floor of the tank. In regard to defect a: The greatest economy and efficiency in a modern retaining wall is obtained by balancing the weight of the retained earth against its own lateral pressures, and the shoe is made of a size, strength, and position to pick up this essential balance weight. To oppose a thin layer of reinforced concrete (like a blanket hung on the face of the moving wedge of earth) to the lateral pressures it generates is to engage in a losing battle, for the natural forces have the advantage of following up every fraction of an inch of displacement they cause, whereas the wall has no chance of moving back into the positions from which it is successively driven in the course of years.

W. H.




### A CESSPOOL AND FILTER-BED

*R. E. writes: "Which is the best method of constructing a cesspool and filter-bed for a four-bedroom house? The soil is sand, and the drain will enter the cesspool about 8 ft. below ground."*

First ascertain from the sanitary authorities of the district whether sewage disposal by means of an overflowing cesspool and filter-bed will be permitted. This form of apparatus can be eminently satisfactory as regards the person installing and using it, but may pollute sources of water supply and inflict loss of health or loss of life. A condition which affects the design of the apparatus is the dryness of the sand subsoil. If the sand is waterlogged for any considerable period in each year a cesspool with a filter-bed would require some special device to carry off the effluent; whereas, if the sand is dry and thirsty, it will absorb the effluent as fast as a 4-in. drain can deliver material to the cesspool.

The site for the cesspool should be on the north-east side of the house, and as far as possible from it. In practice, about 100 ft. is sufficient to diffuse the evil-smelling sewer gas from the ventilator except where the sewage is "strong" (undiluted through the scarcity of flushing water), or when light, warm winds are blowing towards the house. The cesspool is constructed as a permanent waterproof tank of reinforced concrete, 9 in. thick, lined internally with a rendering of cement and sand (1 to 1) in which Ironite has been mixed in accordance with the manufacturer's instructions. This supersedes the layer of puddled clay formerly specified. A circular plan is often adopted, some contractors keeping stock sets of shuttering for the purpose, about 6 ft. internal diameter and 8 ft. deep below waterline. The roof is formed as a brick or concrete dome with a manhole for access and cleaning. An outlet ventilator, 3½ or 4 in. diameter cast-iron pipe carried up 10 ft. above ground is required by by-laws of some districts. The inlet and outlet drain pipes are both provided with "tee" heads to discharge under water level, and with cleaning eyes carried up to the surface of the ground, so that any obstructing scum may be removed. The action of the bacteria in the cesspool is to liquefy a large portion of the sewage and to produce a scum of solid on top, and the underwater inlets and outlets are devised to prevent this scum being disturbed by the flowing current of sewage. The liquid is highly poisonous, and it is the function of the filter-bed to render it innocuous by complete aeration and bacteriological action. The size of the filter-bed and the method of distributing the tank liquid upon it both affect its efficiency. The water-wheel distributor is as effective as any, but a tipping hopper and serrated edged troughs are often used for small installations. A fall of at least 2 ft. 6 in. from the outlet of the cesspool to the outlet of the filter-bed is required with either apparatus. The bottom of the filter-bed is made watertight and slopes down towards the outlet, and the hard, rough clinker with which the bed is formed is carefully screened free from dust, and is packed with coarse particles below and fine on top.

The ground and water levels of the case mentioned will involve the placing of the filter-bed in a pit or in a chamber with walls sufficiently strong to stand the earth pressures. The access of fresh air to every part of the filter-bed is vital, though it is possible to provide fly-proof solid covers if ventilation is also contrived by means of air inlets and outlets. Covers are useful, too, in keeping down the nuisance from smell. The liquid which is spread on top of the filter-bed is distinctly offensive, and is best kept out of sight and away from flies. A filter-bed with concrete walls, floor, and removable ceiling slabs about 10 ft. by 6 ft. on plan should suffice for a four-bedroom house, but it is well to allow ample area so as to encourage the use of plenty of flushing water, particularly where the apparatus is near to the house or on the sunny side of it. At the outlet from the filter-bed a small waterproof pit is formed in which humus may settle, and samples be taken for testing the purity of the effluent. From this humus tank the effluent escapes into the porous subsoil, or is drained away to a stream or storage tank from which it can be used for watering the garden. "Soakage-pits" are sometimes miscalled "filter-beds," the difference being that the tank liquid is encouraged to escape in its poisonous condition into the soil through the porous unwalled, or dry-walled, sides of the *soakage-pit*, whereas it is carefully prevented from escaping from the *filter-bed* until it has trickled through the interstices of the clinker and has been purified by the bacteria residing there.

As some confusion seems to exist it may be worth mention that the *soakage-pit* is used for its cheapness and freedom from smell in places remote from the possible contamination of water supply, and the *filter-bed*, in spite of its greater cost and offensiveness, is installed where a pure effluent is essential in the interests of the health of the community. A small, or ineffective, filter-bed combines the disadvantages of both systems.

W. H.

# THE WEEK'S BUILDING NEWS

*Housing at Sedgefield*

The Sedgefield Rural District Council proposes to build 300 additional houses.

*Additional Houses for Hove*

The Hove Council has under consideration a proposal to build 200 additional houses.

*A Proposed Church for Margate*

An anonymous gift of £10,000 has been made for the erection of a church at Margate.

*Housing at Bovey Tracey*

It is proposed to erect twenty-eight houses on the Hind Street site at Bovey Tracey.

*A New Poplar School*

An L.C.C. central school is to be built in Janet Street, Poplar, E., at a cost of £19,000.

*Housing at Beckenham*

The Beckenham Council has passed the plans of thirty houses.

*A Synagogue for Walworth*

A new synagogue is to be built in Wansey Street, Walworth, S.E.

*A Hippodrome for Brixton*

A new hippodrome is shortly to be built at Brixton.

*A Masonic Hall at Wetherby*

The plans of a new masonic hall have been adopted at Wetherby.

*Housing at Bedford*

The Bedford Town Council proposes to erect twenty-four houses on land in Miller Road and Elstow Road.

*Street Improvements at Gillingham*

The Gillingham Council proposes to carry out a number of improvements in Church Street.

*Plans Passed at Ilford*

The plans of ninety-one houses to be built in various parts of the borough have been passed by the Ilford Council.

*A Hospital for West Balgray*

The Houldsworth Homœpathic Hospital and Dispensary proposes to build a new hospital at West Balgray.

*Housing Subsidies for Sunderland*

The Sunderland Health Committee recommends the granting of subsidies for the erection of twenty-seven houses.

*More Houses for Solihull*

The Solihull Council has decided to erect a further sixty-one houses in various parts of the district.

*A New School for Hornsey*

The Hornsey Education Committee proposes to build a new elementary school for 900 scholars at Coldfall Woods.

*More Flats for Battersea*

The Battersea Council proposes to build a fifth block of buildings on the Plough Road site.

*Housing at Croydon*

The Croydon Corporation has decided to build another 120 houses on the Waddon estate.

*A Chelsea Housing Scheme*

The Chelsea Council has obtained sanction for a loan of £19,400 for a housing scheme in King's Road.

*Housing at Kingsbury*

The Kingsbury Council proposes shortly to erect thirty-four dwellings in Church Lane.

*A School for Chislet*

The Kent Education Committee proposes building an elementary school at Chislet, the new colliery village.

*More Houses for Titchfield*

The Titchfield Parish Council has approved of a site for the erection of an additional thirty-two houses for Titchfield.

*Housing at Hastings*

The Hastings Council has authorized the erection of fifty houses on land near Red Lake.

*A Further Scheme for Airdrie*

The Airdrie Town Council has under consideration a scheme for the erection of 150 houses in Wilson Street.

*Housing at Dumbarton*

At the Dean of Guild Court plans have been passed for the erection of fifty-two houses at Dumbarton.

*A New Eastbourne Shopping Centre*

A new shopping street is to be built at Eastbourne on land abutting on a Corporation housing site.

*Houses Sanctioned at Bournemouth*

The Ministry of Health has sanctioned the grant of the subsidy in respect of fifty further houses at Bournemouth.

*Housing at Colchester*

The Colchester Borough Surveyor has prepared a lay-out scheme for the erection of twenty-eight houses.

*Housing at Abertillery*

The Abertillery Urban District Council proposes to erect twenty houses on the Bryn Ithel site.

*Housing at Bacup*

The Bacup Town Council has decided to apply to the Ministry of Health for sanction to borrow £37,469, for the erection of fifty-four houses on Room Hill estate.

*Housing in Ireland*

The Sligo County Board of Health has adopted a scheme for building twenty houses at Ballisodare. A loan of £10,000 will be required for the work.

*Housing Progress at Loughborough*

It is probable that the Loughborough Housing Committee will shortly ask the Council to apply for the subsidy for a further 100 houses.

*An L.C.C. Housing Site*

The London County Council Housing Committee proposes to appropriate for the erection of tenement dwellings a site at St. Quintin Park, Kensington.

*Housing at Ludlow*

The Ludlow Town Council has authorized the borrowing of £15,500 for the purchase of the Linney site and the erection thereon of thirty-one working-class dwellings.

*Housing at Molesey*

The Molesey Council is considering the acquisition of a housing site at West Molesey, where there is space for seventy or eighty houses.

*Housing at Folkestone*

The Folkestone Health Committee has instructed the borough engineer to prepare a scheme for the erection of 100 houses of the non-parlour type.

*Housing Progress at Torquay*

The Torquay Town-Planning Sub-committee has approved the lay-out of forty-three houses to be built at Windmill Hill for the Torquay Corporation.

*A New Salford Bridge Opened*

Sir Arthur Steel-Maitland, Minister of Labour, recently opened Salford Bridge, which spans the River Tame and the Tame Valley Canal, Birmingham. It was built at a cost of £100,000.

*Houses Required at Cobham*

Arising from the Epsom Rural District Council's question as to the number of additional Council houses required at Cobham, it is stated that fifty-seven houses are necessary.

*A Site for Frinton's Parish Church*

The Frinton Parochial Church Council has decided to use a large vacant plot in the centre of Frinton, between Fourth Avenue and Old Road as a site for the erection of a new parish church.

*Future Housing at St. Peter's*

The Broadstairs and St. Peter's Urban District Council has instructed its housing and town-planning committee to consider the question of the erection of further houses on the housing site at St. Peter's.

*Rotherham's New Chantry Bridge*

The Rotherham Corporation intends to make a start with the work of clearing the site for the new Chantry Bridge. The ancient chapel will be preserved, but the bridge will be reconstructed at a cost of £80,000.

*A New Birkenhead Bridge*

The Mersey Docks and Harbour Board proposes to erect a roller bascule bridge at a cost of £56,000 in place of the present hydraulic bridge across Duke Street passage, Birkenhead.

*Drainage at Rainham*

The Milton Rural District Council has asked Messrs. W. H. Radford and Son, consulting engineers, of Nottingham, to prepare a drainage report for Rainham, Kent.

*A Cork Housing Site*

The Borough Commissioner for Cork states that a site has been obtained on which it is intended to erect about 200 houses, for the construction of which a loan of £100,000 will be issued.

*Housing at Barnes*

As a result of legal proceedings the price of fifty acres at Castlenau, Barnes, which is being acquired by the L.C.C. for a housing scheme has been fixed at £27,500. The sum claimed was £51,275.

*An Irish Subsidy Sanctioned*

The payment of the subsidy of £37,600 in connection with the 375 houses built by the Belfast Corporation on the Whiterock site has now been sanctioned by the Ministry of Home Affairs.

*Dublin Electricity Extensions*

The Dublin Commissioners have decided to apply to the Ministry of Industry and Commerce for sanction to a loan of £475,000 for electricity extension work in the city area between 1926 and 1929.

*A Westerham Housing Estate*

The Hawley Park estate at Westerham Hill has been purchased, and a comprehensive scheme for the erection of 1,500 to 2,000 houses over a period of three years has been drafted.

*Road Improvements at Exmouth*

The Exmouth Urban Council is in negotiation with the County Council with regard to schemes for improving and resurfacing the local main roads, at a cost of over £26,000.

*A Farnham Housing Site*

The Ministry of Health has sanctioned the purchase by the Farnham Urban District Council of land adjoining East Street, Farnham, for housing purposes. The Housing Committee has recommended the approval of a plan of the proposed lay-out of the estate, which provides for the erection of seventy-six houses.

*Slums in Edinburgh*

Dr. William Robertson, the Medical Officer of Health, has reported that a number of houses in the slums of Edinburgh are unsuitable for habitation, and a sub-committee of the Public Health Committee has decided to have a special report on these properties prepared.

*Developments at Bournemouth*

The Bournemouth Borough Council has approved of the erection of the first portion of a new elementary school in the Charminster district, and loans totally £136,600 have been sanctioned in respect of the superstructure of the new pavilion, which is to cost altogether over £200,000.

*New Buildings for Newcastle*

The scheme for the erection of a new police station, police court, and fire station on the present site of the Central Police Station in Pilgrim Street, Newcastle, has been approved by the Newcastle Watch Committee. The total capital cost is estimated at £135,000.

*A Gaelic College*

The American members of the Iona Society propose to spend £2,000,000 on the endowment of a Gaelic College in the Highlands. The foundation-stone will, it is hoped, be laid next summer, and the college will be placed on a 10,000-acre estate.

*Housing Developments at Pontefract*

The Pontefract Town Council has approved of the plans for the provision of 274 further houses on the housing site at Baghill, and the borough engineer has been instructed to prepare plans for the erection of a school for the accommodation of 560 children.

*A Big Crayford Housing Scheme*

The clerk of the Crayford Urban District Council has received information from Mr. J. W. Ellingham, Dartford, to the effect that he has purchased sixty-seven acres of land on the Barnehurst estate, together with a preliminary lay-out providing for the erection thereon of 578 houses.

*The Grosvenor House Site*

Two large blocks of buildings are to be erected on the Grosvenor House site, divided in the centre by a private roadway 50 ft. in width, between Park Lane and Park Street. The two new streets formed in connection with the development of the Devonshire House site have now been named Mayfair Street and Stratton Street.

*Town-Planning in West Sussex*

The Bognor and Westhampnett Joint Town-Planning Advisory Committee has recommended its respective Councils to apply for membership of the Committee of the Littlehampton and East Preston Regional Area Joint Town-Planning Committee for the purpose of drawing up a town-planning scheme in the Bognor Urban district and the Westhampnett rural district.

*Birmingham's Civic Centre*

The scheme for the reconstruction of Birmingham's civic centre, involving an expenditure of more than a million pounds, has been approved by the General Purposes Committee of the Birmingham City Council. A new Mansion House, a concert hall, and a new public library are included in the scheme. It has been decided to offer £1,000 to the architect who submits the successful design, and an additional £1,000 to be divided among senders of the best designs.

*The Photography of Acoustics*

It is now possible for architects to have the acoustic properties of a proposed new building tested at the National Physical Laboratory, at Teddington, on the payment of a fee. An apparatus has recently been perfected by which the reflection of the sound waves in the model of a building can be clearly photographed. The wave of sound appears in the photograph as a definite line, and it is possible to see exactly how a sound wave rebounds from any roof or bay in a building.

*A Proposed Arun Drainage Scheme*

A conference was recently held at Chichester at which representatives of the various councils and commissions concerned were present, when the question of an Arun drainage scheme was discussed. It was resolved to recommend the authorities to support a Bill to be promoted by the West Sussex County Council and the Commissioners for the Port of Arundel and Harbour of Littlehampton providing for the borrowing by the County Council of the sum required for reconstructing the necessary works at the mouth of the River Arun.

*Building Problems at Derby*

The Derby Town Council has shelved the new Town Hall scheme through a motion deferring further consideration for twelve months, which means that any prospects of proceeding with the proposal to adopt the Assembly Rooms site have disappeared for the time being. The Highways Committee has recommended the erection of overflow works at Alvaston at an estimated cost of £36,500, as part of a scheme which it was said would ultimately involve an expenditure of over £100,000, and the Council has decided to confer in committee with the experts, on whose report the proposals are based.

## LIVERPOOL COMPETITION RESULT

Professor C. H. Reilly, the assessor of the Liverpool Cenotaph Competition, has made his awards as follows :—First, Professor Lionel B. Budden; second, Mr. Vernon Constable; third, F. H. Crossley; fourth, E. B. Webber.

# RATES OF WAGES

| | | | I | II |
|---|---|---|---|---|
| | | | s. d. | s. d. |
| A | ABERDARE | S. Wales & M. | 1 8 | 1 3½ |
| A₁ | Abergavenny | Do. | 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 |
| B | BATH .. | S.W.Counties | 1 6 | 1 1½ |
| B₂ | Banbury .. | S. Counties | 1 4½ | 1 0½ |
| B₂ | Bangor .. | N.W. Counties | 1 5 | 1 1 |
| A | BarnardCastle | N.E. Coast | 1 8 | 1 3½ |
| A | Barnsley .. | Yorkshire | 1 8 | 1 3½ |
| B₁ | Barnstaple | S.W. Counties | 1 5½ | 1 1½ |
| A | Barrow .. | N.W.Counties | 1 8 | 1 3½ |
| A | Barry .. | S. Wales & M. | 1 8 | 1 3½ |
| B₂ | Basingstoke | S.W. Counties | 1 4½ | 1 0½ |
| 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 6½ | 1 2 |
| B₂ | Bicester .. | Mid. Counties | 1 4½ | 1 0½ |
| A | Birkenhead | N.W.Counties | †1 9 | 1 3½ |
| A | Birmingham | Mid. Counties | 1 8 | 1 3½ |
| A | Bishop Auckland | N.E. Coast | 1 8 | 1 3½ |
| A | Blackburn | N.W.Counties | 1 8 | 1 3½ |
| A | Blackpool | N.W.Counties | 1 8 | 1 3½ |
| A | Blyth .. | N E. Coast | 1 8 | 1 3½ |
| 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 |
| A | Bradford .. | Yorkshire | 1 8 | 1 3½ |
| A₂ | Brentwood | E. Counties | 1 6½ | 1 2 |
| A | Bridgend .. | S. Wales & M. | 1 8 | 1 3½ |
| B₂ | Bridgwater | S.W Counties | 1 5 | 1 1 |
| A₁ | Bridlington | Yorkshire | 1 7½ | 1 2½ |
| A | Brighouse .. | Yorkshire | 1 8 | 1 3½ |
| B₁ | Brighton .. | S. Counties | 1 6 | 1 1½ |
| A | Bristol .. | S.W. Counties | 1 8 | 1 3½ |
| B₂ | Brixham .. | S.W. Counties | 1 4½ | 1 0½ |
| A₂ | Bromsgrove | Mid. Counties | 1 6½ | 1 2 |
| 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 |
| A₂ | Buxton .. | N.W.Counties | 1 6½ | 1 2 |
| 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 |
| B | Cheltenham | S.W. Counties | 1 6 | 1 1½ |
| A | Chester .. | N.W. Counties | 1 8 | 1 3½ |
| A | Chesterfield | Mid Counties | ‡1 8 | 1 3½ |
| 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 |
| B₁ | Colwyn Bay | N.W.Counties | 1 5½ | 1 1½ |
| A | Consett .. | N.E. Coast | 1 8 | 1 3½ |
| B₁ | Conway .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Coventry .. | Mid. Counties | 1 8 | 1 3½ |
| 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 |
| B₁ | Denbigh .. | N.W.Counties | 1 5½ | 1 1½ |
| A | Derby .. | Mid. Counties | 1 8 | 1 3½ |
| A | Dewsbury .. | Yorkshire | 1 8 | 1 3½ |
| B | Didcot .. | S. Counties | 1 6 | 1 1½ |
| A | Doncaster .. | Yorkshire | 1 8 | 1 3½ |
| C₁ | Dorchester | S.W.Counties | 1 4 | 1 0½ |
| A₂ | Driffield .. | Yorks | 1 6½ | 1 2 |
| A₂ | Droitwich.. | Mid. Counties | 1 6½ | 1 2 |
| A₂ | Dudley .. | Mid. Counties | 1 7 | 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 |
| A | Filey .. | Yorks | 1 6½ | 1 2 |
| A | Fleetwood .. | N.W.Counties | 1 8 | 1 3½ |
| B₂ | Folkestone .. | S. Counties | 1 4½ | 1 0½ |
| 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 |
| B | Gloucester.. | S.W.Counties | 1 6 | 1 1½ |
| A₂ | Goole .. | Yorkshire | 1 7 | 1 2½ |
| B₁ | Gosport .. | S. Counties | 1 5½ | 1 1½ |
| A₂ | Grantham.. | Mid. Counties | 1 6½ | 1 2 |
| A₂ | Gravesend.. | S. Counties | 1 7 | 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 |
| A₁ | Hanley .. | Mid. Counties | 1 7½ | 1 2½ |
| 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 |

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

| | | | I | II |
|---|---|---|---|---|
| | | | s. d. | s. d. |
| A | ILKLEY .. | Yorkshire | 1 8 | 1 3½ |
| A | Immingham | Mid. Counties | 1 8 | 1 3½ |
| B | Ipswich .. | E. Counties | 1 6 | 1 1½ |
| C₁ | Isle of Wight | S. Counties | 1 4 | 1 0½ |
| A | JARROW .. | N.E. Coast | 1 8 | 1 3½ |
| A | KEIGHLEY | Yorkshire | 1 8 | 1 3½ |
| B₂ | Kendal .. | N.W. Counties | 1 5 | 1 1 |
| B₂ | Keswick .. | N.W.Counties | 1 5 | 1 1 |
| B | Kettering .. | Mid. Counties | 1 6 | 1 1½ |
| A₂ | Kidderminster | Mid. Counties | 1 6½ | 1 2 |
| B₂ | King's Lynn | E. Counties | 1 5 | 1 1 |
| A₁ | LANCASTER | N.W.Counties | 1 7½ | 1 2 |
| A₂ | Leamington | Mid. Counties | 1 6½ | 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. Countie | 1 8 | 1 3½ |
| A | Liverpool .. | N.W.Counties | 1 10 | 1 4½ |
| B | Llandudno | N.W.Counties | 1 6 | 1 1½ |
| A | Llanelly .. | S. Wales & M. | 1 8 | 1 3½ |
| | London (12 miles radius) | | 1 9½ | 1 4½ |
| | Do. (12–15 miles radius) | | 1 9 | 1 4 |
| A | Long Eaton | Mid. Counties | 1 8 | 1 3½ |
| A | Loughborough | Mid. Counties | 1 8 | 1 3½ |
| B | Luton .. | E. Counties | 1 6 | 1 1½ |
| A | Lytham .. | N.W. Counties | 1 8 | 1 3½ |
| A₁ | MACCLESFIELD | N.W.Counties | 1 7½ | 1 2½ |
| B | Maidstone .. | S. Counties | 1 5½ | 1 1½ |
| 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 |
| 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 |
| B | Norwich .. | E. Counties | 1 6 | 1 1½ |
| A | Nottingham | Mid. Counties | 1 8 | 1 3½ |
| A | Nuneaton .. | Mid. Counties | 1 8 | 1 3½ |
| B | OAKHAM .. | Mid. Counties | 1 5½ | 1 1½ |
| A | Oldham .. | N.W.Counties | 1 8 | 1 3½ |
| 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 |
| A₂ | 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 |
| 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 |
| B | South'pton | S. Counties | 1 6 | 1 1½ |
| B₁ | Southend-on-Sea | E. Counties | 1 5½ | 1 1½ |
| A | Southport .. | N.W.Counties | 1 8 | 1 3½ |
| A | S. Shields .. | N.E. Coast | 1 8 | 1 3½ |
| A₂ | Stafford .. | Mid. Counties | 1 7 | 1 2½ |
| A | Stockport .. | N.W.Counties | 1 8 | 1 3½ |
| A | Stockton-on-Tees | N.E. Coast | 1 8 | 1 3½ |
| A | Stoke-on-Trent | Mid. Counties | 1 8 | 1 3½ |
| B | Stroud .. | S.W.Counties | 1 5½ | 1 1½ |
| A | Sunderland | N.E. Coast | 1 8 | 1 3½ |
| A | Swansea .. | S. Wales & M. | 1 8 | 1 3½ |
| B | Swindon .. | S.W. Counties | 1 6 | 1 1½ |
| A₁ | TAMWORTH | N.W.Counties | 1 7½ | 1 2½ |
| B₁ | Taunton .. | S.W. Counties | 1 5½ | 1 1½ |
| A | Teeside Dist. | N.E. Counties | 1 8 | 1 3½ |
| A | Todmorden | Yorkshire | 1 8 | 1 3½ |
| A₂ | Torquay .. | S.W.Counties | 1 7 | 1 2½ |
| 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 |
| A₂ | Walsall .. | Mid. Counties | 1 7 | 1 2½ |
| A | Warrington | N.W.Counties | 1 8 | 1 3½ |
| A₂ | Warwick .. | Mid. Counties | 1 6½ | 1 2 |
| 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 6½ | 1 2 |
| 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 |
| A | Worksop .. | Yorkshire | 1 8 | 1 3½ |
| A₁ | Wrexham .. | N.W. Counties | 1 7½ | 1 2½ |
| B | Wycombe .. | S. Counties | 1 6 | 1 1½ |
| B₁ | YARMOUTH | E. Counties | 1 5½ | 1 1½ |
| B₂ | Yeovil .. | S.W. Counties | 1 5 | 1 1 |
| A | York .. | Yorkshire | 1 8 | 1 3½ |

* Plasterers, 1s. 9d.
† Carpenters and Painters, 1s. 8½d.
‡ Plumbers, 1s. 9d.
§ Painters, 1s. 6d.
‖ Carpenters and Plasterers, 1s. 8½d.
¶ Painters, 1s. 7d.

# PRICES CURRENT

## EXCAVATOR AND CONCRETOR

EXCAVATOR, 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.*

| | £ | s. | d. |
|---|---|---|---|
| *Broken brick or stone, 2 in., per yd.* | 0 | 11 | 6 |
| *Thames ballast, per yd.* | 0 | 13 | 0 |
| *Pit gravel, per yd.* | 0 | 18 | 0 |
| *Pit sand, per yd.* | 0 | 14 | 6 |
| *Washed sand* | 0 | 15 | 6 |
| *Screened ballast or gravel, add 10 per cent. per yd.* | | | |
| *Clinker, breeze, etc., prices according to locality.* | | | |
| *Portland cement, per ton* | 2 | 19 | 0 |
| *Lias lime, per ton* | 2 | 10 | 0 |
| *Sacks charged extra at 1s. 9d. each and credited when returned at 1s. 6d.* | | | |
| *Transport hire per day:* | | | |
| *Cart and horse* £1 3 0 *Trailer* | 0 | 15 | 0 |
| *3-ton motor lorry* 3 15 0 *Steam roller* | 4 | 5 | 0 |
| *Steam lorry, 5-ton* 4 0 0 *Water cart* | 1 | 5 | 0 |

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

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

In stiff clay, add 30 per cent.

In underpinning, add 100 per cent.

In rock, including blasting, add 225 per cent.

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

Headings, including timbering, add 400 per cent.

RETURN, fill, and ram, ordinary earth, per yd. . . . . 0 2 4

SPREAD and level, including wheeling, per yd. . . . . 0 2 4

PLANKING, per ft. sup. . . . . 0 0 5

DO. over 10 ft. deep, add for each 5 ft. depth 30 per cent.

HARDCORE, 2 in. ring, filled and rammed, 4 in. thick, per yd. sup. . 0 2 1

DO. 6 in. thick, per yd. sup. . . 0 2 10

PUDDLING, per yd. cube . . . 1 10 0

CEMENT CONCRETE, 4-2-1, per yd. cube 2 3 0

DO. 6-2-1, per yd. cube. . . 1 18 0

DO. in upper floors, add 15 per cent.

DO. in reinforced-concrete work, add 20 per cent.

DO. in underpinning, add 60 per cent.

LIAS LIME CONCRETE, per yd. cube . £1 16 0

BREEZE CONCRETE, per yd. cube . 1 7 0

DO. in lintols, etc., per ft. cube . 0 1 6

## 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.*

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

STONEWARE DRAINS, jointed in cement, tested pipes, 4 in., per ft. . . 0 4 3

DO. 6 in., per ft. . . . . 0 5 0

DO. 9 in., per ft. . . . . 0 7 9

CAST-IRON DRAINS, jointed in lead, 4 in., per ft. . . . . 0 9 0

DO. 6 in., per ft. . . . . 0 11 0

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

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

## BRICKLAYER

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

| | £ | s. | d. |
|---|---|---|---|
| *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.* | 23 | 0 | 0 |
| DO. *headers, per M.* | 23 | 10 | 0 |
| *Colours, extra, per M.* | £5 | 10 | 0 |
| *Seconds, less, per M.* | 1 | 0 | 0 |
| *Cement and sand, see "Excavator" above.* | | | |
| *Lime, grey stone, per ton* | £2 | 17 | 0 |
| *Mixed lime mortar, per yd.* | 1 | 6 | 0 |
| *Damp course, in rolls of 4½ in., per roll* | 0 | 2 | 6 |
| DO. 9 *in. per roll* | 0 | 4 | 9 |
| DO. 14 *in. per roll* | 0 | 7 | 6 |
| DO. 18 *in. per roll* | 0 | 9 | 6 |

BRICKWORK in stone lime mortar, Flettons or equal, per rod . . 33 0 0

DO. in cement do., per rod . . 36 0 0

DO. in stocks, add 25 per cent. per rod.

DO. in blues, add 100 per cent. per rod.

DO. circular on plan, add 12½ per cent. per rod.

FACINGS, FAIR, per ft. sup. extra . £0 0 2

DO. Red Rubbers, gauged and set in putty, per ft. extra . . . 0 4 6

DO. salt, white or ivory glazed, per ft. sup. extra . . . . 0 5 6

TUCK POINTING, per ft. sup. extra . 0 0 10

WEATHER POINTING, per ft. sup. extra 0 0 3

GRANOLITHIC PAVING, 1 in., per yd. sup. . . . . 0 5 0

DO. 1½ in., per yd. sup.. . . 0 6 0

DO. 2 in., per yd. sup. . . . 0 7 0

BITUMINOUS DAMP COURSE, ex rolls, per ft. sup. . . . . 0 0 7

ASPHALT (MASTIC) DAMP COURSE, 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

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.*

| | £ | s. | d. |
|---|---|---|---|
| *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.* | | | |

HOISTING and setting stone, per ft. cube . . . . . £0 2 2

DO. for every 10 ft. above 30 ft., add 15 per cent.

PLAIN face Portland basis, per ft. sup. £0 2 8

DO. circular, per ft. sup. . . 0 4 0

SUNK FACE, per ft. sup. . . . 0 3 9

DO. circular, per ft. sup. . . 0 4 10

JOINTS, arch, per ft. sup. . . 0 2 6

DO. sunk, per ft. sup. . . . 0 2 7

DO. DO. circular, per ft. sup.. . 0 4 6

CIRCULAR-CIRCULAR work, per ft. sup. 1 2 0

PLAIN MOULDING, straight, per inch of girth, per ft. run . . . 0 1 1

DO. circular, do. per ft. run . 0 1 4

HALF SAWING, per ft. sup. . . £0 1 0

Add to the foregoing prices if in York stone 35 per cent.

DO. Mansfield, 12½ per cent.

Deduct for Bath, 33⅓ per cent.

DO. for Chilmark, 5 per cent.

SETTING 1 in. slate shelving in cement, per ft. sup. . . . . £0 0 6

RUBBED round nosing to do., per ft. lin. . . . . 0 0 6

YORK STEPS, rubbed T. & R., ft. cub. fixed . . . . . 1 9 0

YORK SILLS, W. & T., ft. cub. fixed. 1 13 0

## SLATER AND TILER

SLATER, 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.

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

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

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

*See* "Sundries for Asbestos Tiling."

## CARPENTER AND JOINER

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

| | £ | s. | d. |
|---|---|---|---|
| *Timber, average prices at Docks, London Standard, Scandinavian, etc. (equal to 2nds):* | | | |
| 7×3, per std. | £20 | 0 | 0 |
| 11×4, per std. | 30 | 0 | 0 |
| *Memel or Equal. Slightly less than foregoing.* | | | |
| *Flooring, P.E., 1 in., per sq.* | £1 | 5 | 0 |
| DO. *T. and G., 1 in., per sq.* | 1 | 5 | 0 |
| *Planed Boards, 1 in.×11 in., per std.* | 30 | 0 | 0 |
| *Wainscot oak, per ft. sup. of 1 in.* | 0 | 2 | 0 |
| *Mahogany, per ft. sup. of 1 in.* | 0 | 2 | 0 |
| DO. *Cuba, per ft. sup. of 1 in.* | 0 | 3 | 0 |
| *Teak, per ft. sup. of 1 in..* | 0 | 3 | 0 |
| DO., *ft. cube* | 0 | 15 | 0 |
| FIR fixed in wall plates, lintels, sleepers, etc., per ft. cube | 0 | 5 | 9 |
| DO. framed in floors, roofs etc., per ft. cube | 0 | 6 | 3 |
| DO., framed in trusses, etc., including ironwork, per ft. cube | 0 | 7 | 3 |
| PITCH PINE, add 33⅓ per cent. | | | |
| FIXING only boarding in floors, roofs, etc., per sq. | 0 | 13 | 6 |
| SARKING FELT laid, 1-ply, per yd. | 0 | 1 | 6 |
| DO., 3-ply, per yd. | 0 | 1 | 9 |
| CENTERING for concrete, etc., including horsing and striking, per sq. | 3 | 10 | 0 |
| SLATE BATTENING, per sq. | 0 | 18 | 6 |

## PRICES CURRENT; *continued.*

### CARPENTER AND JOINER: *continued.*

| | | | |
|---|---|---|---|
| DEAL GUTTER BOARD, 1 in., on firring, per sq. | £3 | 5 | 0 |
| MOULDED CASEMENTS, 1¼ in., in 4 sqs., glazing beads and hung, per ft. sup. | 0 | 3 | 0 |
| DO., DO., 2 in., per ft. sup. | 0 | 3 | 3 |
| DEAL cased frames, oak sills, 2 in d.h. sashes, brass-faced pulleys, etc., per ft. sup. | 0 | 4 | 0 |
| DOORS, 4 pan. sq. b.s., 2 in., per ft. sup. | 0 | 3 | 6 |
| DO., DO., DO., 1¼ in., per ft. sup. | 0 | 3 | 0 |
| DO., DO., moulded b.s., 2 in., per ft. sup. | 0 | 3 | 9 |
| DO., DO., DO., 1¼ in., per ft. sup. | 0 | 3 | 3 |
| If in oak multiply 3 times. | | | |
| If in mahogany multiply 3 times. | | | |
| If in teak multiply 3 times. | | | |
| WOOD BLOCK FLOORING, standard blocks, laid in mastic herringbone: | | | |
| Deal, 1 in., per yd. sup., average | 0 | 10 | 0 |
| DO. 1¼ in., per yd., sup., average | 0 | 12 | 0 |
| DO., DO., 1¼ in. maple blocks | 0 | 15 | 0 |
| STAIRCASE WORK, DEAL | | | |
| 1 in. riser, 1¼ in. tread, fixed, per ft sup. | 0 | 3 | 6 |
| 2 in. deal strings, fixed, per ft. sup. | 0 | 3 | 9 |

## PLUMBER

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

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

## PLASTERER

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

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

## GLAZIER

GLAZIER, 1s. 8½d. *per hour.*

| | | | |
|---|---|---|---|
| *Glass: 4lbs in crates:* | | | |
| *Clear, 21 oz.* | £0 | 0 | 6 |
| DO. 26 oz. | 0 | 0 | 7½ |
| *Cathedral white, per ft.* | 0 | 0 | 6½ |
| *Polished plate, British ¼ in., up to 2 ft. sup.* | 0 | 2 | 0 |
| DO. *3 ft. sup.* | 0 | 2 | 6 |
| DO. *7 ft. sup.* | 0 | 3 | 6 |
| DO. *25 ft. sup.* | 0 | 4 | 0 |
| DO. *100 ft. sup.* | 0 | 4 | 6 |
| *Rough plate, ⅛ in.* | 0 | 0 | 6 |
| DO. *¼ in., per ft.* | 0 | 0 | 6½ |
| *Linseed oil putty, per cwt.* | 0 | 16 | 0 |
| GLAZING in putty, clear sheet, 21 oz. | £0 | 0 | 11 |
| DO. 26 oz. | 0 | 1 | 0 |
| GLAZING in beads, 21 oz., per ft. | 0 | 1 | 1 |
| DO. 26 oz., per ft. | 0 | 1 | 4 |
| Small sizes slightly less (under 3 ft. sup.). | | | |
| Patent glazing in rough plate, normal span 1s. 6d. to 2s. per ft. | | | |
| LEAD LIGHTS, plain, med. sqs. 21 oz., usual domestic sizes, fixed, per ft. sup. and up | £0 | 3 | 6 |
| Glazing only, polished plate, 6½d. to 8d. per ft. according to size. | | | |

## DECORATOR

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

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

## SMITH

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

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

## SUNDRIES

| | | | |
|---|---|---|---|
| *Fibre or wood pulp boardings, according to quality and quantity. The measured work price is on the same basis per ft. sup.* | £0 | 0 | 2½ |
| FIBRE BOARDINGS, including cutting and waste, fixed on, but not including studs or grounds, per ft. sup. from 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:* | | | |
| *3 m/m alder, per ft. sup.* | 0 | 0 | 2 |
| *4½ m/m amer. white, per ft. sup.* | 0 | 0 | 3¾ |
| *¾ m/m figured ash, per ft. sup.* | 0 | 0 | 5 |
| *4½ m/m 3rd quality, composite birch, per ft sup.* | 0 | 0 | 1½ |

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